

Plan Implementation



November, 2022



Grand Haven
Coast Guard City USA



FOREST STEWARDSHIP PLAN

200 Acres in Section 29
Grand Haven Township, Ottawa County, MI T8N, R16W
Parcel # 70-03-29-160-004
70-03-29-200-010
70-03-29-325-016

Plan Conclusions

According to the 2022 City Approved Forest Management Plan, **our forests are in grave danger from invasive pathogens and deer overgrazing.** The deer have decimated the critical forest understory and inhibited tree planting efforts leading to erosion of our critical dunes.



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Agenda

1. Brief History
2. Critical Need
3. Drone and Street Count Data
4. DNR Response to Questions from City (Worksession and Meeting with DNR)

Brief History

Connections, Commissions and Census

eMail Sent to Council

Leading to meetings with Larry Burns and Jim Mathews and creation of "Save our Forests Grand Haven"

June, 2023

Work Session #1

Deer Management Work Session with GH City Council

July 1, 2024

Deer Census Completed

Drone flyover and Ber's Pest Control

August, 2025

November, 2022

Madden & Mathews Join SEC

Forest Management Subcommittee is founded.

March, 2024

Drone Purchased Approved by City Council

January, 2025

City Council Work Session to review deer count.

A photograph of a forest with many thin tree trunks and a ground covered in small white flowers. A semi-transparent green overlay covers the entire image. In the center, there is a rounded rectangular box with a solid green background and white text.

Critical Need

Shifting Baseline Syndrome



1964



1998



2025

Shifting baseline syndrome: causes, consequences, and implications, Volume 16, Issue 5, *Frontiers in Ecology and the Environment* pages: 263-263

A photograph of a forest with many trees, some with sparse green leaves and others bare. A large green text box is overlaid on the right side of the image. The ground is covered in dry leaves and twigs.

Deer eat saplings before they're able to mature, making natural forest regeneration impossible.

Fall, 2024:

**Three newly planted trees died
in Lake Forest Cemetery
because of deer rubbing.**



November 13th, 2024:

**6-Point Buck spotted on
Gladys Avenue driveway, in
Grand Haven.**





Duncan Park



Mulligan's Hollow



Lake Forest Cemetery

Photos Taken Between 3:30-4:00 PM July 31, 2025

Browse Lines

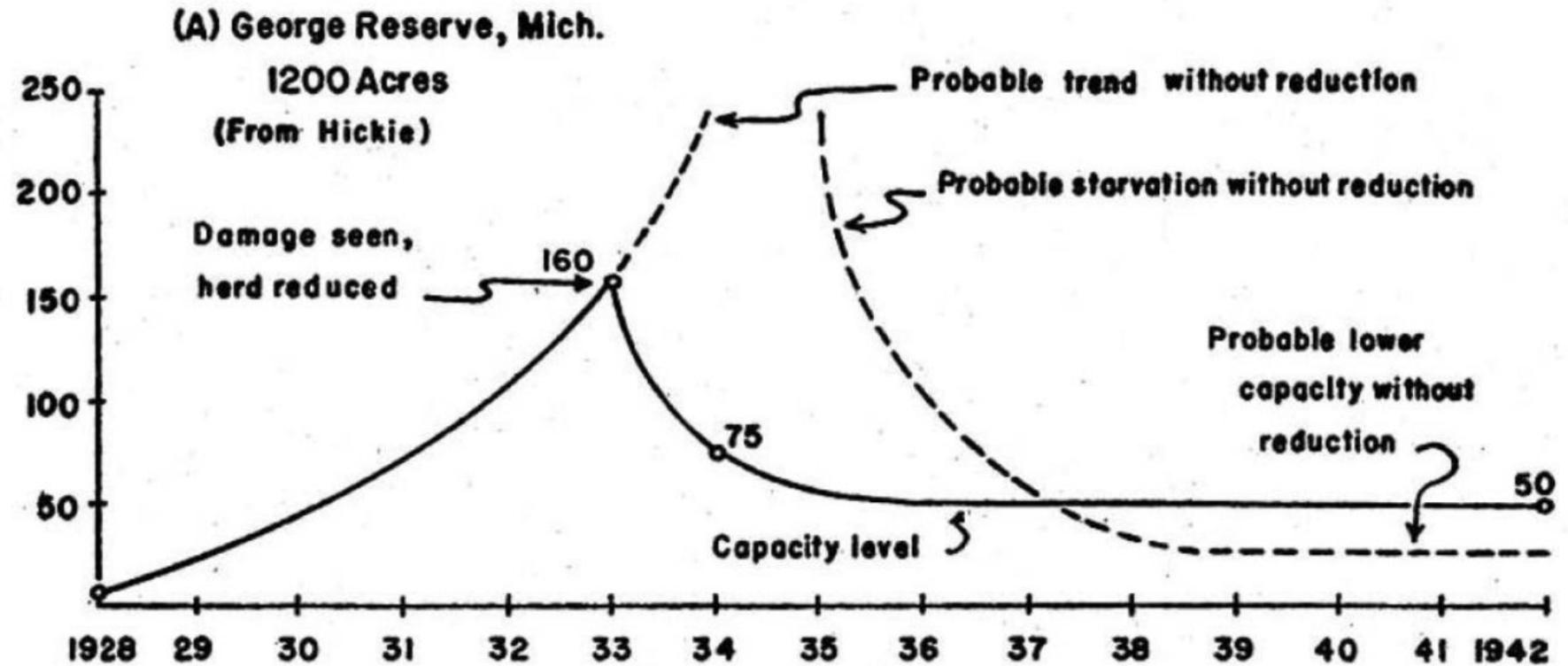
"This is up there with the worst red flags you can see. You have too many deer and not enough food. You need to reduce deer numbers while increasing forage through habitat management until browse lines vanish."

