

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: \_\_\_\_\_

Observer: \_\_\_\_\_

Date: Des Laes Wildlife Refuge, 194

Seth H. Low &amp; Wm. B. Long, Jr.

Estimated population: ducks Sept. 7 to Sept. 15 0 shorebirds \_\_\_\_\_

1,000

1,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
9-7	8	---	---	northeast	5	76	---	---
9-9	6	---	9	north	20	57	.11	---
9-10	---	3	---	calm	---	65	---	---
9-11	---	---	2	south	10	72	---	2.08
9-12	---	---	---	north	10	76	---	---
9-13	2	---	3	southeast	5	67	---	---
9-14	---	---	6	southeast	15	72	---	---
9-15	8	2	20	---	---	81	---	---
Total	2	---	3	---	---	---	---	---

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Laes Lake from Tower #2 to south end; mostly along

Condition of water in sickness areas: west shore and south end.

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low \_\_\_\_\_ Stagnant \_\_\_\_\_ Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution: <sup>x</sup> <sup>x</sup>Newly flooded or drying areas (describe): Wind blows water off of and out on to flats at south end depending on wind direction.

Receding from spring level of 1939; 1939 lake bed reflooded after

being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas:

(Water-bloom: \_\_\_\_\_)

(Algae: \_\_\_\_\_)

(Pondweeds: yes)

(Marsh plants: yes)

Condition of aquatic animal life in sickness areas:

(Leeches: no)

(Crustaceans: \_\_\_\_\_)

(Insects: no)

(Fishes: yes)

Remarks: \_\_\_\_\_

no

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: August 31 to September 6, 1940Estimated population: ducks 1,000 shorebirds 1,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
8-31	---	---	---	south	10	81	---	---
9-1	---	---	---	south	10	89	---	---
9-2	---	---	---	---	---	87	---	---
9-3	4	4	18	south	10	97	---	2.20
9-4	---	1	3	southwest	20	88	.36	---
9-5	---	---	---	west	5	85	.02	---
9-6	---	1	---	west	5	86	---	---
Total	4	6	21					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas:

(Water-bloom: yes  
(Algae: yes  
(Pondweeds: no  
(Marsh plants: no

Condition of aquatic animal life in sickness areas:

(Leeches: no  
(Crustaceans: yes  
(Insects: yes  
(Fishes: no

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: August 24 to August 30, 1940Estimated population: ducks 2,000 shorebirds 2,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
8-24	--	5	--	calm	--	61	.16	--
8-25	--	--	--	--	--	62	.58	--
8-26	1	2	5	south	10	73	--	--
8-27	5	3	12	south	10	88	--	--
8-28	5	--	5	west	5	74	.09	--
8-29	--	3	--	north	10	73	--	--
8-30	--	3	3	north	5	77	--	--
Total	11	16	25					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: yes)  
(Algae: yes)  
(Pondweeds: no)  
(Marsh plants: no)

Condition of aquatic animal life in sickness areas: (Leeches: no)  
(Crustaceans: yes)  
(Insects: yes)  
(Fishes: no)

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: August 17 to August 23, 1940Estimated population: ducks 2,000 shorebirds 3,000

Date	Birds accounted for			Wind		Maximum Temperature	Precip- itation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
8-17	7	23	8	north	10	72	.04	--
8-18	--	13	--	northwest	5	75	--	--
8-19	32	7	136	--	--	78	--	--
8-20	3	9	9	southwest	--	82	--	--
8-21	7	6	22	southeast	--	68	--	2.28
8-22	1	2	12	southeast	10	63	--	--
8-23	7	4	17	--	--	67	--	--
Total	57	64	204					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along  
west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low ☒ Stagnant ☒ Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats  
at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after  
being dry several seasons; water mostly out of areas of upland vegetation.

Condition of  
vegetation in  
sickness areas: (Water-bloom: yes  
 (Algae: yes  
 (Pondweeds: no  
 (Marsh plants: no

Condition of  
aquatic animal  
life in  
sickness areas: (Leeches: no  
 (Crustaceans: yes  
 (Insects: yes  
 (Fishes: no

Remarks:



## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: August 10 to August 16, 1940Estimated population: ducks 1,000 shorebirds 5,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
8-10	--	2	2	south	5	95	--	--
8-11	--	2	--	south	5	89	--	2.50
8-12	29	2	122	south	10	94	--	--
8-13	7	14	30	south	15	90	--	--
8-14	20	7	31	south	10	92	--	--
8-15	7	5	12	northwest	5	80	.37	--
8-16	55	8	113	calm	--	79	--	--
Total	118	40	210					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: yes)  
(Algae: yes)  
(Pondweeds: no)  
(Marsh plants: no)

Condition of aquatic animal life in sickness areas: (Leeches: no)  
(Crustaceans: yes)  
(Insects: yes)  
(Fishes: no)

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: August 3 to August 9, 1940Estimated population: ducks 1,000 shorebirds 10,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
8-3	96	4	154	west	5	79	.11	---
8-4	--	26	--	north	10	72	--	---
8-5	46	18	323	northwest	10	79	--	---
8-6	16	17	122	south	10	85	--	---
8-7	10	29	71	north	10	91	--	---
8-8	21	12	31	southeast	5	90	--	---
8-9	4	16	22	south	15	92	--	---
Total	193	122	723					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows off water- off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: yes  
(Algae: yes  
(Pondweeds: no  
(Marsh plants: no

Condition of aquatic animal life in sickness areas: (Leeches: no  
(Crustaceans: yes  
(Insects: yes  
(Fishes: no

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: July 27 to August 2, 1940Estimated population: ducks 1,000 shorebirds 10,000

Date	Birds accounted for			Wind		Maximum Temperature	Precip- itation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
7-27	--	9	--	southeast	15	63	.93	--
7-28	--	8	--	--	--	74	--	--
7-29	45	6	173	north	5	72	--	--
7-30	21	17	125	southeast	10	84	.01	--
7-31	17	7	40	southeast	5	92	--	--
8-1	27	11	66	east	10	88	.07	--
8-2	--	14	--	calm	--	79	.73	--
Total	110	72	404					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along  
west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats  
at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after  
being dry several seasons; water mostly out of areas of upland vegetation.

