Forest Preserve District
OF WILL COUNTY
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M E M O R A N D U M

TO: BOARD OF COMMISSIONERS OF THE FOREST PRESERVE DISTRICT OF WILL COUNTY

FROM: Marcella M. DeMauro, Executive Director

DATE: August 20, 2014

SUBJECT: Review and Consider Approval of Recommendations for Deer Management at Six (6) Forest Preserves or Preserve Complexes During the 2014 – 2015 Fall-Winter Season

Background

In September 2010, the Board approved the Operational Plan for the District's Deer Management Program. This plan established that only sharpshooting was to be used to manage the deer population to achieve an initial target density of between 20 to 30 deer per square mile. Although the overall deer management program was approved, each year Staff provides specific recommendations on the number of deer to be removed from select forest preserves.

Adoption of the Operational Plan (Plan) for Deer Management

The District's Plan states that the deer management program goal is to allow for a sustainable relationship between the deer population and biological diversity and habitat structure, with an initial target deer density of 20 deer per square mile. The Plan also states that the program will be ongoing and that the target deer density per square mile is expected to change as a result of the District's monitoring, which is designed to collect and assess data on deer population levels, habitat recovery, and deer management program effectiveness. The results of the monitoring program will be used to modify and adapt management strategies and targets to existing conditions and ensure the ongoing effectiveness of the deer management program. The Plan also states that Staff will consider program effectiveness measured against operational expense, and make the necessary programmatic changes to the deer management program to maintain cost effectiveness and ensure long-term sustainability.

This upcoming season marks the District's fourth year of deer management. At the end of the 2010-2011 and 2011-2012 programs, Staff completed and forwarded a final report to the Operations Committee and Board. In both reports staff identified areas for operational

improvement, and made recommendations for the following year's deer management program. The 2012-2013 program was suspended due to concerns about the possible effect of Epizootic Hemorrhagic Disease (EHD) on the population sizes of white-tailed deer in District preserves and subsequent impacts disease related mortality might have on the deer management program. Data from the Illinois Department of Natural Resources (IDNR) and aerial deer population counts conducted during the winter of 2012-13 demonstrated that EHD had not caused a significant reduction in deer population sizes within District preserves.

The District resumed deer management activities for 2013-2014. A final report and assessment of the 2013-2014 management program (see Attachment 3) is being provided along with this memo which gives recommendations to continue the program during the 2014-2015 management season.

2014 - 2015 Fall-Winter Deer Management Recommendations

Preserve Locations and Deer Removal Number

Aerial deer population surveys were completed in December 2013 and January 2014. Table 1 (in Attachment 2) lists the properties that are proposed for deer management based on that survey data, as well as the estimated deer density and area counted as part of each property. Table 1 includes data from 2008 through the 2013-2014 aerial surveys. Historical data prior to 2008 (dating back to 1993) are also available but not very meaningful when developing management recommendations for the upcoming season.

Deer removal is recommended in the following six preserves or areas (areas may contain more than one preserve, but the IDNR considers them a single management unit) for the 2014-15 program:

- Lockport Prairie Nature Preserve
- McKinley Woods Preserve
- Kankakee Sands Geologic Area (including Sand Ridge Savanna Preserve, Braidwood Dunes and Savanna Nature Preserve, and Kankakee Sands Preserves);
- Goodenow Grove Nature Preserve
- Hickory Creek Preserve
- Raccoon Grove Nature Preserve

The total number of deer proposed for removal during the 2014-15 management season is 181 (see Table 4, Attachment 2).

Of note, Romeoville Prairie Nature Preserve (including the Isla a la Cache Preserve) is the first property managed for deer that has reached initial target population size based on the most recent aerial count results. While the deer browse survey still indicates heavy use, this site is not being recommended for additional deer removal during the 2014-2015 management season. It will be monitored and re-evaluated for possible inclusion in the 2015-2016 management season.

The deer removal goals at most preserves in the recommendations for the 2014-15 management season are not intended to accomplish the desired population density by the end of this season.

These sites include McKinley Woods Preserve, Kankakee Sands Geologic Area, Goodenow Grove Nature Preserve, Hickory Creek Preserve, and Raccoon Grove Nature Preserve. In these preserves the deer population size and current density is so high that establishing the desired population size within the time constraints of single season and Deer Population Control Permit (DPCP) is not feasible. Additional deer removal in subsequent years will likely be necessary to achieve site goals.

It is important to note that the population sizes reported in Table 1 do not reflect any immigration, emigration or births which may have occurred since the time of the aerial survey, and that the aerial deer counts represent a conservative population estimate based on the presence of deer within the preserve or survey area at the specific time of the flyover. Aerial surveys are generally considered to underestimate the actual population size by 25%. Also, it is very common for deer to exhibit daily movements between District properties and adjacent properties depending on various conditions.

Upon Board approval of the 2014-2015 deer management program recommendations, staff will submit a Deer Population Control Permit (DPCP) application to the Illinois Department of Natural Resources (IDNR) for review and approval.

Required Documentation for the Deer Population Control Permit Application

The IDNR also requires deer browse monitoring during the growing season preceding any proposed culling activities when reviewing permit applications. In July, District staff completed vegetation sampling at each of the areas recommended for culling during the 2014-15 season. This sampling documented ongoing elevated deer browse pressure in support of the permit application to initiate or continue population reduction. The complete browse results will be included in the IDNR's DPCP application and are summarized in Table 2 (in Attachment 2).