National Deer Association Report, August 21, 2024



Lake Forest Cemetery July 31, 2025

1928 George Reserve Study, Ann Arbor, MI



- ❖ Fenced preserve managed by the UMI, 25 miles northwest of Ann Arbor.
- ❖ The 1,200 acre study site is 6 times larger than our GH Urban Forest (MH, DP, LFC)
- ❖ In 1928, researchers introduced **four does and two bucks** to initiate the study.
- ❖ By 1933, deer population had surged to approximately **160 individuals**, demonstrating exponential growth in the absence of predators or hunting. Deer overbrowsing quickly became evident.
- ❖ The herd was reduced to 75 and then to 50 before the evidence of overbrowsing dramatically decreased.
- ❖ The reduced herd was then considered “in equilibrium within its range”.

WHAT DOES A HEALTHY FOREST LOOK LIKE?



Hardy, healthy trees

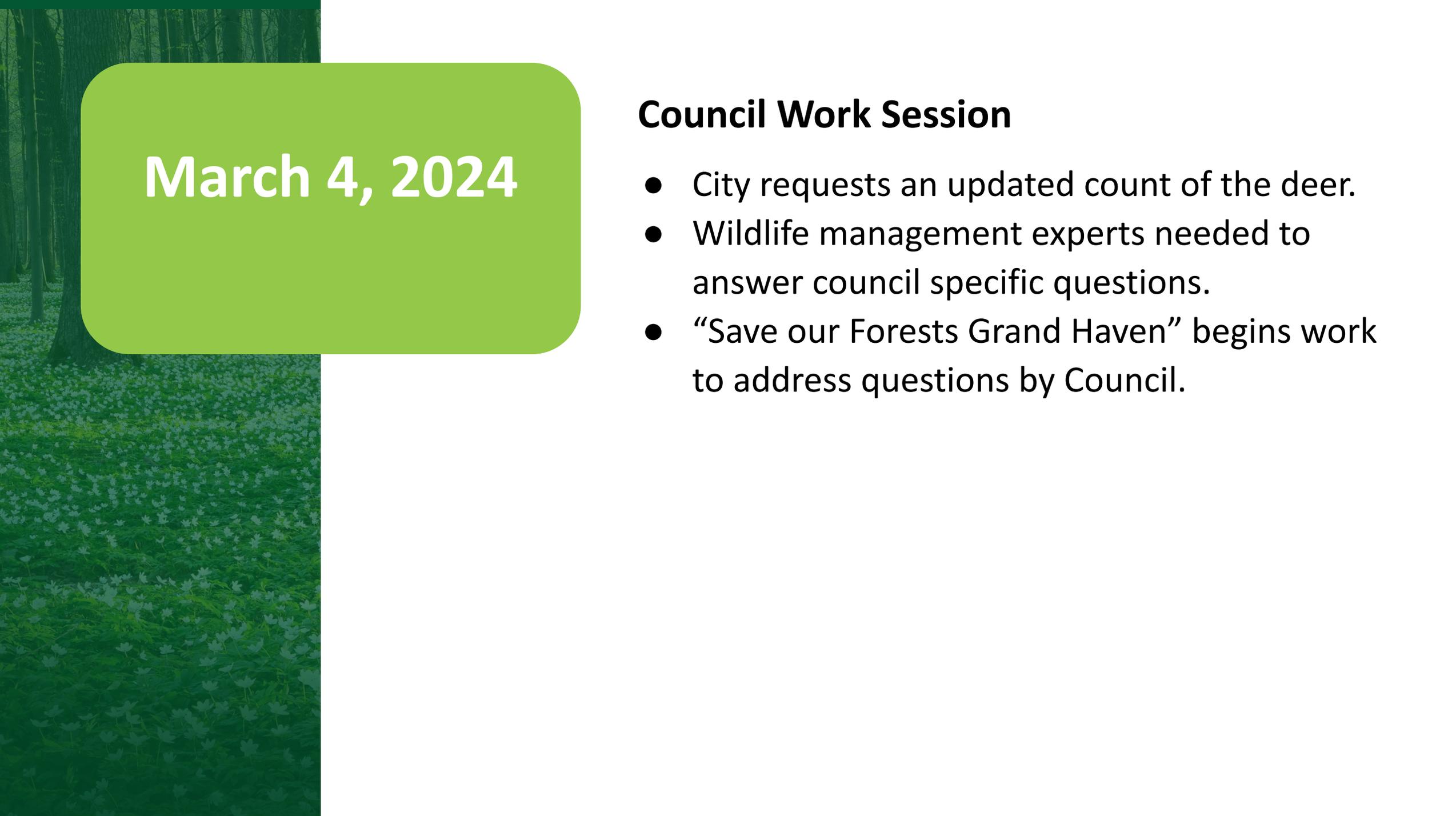


A wide variety of native plants, shrubs and saplings under their canopy



A healthy ecosystem containing a broad spectrum of birds, bees, butterflies and small mammals



A background image of a forest with tall trees and a ground covered in green leaves. A bright green rounded rectangle is overlaid on the left side of the image, containing the date 'March 4, 2024' in white text.

March 4, 2024

Council Work Session

- City requests an updated count of the deer.
- Wildlife management experts needed to answer council specific questions.
- “Save our Forests Grand Haven” begins work to address questions by Council.

**July 1st,
2024**

- City Council approves drone purchase
- Purchase made possible by a GHACF Mixer Grant and donations to “Save our Forests Grand Haven”.
- The city owns the \$5,460.60 drone and may use it for multiple purposes
- Drone flights are limited to city owned property.

24-148 Council Member McLaughlin moved, seconded by Mayor Pro-tem Cummins to approve the purchase of a DJI Mavic 3 Thermal Drone in the amount of \$5,460.60 for the purpose of completing ecological studies, with funds to be reimbursed by the Save the Forest Fund at the Grand Haven Community Foundation.

January, 2025



Deer survey conducted, with a drone forest flyover,



A graphic for Deer Management featuring a photograph of a deer with large antlers at the top. Below the photo is a green circle containing a white silhouette of a deer. Underneath the circle, the text "DEER MANAGEMENT" is written in bold. Below that, a smaller line of text reads: "Our comprehensive approach helps reduce deer populations and prevent damage to your property." At the bottom, there is a "LEARN MORE" link.

and Berg's Pest Control using infrared cameras to count deer on city streets.



Drone Survey Data

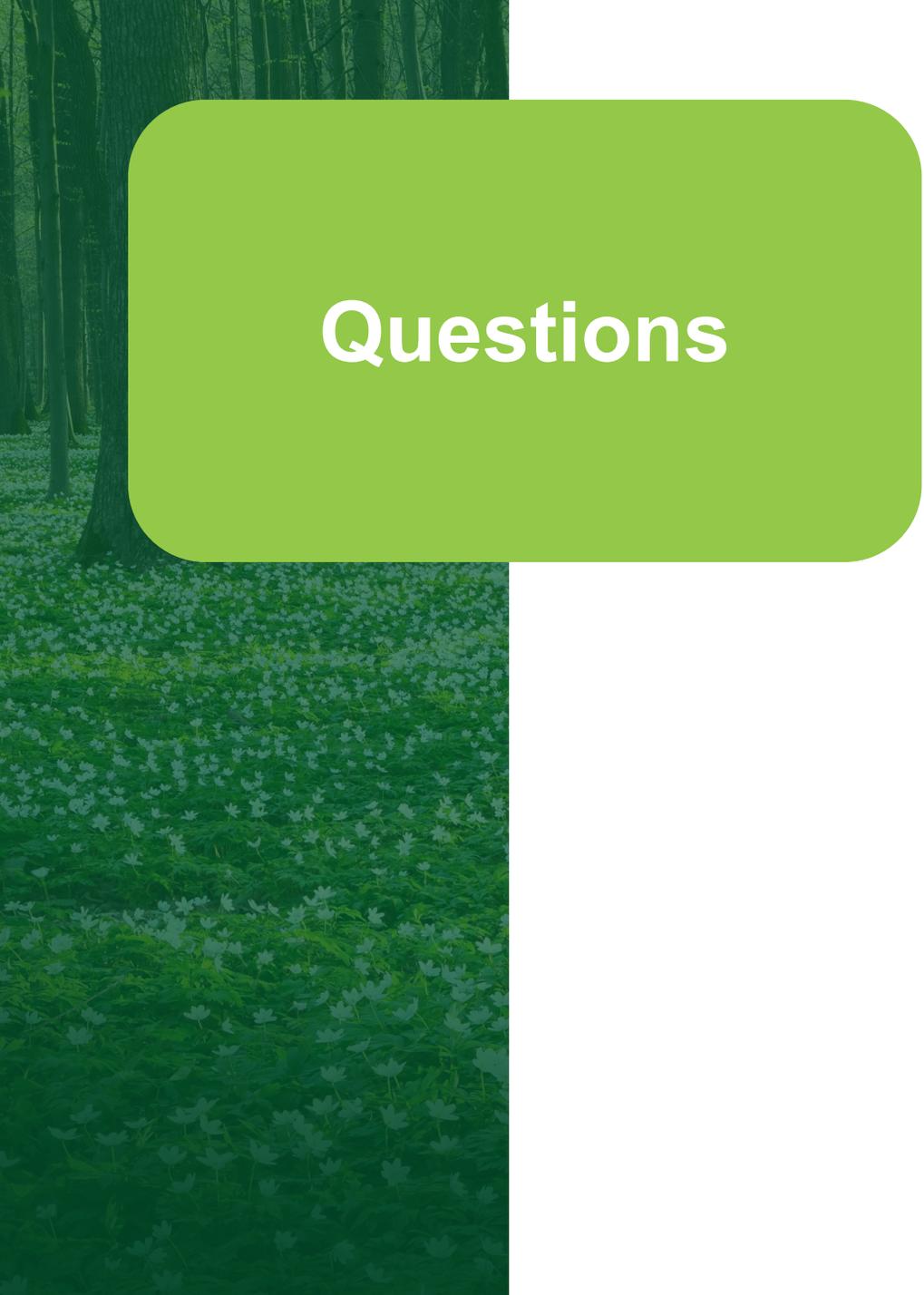
Lake Forest Cemetery, Mulligan's Hollow, Duncan Park

The count recorded 68 highly likely (verifiable) sightings, with an additional 44 possible sightings. Thus, the total deer population within the 200-acre urban forest is estimated to range between 68 and 112.

Location	Likely Sightings	Additional Possible Sightings	Estimated Population
Mulligan's Hollow Area 1	8	6	14
Mulligan's Hollow Area 2	18	13	31
Mulligan's Hollow Area 3	7	5	12
Lake Forest Cemetery	16	9	25
Duncan Woods	19	11	30
Total:	68	44	112

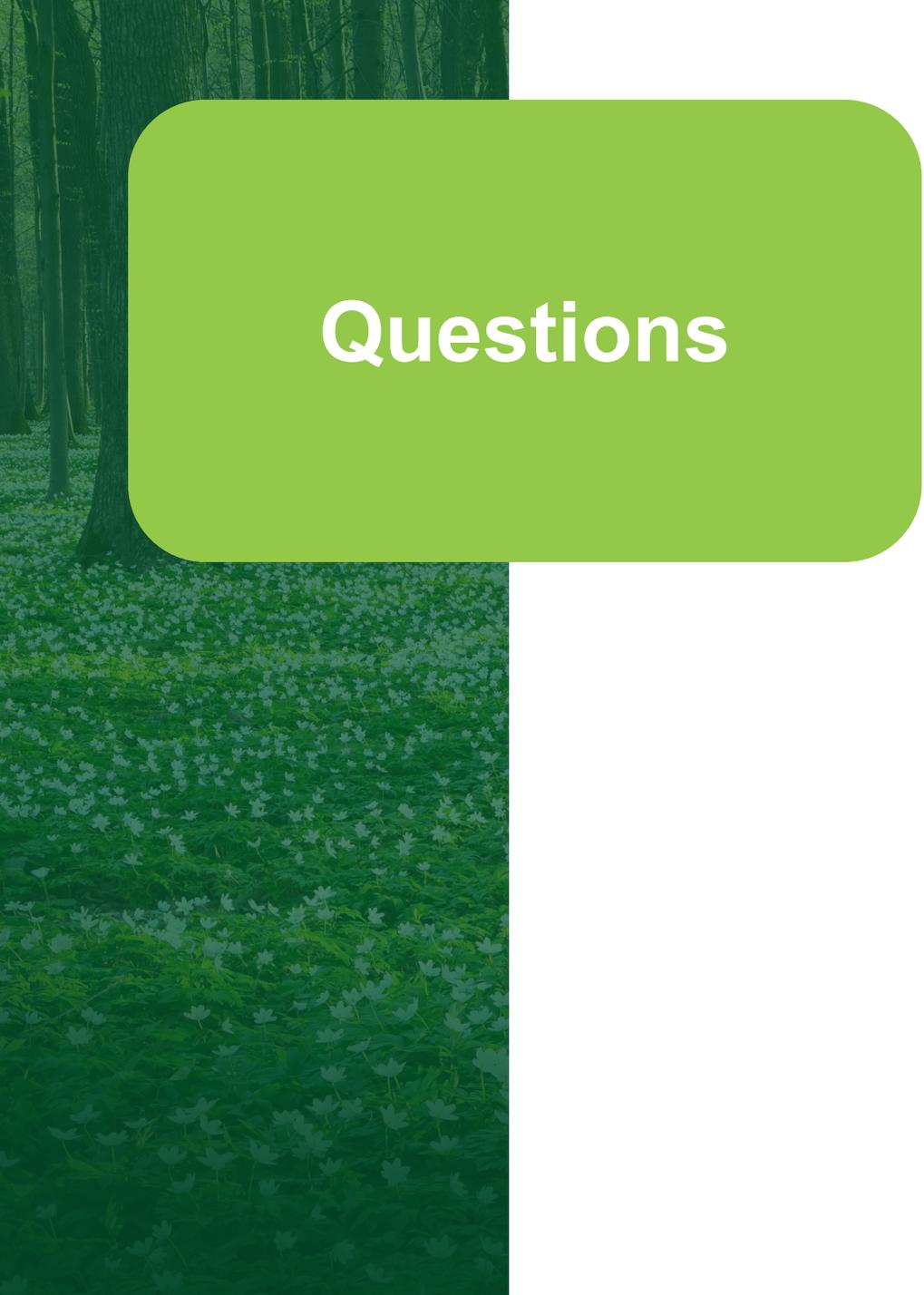
2025 Deer Count

Park Location	Likely	Additional Possible	Estimated Maximum
MH 1	8	6	14
MH2	18	13	31
MH3	7	5	12
LFC	16	9	25
DW	19	11	30
	68	44	112
Deer counted outside the park	55		
GH Census Range	123		167

A background image of a forest with tall trees and a green ground cover. A bright green rounded rectangle is overlaid on the left side of the image.

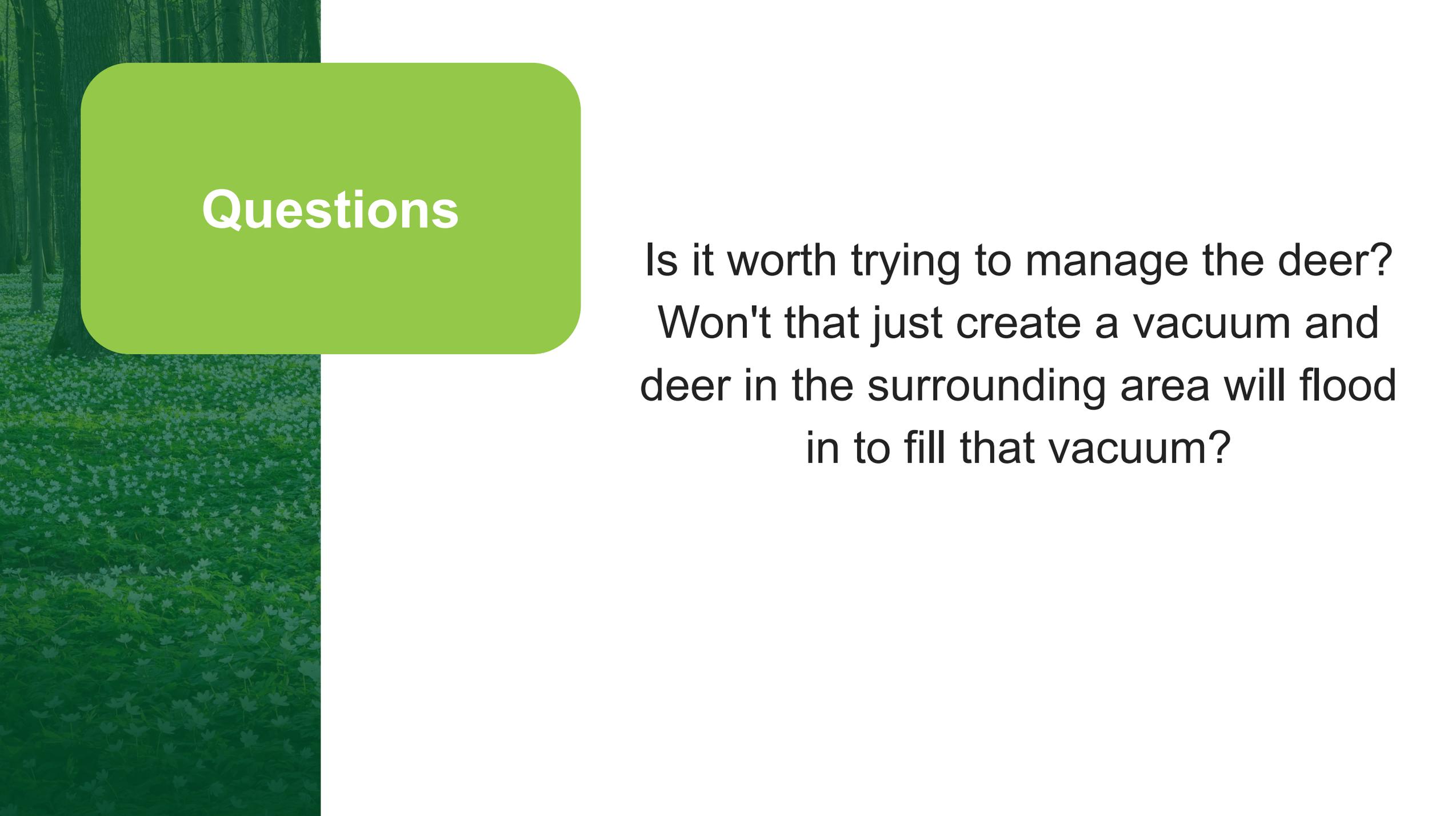
Questions

What are your recommendations for communities struggling with ecological damage associated with deer overbrowsing?

A background image of a forest with tall trees and a field of green plants. A large, rounded green rectangle is overlaid on the left side of the image.

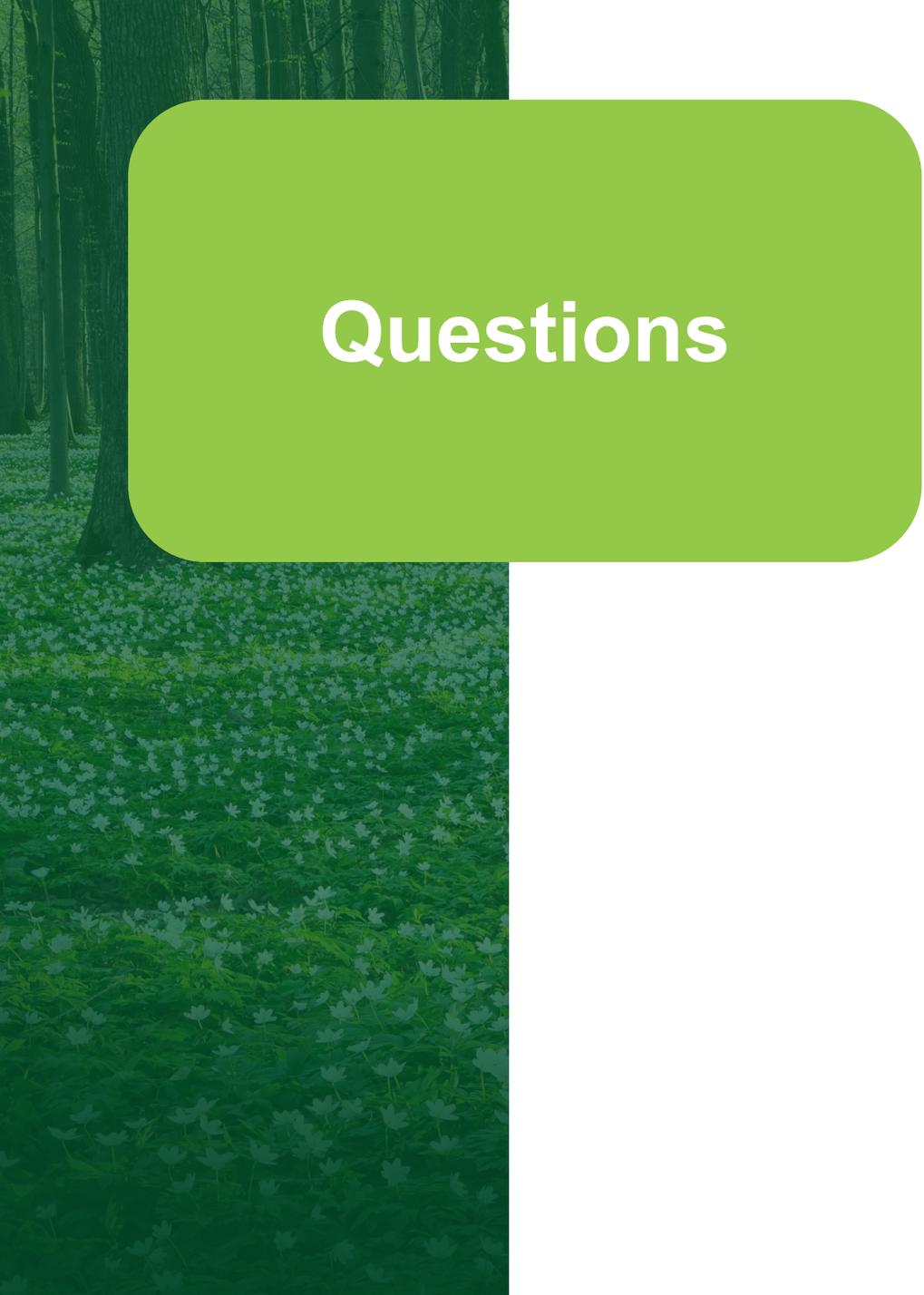
Questions

Do you believe the number of deer counted in Grand Haven exceeds a healthy carrying capacity?

A background image of a forest with tall trees and a field of green plants. A bright green rounded rectangle is overlaid on the left side of the image.

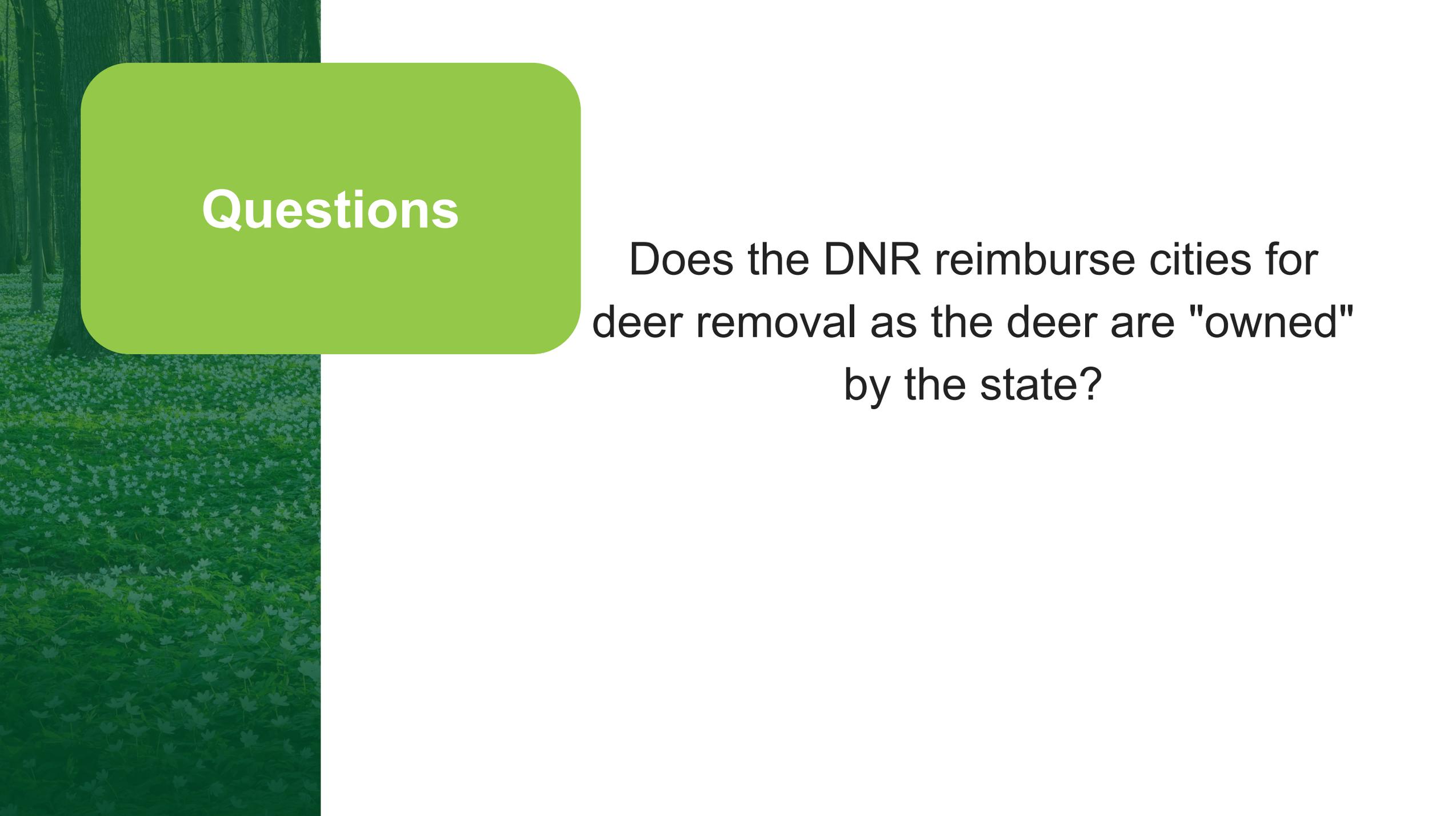
Questions

Is it worth trying to manage the deer?
Won't that just create a vacuum and deer in the surrounding area will flood in to fill that vacuum?

A vertical photograph of a forest floor with many small white flowers and green foliage. A bright green rounded rectangle is overlaid on the left side of the image.

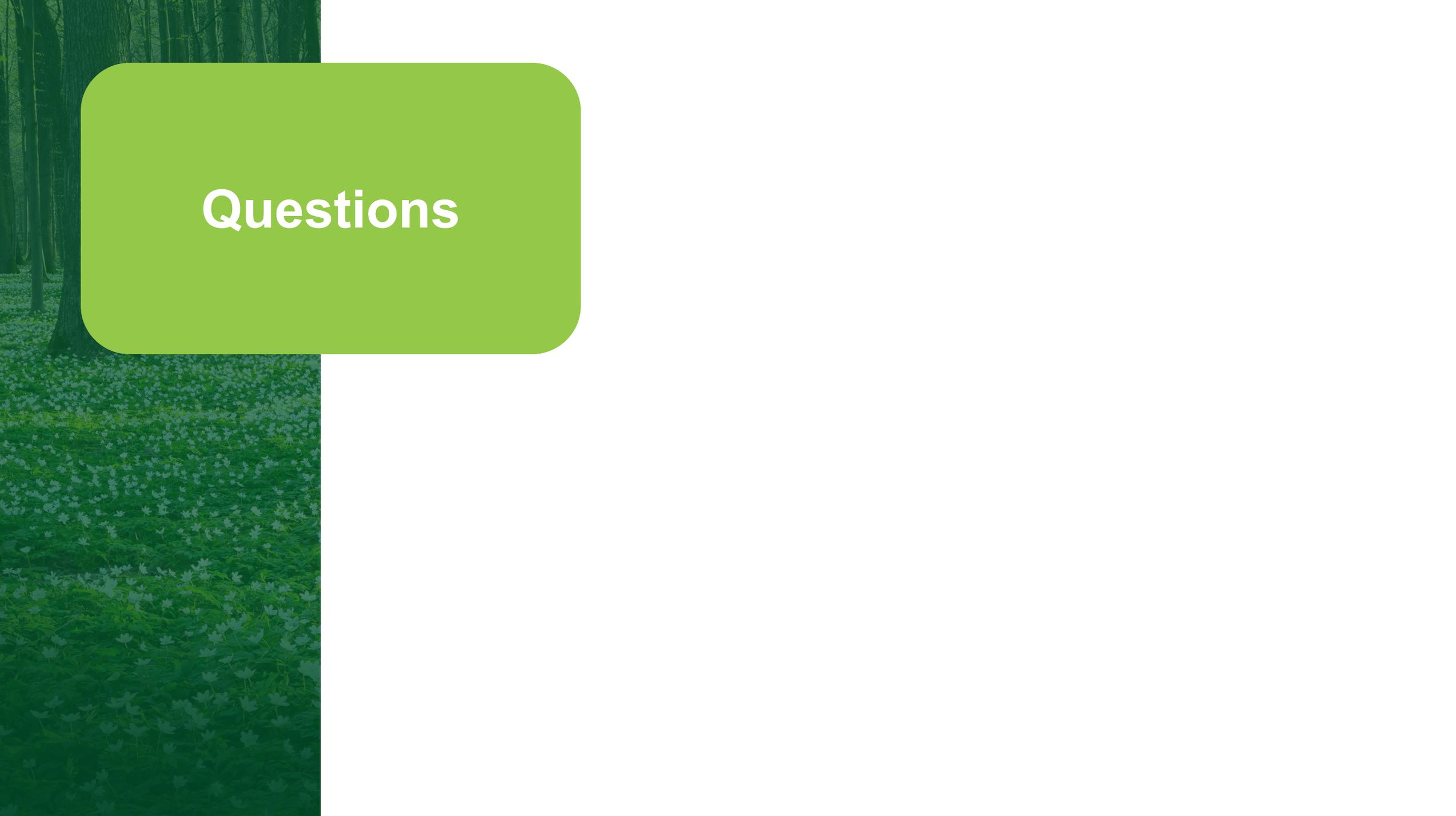
Questions

When is the best time of year to manage the deer?

A background image of a forest with tall trees and a ground covered in green foliage. A bright green rounded rectangle is overlaid on the left side of the image.

Questions

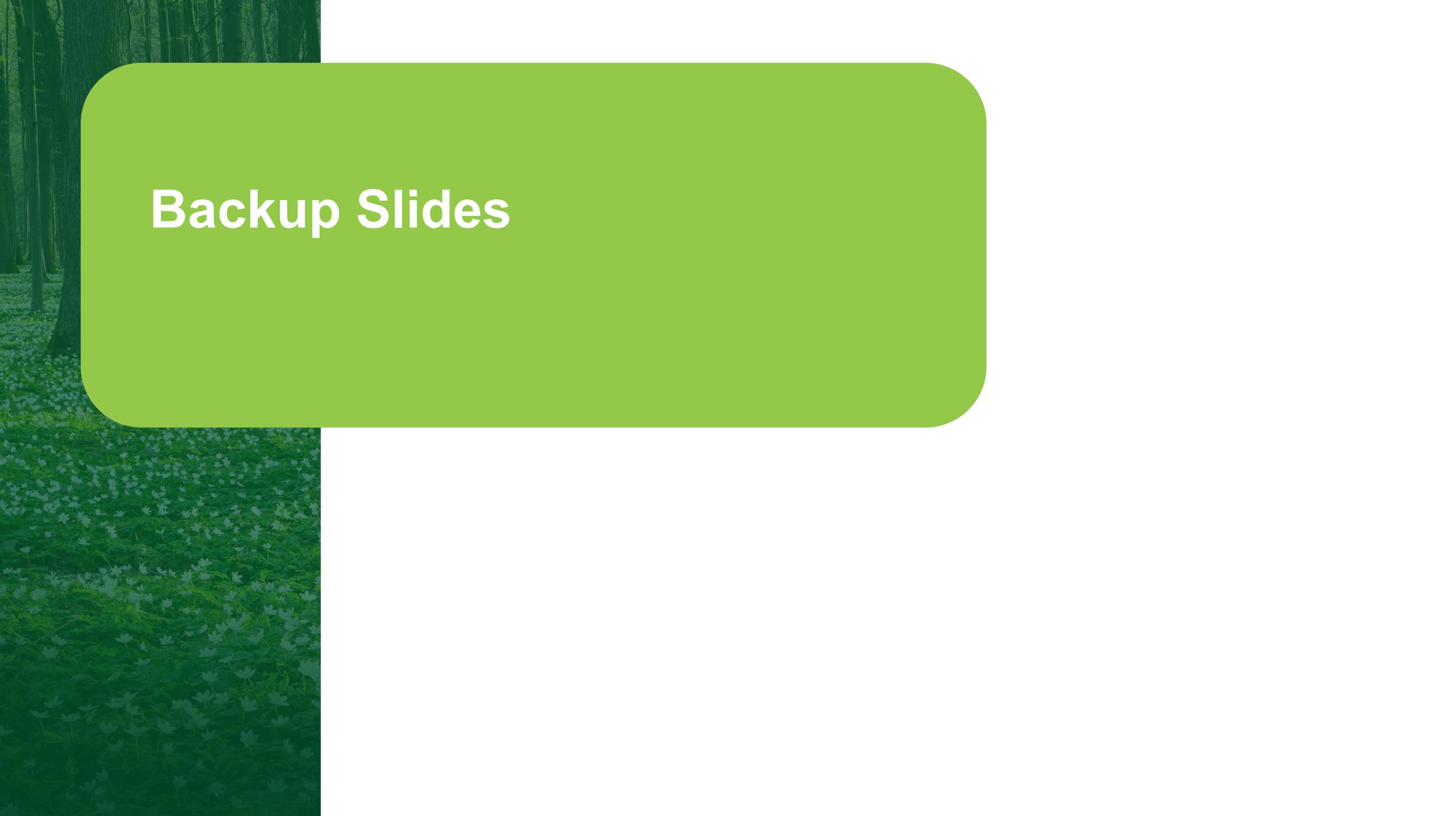
Does the DNR reimburse cities for deer removal as the deer are "owned" by the state?

A vertical photograph of a forest floor covered in green moss and small white flowers, with tree trunks visible in the background. A bright green rounded rectangle is overlaid on the left side of the image.

Questions



Thank You!

A vertical photograph of a forest floor covered in green moss and small white flowers, with tall trees in the background. A large, rounded green rectangle is overlaid on the left side of the image, containing the text 'Backup Slides'.

Backup Slides

Budget

\$495 Per Deer Includes

- All required permits
- Harvesting
- Field dressing and clean-up
- Processing in preparation for donation:
 - Muskegon Rescue Mission
 - Doe Patrol
 - Others as needed