



**METROPARKS
TOLEDO**

2024 End of Culling Report

SUBMITTED 4-23-2024

A. BACKGROUND / INTRODUCTION

Metroparks Toledo (Metroparks) submitted its 2023-2024 Deer Management Plan and Request for Deer Damage Control Permit to the Ohio Division of Wildlife (ODW) on 11/17/2023 to initiate the ninth season of its lethal deer culling program to continue addressing ongoing negative ecological impacts associated with overabundance of deer across the park district. This request was subsequently approved by the Ohio Division of Wildlife on 1/4/2024 under ODW deer damage control permit # 18230, valid from January 4, 2024 until February 29, 2024. During this period of culling activities, Metroparks law enforcement staff (Ohio Peace Officer Training Academy Certified) served as marksmen. Metroparks staff provided field support to marksmen and conducted all other deer management activities including removal of deer killed in the field, field dressing of deer, collection of biological data, transportation of deer carcasses to venison processing facilities, and disposal of remains not taken for venison processing. Each evening, culling activities commenced after Metroparks law enforcement personnel closed each park and determined that no park visitors remained after normal park hours.

B. ADHERENCE TO STIPULATIONS OF DEER MANAGEMENT CONTROL PERMIT

Metroparks strictly followed the permit conditions mandated by ODW, including:

1. Wildlife Officer Michael Ohlrich was notified by phone prior to each night when culling operations were conducted.
2. Wildlife Management Supervisor Bob Ford was notified by phone after the conclusion of each night of culling operations and provided a summary of the results.
3. A copy of Permit # 18230 was in the possession of Metroparks marksmen during the course of operations.
4. Antlered deer made up fewer than 25% of all deer taken. All antlers were removed and destroyed by Metroparks staff following culling operation.
5. A deer damage carcass tag was attached immediately to each deer in the field.
6. Each deer damage carcass tag featured a unique ID number assigned by Metroparks to insure accurate record keeping.
7. Each deer killed was reported online and assigned a permanent ODW tag number.
8. All venison processed as a result of culling operations was donated to charity.

This written report fulfills Metroparks’ final obligation under Permit # 18230 and formally concludes all actions under the Metroparks 2023-2024 Deer Management Plan. All future deer management activities to be conducted by Metroparks will occur under a new request for deer damage control permit.

C. DEER MANAGEMENT / RESULTS OF OPERATION

A total of 123 deer were culled over 11 separate nights between January 8th and February 8th, 2024. A total of 109 deer culled were antlerless (89%) while 14 deer culled were antlered (11%). Table 1 provides a culling summary for each park area included in the 2023-24 deer management plan.

Table 1. **Culling summary by park area** for 123 deer culled by Metroparks from January 8 to February 8, 2024.

Park Area	Antlerless	Antlered	Total
Oak Openings Preserve	36	0	36
Swan Creek Preserve & Brookwood Area	25	7	32
Side Cut and associated parklands	40	4	44
Pearson	8	3	11
Toledo Botanical Garden	0	0	0
Middlegrounds	0	0	0
Total All Parklands	109	14	123

D. BIOLOGICAL AND DEMOGRAPHIC DATA

In addition to antlered status, biological data (weight, sex, reproductive status, general condition) were collected for all deer culled during the 2023-24 season. A summary of biological data collected by Metroparks staff during culling activities is provided as an appendix to this report.

Age and Sex Distribution

Out of 123 deer culled, 78 were females (63%) and 45 were males (37%). A total of 44 deer (36%) were fawns (<1 year of age), including 27% of all females culled and 51% of all males culled. A breakdown of the sex and age class of deer culled is shown in Table 2.

Table 2. **Sex and age distribution** of 123 deer culled by Metroparks from January 8 to February 8, 2024.

Age	Female	Male	Total
0.5	21	23	44
1.5	17	12	29
2.5	18	6	24
3.5	8	0	8
4.5	7	1	8
5.5	4	2	6
6.5	2	1	3
7.5	1	0	1
Total	78	45	123

Weight

Whole body weights of harvested deer ranged from 61 to 194 pounds for females (mean of 118 pounds) and 66 to 217 pounds for males (mean of 117 pounds). A breakdown of the mean weight by sex and age class of deer culled is shown in Table 3.

Table 3. **Mean whole body weights** (pounds) of 131 deer culled by Metroparks from January 8, 2024 to February 8, 2024.

Age (years)	Female	Male
0.5	78.4	83.8
1.5	117.6	139.6
≥2.5	138.0	164.9
All age classes	117.5	117.0

Reproductive Status

Across all age classes, 59 of 78 females (76%) were pregnant. Across all age classes, 19% of pregnant females carried a single fetus, 75% carried twins, and 7% carried triplets. A breakdown of additional reproductive characteristics of female deer culled by Metroparks from January 8 to February 8, 2024 is shown in Table 4.

Table 4. **Pregnancy rates (%)**, mean fetus count per pregnant female, and mean fetus count per female among deer culled by Metroparks from January 8 to February 8, 2024.

Age (years)	pregnancy rate (%)	mean fetus count per pregnant female	mean fetus count per female
All	75.6		
0.5	23.8	1.20	0.29
1.5	100.0	1.71	1.71
≥2.5	92.5	2.05	1.90

E. EVALUATION OF CULLING RESULTS / IDENTIFICATION OF FUTURE MANAGEMENT NEEDS

Culling results: Deer removed through Metroparks culling operations during the 2023-24 season appeared generally to be in good health with no obvious signs of biological stress. Of the 150 tags requested by Metroparks under permit #18230, 123 (82%) were filled. Overall annual reduction goals were at first considered achieved for Oak Openings Preserve (30 of 30 permits filled, 100%) with an additional 33 deer harvested by hunters within the park during the controlled archery season. However, following population counts completed on January 20, 2024, the Oak Openings population was substantially higher than anticipated, so an additional 6 of our 10 “extra” tags were filled at Oak Openings. Likewise, the Pearson population was also found to be larger than expected, so an additional extra tag was filled here, for a total of 11 tags of our requested 10 for Pearson (100% filled). Metroparks filled 32 of 40 requested permits (80%) at Swan Creek, largely achieving annual reduction targets for this park, but no deer were removed at the nearby Brookwood Area. For Side Cut and associated parklands, 44 of 50 permits were filled (88%) as we continue to struggle to bring the population density into the desired range for these parks. No culling operations were conducted at Toledo Botanical Garden or Middlegrounds during the 2023-24 season. A summary of culling operations from 2015 to 2024 is shown in Table 5.

Table 5. **Summary of culling by park** carried out by Metroparks Toledo between 2015 and 2024.

Culling Summary by Park	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
	16	17	18	19	20	21	22	23	24	

Oak Openings Preserve	165	150	50	71	73	60	27	37	36	669
Swan Creek Preserve & Brookwood Area		50	64	58	40	33	35	35	32	347
Side Cut and associated parklands			106	54	46	21	47	41	44	359
Wildwood Preserve	30		19	13	10	10		12		94
Pearson					27	7	7	13	11	65
Secor								4		4
Toledo Botanical Garden					7					7
Middlegrounds			1							1
Total All Parklands	195	200	240	196	203	131	116	142	123	1546

Deer population status: Annual population reduction goals for each park area (as described above) were set to maintain peak population densities for each park area at ~15 to 25 deer per square mile. Helicopter snow count surveys completed by Metroparks staff on January 20, 2024 provide additional insight into the current status of deer populations at each park area during the 2023-24 culling season (Figure 1). Snow counts completed at Wildwood Preserve, Secor, and Swan Creek Preserve / Brookwood Area show current population densities are within the acceptable range, although the Brookwood Area when considered by itself, continues to suffer from excessive deer numbers due to a localized deer population that remains inaccessible during culling operations. Substantial progress has been made at reducing deer densities at Side Cut and associated parklands since culling operations began there in 2017-18, however densities remain above the desired target. The snow count this year showed elevated numbers at all parks compared to last year, including the highest population count at Oak Openings Preserve since the 2018-19 season. Two possible factors, likely among others, may have contributed to these elevated numbers. First, last year's snow count had difficult conditions and visibility, and we suspect that deer detectability was quite low last year, but quite high this year when conditions were good. Second, the region experienced a high acorn mast year this season (2023), so the oak-rich area of Oak Openings Preserve in particular may have drawn in more deer from the surrounding landscape than normal.