Vegetation sampling demonstrates the impact of deer browsing on native plants by use of the coefficient of conservatism value (C-value). The C-Value is a measure developed by the Morton Arboretum to describe the authenticity of the affiliation of plant species to their respective habitats. Plant species with higher C-Values have an increasingly narrow and restrictive distribution to unique and specific habitats, and become increasingly intolerant of any habitat disturbances or degradations. Plant species with lower C-Values have a broader distribution in a variety of habitats. Plants species with higher C-Values are native species, are generally rare in their associated habitats, and not likely to be found outside of those habitats; while species with lower C-Values are generalists, include both native and exotic species, and are typically very tolerant of habitats that are disturbed or degraded.

Deer Removal Recommendation Relative to Sex Ratio

During the first two years of the deer management program, sharpshooters focused on the removal of only antlerless individuals to facilitate a more rapid population reduction by both removing existing deer and reducing additions to the population through births. As expressed in previous reports, one concern was the potential for creating a sex ratio favoring males, a condition not supportive of the deer management program goal. Staff indicated in previous reports that modifications to the deer program would be required in response to evidence of

skewed sex ratios in preserves selected for deer management.

During the 2011-12 management program, skewed sex ratios probably contributed to the reduced sharpshooter efficiency and increased costs as compared to the 2010-11 program. For the 2013-2014 management program the Board approved staff's recommendation to include antlerless deer (fewer than 10 antler points). Therefore staff is recommending the continued preferential, but not exclusive, removal of does during the 2014-15 management program, allowing for the removal of younger males if necessary to achieve removal targets. Mature males showing ten or more antler points will not be removed.

Site Details

Pending issuance of the required population control permits from IDNR, the District's Police Department will engage in sharpshooting (beginning at dusk) to achieve the target deer density of between 20 and 30 deer per square mile at the six identified areas.

The attached maps (Attachment 1) show the positions of bait/shooting stations within each preserve. Habitat conditions, access and safety considerations were primary factors affecting the selection of station locations. Firing stations will be in both elevated stands and at ground level. The main determinant in the firing station elevation is natural terrain. Natural terrain was considered at all stations in all preserves to ensure an acceptable backdrop for shooting in a downward trajectory at all times over a distance of 50 yards or less (the same distance required for IDNR sharpshooter certification); and shooting into the preserve, not toward or beyond the preserve's boundary. The following is a brief description of bait/firing stations and existing deer browse pressure at each of the six areas.

***Romeoville Prairie Nature Preserve and Isle a la Cache Area* (RPN)**

Romeoville Prairie Nature Preserve occupies over 590 acres of the DesPlaines River Valley north of 135th Street on the west side of the river. It is dominated by prairie, sedge meadow, and marsh communities. The preserve has no public access areas and is well buffered from residential and other public spaces. The terrain is very level and the landscape very open.

The Isle a la Cache occupies 96 acres on an island in the DesPlaines River south of 135th Street. While the Isle a la Cache museum and associated amenities occur in the northern half of this area, the southern half of the preserve is flat and largely wooded with a few isolated open areas well suited for sharpshooting.

Vegetation sampling from these two preserves documented that 89% of all native plants sampled exhibited some degree of deer browse and 90% of highly conservative plants, those with a coefficient of conservatism value (C-value) of seven or higher were browsed. As the number of deer documented in the preserve was within the target range of 20-30 deer per square mile, staff will continue to monitor the site and may recommend additional removal of deer at a future date. Staff may also recommend lowering the target density for this site if heavy browse of highly conservative plant species continues to be a problem.

***Lockport Prairie Nature Preserve* (LPN)**

Lockport Prairie Nature Preserve is a 254-acre site located along the west bank of the DesPlaines River east of Route 53 and south of Route 7. The preserve has a relatively flat terrain; it occupies the floor of the river valley which is approximately 40 feet below the west bluff of the DesPlaines River valley along Route 53. Up to two (2) bait stations are proposed and staff intends to use elevated stands.

Vegetation sampling from these areas documented that 57% of all native plants and 76% of highly conservative plant species with a C value of seven or higher exhibited deer browse. Woody vegetation throughout this preserve is continuing to experience excessive browse pressure. The recommended 2014-15 removal target for Lockport Prairie Nature Preserve is 10 deer.

***McKinley Woods Preserve and Four Rivers Environmental Education Center Area* (MWP)**

McKinley Woods is a 447-acre site situated on bluffs above the Illinois and Michigan (I&M) Canal and the Des Plaines River. The I&M Canal State Trail is between the river and the canal. The preserve is characterized by steep wooded bluffs and ravines that provide a very safe backdrop for firing stations. Up to four (4) bait stations are proposed in this preserve.

The Four Rivers Environmental Education Center is a 78-acre area located essentially on an island in the DesPlaines River. Except for the narrow strip of land connecting it to the mainland, this area is surrounded on all sides by water providing good isolation for sharpshooting activities. While the northern half of this site is largely open, the southern half is predominately wooded. One (1) bait station may be located in this area; if so, District Police will coordinate with facility staff to avoid any scheduled public programs.

