Village of Cayuga Heights

MARCHAM HALL
836 HANSHAW ROAD
ITHACA, N.Y. 14850

Telephone
607-257-1238
Fax
607-257-4910

Office Hours
9 A.M. - 4 P.M

In the Matter of the Application of The Village of Cayuga Heights
for an Environmental Assessment Pursuant to the
State Environmental Quality Review Act ("SEQR")

DETERMINATION OF SIGNIFICANCE – POSITIVE DECLARATION

This Positive Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law.

1. The Village of Cayuga Heights, 836 Hanshaw Road, Ithaca, New York 14850, is the lead agency for the referenced matter. Additional information concerning this matter can be obtained from the Village Clerk, Norma Manning, at the Village Offices, 836 Hanshaw Road, Ithaca, New York 14850, (607) 257-1238. The proposed action consists of the Village undertaking a deer population control program as described in the Environmental Assessment Form ("EAF") a copy of which is attached hereto and made a part hereof. This proposed action has been classified as an Unlisted Action under the SEQR regulations. This proposed action would occur at various locations in the Village of Cayuga Heights, as described in the attached EAF.

2. It is hereby determined by the Board of Trustees of the Village of Cayuga Heights, pursuant to Section 617.7 of the SEQR regulations, that the proposed action may have a significant effect upon the environment (a) by causing a reduction in the population of deer within said Village of Cayuga Heights by approximately 150 deer, and (b) as a result of the public controversy related to this environmental impact, and therefore requires the preparation of an Environmental Impact Statement. The details of this proposed action, together with the analysis of relevant areas of environmental concern and reasoned elaboration of this determination, are set forth in the EAF attached hereto, and the various attachments to said EAF. Given the extent of the review and detail provided in the EAF, and the results of the public hearing conducted by the Village on October 28, 2009 in connection with such review, scoping, provided as an option in accordance with Section 617.8 of the SEQR regulations, will not be conducted.

3. It is hereby further determined that the following agencies are or will be involved in the proposed action:

a. New York State Department of Environmental Conservation.

b. Board of Trustees of the Village of Cayuga Heights.

Copies of this Positive Declaration will be filed with the office of the Commissioner of the New York State Department of Environmental Conservation and its Regional Office, and with the offices of the Mayor and of the Clerk of the Village of Cayuga Heights, and notice of this Positive Declaration will be published in the Environmental Notice Bulletin.

5. The Village of Cayuga Heights is hereby required to prepare a Draft Environmental Impact Statement pursuant to the provisions of Section 617.7(a) - (c) of the SEQR regulations.

Dated: March 27, 2010 Village of Cayuga Heights

By: James A. Gilmore III, Mayor

James Gilmore, Mayor

cc: -Commissioner, DEC, 50 Wolf Road, Albany, New York 12233-0001
-DEC Cortland Regional Office
-Environmental Notice Bulletin, Room 509, 50 Wolf Road, Albany, New York 12233-0001
-Village of Cayuga Heights Clerk

1) BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE VILLLAGE OF CAYUGA HEIGHTS that the Village adopts the Full Environmental Assessment Form, together with all suppoting attachments, as developed and assembled by the Board at recent meetings, as and for the environmental review required under the State Environmental Quality Review Act for the Village's proposed Deer Population Control Program.

2) BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE VILLLAGE OF CAYUGA HEIGHTS that, based upon review of the information recorded in the Full Environmental Assessment Form, and the supporting information attached, and considering both the magnitude and importance of each impact, it is reasonably determined by the Board that the Village's proposed Deer Population Control Program may result in one or more large and important impacts that may have a significant impact on the environment, and that therefore a positive declaration will be prepared.

3) BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE VILLLAGE OF CAYUGA HEIGHTS that the Board adopts the attached Positive Declaration of significance with regard to the Village's proposed Deer Population Control Program.

617.20
Appendix A
State Environmental Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Purpose: The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

Full EAF Components: The full EAF is comprised of three parts:

Part 1: Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.

Part 2: Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.

Part 3: If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

THIS AREA FOR LEAD AGENCY USE ONLY

DETERMINATION OF SIGNIFICANCE -- Type 1 and Unlisted Actions

Identify the Portions of EAF completed for this project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

☐ A. The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore **a negative declaration will be prepared.**

☐ B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore **a CONDITIONED negative declaration will be prepared.***

☒ C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore **a positive declaration will be prepared**.