Deer browse damage assessment: Following 2023-24 culling operations, overwinter deer browse damage surveys were conducted between March 13 and March 27, 2024. A summary of browse survey results is shown in Figures 2 and 3 below. Overall trends in deer browse damage are consistent with population trends described above, with most park areas having browse damage within acceptable levels (see Figure 2). However, browse damage was elevated compared to last year at all parks except Oak Openings and Wildwood Preserves, overall reflecting the higher population count this year compared to last year (see Figure 1). Browse damage at Side Cut and Fallen Timbers Battlefield increased again this year, reflecting our struggle to bring the Side Cut and associated parklands deer population into desired densities (Figure 1). For Oak Openings and Wildwood Preserve, where oaks are the dominant woodland species, browse damage to oak seedlings remained at very low levels in 2024 (see Figure 3) despite the elevated population count. Notably, browse damage at the Brookwood Area was the worst this year since we began recording it in 2019, demonstrating the consequences of our continued failure to remove deer from this area.

Future management needs: The Metroparks long term goal is to maintain deer populations at or below levels that ensure the protection of native plant and animal diversity and the development of high quality habitat for a variety of native wildlife species. As a general rule, Metroparks managers intend to keep peak deer population densities at no greater than 15 to 25 deer per square mile for

parklands throughout the park district wherever possible. However, future population reduction goals will take into account actual browse damage (in established woodlands as well as newly planted sites) along with estimates of population recruitment during the spring fawning season. Given our elevated population estimates resulting from the January 20, 2024 snow count, it is likely that culling operations will be necessary in the upcoming year for all parks, including Secor and Wildwood Preserve which were excluded this year due to last year’s low population estimate.

F. VENISON DONATION

Deer culled by Metroparks during the 2023-24 season were processed into 6,107 pounds of ground venison donated to charities in the Toledo region who distributed this venison to those in need. Table 6 provides a summary of venison donations since Metroparks initiated its deer culling program during the 2015-16 season.

Table 6. **Pounds of venison donated** by Metroparks Toledo between 2015 and 2024.

Year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Pounds	6,744	9,940	11,284	9,598	10,332	6,340	4,784	9,230	6,107	74,359

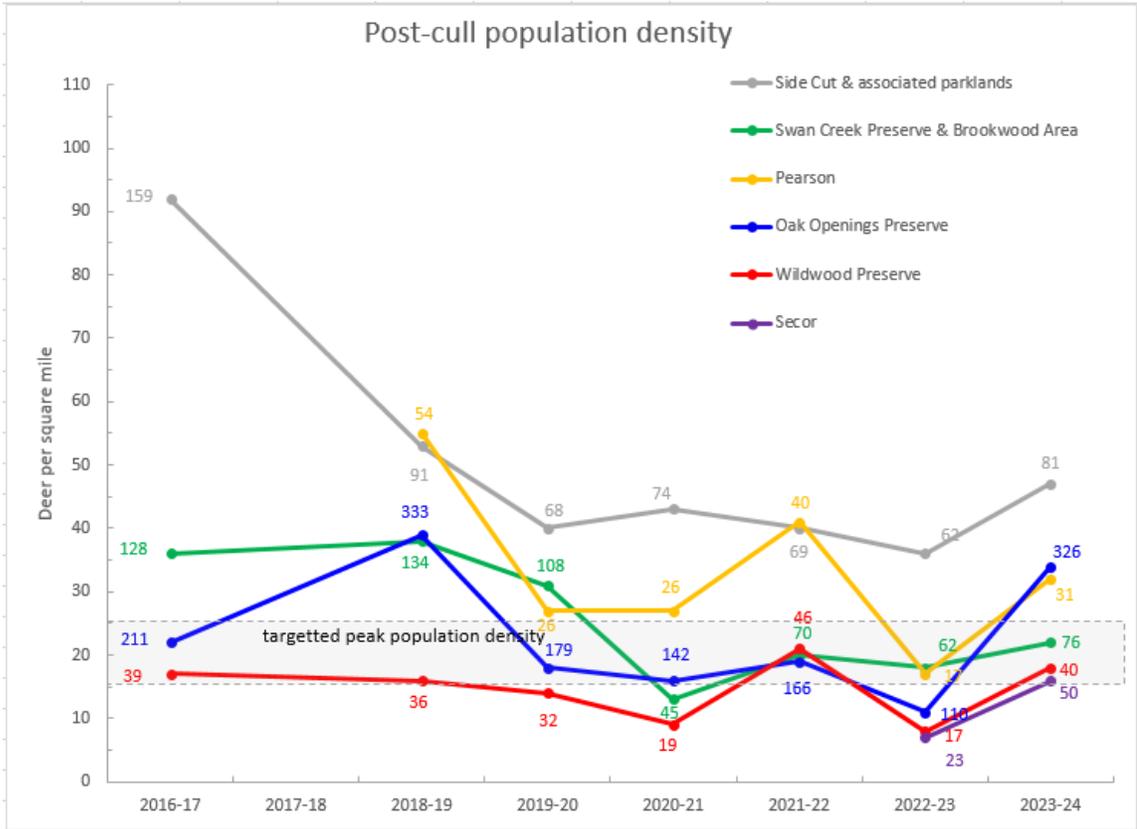


Figure 1. **Post-cull population densities** for five park areas based on population surveys completed between 2016 and 2024. Actual population numbers observed for each park area are shown next to each density data point. Deer culled from the population during the same season, but after counts were completed were subtracted from the count (for example, 7, 4, 26, and 9 deer were culled at Side Cut, Swan Creek Preserve, Oak Openings Preserve, and Pearson respectively, following the snow count conducted on January 20, 2024). Note that reported numbers may vary slightly from previously submitted reports due to the correction of minor errors found in the previous reports.

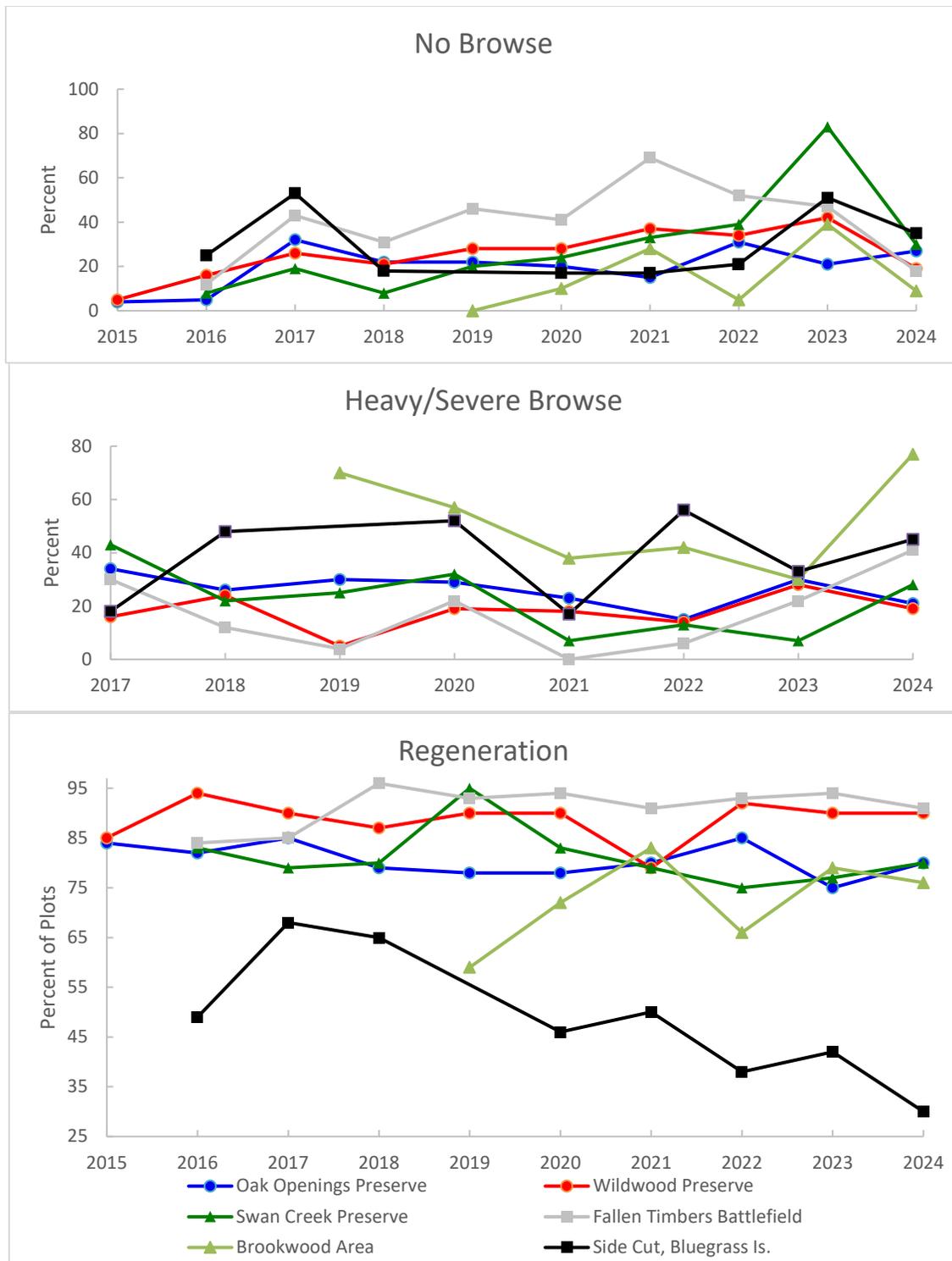


Figure 2. **Overall overwinter deer browse damage** observed between 2015 and 2024 for six park areas. Browse damage surveys were conducted in March/April each year prior to leaf-out. Note that in 2017 persistent overwinter snow cover protected many seedlings from direct browse damage. Data were not collected at Side Cut in 2019 due to persistent spring flooding which likely contributed to the decline in regeneration observed in 2020.

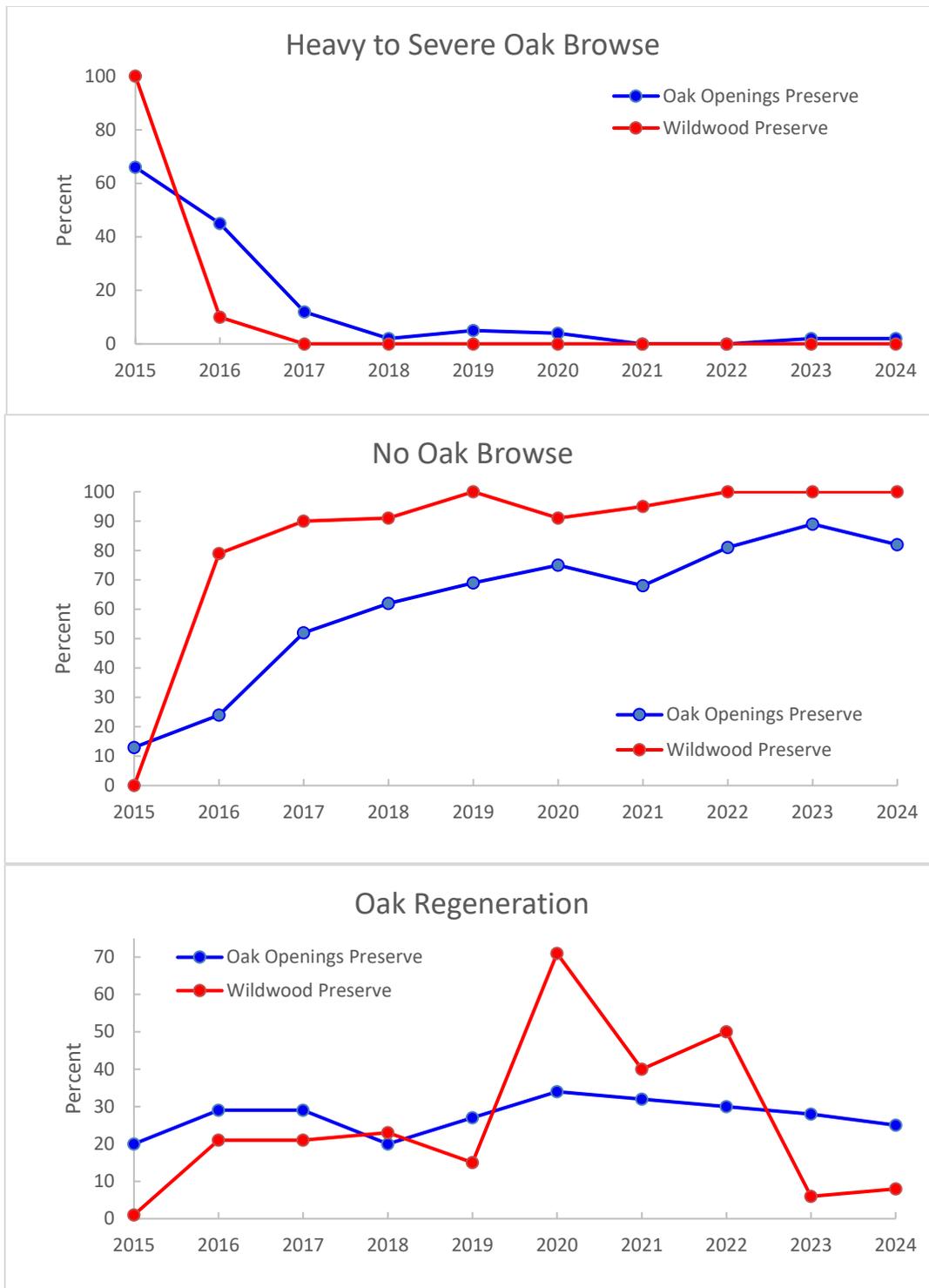


Figure 3. **Overwinter deer browse damage of oak seedlings** observed between 2015 and 2024 for two park areas. Browse damage surveys were conducted in March/April each year prior to leaf-out. Note that heavy acorn production was observed in fall of 2018, likely contributing to increased oak regeneration observed at Wildwood Preserve in 2020.

APPENDIX – SUMMARY OF BIOLOGICAL DATA

ODW Tag #	Date Culled	Time (approx.)	Location ¹	Sex	Weight (lbs)	Age (years)	Antlers (N=no)	Fetus Count (#)
1	1/8/2024	1930	SI	F	132	2.5		2
2	1/8/2024	1930	SI	F	75	0.5		0
3	1/8/2024	1930	SI	M	85	0.5	N	
4	1/8/2024	1900	SI	F	121	2.5		0
5	1/8/2024	1930	SI	M	149	2.5	10	
6	1/8/2024	1900	SI	M	105	1.5	N	
7	1/8/2024	2100	SI	M	84	0.5	N	
8	1/8/2024	2100	SI	F	125	2.5		2
9	1/8/2024	2100	SI	F	77	0.5		0
10	1/8/2024	2130	SI	F	87	0.5		0
11	1/8/2024	2130	SI	F	143	4.5		2
12	1/8/2024	2200	SI	F	123	1.5		2
13	1/8/2024	2200	SI	M	88	0.5	N	
14	1/8/2024	2230	SI	M	170	2.5	9	
15	1/8/2024	2000	SI	M	80	0.5	N	
16	1/8/2024	2000	SI	F	106	1.5		1
17	1/8/2024	2030	SI	F	129	1.5		2
18	1/8/2024	2030	SI	F	72	0.5		0
19	1/10/2024	1900	SW	M	160	1.5	4	
20	1/10/2024	1900	SW	M	148	1.5	7	
21	1/10/2024	1900	SW	F	150	2.5		2
22	1/10/2024	1930	SW	M	81	0.5	N	
23	1/10/2024	1930	SW	F	160	7.5		2
24	1/10/2024	2000	SW	F	144	2.5		2
25	1/10/2024	2000	SW	M	89	0.5	N	
26	1/10/2024	2000	SW	M	159	1.5	5	
27	1/10/2024	2000	SW	F	125	1.5		2
28	1/10/2024	2100	SW	F	142	2.5		0
29	1/10/2024	2100	SW	F	128	1.5		3
30	1/10/2024	2130	SW	F	122	1.5		2
31	1/10/2024	2130	SW	M	82	0.5	N	
32	1/10/2024	2130	SW	M	72	0.5	N	
33	1/10/2024	2130	SW	F	155	5.5		2
34	1/10/2024	2130	SW	F	118	1.5		1
35	1/10/2024	2130	SW	F	150	4.5		2
36	1/10/2024	2130	SW	M	94	0.5	N	
37	1/10/2024	2130	SW	F	120	1.5		2
38	1/10/2024	2200	SW	M	147	2.5	4	
39	1/10/2024	2200	SW	M	127	1.5	4	
40	1/10/2024	2200	SW	M	92	0.5	N	

ODW Tag #	Date Culled	Time (approx.)	Location ¹	Sex	Weight (lbs)	Age (years)	Antlers (N=no)	Fetus Count (#)
41	1/10/2024	2230	SW	M	81	0.5	N	
42	1/10/2024	2230	SW	F	69	0.5		0
43	1/10/2024	2300	SW	M	90	0.5	N	
44	1/10/2024	2300	SW	F	77	0.5		0
45	1/10/2024	2300	SW	M	151	1.5	4	
46	1/10/2024	2300	SW	F	106	1.5		1
47	1/11/2024	1930	SI	M	158	2.5	10	
48	1/11/2024	2030	SI	F	65	0.5		1
49	1/11/2024	2030	SI	F	135	1.5		2
50	1/11/2024	2030	SI	F	94	0.5		0
51	1/11/2024	2130	SI	M	87	0.5	N	
52	1/11/2024	2130	SI	F	164	4.5		3
53	1/11/2024	2130	SI	F	88	0.5		0
54	1/11/2024	2200	SI	F	194	4.5		2
55	1/11/2024	2200	SI	F	134	1.5		1
56	1/11/2024	2200	SI	M	174	1.5	4	
57	1/11/2024	2230	SI	M	112	0.5	N	
58	1/11/2024	2230	SI	F	119	1.5		2
59	1/11/2024	2230	SI	M	66	0.5	N	
60	1/11/2024	2230	SI	M	81	0.5	N	
61	1/11/2024	2230	SI	F	120	2.5		3
62	1/11/2024	2230	SI	F	128	3.5		2
63	1/11/2024	2300	SI	F	90	0.5		0
64	1/11/2024	2300	SI	F	61	0.5		0
65	1/11/2024	2300	SI	F	138	2.5		2
66	1/17/2024	1930	PE	M	140	2.5	8	
67	1/17/2024	1930	PE	F	130	2.5		2
68	1/18/2024	1930	OO	F	161	5.5		2
69	1/18/2024	2100	OO	F	146	5.5		2
70	1/18/2024	2100	OO	F	141	3.5		1
71	1/18/2024	2130	OO	F	131	2.5		2
72	1/18/2024	2200	OO	F	86	0.5		1
73	1/18/2024	2230	OO	F	130	2.5		2
74	1/18/2024	2230	OO	F	140	6.5		2
75	1/18/2024	2230	OO	F	87	0.5		1
76	1/18/2024	2230	OO	F	97	1.5		1
77	1/18/2024	2230	OO	F	80	0.5		0
78	1/30/2024	2000	SI	F	139	3.5		2
79	1/30/2024	2000	SI	F	138	2.5		2
80	1/30/2024	2000	SI	F	111	1.5		2
81	1/30/2024	2100	SI	F	73	0.5		0

ODW Tag #	Date Culled	Time (approx.)	Location ¹	Sex	Weight (lbs)	Age (years)	Antlers (N=no)	Fetus Count (#)
82	1/30/2024	2100	SI	M	87	0.5	N	
83	1/31/2024	1900	OO	F	142	3.5		2
84	1/31/2024	1930	OO	F	127	2.5		2
85	1/31/2024	1930	OO	F	77	0.5		0
86	1/31/2024	2030	OO	F	117	2.5		2
87	1/31/2024	2030	OO	F	127	2.5		2
88	1/31/2024	2100	OO	F	120	3.5		2
89	1/31/2024	2200	OO	M	217	5.5	N	
90	1/31/2024	2300	OO	F	127	4.5		2
91	1/31/2024	2300	OO	M	91	0.5	N	
92	1/31/2024	2300	OO	F	129	4.5		2
93	1/31/2024	2330	OO	F	126	6.5		2
94	1/31/2024	2330	OO	M	82	0.5	N	
95	1/31/2024	2330	OO	M	82	0.5	N	
96	1/31/2024	2330	OO	F	145	3.5		2
97	1/31/2024	2330	OO	F	74	0.5		0
98	1/31/2024	2330	OO	M	78	0.5	N	
99	2/1/2024	2100	SW	M	142	2.5	N	
100	2/1/2024	2100	SW	M	137	1.5	5	
101	2/1/2024	2130	SW	F	129	5.5		2
102	2/1/2024	2230	SW	F	92	0.5		2
103	2/6/2024	1930	PE	F	69	0.5		0
104	2/6/2024	1930	PE	F	118	1.5		2
105	2/6/2024	2000	PE	M	181	5.5	N	
106	2/6/2024	2130	PE	F	143	3.5		2
107	2/6/2024	2130	PE	F	147	3.5		3
108	2/6/2024	2130	PE	F	145	4.5		2
109	2/6/2024	2130	PE	F	87	0.5		1
110	2/6/2024	2200	PE	M	140	1.5	5	
111	2/6/2024	2200	PE	M	108	1.5	6	
112	2/7/2024	2000	OO	M	174	4.5	N	
113	2/7/2024	2030	OO	M	171	6.5	N	
114	2/7/2024	2030	OO	F	120	2.5		2
115	2/7/2024	2100	OO	M	74	0.5	N	
116	2/7/2024	2100	OO	M	69	0.5	N	
117	2/7/2024	2230	OO	F	111	1.5		2
118	2/7/2024	2330	OO	F	97	1.5		1
119	2/7/2024	2330	OO	F	128	2.5		0
120	2/7/2024	2330	OO	F	67	0.5		0
121	2/7/2024	2330	OO	F	127	2.5		2
122	2/8/2024	2030	SI	M	135	1.5	N	

ODW Tag #	Date Culled	Time (approx.)	Location ¹	Sex	Weight (lbs)	Age (years)	Antlers (N=no)	Fetus Count (#)
123	2/8/2024	2030	SI	M	131	1.5	N	

¹SE = Secor, OO = Oak Openings Preserve, SW = Swan Creek Preserve, SI = Side Cut & Blue Grass Island, PE = Pearson, WW = Wildwood Preserve