Condition of  
vegetation in  
sickness areas: (Water-bloom: yes  
(Algae: yes  
(Pondweeds: no  
(Marsh plants: no

Condition of  
aquatic animal  
life in  
sickness areas: (Leeches: no  
(Crustaceans: yes  
(Insects: yes  
(Fishes: no

Remarks:



## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: July 20 to July 26, 1940Estimated population: ducks 1,000 shorebirds 5,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
7-20	--	3	--	calm	--	91	--	--
7-21	--	4	--	southeast	10	92	.21	--
7-22	61	7	84	south	5	90	.22	--
7-23	21	8	25	calm	--	90	--	2.65
7-24	36	10	46	north	10	76	--	--
7-25	31	9	67	north	5	69	.10	--
7-26	32	19	426	calm	--	73	--	--
Total	181	60	648					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: yes)  
(Algae: yes)  
(Pondweeds: no)  
(Marsh plants: no)

Condition of aquatic animal life in sickness areas: (Leeches: no)  
(Crustaceans: yes)  
(Insects: yes)  
(Fishes: no)

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: July 13 to July 19, 1940Estimated population: ducks 2,000 shorebirds 3,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
7-13	--	11	--	south	10	92	--	--
7-14	16	17	92	--	--	77	--	--
7-15	30	16	75	east	5	79	--	--
7-16	5	20	15	south	10	86	--	--
7-17	20	6	13	east	10	89	--	--
7-18	11	4	21	east	10	92	--	--
7-19	--	3	11	south	5	87	.35	--
Total	82	77	227					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas:	(Water-bloom: <u>yes</u>
	(Algae: <u>yes</u>
	(Pondweeds: <u>no</u>
	(Marsh plants: <u>no</u>
Condition of aquatic animal life in sickness areas:	(Leeches: <u>no</u>
	(Crustaceans: <u>yes</u>
	(Insects: <u>yes</u>
	(Fishes: <u>no</u>

Remarks:



## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: July 6 to July 12, 1940Estimated population: ducks 3,000 shorebirds 2,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
7-6	40	10	100	north	10	97	---	---
7-7	143	30	257	calm	---	82	.08	---
7-8	88	69	518	southeast	10	83	.09	---
7-9	24	20	123	calm	---	95	---	---
7-10	---	39	---	northeast	10	64	.42	---
7-11	18	25	45	southeast	10	71	---	---
7-12	70	12	259	south	10	83	---	---
Total	383	203	1100					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low ☒ Stagnant ☒ Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from spring level of 1939; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: ☒ yes)  
 (Algae: ☒ yes)  
 (Pondweeds: ☒ no)  
 (Marsh plants: ☒ no)

Condition of aquatic animal life in sickness areas: (Leeches: ☒ no)  
 (Crustaceans: ☒ yes)  
 (Insects: ☒ yes)  
 (Fishes: ☒ no)

Remarks:

## WEEKLY OBSERVATIONS RELATIVE TO DUCK SICKNESS

Refuge: Des Lacs National Wildlife RefugeObserver: Seth H. Low & Wm. B. Long, Jr.Date: June 29 to July 5, 1940Estimated population: ducks 6,000 shorebirds 2,000

Date	Birds accounted for			Wind		Maximum Temperature	Precipitation	Water Level on gauge
	Sick Birds	Died in Hospital	Dead Birds	Direction	Miles			
6/29	66	--	321	west	10	79	--	2.95
6/30	85	7	784	north	2	80	--	--
7/1	141	24	2058	calm	--	77	--	--
7/2	51	26	524	calm	--	83	--	--
7/3	50	34	172	south	10	86	--	--
7/4	13	25	128	south	2	94	--	2.60
7/5	23	15	114	calm	--	94	--	--
Total	443	131	4101					

If no accurate count was made, give estimate of total sick and dead:

Sick birds: \_\_\_\_\_

Dead birds: \_\_\_\_\_

Describe location of losses and probable source of poisoning:

Upper Des Lacs Lake from Tower #2 to south end; mostly along west shore and south end.

Condition of water in sickness areas:

(Check two) High \_\_\_\_\_ Normal \_\_\_\_\_ Low x Stagnant x Circulating \_\_\_\_\_

Relation of wind direction and velocity to water distribution:

Wind blows water off of and out on to flats at south end depending on wind direction.

Newly flooded or drying areas (describe):

Receding from 1939 spring level; 1939 lake bed reflooded after being dry several seasons; water mostly out of areas of upland vegetation.

Condition of vegetation in sickness areas: (Water-bloom: yes)  
(Algae: yes)  
(Pondweeds: no)  
(Marsh plants: no)

Condition of aquatic animal life in sickness areas: (Leeches: no)  
(Crustaceans: yes)  
(Insects: yes)  
(Fishes: no)

Remarks: