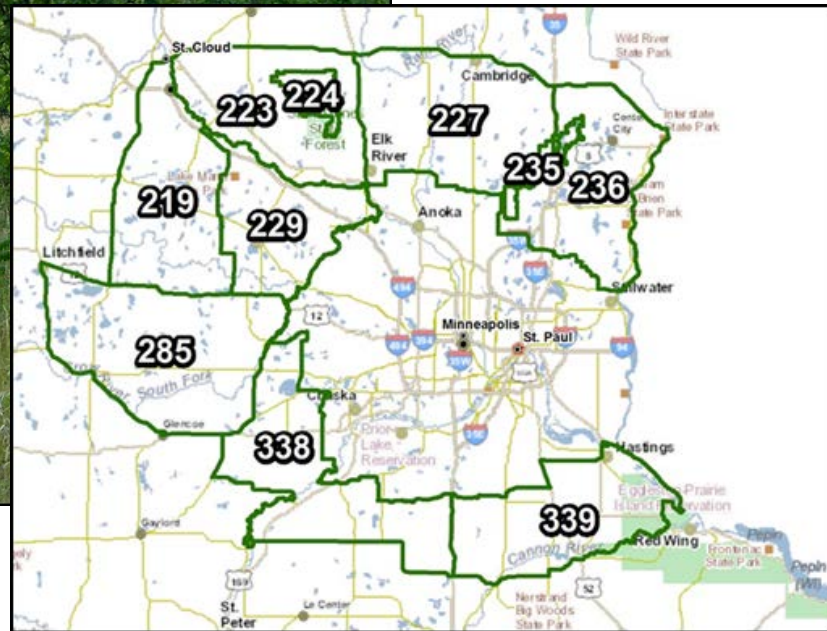
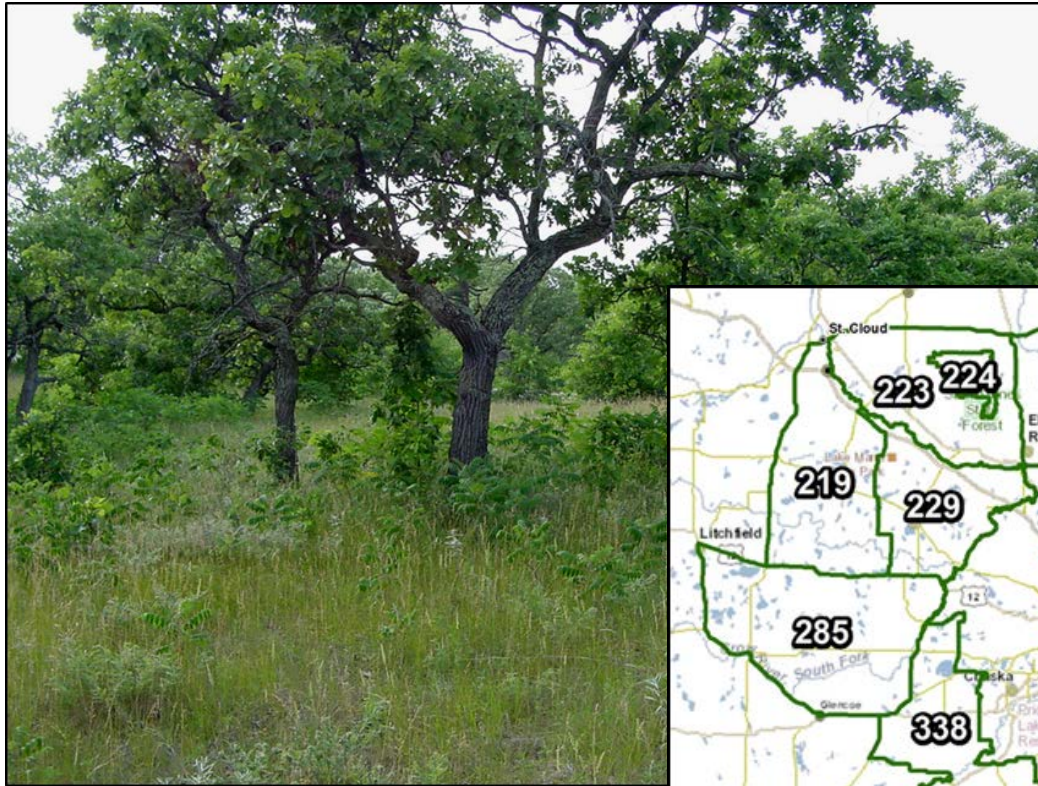


Minnesota Deer Population Goals

Sand Plain – Big Woods Goal Block



Minnesota DNR – Section of Wildlife, 2015

Final Deer Population Goals – Block 5: Sand Plain – Big Woods

The following pages provide a description of the 2015 deer population goals, factors considered during goal setting, and management implications for each permit area in Block 5: Sand Plain – Big Woods (deer permit areas 219, 223, 224, 227, 229, 235, 236, 285, 338 and 339).

Final population goals were developed through a public engagement process, including collecting public comment (via public meetings, online and written questionnaires, mail and email) and convening citizen advisory teams to review information and make recommendations on population goals to DNR. Goals are anticipated to be revisited in 3-5 years (2018-2020). Information incorporated into the final decision includes¹:

- [Block 5 Hunter and Landowner Survey Reports](#)
- [Block 5 Team Information Packet](#) and Addendum
- [2014 Harvest Report](#)
- Public comment received during comment periods in winter and spring 2015
- [Block 5 Advisory Team Recommendations](#)
- Input from Area and Regional Staff

¹ Goal setting materials are linked for convenience; source materials with additional detail are cited on the last page.

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Deer Permit Area 219

Deer Permit Area 219 includes much of western Wright County and the very southeastern portion of Stearns County with a small portion of far eastern Meeker County. Much of this area is interspersed habitats of rolling scattered hardwood forest mixed with agricultural cropland. Two major rivers (North Fork Crow River and Clearwater River) course through this area along with numerous game fish and wildlife shallow lakes. This mixture of habitats is ideal for deer and this permit area is often managed intensely for deer and deer hunting. A more moderate-to-liberal (e.g., Hunter Choice or Managed) deer hunting season framework is often selected for deer herd management due to the high recruitment potential for deer populations in this permit area and the high percentage of private lands where harvest levels are sometimes limited by landowner decisions.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (62%) of hunters surveyed in this permit area preferred a population increase, but more than one quarter (29%) preferred no change in the population. Landowners surveyed in this permit area were split between preferring no change in the population and preferring a population increase, with the greatest number (34%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (83%) of questionnaire respondents preferred a population increase, with the greatest number (45%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%; factors considered included harvest levels, hunter satisfaction rates and more. Public comment collected in spring 2015 showed that approximately 74% of commenters supported or were ok with the team's recommendation. The Department decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for team recommendations.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.
- The Department will aim for a target density of 16-21 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 12-18 dpsm². In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.

² Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are

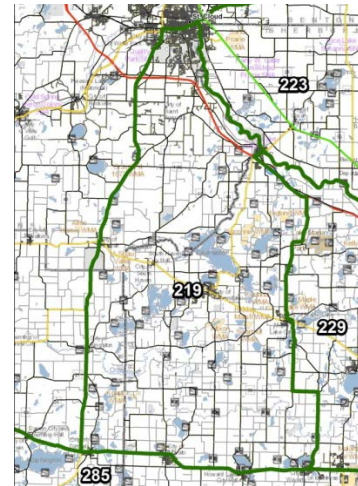
- The mild 2014-15 winter, coupled with more conservative management in 2014, appears to have moved this population into target density range for 2015. If milder winter conditions continue, moderate-to-liberal management strategies are anticipated for the next few years to continue moving the population in this area toward goal and/or to maintain it at goal.

developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

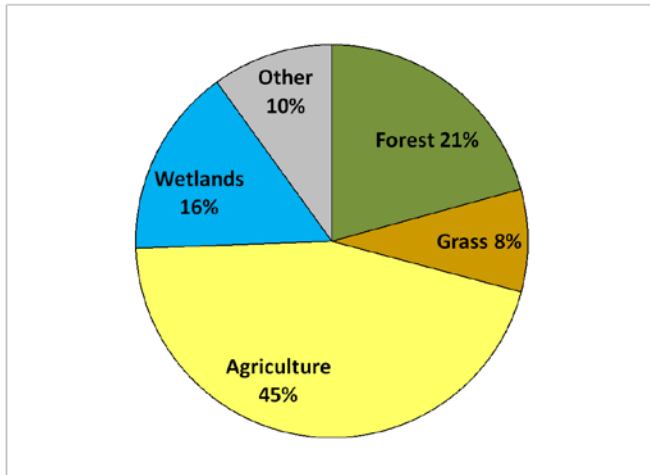
Deer Permit Area: 219
Size of Deer Permit Area: 427 square miles total; 391 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.
Comments: Deer Permit Area (DPA) 219 was renamed in 2006. It was previously DPA 419.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Intensive	3681	42%	1545	527	1018
2006	Managed	2938	54%	1577	624	953
2007	Lottery (800)	2708	36%	979	538	441
2008	Lottery (1200)	2744	34%	945	516	429
2009	Lottery (1500)	2967	39%	1170	654	516
2010	Lottery (2500)	3120	44%	1365	688	677
2011	Managed	3370	46%	1555	646	909
2012	Hunter's Choice	3420	38%	1294	677	617
2013	Managed	3551	46%	1637	760	877
2014	Hunter's Choice	3573	39%	1398	638	760

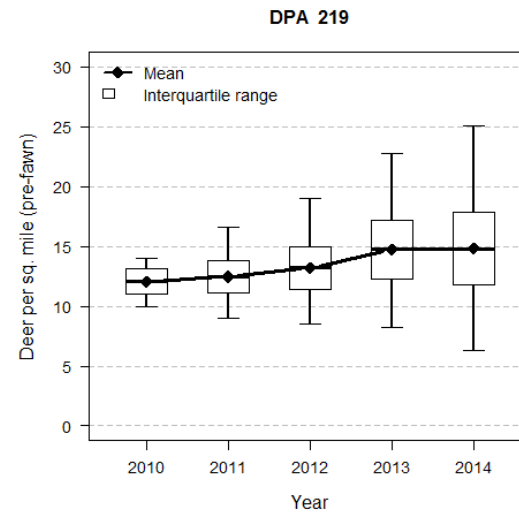
Deer Permit Area: 219
Size of Deer Permit Area: 427 square miles total;
 391 square miles of land



Habitat Categories:



2014 Model Output



Deer Permit Area 223

Deer Permit Area 223 includes most of Sherburne County minus the 35,000 acre Sherburne National Wildlife Refuge (DPA 224) in central Minnesota. This area is almost completely in the Anoka Sand Plain ecotype. Many human residences and development areas occupy this permit area, especially in eastern and western reaches. The eastern two-thirds of DPA 223 have a strong oak forest/agricultural component with associated small and large wetlands/lakes scattered throughout the area. The western third of the DPA has a large amount of open agricultural land dominated by irrigation systems, making the DPA very productive with respect to agricultural food sources. DPA 223 has a strong firearms and archery deer hunting heritage, usually allowing for satisfactory deer herd management. More moderate-to-liberal (e.g., Hunter Choice and Managed) deer season strategies are often selected due to the high recruitment potential of the deer population and areas of private land where deer hunting is not allowed. Deer depredation complaints are routinely high in DPA 223, especially on specialty crops.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (58%) of hunters surveyed in this permit area preferred a population increase, but approximately one third (32%) preferred no change in the population. Landowners surveyed in this permit area were divided between preferring no change in the population and preferring a population increase, with the greatest number (47%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (68%) of questionnaire respondents preferred a population increase, with the greatest number (39%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team did not reach consensus on a recommendation for this permit area and individual preferences ranged from preferring a 25% decrease to preferring a 50% increase. Factors considered in the team's discussion included ecosystem health, carrying capacity, hunter success and satisfaction rates, harvest levels, local variations in deer populations and more. Public comment collected in spring 2015 showed that a majority of commenters preferred a population increase. The Department decided to manage for an increased deer population in recognition of the advisory team's input and the range of stakeholder desires.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.

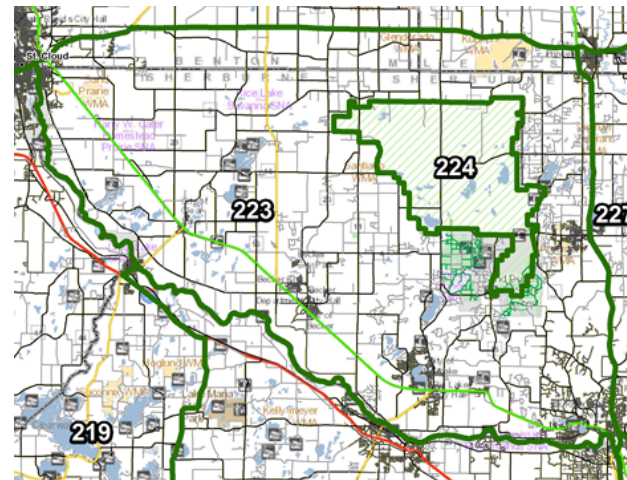
- The Department will aim for a target density of 16-21 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 12-18 dpsm³. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.
- The mild 2014-15 winter, coupled with more conservative management in 2014, appears to have moved this population into target density range for 2015. If milder winter conditions continue, moderate-to-liberal management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain it at goal in this productive area.

³ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

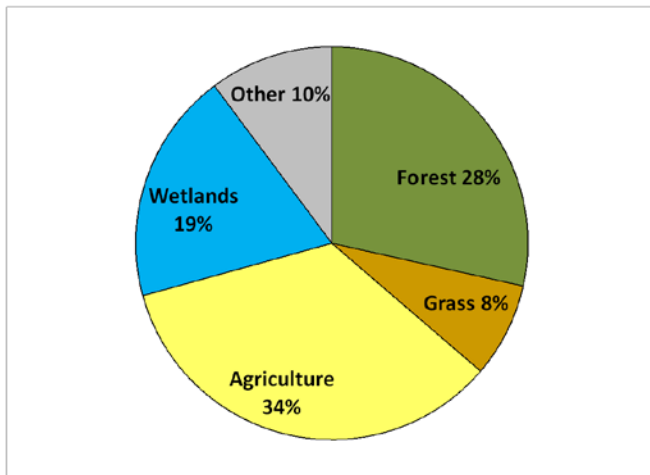
Deer Permit Area: 223
Size of Deer Permit Area: 385 square miles total; 376 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Intensive	3043	47%	1434	567	867
2006	Managed	2537	57%	1456	580	876
2007	Managed	2682	59%	1581	683	898
2008	Managed	2656	47%	1242	577	665
2009	Lottery (1500)	2777	37%	1018	624	394
2010	Lottery (2500)	2920	44%	1274	679	595
2011	Managed	2998	51%	1539	711	828
2012	Hunter's Choice	3141	39%	1236	686	550
2013	Managed	3219	48%	1560	776	784
2014	Hunter's Choice	3340	44%	1480	727	753

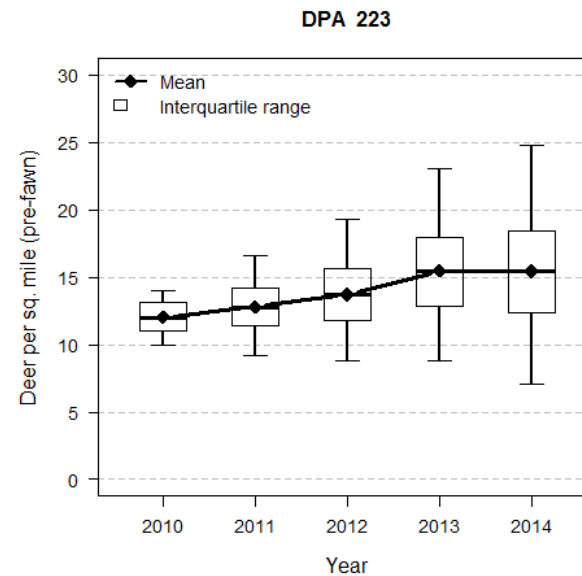
Deer Permit Area: 223
Size of Deer Permit Area: 385 square miles total;
 376 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 224

Deer Permit Area 224 includes all of the Sherburne National Wildlife Refuge (SNWR). The refuge is composed of approximately 1/3 forest (bur/pin oak dominated), 1/3 upland grass (restored prairie dominated) and 1/3 wetland (cattail dominated) with no agricultural crops amongst its 35,000 acres. This island of wildlife habitat in Sherburne County typically attracts and holds hundreds of deer within its borders spring, summer and fall. Likewise, as most of the refuge is open to deer hunting, this area attracts hundreds of archery and firearms hunters. Through the past 40 years many human residences have been built next to the refuge border, increasing wildlife contacts in positive and challenging ways. Generally, deer populations are adequately managed through moderate-to-conservative (Hunter Choice and Lottery) hunting strategies. Deer depredation complaints are usually moderate in DPA 224, but new specialty crop operations close to the refuge have increased complaints in recent years. During severe winters deer tend to move out onto private lands where more high energy foods are present.

2015 Deer Population Goal:

Communicate interest in a population increase of 50%, relative to 2014 population, to USFWS Refuge Managers

Summary of decision

A majority (87%) of hunters surveyed in this permit area preferred a population increase, with the greatest number (45%) preferring an increase of 25%. Private landowners were not surveyed about this permit area because it is entirely public land (Sherburne National Wildlife Refuge). Public comment collected via online and written questionnaires in winter 2015 showed a majority (69%) of questionnaire respondents preferred a population increase, with the greatest number (44%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 50%. Factors considered in the team discussion included wildlife viewing, available habitat, harvest levels, hunting pressure, hunter satisfaction rates, habitat for waterfowl and migratory birds, impacts to native plant communities and more. Public comment collected in spring 2015 showed that approximately 62% of commenters supported or were ok with the team's recommendation. The Department recognizes that management objectives for the NWR, e.g., from their 2005 Comprehensive Conservation Plan (CCP), must be considered along with the desire for deer population increases. DNR will coordinate management with the USFWS to increase the deer population in DPA 251 while also recognizing management objectives of the Refuge.

Management implications

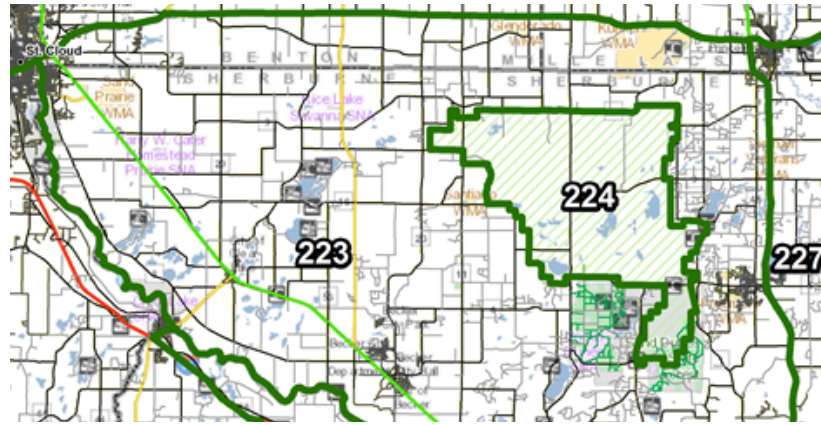
- This recommendation will result in management for population levels above those directed by previous goals.
- Because the population is not modeled (due to the permit area's small size), a target density is not available. Trends in harvest indices, WSI, and field observations will be used to assess population status.

- If milder winter conditions continue, conservative-to-moderate management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain it at goal in this area.

Deer Permit Area: 224
Size of Deer Permit Area: 49 square miles; 47 square miles of land.
2015 Population Goal: Communicate interest in a population increase of 50%, relative to 2014 population, to USFWS Refuge Managers.
Comments: This is the Sherburne National Wildlife Refuge. The population for this small area is not modeled.

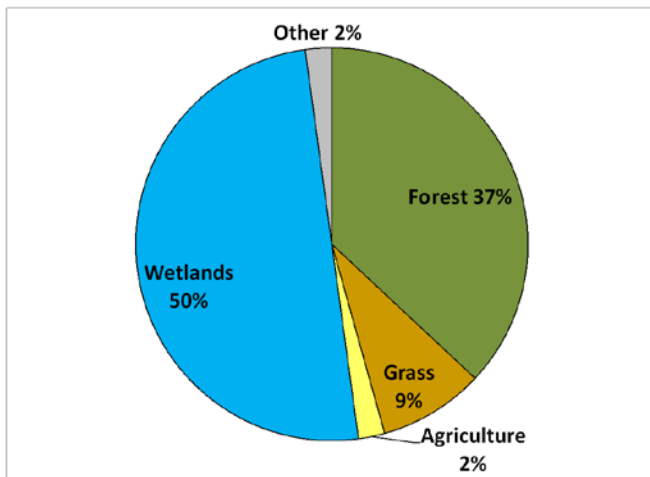
Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Managed	844	36%	304	133	171
2006	Managed	761	48%	367	142	225
2007	Managed	704	48%	340	132	208
2008	Managed	737	37%	271	127	144
2009	Lottery (350)	659	29%	190	103	87
2010	Lottery (350)	640	38%	246	131	115
2011	Managed	766	34%	257	111	146
2012	Hunter's Choice	702	30%	213	124	89
2013	Hunter's Choice	721	25%	182	111	71
2014	Hunter's Choice	749	23%	173	85	88

Deer Permit Area: 224
Size of Deer Permit Area: 49 square miles;
Area: 47 square miles of land



Habitat Categories:

2014 Model Output:
This area is not modeled due to its small size.



Deer Permit Area 227

Permit area 227 is split predominately between northern Anoka County and southern Isanti County. The western edge of the deer permit area (DPA) lies in Sherburne County on the east side of Hwy. 169. The Rum River is a major river feature that flows in and out of the northwestern corner of the DPA and eventually heads south through the middle of the permit area. The land base lies within the Anoka Sand Plain ecological subsection defined by sandy soils that support upland oak stands. Urban city centers and suburban housing developments are interspersed with agricultural lands. Deer recruitment is typically high in this area; past management of more liberalized seasons reflects the productivity of this deer herd.

2015 Deer Population Goal:

Stabilize at 2014 population levels over the next 3-5 years

Summary of decision

A majority (58%) of hunters surveyed in this permit area preferred a population increase, but nearly one third (29%) preferred no change in the population. Landowners surveyed in this permit area were divided between preferring no change and preferring a population increase, with the greatest number (40%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed a majority (69%) of questionnaire respondents preferred a population increase, with the greatest number (43%) preferring an increase of 25%. After reviewing biological and social data for this permit area, the deer advisory team recommended no change in the population (relative to 2014); factors considered included winter weather impacts, available habitat, harvest levels, hunter success and satisfaction rates, over-browsing by deer, biodiversity and more. Public comment collected in spring 2015 showed that approximately 46% of commenters supported or were ok with the team's recommendation; of those that did not support the team's recommendation, a majority preferred a population increase. The Department has decided to manage for no change in the deer population in recognition of the advisory team recommendation and the range of stakeholder desires.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.
- The Department will aim for a target density of 13-17 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 12-18 dpsm⁴. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.

⁴ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are

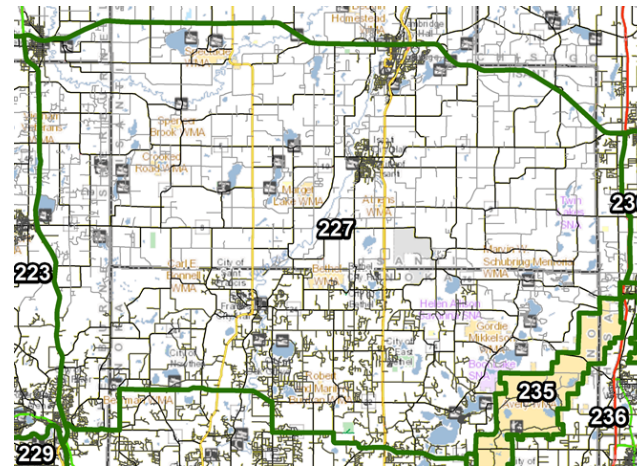
- If milder winter conditions continue, moderate-to-liberal management strategies are anticipated for the next few years to continue moving the population toward goal and/or maintaining it at goal in this very productive area.

developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

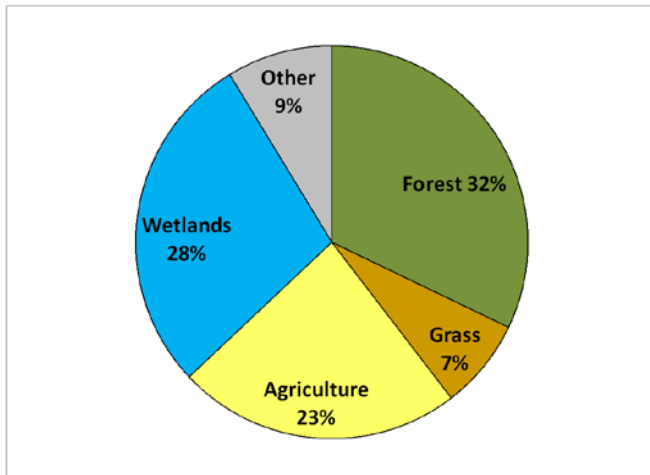
Deer Permit Area: 227
Size of Deer Permit Area: 492 square miles total; 472 square miles of land.
2015 Population Goal: Stabilize at 2014 population levels over the next 3-5 years.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Intensive	4762	53%	2518	973	1545
2006	Intensive	4133	70%	2906	1079	1827
2007	Intensive	4342	68%	2945	1106	1839
2008	Intensive	4329	54%	2323	999	1324
2009	Intensive	4402	61%	2679	1063	1616
2010	Intensive	4361	68%	2951	1072	1879
2011	Intensive	4675	55%	2587	1039	1548
2012	Intensive	4949	53%	2626	1044	1582
2013	Intensive	4859	55%	2668	1095	1573
2014	Hunter's Choice	5044	38%	1923	1028	895

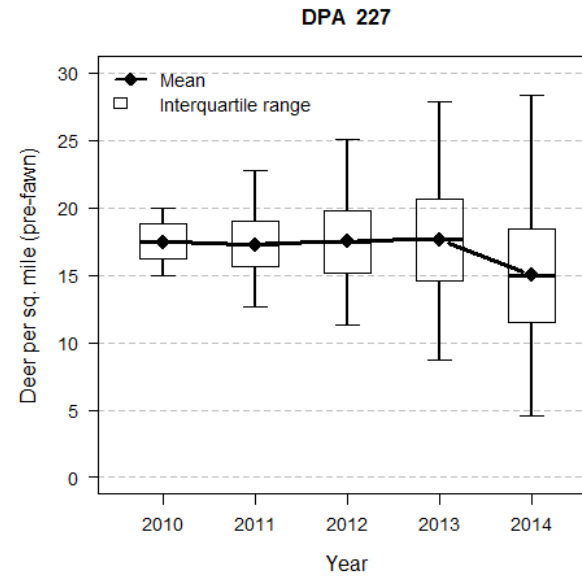
Deer Permit Area: 227
Size of Deer Permit Area: 492 square miles total;
 472 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 229

Deer Permit Area 229 includes much eastern Wright County with similar habitat components as DPA 219 of rolling hardwood and agricultural land interspersed with rivers and lakes. The main difference between the two is that the human population in DPA 229 is significantly higher and private land tracts are significantly smaller. This permit area has traditionally been more difficult to manage for deer populations mostly because of the human dimension. Historically, deer harvest management has alternated between conservative and more liberal management strategies. Numerous small private land tracts that are off limits to hunting, due to landowner preferences, often require a more aggressive hunting strategy for the entire permit area to accomplish harvest goals. DPA 229 also borders DPA 601, the Twin Cities metropolitan area, where there is no harvest limit on antlerless deer.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (73%) of hunters surveyed in this permit area preferred a population increase, with the greatest number (40%) preferring an increase of 10%. Landowners surveyed in this permit area were divided between preferring no change in the population and preferring a population increase, with the greatest number (39%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (75%) of questionnaire respondents preferred a population increase, with the greatest number (42%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%. Factors considered in the team's discussion included harvest levels, hunter success rates, impacts to native plant communities, hunting pressure and more. Public comment collected in spring 2015 showed that approximately 78% of commenters supported or were ok with the team's recommendation. The Department has decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for team recommendations. Management for this goal will result in deer population levels lower, but similar, to those of peak population years. As a result, additional monitoring of deer population goal impacts will likely be needed given the potential for social conflicts associated with communities and land uses (e.g., specialty crops) in the area.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.

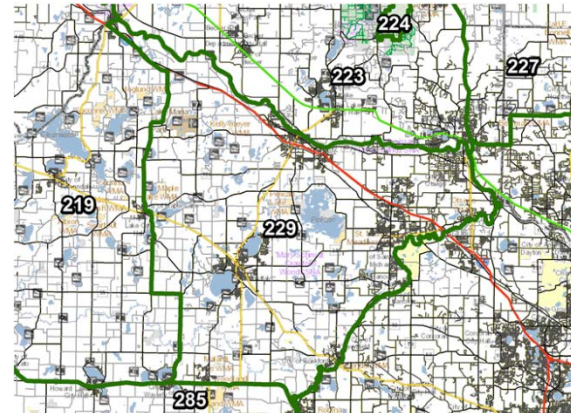
- The Department will aim for a target density of 11-14 deer per square (dpsm) mile of land area (pre-fawn) based on the 2014 model estimate of 8-12 dpsm⁵. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.
- If milder winter conditions continue, moderate-to-liberal management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain at goal in this very productive area.

⁵ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

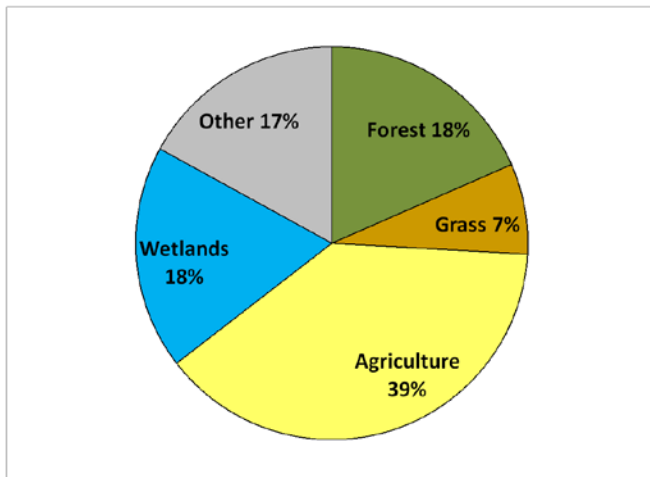
Deer Permit Area: 229
Size of Deer Permit Area: 313 square miles total; 284 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.
Comments: Deer Permit Area (DPA) 229 was renamed in 2006. It was previously DPA 429.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Intensive	1510	44%	658	268	390
2006	Intensive	1279	60%	773	276	497
2007	Managed	1377	56%	771	283	488
2008	Managed	1457	43%	622	248	374
2009	Lottery (1200)	1497	34%	505	309	196
2010	Lottery (1500)	1481	38%	558	286	272
2011	Managed	1512	40%	599	273	326
2012	Hunter's Choice	1551	33%	514	284	230
2013	Managed	1525	38%	585	304	281
2014	Lottery (300)	1463	29%	429	286	143

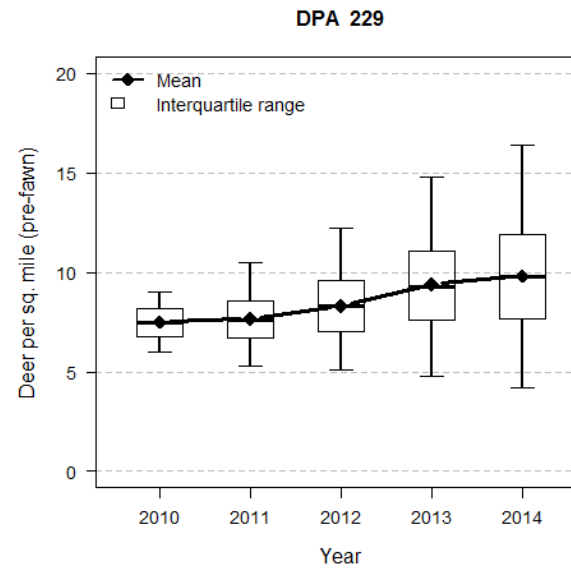
Deer Permit Area: 229
Size of Deer Permit Area: 313 square miles total;
 284 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 235

This permit area consists solely of the roughly 24,000 acre Carlos Avery Wildlife Management Area. The permit area is smaller than most DPAs and has two sanctuary areas. This area consists primarily of large wetland complexes and oak forest. Two-thirds of the permit area is wetland with a mix of open water, cattail marsh, and shrub swamp; the remainder is upland, consisting of oak woodlands, mixed hardwoods, upland grasses, and 50-100 acres of agriculture. The permit area is long and narrow, making it easy for deer to move in and out of the permit area on a regular basis. Deer numbers have remained relatively stable and, due to the close proximity of the Metro area, hunting pressure is high. Deer harvest has also been relatively stable; averaging around 120 deer per year over the last decade. A special deer hunt for hunters who are disabled often takes place prior to the regular firearm season in the sanctuary portion of the area through Capable Partners. Deer damage to neighboring agricultural crops has been relatively low.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (84%) of hunters surveyed in this permit area preferred a population increase, with the greatest number (47%) preferring a 10% increase. Private landowners were not surveyed about this permit area because it is entirely public land (Carlos Avery Wildlife Management Area). Public comment collected via online and written questionnaires in winter 2015 showed that a majority (76%) of questionnaire respondents preferred a population increase, with the greatest number (45%) preferring an increase of 25%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%. Factors considered in the team's discussion included hunter satisfaction rates, hunting pressure, ecosystem health, biodiversity and more. Public comment collected in spring 2015 showed that approximately 71% of commenters supported or were ok with the team's recommendation. The Department has decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for team recommendations.

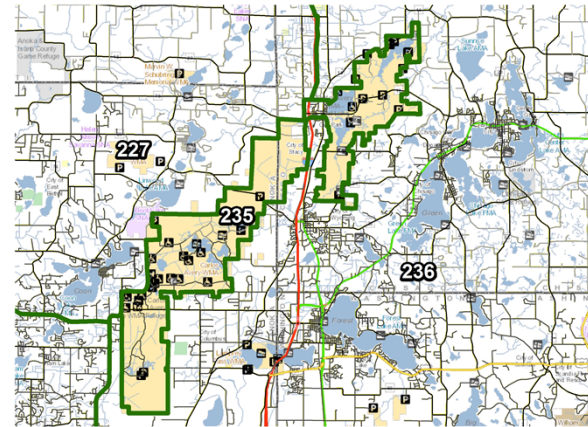
Management implications

- This recommendation will result in management for population levels above those directed by previous goals.
- Because the population is not modeled (due to its small size), a target density is not available. Trends in harvest indices, WSI, and field observations will be used to assess population status.
- If milder winter conditions continue, conservative-to-moderate management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain it at goal in this productive area.

Deer Permit Area: 235
Size of Deer Permit Area: 37 square miles total; 34 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.
Comments: This is the Carlos Avery Wildlife Management Area. The population for this small area is not modeled.

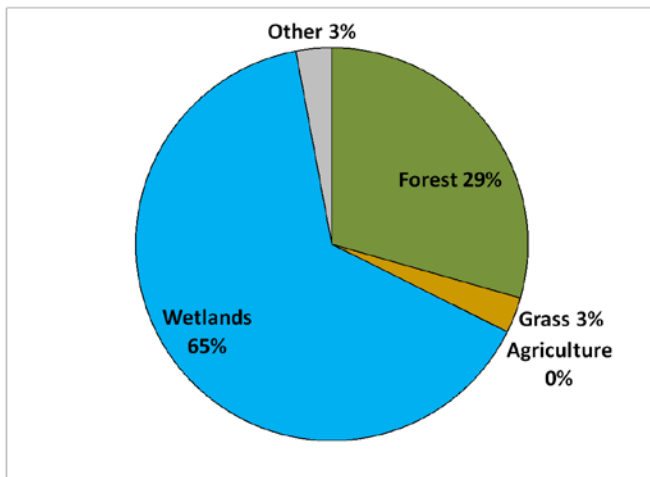
Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Managed	540	36%	192	86	106
2006	Managed	557	43%	242	97	145
2007	Managed	453	40%	179	75	104
2008	Managed	446	32%	142	61	81
2009	Lottery (25)	342	25%	84	53	31
2010	Lottery (25)	349	34%	119	73	46
2011	Lottery (75)	392	30%	119	65	54
2012	Lottery (75)	308	35%	107	65	42
2013	Hunter's Choice	324	41%	133	73	60
2014	Hunter's Choice	639	23%	146	88	58

Deer Permit Area: 235
Size of Deer Permit Area: 37 square miles total;
34 square miles of land



Habitat Categories:

2014 Model Output:
This area is not modeled due to its small size.



Deer Permit Area 236

This area is set within southeastern Anoka County, northern Washington County, and southern Chisago County. The St. Croix River defines the eastern boundary. The land area is unique as it moves from Anoka Sand Plain ecological subsection, with flat sandy habitats supporting prairies and wetlands, to the pine stands and hardwood forests along the river within the St. Paul Baldwin Plains and Moraines subsection. The southern area is highly developed with numerous smaller, privately owned parcels of land. DPA 236 abuts the metro 601 unlimited deer zone on its southern border. Deer depredation issues are higher in this area with specialty crop growers utilizing the fertile soils. The deer population in this area is highly productive and the harvest management scheme has been more liberal in the recent past to control population growth.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (68%) of hunters surveyed in this permit area preferred a population increase, with the greatest number (26%) preferring an increase of 10%. Landowners surveyed in this permit area were divided between preferring no change in the population and preferring a population increase, with the greatest number (41%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (71%) of questionnaire respondents preferred a population increase, with the greatest number (50%) preferring an increase of 25%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%. Factors considered in the team's discussion included available habitat, impacts of winter weather, harvest levels, hunter satisfaction rates, forest regeneration, damage to crops and landscaping, local variation in deer populations and more. Public comment collected in spring 2015 showed that approximately 74% of commenters supported or were ok with the team's recommendation. The Department has decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for team recommendations. This area is close to the Twin Cities metro area, has a considerable amount of human development, and hunting access is more limited. Social conflicts will need to be monitored and addressed in association with management toward this goal.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.

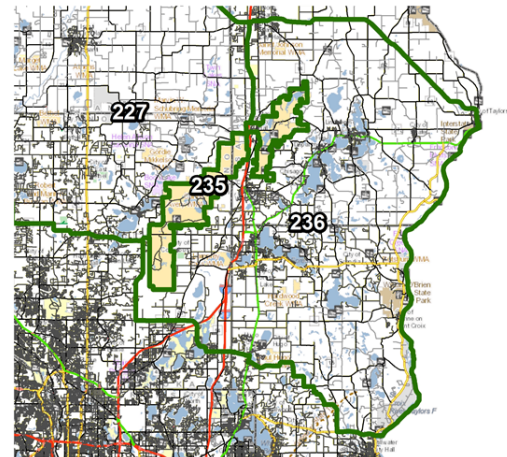
- The Department will aim for a target density of 16-21 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 12-18 dpsm⁶. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.
- The mild 2014-15 winter, coupled with more conservative management in 2014, appears to have moved this population into target density range for 2015. If milder winter conditions continue, moderate-to-liberal management strategies are anticipated for the next few years to continue moving the population toward goal and/or maintain it at goal in this very productive area.

⁶ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

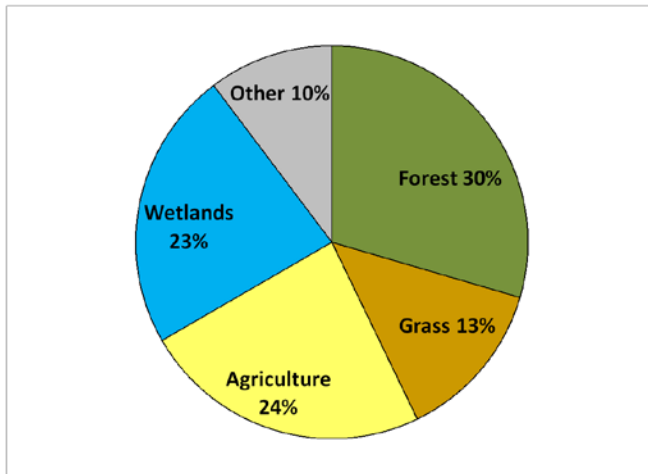
Deer Permit Area: 236
Size of Deer Permit Area: 404 square miles total; 370 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Intensive	3697	69%	2550	1067	1483
2006	Intensive	3292	75%	2459	935	1524
2007	Intensive	3381	79%	2662	1085	1577
2008	Intensive	3232	68%	2189	916	1273
2009	Intensive	3228	69%	2232	939	1293
2010	Intensive	3233	73%	2373	883	1490
2011	Intensive	3117	60%	1880	808	1072
2012	Intensive	3118	65%	2015	850	1165
2013	Intensive	3212	55%	1762	768	994
2014	Hunter's Choice	3026	42%	1284	739	545

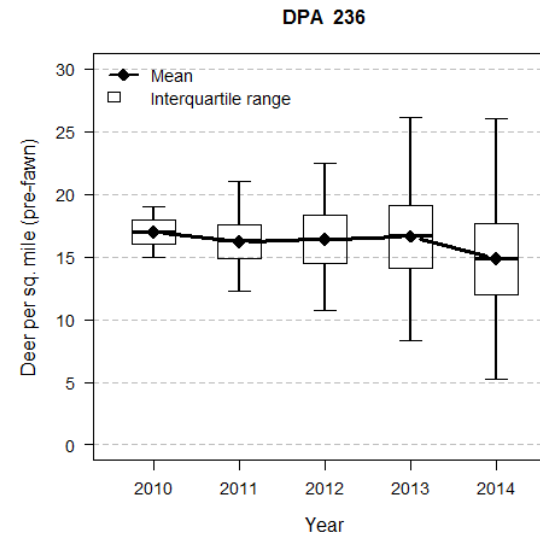
Deer Permit Area: 236
Size of Deer Permit Area: 404 square miles total;
Area: 370 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 285

This permit area is a mix of agricultural land and forest. The best deer habitat is found in the Northern two-thirds of the permit area with most older, upland forest stands being dominated by oak. The Southwestern third of the permit area has a greater agricultural component in the landscape. The deer population has been relatively stable and there are few complaints of deer damage to agricultural crops.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

A majority (88%) of hunters surveyed in this permit area preferred a population increase, with the greatest number (35%) preferring an increase of 25%. Landowners surveyed in this permit area were divided between preferring no change in the population and preferring a population increase, with the greatest number (39%) preferring no change. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (83%) of questionnaire respondents preferred a population increase, with the greatest number (51%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%. Factors considered in the team's discussion included hunter success and satisfaction rates, impacts to native plant communities, available habitat, harvest levels and more. Public comment collected in spring 2015 showed that approximately 76% of commenters supported or were ok with the team's recommendation. The Department has decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for team recommendations.

Management implications

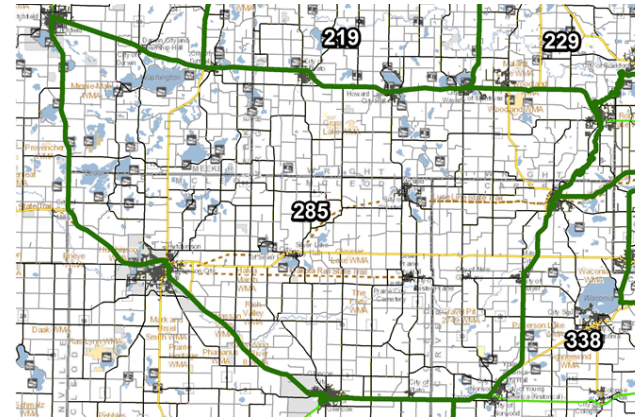
- This recommendation will result in management for population levels above those directed by previous goals.
- The Department will aim for a target density of 11-14 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 8-12 dpsm⁷. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.
- If milder winter conditions continue, conservative management strategies are anticipated for the next few years to move the population toward/maintain at goal in this area.