Vegetation sampling from these areas documented that 54% of all native plants and 57% of highly conservative plant species with a C value of seven or higher exhibited deer browse. Woody vegetation throughout this complex of preserves is continuing to experience excessive browse pressure. Data shows that native shrubs and trees are being browsed at a rate of 61% and 67% respectively. The recommended 2014-15 removal target for the McKinley Woods and Four Rivers Environmental Education Center area is 40 deer.

***Kankakee Sands Geologic Area* (KGA)**

The Kankakee Sands Geologic Area includes multiple preserves: Sand Ridge Savanna Nature Preserve, Sand Ridge Preserve, Braidwood Dunes and Savanna Nature Preserve, and Kankakee Sands Preserve. The area recommended for deer management totals 1,412-acres.

The Sand Ridge Savanna complex is a 543-acre site comprised of both Sand Ridge Savanna Nature Preserve and Sand Ridge Preserve, located south of Route 113 approximately one mile west of the Kankakee River. The western half of the site is characterized by a series of forested dune ridges and wetlands between the ridges or agricultural fields; the eastern portion of the site contains open prairie and wetlands. Three (3) potential bait stations are proposed.

Kankakee Sands Preserve is a 555-acre site located north of Route 113 beginning approximately one quarter mile west of the Kankakee River continuing westward to about one mile away from the river. This preserve is dominated by large active agricultural fields interrupted by tree lines and interspersed pockets of wetlands and woodlands receiving significant restoration resources. Staff intends to use a combination of natural elevated shooting positions and tree stands throughout this preserve. Up to three (3) bait stations are proposed.

Braidwood Dunes and Savanna Nature Preserve is a 314-acre preserve located between Route 113 and Smiley Road, east of Sand Ridge Savanna. The preserve is dominated by sand prairie, sand savanna and wetland communities. This is a unique habitat that supports many uncommon native and conservative species which is also currently receiving significant restoration attention that could be adversely impacted by excessive deer browse. Up to three (3) bait stations are proposed.

Vegetation sampling from KGA documented that 67% of all native plants sampled had been browsed by deer. Among these, native trees, shrubs and species with a C-value of 7 or more are all suffering significant browse pressure. The recommended removal target for the Kankakee Sands Geologic Area is 21 deer.

***Goodenow Grove Nature Preserve* (GGN)**

The Goodenow Grove Nature Preserve is an 891-acre complex located east of I-394 and north of Goodenow Road. The site is characterized by heavily wooded areas along Plum Creek and its tributaries, as well as barrens (shrubby prairies), savannas and grasslands associated with level areas. Staff intends to take advantage of natural elevated positions for clear shots and backdrops to minimize the potential flight of the projectiles. Up to three (3) bait stations are proposed in this area. District Police will coordinate with facility staff to avoid any scheduled public programs and minimize interference with sled hill use.

The 2013-14 management season was the first year the total number of deer included in the DPCP for GGN was successfully removed. As a result, the area continues to demonstrate excessive levels of deer browse pressure. Vegetation sampling documented that 69% of all native plants exhibited some degree of deer browse damage. All types of plants are experiencing significant levels of deer browse, particularly native shrubs and trees which exhibited a browse rate of 92% and 100% respectively. The recommended removal target for this preserve during the winter of 2014-15 is 30 deer.

***Hickory Creek Preserve* (HCP)**

Hickory Creek Preserve is a 1,541-acre mosaic of natural communities including woodland, wetland, barrens and prairie around numerous public use amenities, all of which is surrounded by private residential properties. The preserve has terrain ranging from flat, to rolling, to steeply sloped areas. Using the large amount of interior space and varying terrain, sharpshooters will take advantage of the natural topography and elevated shooting positions from well buffered locations to limit the potential flight of projectiles. Up to four (4) bait stations are proposed in

this preserve.

Vegetation sampling at HCP documented that 100% of native shrubs and 70% of highly conservative plants with a C-value of 7 or more currently exhibit some degree of deer browse damage. Evaluating all of the native vegetation sampled, 70% had deer browse damage. The recommended removal target for this preserve during the 2014-15 management season is 60.

***Raccoon Grove Nature Preserve* (RGN)**

Raccoon Grove Nature Preserve is a 213-acre, heavily wooded preserve south of Goodenow Road and east of Route 50, with a restored prairie on the south end and a former residential area on the west side that provides more of an open savanna structure. The preserve is characterized by rolling terrain, but often features steep slopes where Rock Creek has down-cut through the morainal deposits. The wooded, rolling terrain and steep slopes associated with the creek provide excellent backdrops for safely conducting sharpshooting activities. Up to three (3) bait stations are proposed in this preserve.

Recent vegetation sampling confirms the existing deer population is causing excessive damage to the native vegetation. Overall, 64% of all native plants sampled were browsed. Additionally, very high levels of browse were evident in native shrubs and trees (100%) and highly conservative species with a C-value of 7 or more are being preferentially selected (73%). The recommended removal target for this preserve is 20 deer.

2014 - 2015 Schedule of Tasks

The attached schedule of tasks (Table 3 in Attachment 2) assumes a 60-day IDNR application review period. Ideally, desired winter conditions would allow sharpshooting activities to begin in mid-December, allowing the removal targets to be accomplished in time for aerial population counts to be conducted immediately afterwards. This is the ideal situation for assessing the resulting deer population density and determining the need for additional population management the following winter.

Deer management activities will likely be completed by the end of February 2015, but could extend into early March depending on when the 90-day population control permit expires, if an extension is requested and granted, and the actual winter weather conditions experienced.

Future Deer Management Needs

Since the District's deer management program began, the focus has been on reducing deer densities within the highest quality natural area remnants with the highest concentration and diversity of conservative plant species and unique plant communities, namely dedicated state nature preserves. Additional forest preserve sites also support important native plant populations and communities which are being degraded and/or suppressed from achieving the desired restoration potential due to excessive deer browse from resident deer populations.

Table 5 (in Attachment 2) contains a list of sites which currently have a white-tailed deer density

above the target range (most significantly above the density target) which are in need of deer population reduction once the current deer management sites transition into a population maintenance phase. These sites will be included in future deer management recommendations as program resources allow.

Recommendation

Staff recommends approval to remove 181 deer from six (6) forest preserve areas during the 2014-2015 fall-winter season. Removal will be conducted by certified sharpshooters including both District Police Officers and volunteers under the direction of the Police Department in accordance with approved program guidelines and as authorized by the Illinois Department of Natural Resources.

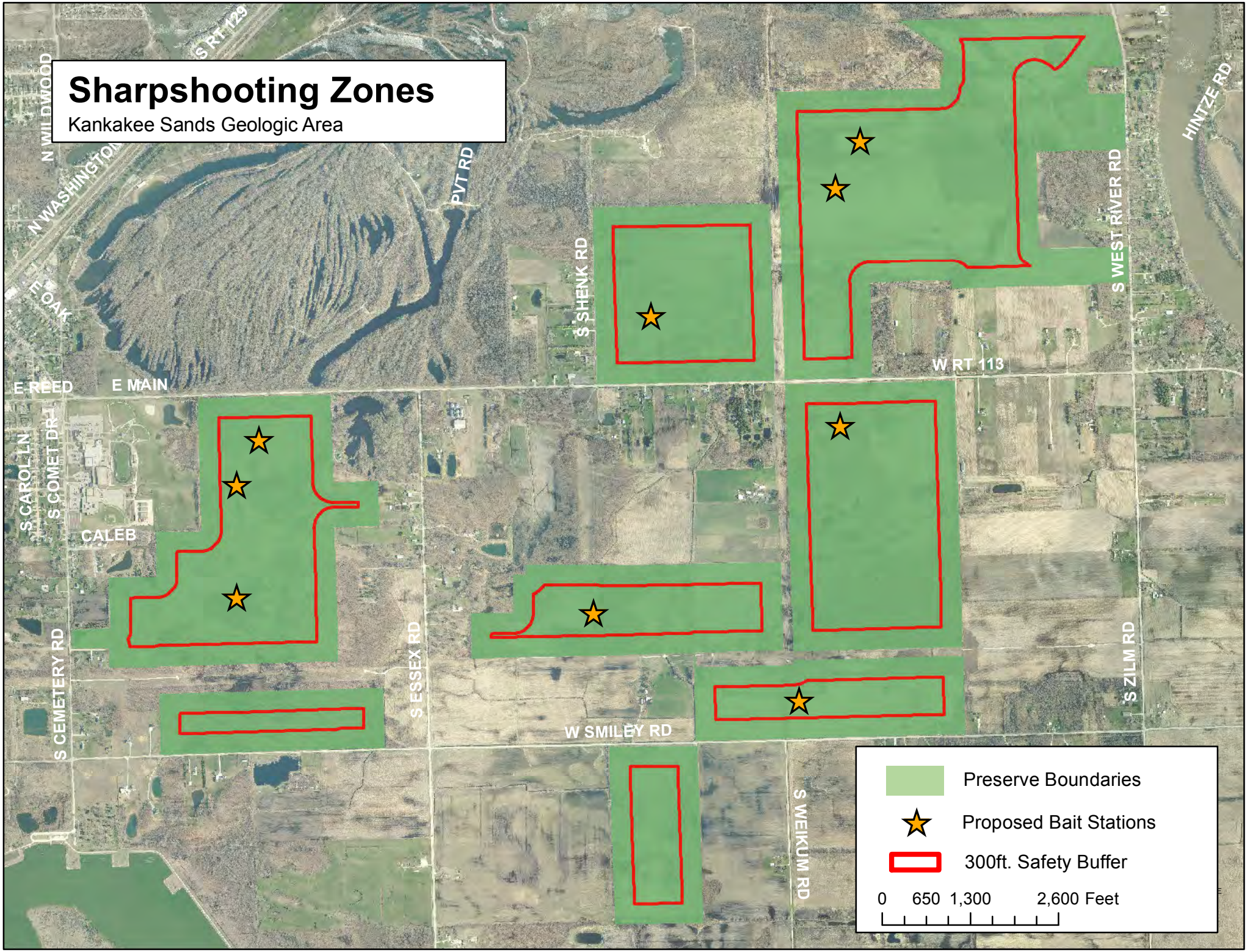
If you have any questions, please feel free to contact me.

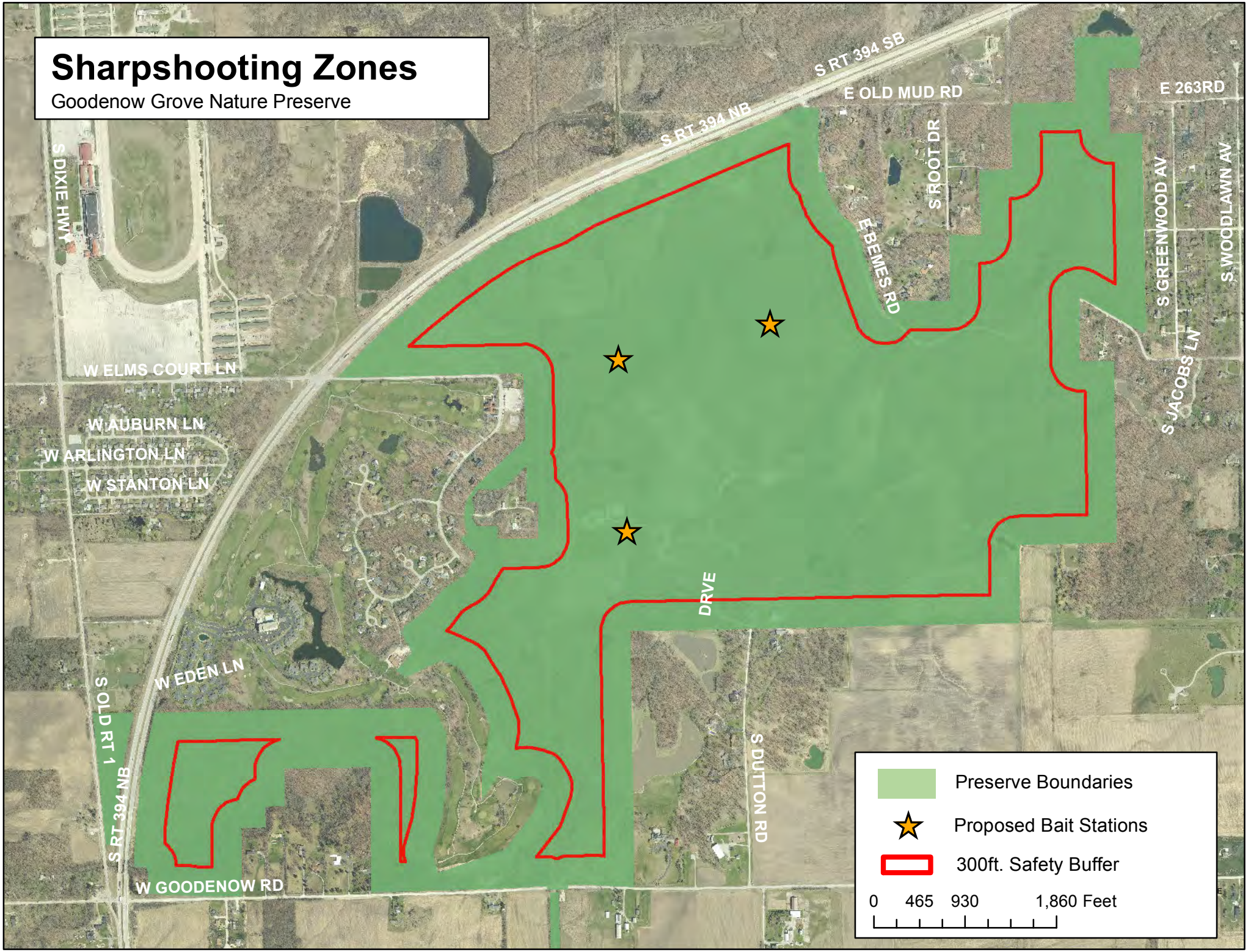
History:
09/03/14 Forest Preserve District Operations Committee APPROVED
Attachments:
Attachment 1 - SEP14 - MAPS - 2014 2015 Deer Mgmt Recommendations (PDF)
Attachment 2 - SEP14 - TABLES - Deer Mgmt Recommendations (PDF)
SEP14 - REP - 2013-2014 Deer Mgmt Program Report rev (PDF)
RESULT: **APPROVED [24 TO 2]**
MOVER: Walter G. Adamic, District 9 (D - Joliet)
SECONDER: Mark Ferry, District 13 (D - Plainfield)
AYES: Howard, Ogalla, Izzo, Wilhelmi, Adamic, Harris, Zigrossi, Gould, Babich, Bible, Brooks Jr., Collins, Ferry, Freitag, Hart, Maher, McDermed, Moran, Moustis, Rice, Traynere, Weigel, Winfrey, Bennefield
NAYS: Steve Balich, Mike Fricilone

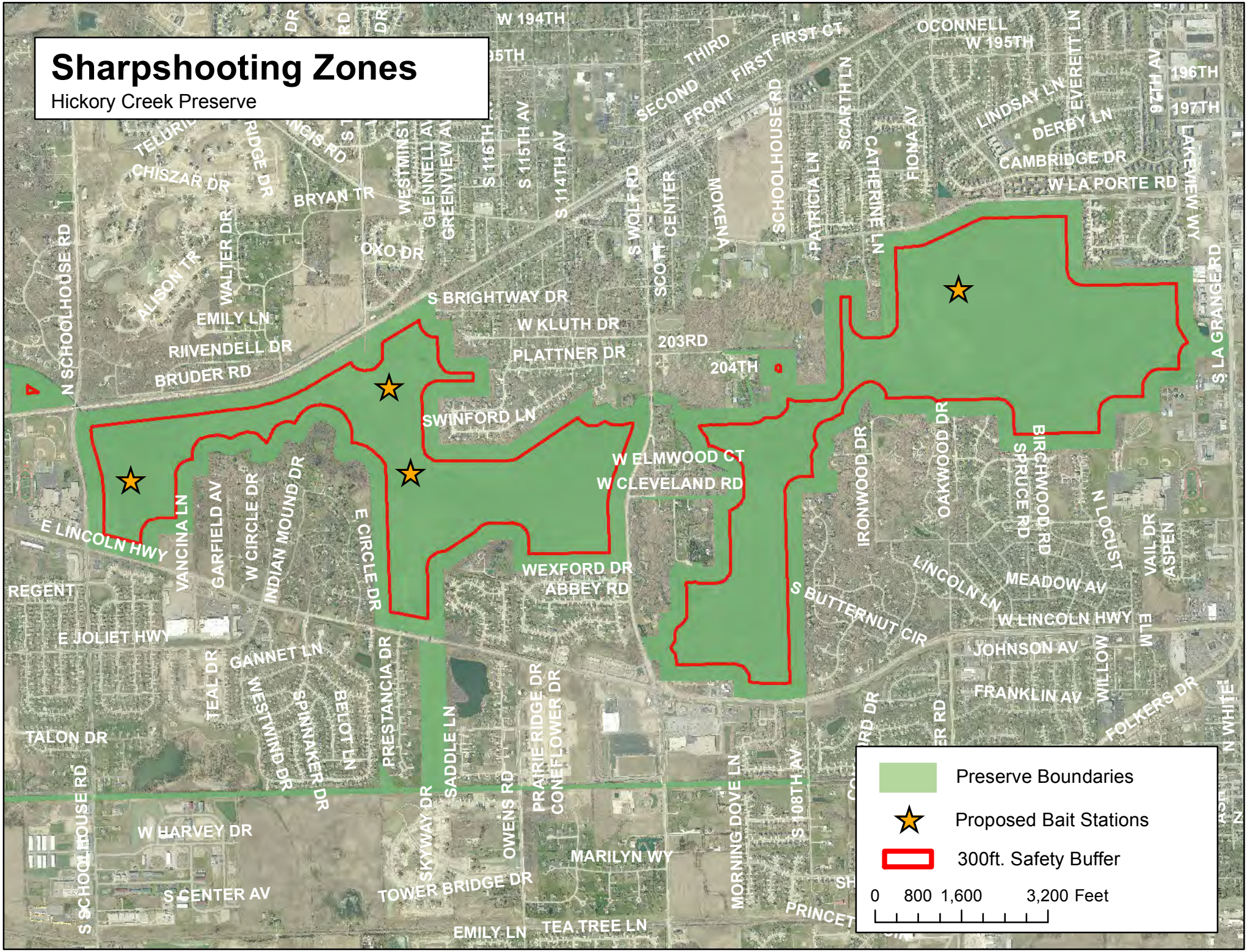

Sharpshooting Zones
Romeoville Prairie Nature Preserve Area
I 55 NB
I 355 NB
I 355 SB
JOLIET RD
MARQUETTE DR
RT 53
S SCHMIDT RD
N SCHMIDT RD
ENTERPRISE DR
LAKESIDE DR
NAPERVILLE DR
ABBEYWOOD DR
BEACON AV
N SLEEPY HOLLOW LN
N SUNRISE DR
HUDSON AV
GENEVA AV
DALHART AV
W NORMANTOWN RD
KINGSTON DR
IOLA AV
GLEN AV
PHELPS AV
TERRACE LN
PARKWOOD AV
FORESTWOOD DR
BRISTOL AV
BELMONT DR
ANDERSON DR
N INDEPENDENCE BL
DE PAUL CT
RIVEREDGE DR
MONTROSE DR
ARNOLD AV
MACON AV
W ROMEO RD
HALE AV
MCKOOL AV
HAYES AV
MURPHY DR
E ROMEO RD
E OLD ROMEO RD
NEW AV
HIGH RD
S HIGH RD
CICO RD
S NEW AV
W 127TH
127TH
SMITH RD
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 700 1,400 2,800 Feet


Sharpshooting Zones
Lockport Prairie Nature Preserve
W RENWICK RD
S MATERIAL RD
W 5TH
W 6TH
E 7TH
E 8TH
E 9TH
E 10TH
E 11TH
E 12TH
E 13TH
E 14TH
E 15TH
E 16TH
E 17TH
E 18TH
E 19TH
VINE
AMES
DAVIESS AV
CLINTON
CANAL
S COMMERCE
S STATE
S WASHINGTON
S JEFFERSON
MADISON
W 9TH
DAVIESS
W DIVISION
W DIVISION W 16TH
MAY
FRANCES
S HAMILTON
W 19TH
DAGGETT AV
S POWERHOUSE RD
CHANNEL RD
CANAL
S BROADWAY
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 450 900 1,800 Feet


Sharpshooting Zones
McKinley Woods Preserve
W EAMES
W BRIDGE
W MAY
S MAY CT
S BLACKBERRY LN
S CANAL
W WALNUT LN
W DURKEE RD
W DRUMMOND RD
E HANSEL RD
S WOODRUSH
W WINDING OAK TR
W WILD ROSE DR
S MC KINLEY WOODS RD
W ORCHID LN
S JUSTIN DR
S IVY LN
W ERIN ISLE
W LAUREN DR
W MELISSA DR
W LESLIE DR
W HIGHLAND DR
W DES PLAINES RIVER RD
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 625 1,250 2,500 Feet


Sharpshooting Zones
Kankakee Sands Geologic Area
S RT 129
N WILDWOOD
N WASHINGTON
E OAK
PVT RD
S SHENK RD
S WEST RIVER RD
HINTZE RD
W RT 113
E REED
E MAIN
S CAROL LN
S COMET DR
CALEB
S CEMETERY RD
S ESSEX RD
W SMILEY RD
S ZILM RD
S WEIKUM RD
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 650 1,300 2,600 Feet


Sharpshooting Zones
Goodenow Grove Nature Preserve
S RT 394 SB
S RT 394 NB
E OLD MUD RD
E 263RD
S DIXIE HWY
S ROOT DR
E BEMES RD
S GREENWOOD AV
S WOODLAWN AV
S JACOBS LN
W ELMS COURT LN
W AUBURN LN
W ARLINGTON LN
W STANTON LN
DRVE
W EDEN LN
S OLD RT 1
S RT 394 NB
S DUTTON RD
W GOODENOW RD
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 465 930 1,860 Feet


Sharpshooting Zones
Hickory Creek Preserve
W 194TH
W 195TH
OCONNELL
THIRD
SECOND
FRONT
FIRST
FIRST CT
LINDSAY LN
DERBY LN
CAMBRIDGE DR
W LA PORTE RD
196TH
197TH
97TH AV
EVERETT LN
LAKEVIEW WY
S LA GRANGE RD
SCHOOLHOUSE RD
SCARTH LN
CATHERINE LN
FIONA AV
PATRICIA LN
MOKENA
SCOTT CENTER
S WOLF RD
S 114TH AV
S 115TH AV
S 116TH
GLENELL AV
GREENVIEW AV
WESTMINST
RIDGE DR
CHISZAR DR
BRYAN TR
OXO DR
ALISON TR
WALTER DR
EMILY LN
RIIVENDELL DR
BRUDER RD
N SCHOOLHOUSE RD
S BRIGHTWAY DR
W KLUTH DR
PLATTNER DR
203RD
204TH
SWINFORD LN
W ELMWOOD CT
W CLEVELAND RD
IRONWOOD DR
OAKWOOD DR
SPRUCE RD
BIRCHWOOD RD
N LOCUST
VAIL DR
ASPEN
E LINCOLN HWY
VANCINA LN
GARFIELD AV
W CIRCLE DR
INDIAN MOUND DR
E CIRCLE DR
WEXFORD DR
ABBEY RD
S BUTTERNUT CIR
LINCOLN LN
MEADOW AV
W LINCOLN HWY
ELM
WILLOW
JOHNSON AV
FRANKLIN AV
FOLKERS DR
REGENT
E JOLIET HWY
GANNET LN
TEAL DR
WESTWIND DR
SPINNAKER DR
BELOT LN
PRESTANCIA DR
SADDLE LN
PRAIRIE RIDGE DR
CONEFLOWER DR
TALON DR
S SCHOOLHOUSE RD
W HARVEY DR
S CENTER AV
SKYWAY DR
OWENS RD
TOWER BRIDGE DR
MARILYN WY
MORNING DOVE LN
S 108TH AV
EMILY LN
TEA TREE LN
PRINCET
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 800 1,600 3,200 Feet


Sharpshooting Zones
Raccoon Grove Nature Preserve
W PAULING RD
W OAKBROOK RD
S TIMBERLANE RD
W TIMBERLANE RD
W TIMBERLANE RD
S RT 50
S EGYPTIAN TR
Preserve Boundaries
Proposed Bait Stations
300ft. Safety Buffer
0 260 520 1,040 Feet

Table 1

Area Counted (square miles)					
Preserve & Unit	**2008**	**2009**	**2010/2011**	**2012/2013**	**2013/2014**
Romeoville Prairie Nature Preserve	0.90		0.90	0.90	0.90
Lockport Prairie Nature Preserve	0.43		0.43	0.43	0.43
McKinley Woods Preserve	1.11		1.11	1.11	1.11
Kankakee Sands Geologic Area	3.07			2.57	2.57
Goodenow Grove Nature Preserve	1.50		1.50	1.50	1.50
Hickory Creek Preserve	3.25		3.25	3.25	3.25
Raccoon Grove Nature Preserve	0.50			0.5	0.5
Aerial Count					
Preserve & Unit	**2008**	**2009**	**2010/2011**	**2012/2013**	**2013/2014**
Romeoville Prairie Nature Preserve	28		27	33	16
Lockport Prairie Nature Preserve	24		27	14	21
McKinley Woods Preserve	122		137	123	93
Kankakee Sands Geologic Area	112			112	112
Goodenow Grove Nature Preserve	110		98	94	76
Hickory Creek Preserve	200		147	248	205
Raccoon Grove Nature Preserve	0			32	59
Densities (per square mile)					
Preserve & Unit	**2008**	**2009**	**2010/2011**	**2012/2013**	**2013/2014**
Romeoville Prairie Nature Preserve	31		30	35	18
Lockport Prairie Nature Preserve	56		63	33	49
McKinley Woods Preserve	110		123	111	84
Kankakee Sands Geologic Area	36			44	44
Goodenow Grove Nature Preserve	73		65	63	51
Hickory Creek Preserve	62		45	76	63
Raccoon Grove Nature Preserve	0			64	118

Table 2

Location	% Browse Native Vines	% Browse Native Trees	% Browse Native shrubs	% Browse Native Forbes	% Browse Plants C-value 0-3	% Browse Plants C-value 4-6	% Browse Plants C-value 7+	Total % Deer Browse
Romeoville Prairie Nature Preserve	na	100%	78%	93%	72%	96%	90%	89%
Lockport Prairie Nature Preserve	na	67%	90%	53%	92%	48%	76%	57%
McKinley Woods Preserve	67%	67%	61%	53%	51%	65%	57%	54%
Kankakee Sands Geologic Area	100%	74%	68%	60%	63%	70%	68%	67%
Goodenow Grove Nature Preserve	na	100%	92%	64%	73%	67%	93%	69%
Hickory Creek Preserve	100%	90%	100%	56%	54%	90%	70%	70%
Raccoon Grove Nature Preserve	na	100%	100%	61%	43%	77%	73%	64%

Table 3

	2014					2015						
Activity	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**
Presentation and approval of 2014-15 Recommendations												
Submission of IDNR Permit Application												
Train and Certify Volunteers												
Update Deer Management Brochure												
Post Deer Management Program Updates on Web Site												
IDNR Review and Approval of Application and Firing Stations												
Sharpshooter Qualification Testing												
Develop and Mail Notification Letter to Adjacent Landowners												
Implementation of Culling Activities												
Complete Aerial Deer Population Surveys												
Prepare Annual Summary and Recommendations Report												

Table 4

	Current Population Size	Target Population Size	Current Density (Deer per square mile)	2014-15 Removal Target	Estimated Density after 2014-15 Removal Target Completed (Deer per square mile)
Des Plaines River Watershed					
Romeoville Prairie Nature Preserve and Isle a la Cache Area	16	23	18	0	18
Lockport Prairie Nature Preserve	21	9	49	-10	26
McKinley Woods and Four Rivers Environmental Education Center	93	30	84	-40	48
Kankakee River Watershed					
Kankakee Sands Geologic Area (Sand Ridge, Kankakee Sands and Braidwood Dunes and Savanna Preserves)	112	65	36	-21	30
Plum Creek Watershed					
Goodenow Grove Nature Preserve	76	30	51	-30	31
Hickory Creek Preserve Watershed					
Hickory Creek Preserve	205	65	63	-60	45
Rock Creek Watershed					
Raccoon Grove Preserve	59	10	118	-20	78

Table 5

Area Counted					
Preserve & Unit	2008	2009	2010/2011	2012/2013	2013/2014
Plum Valley Ravines	1.65		1.65	1.65	1.65
Plum Valley Preserve	1.36		1.36	1.36	1.36
Monee Reservoir	0.33				0.33
Thorn Creek Woods Nature Preserve	3.52			2.92	2.92
Messenger Woods Nature Preserve	0.76		0.76	0.76	0.76
Messenger Marsh Preserve	0.73		0.73	0.73	0.73
Lockport Prairie East Preserve					0.05
Keepataw Preserve	0.55		0.55	0.55	0.55
Lower Rock Run Preserve		0.57	0.57		0.57
Rock Run Preserve (N. of Black Road)			0.20		0.20
Theodore Marsh Preserve			0.45		
O'hara Woods Preserve			0.08		
Bird's Junction Marsh			0.09		0.09
Hammel Woods			0.66		0.66

Aerial Count					
Preserve & Unit	2008	2009	2010/2011	2012/2013	2013/2014
Plum Valley Ravines	163		149	152	151
Plum Valley Preserve	57		61	54	75
Monee Reservoir	0				12
Thorn Creek Woods Nature Preserve	99			200	30
Messenger Woods Nature Preserve	101		99	55	84
Messenger Marsh Preserve	59		79	55	32
Lockport Prairie East Preserve					19
Keepataw Preserve	4		61	10	33
Lower Rock Run Preserve		54	82		99
Rock Run Preserve (N. of Black Road)			32		52
Theodore Marsh Preserve			34		
O'hara Woods Preserve			4		
Bird's Junction Marsh			23		8
Hammel Woods			27		27

Density (deer per square mile)					
Preserve & Unit	2008	2009	2010/2011	2012/2013	2013/2014
Plum Valley Ravines	99		90	92	92
Plum Valley Preserve	42		45	40	55
Monee Reservoir	0				36
Thorn Creek Woods Nature Preserve	28			68	10
Messenger Woods Nature Preserve	133		130	72	111
Messenger Marsh Preserve	81		108	75	44
Lockport Prairie East Preserve					380
Keepataw Preserve	7		111	18	60
Lower Rock Run Preserve		95	144		174
Rock Run Preserve (N. of Black Road)			160		260
Theodore Marsh Preserve			76		
O'hara Woods Preserve			50		
Bird's Junction Marsh			256		89
Hammel Woods			41		41