⁷ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

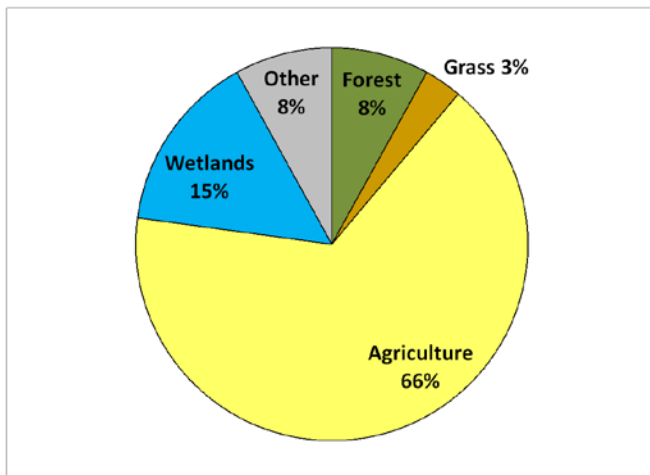
Deer Permit Area: 285
Size of Deer Permit Area: 580 square miles total; 549 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.
Comments: Deer Permit Area (DPA) 285 was re-named in 2008. It was previously DPA 428.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	Managed	2720	37%	1009	402	607
2006	Lottery (1000)	2070	39%	800	346	454
2007	Lottery (500)	2223	31%	691	415	276
2008	Lottery (500)	2149	33%	712	434	278
2009	Lottery (500)	2222	31%	699	451	248
2010	Lottery (750)	2299	36%	817	462	355
2011	Lottery (900)	2441	31%	761	454	307
2012	Lottery (700)	2516	29%	739	482	257
2013	Lottery (1100)	2491	30%	758	461	297
2014	Lottery (1100)	2417	30%	723	412	311

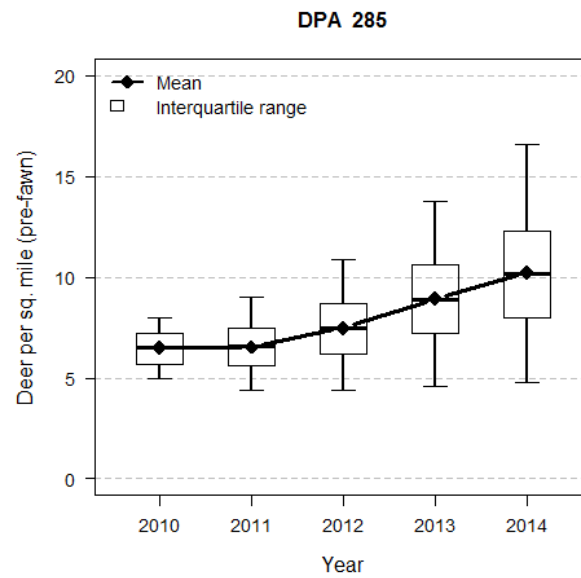
Deer Permit Area: 285
Size of Deer Permit Area: 580 square miles total;
 549 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 338

This deer permit area (DPA) is a mixture of agricultural land, wetlands, blufflands and upland forest. The DPA contains several State wildlife management areas, regional parks and USFWS refuge lands. The deer population has remained relatively stable with few complaints of deer damage to agricultural crops. This permit area is bordered on the north and east by the Metro Deer Management Unit, DPA 601.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

Hunter and landowner surveys were last conducted in SE Minnesota (including this permit area) in 2012. At that time, hunter respondents were divided between preferring no change in the population and preferring a population increase, with the greatest number (54%) preferring a population increase and 35% preferring no change. Landowner surveys were not conducted within this permit area. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (82%) of questionnaire respondents preferred a population increase, with the greatest number (56%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team did not reach consensus on a recommendation for this permit area (individual team member recommendations ranged from decrease 25% to increase 50%, with the greatest number of members recommending an increase of 25%). Factors considered in the team's discussion included available habitat, harvest levels, hunter success and satisfaction rates, hunting pressure, consistency of management since previous goals were set, and more. Public comment collected in spring 2015 showed that a majority of commenters preferred a population increase. The Department has decided to manage for an increased deer population in recognition of individual advisory member preferences, the range of stakeholder desires, and public support for an increase.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.
- The Department will aim for a target density of 6-9 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 5-8 dpsm⁸. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.

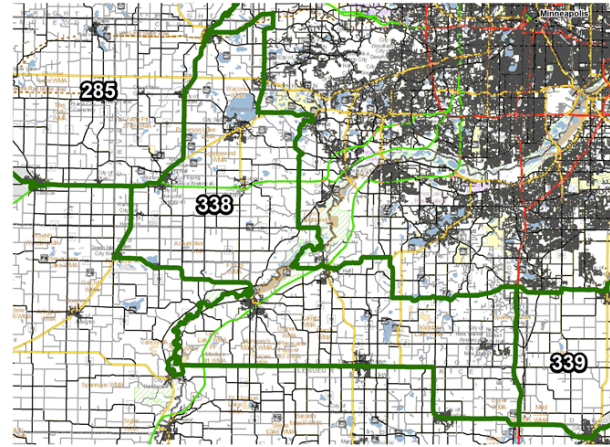
⁸ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate of the 2014 population and best available data, along with other population indices.

- If milder winter conditions continue, moderate management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain it at goal in this area.

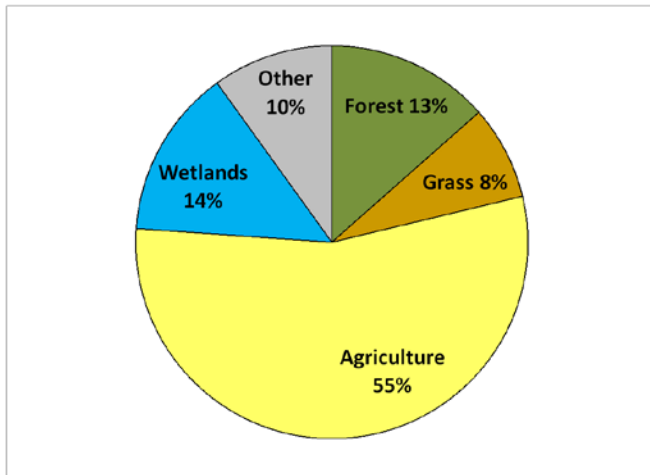
Deer Permit Area: 338
Size of Deer Permit Area: 472 square miles total; 454 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	A-Lottery (150) B-Managed	1766	38%	669	317	352
2006	A-Lottery (150) B-Managed	1672	43%	720	322	398
2007	A-Lottery (100) B-Managed	1849	43%	804	414	390
2008	A-Lottery (100) B-Managed	1869	36%	673	336	337
2009	Managed	1914	44%	836	381	455
2010	Lottery (1000)	1809	26%	479	201	278
2011	Managed	2097	31%	658	214	444
2012	Managed	2083	36%	742	294	448
2013	Managed	2097	33%	698	266	432
2014	Hunter's Choice	2104	26%	555	236	319

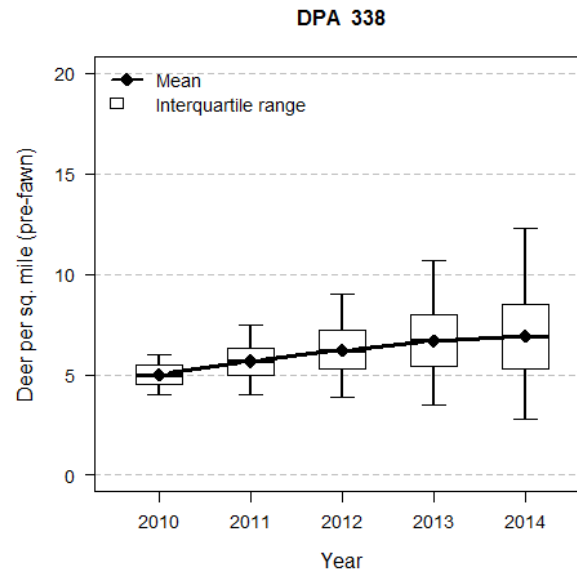
Deer Permit Area: 338
Size of Deer Permit Area: 472 square miles total;
 454 square miles of land



Habitat Categories:



2014 Model Output:



Deer Permit Area 339

This deer permit area (DPA) is a mixture of agricultural land and forest. The permit area contains several State wildlife management areas including the approximately 7000-acre Gores Pool #3 WMA, consisting primarily of floodplain forest and backwater sloughs. The deer population has remained relatively stable and there are few complaints of deer damage to agricultural crops. This permit area is bordered on the north by the Metro Deer Management Unit, DPA 601.

2015 Deer Population Goal:

Increase the population 25%, relative to 2014 population, over the next 3-5 years

Summary of decision

Hunter and landowner surveys were last conducted in SE Minnesota (including this permit area) in 2012. At that time, hunter respondents were divided between preferring no change in the population and preferring a population increase, with the greatest number (45%) preferring a population increase and 41% preferring no change. Landowner surveys were not conducted within this permit area. Public comment collected via online and written questionnaires in winter 2015 showed that a majority (84%) of questionnaire respondents preferred a population increase, with the greatest number (66%) preferring an increase of 50%. After reviewing biological and social data for this permit area, the deer advisory team recommended a population increase of 25%. Factors considered in the team's discussion included available habitat, harvest levels, hunter success and satisfaction rates, previous goals, native plant communities, predation concerns, and more. Public comment collected in spring 2015 showed that approximately 70% of commenters supported or were okay with the team's recommendation. The Department decided to manage for an increased deer population in recognition of the advisory team recommendation, the range of stakeholder desires, and public support for an increase.

Management implications

- This recommendation will result in management for population levels above those directed by previous goals.
- The Department will aim for a target density of 10-13 deer per square mile (dpsm) of land area (pre-fawn) based on the 2014 model estimate of 7-11 dpsm⁹. In addition to trends indicated by the population model estimates, trends in harvest indices, WSI, and field observations will be used to assess population status.

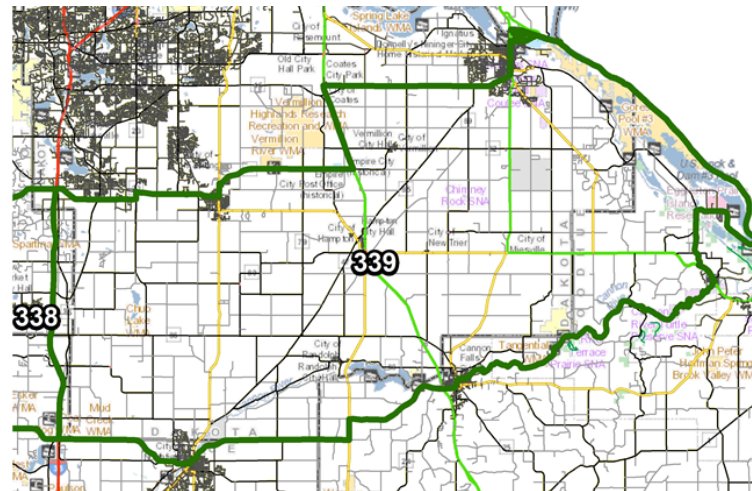
⁹ Note that, similar to a weather forecast or budget forecast, model estimates may change over time as new information is incorporated into the model. For example, DNR deer population modeling occurs each spring prior to setting deer seasons. If the winter persists beyond the date when population estimates are developed, the estimate for that year may be different in the following year once the final data on winter severity can be included. In that case, DNR will assess the trend in the population based on the most up-to-date estimate and best available data.

- If milder winter conditions continue, conservative-to-moderate management strategies are anticipated for the next few years to continue moving the population toward goal and/or to maintain it at goal in this area.

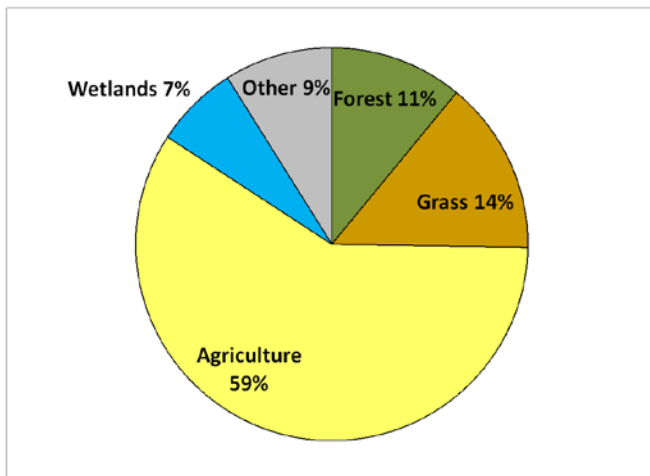
Deer Permit Area: 339
Size of Deer Permit Area: 406 square miles total; 394 square miles of land.
2015 Population Goal: Increase the population 25%, relative to 2014 population, over the next 3-5 years.

Year	Mgmt. Designation	No. Firearm Hunters	Firearm Success (%)	Reported Deer Harvest (All seasons)		
				Total	Bucks	Antlerless
2005	A-Lottery (150) B-Managed	1683	36%	606	323	283
2006	A-Lottery (150) B-Managed	1578	39%	622	297	325
2007	A-Lottery (100) B-Managed	1670	42%	694	365	329
2008	A-Lottery (100) B-Managed	1665	39%	643	327	316
2009	Managed	1787	45%	801	344	457
2010	Managed	1705	40%	690	247	443
2011	Managed	1775	38%	673	271	402
2012	Managed	1870	38%	716	308	408
2013	Managed	1900	35%	669	260	409
2014	Hunter's Choice	1862	34%	633	283	350

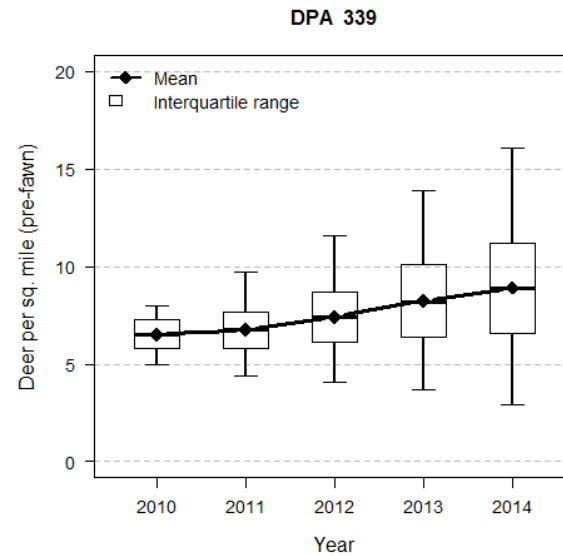
Deer Permit Area: 339
Size of Deer Permit Area: 406 square miles total;
 394 square miles of land



Habitat Categories:



2014 Model Output:



References

MNDNR. 2014. *2014 Minnesota Deer Harvest Report*. St. Paul, Minnesota. 44pp.

MNDNR. 2015. *Minnesota Deer Population Goal Setting Packet: Superior Uplands Arrowhead Goal Block 2015*. St. Paul, Minnesota. 66pp.
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MNDNR. 2015. *Superior Uplands Arrowhead: Deer Goal Setting – Block 1 Landowner and Hunter Survey Results*. St. Paul, Minnesota. 32pp.