*A Conditioned Negative Declaration is only valid for Unlisted Actions

Deer Population Control Program
Name of Action

Village of Cayuga Heights
Name of Lead Agency

James S. Gilmore III
Print or Type Name of Responsible Officer in Lead Agency

Mayor
Title of Responsible Officer

James S. Gilmore III
Signature of Responsible Officer in Lead Agency

Signature of Preparer (If different from responsible officer)

3/22/2010
Date

website

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources, Region 7
Bureau of Wildlife
1285 Fisher Avenue, Cortland, New York 13045-1090
Phone: (607) 753-3095 • **Fax:** (607) 753-8532
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

January 8, 2010

Mayor Jim Gilmore
Village of Cayuga Heights
Marcham Hall
836 Hanshaw Road
Ithaca, New York 14850

Reference: Village of Cayuga Heights Deer Overpopulation Remediation

Dear Mayor Gilmore:

I am in receipt of your letter of November 13, 2009, notifying us that the Village of Cayuga Heights is planning to undertake Deer Overpopulation Remediation and assume Lead Agency status under the State Environmental Quality Review Act ("SEQR"; ECL Article 8 and 6 NYCRR Part 617).

The Department of Environmental Conservation is in agreement and approves of the Village of Cayuga Heights assuming Lead Agency status within its political boundaries for the above described action. We do request status as an Involved Agency inasmuch as the Department has discretionary jurisdiction to permit the project under ECL §§11-0515 and 11-0521. The Department stands ready to assist the Village in its application of SEQR. Accordingly, when the Village has prepared the environmental assessment form, please send it to us so that the Department may have input into its content and any determination of significance that is made by the Village.

Sincerely,

Marie Kautz
Regional Wildlife Manager

cc: G. Rasmussen
D. Riehlman
L. Clark
J. Merriman

PART 1--PROJECT INFORMATION
Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

Name of Action Deer Population Control Program

Location of Action (include Street Address, Municipality and County)

The Village of Cayuga Heights

Name of Applicant/Sponsor Village of Cayuga Heights

Address 836 Hanshaw Road

City / PO Ithaca State NY Zip Code 14850

Business Telephone 607-257-1238

Name of Owner (if different) N/A

Address

City / PO State Zip Code

Business Telephone

Description of Action:

The Village of Cayuga Heights proposes to engage in deer population control by means of tubal ligation sterilization of 20 to 60 does, followed by culling of the remaining male and female unsterilized deer living within our 1.84 square mile Village boundary. This project is designed to reduce the size of the herd in the initial 3 years, and then provide stability in herd numbers thereafter, bringing the herd count closer to more normal levels achieved in the wild. The long-term target is a herd size of 20 to 60 deer total, versus the current estimate of 196 as of Spring 2009 within the Village. See attached letter from Paul Curtis dated 12/9/09. Where possible, all healthy deer venison culled will be donated to local food banks.

Cornell University

Cooperative Extension
Department of Natural Resources
108 Fernow Hall
Ithaca, NY 14853
t. 607-255-2115
f. 607-255-2815
www.dnr.cornell.edu/ext

9 December, 2009

Village of Cayuga Heights Trustees
836 Hanshaw Road
Ithaca, New York 14850

Dear Trustees:

The last reliable population estimate I conducted for the deer herd in the Village of Cayuga Heights was in the spring of 2006. There was a sufficient sample of tagged deer in the Village to conduct a population survey using infrared-triggered cameras stationed in a grid at approximately one camera per 100 acres. The number of deer in the Village was estimated to be 147 animals with 95% C.I. from 124 to 175, assuming a marked population of 35 tagged deer. This would total about 82 deer per square mile.

Deer herds have the capacity to grow at a rate of 40% annually. Given the high density of deer residing in the Village, and the amount of developed habitat, a growth rate of 10% annually is more reasonable. Based on our camera survey data, the growth rate between spring 2005 and 2006 was 7% (137 to 147 deer). Assuming a 10% growth rate, the population estimates for spring 2007 would be 162 deer, for spring 2008 would be 178 deer, and for spring 2009 would be 196 deer. This would total approximately 110 deer per square mile, and is a reasonable estimate of the current herd size in the Village of Cayuga Heights.

This week I received a call from NYSDOT, and recovered radio collars from 3 deer struck by cars on State Route 13 during the past year. After checking records of tagged deer from the previous study, and known deer mortalities, at most there may be 5 sterilized deer from the previous study still residing in the Village. If alive, these deer would be 8+ years old, and batteries have died on all the old radio collars. We will need a completely new sample of tagged, sterilized deer for future population estimates.

Respectfully,

Paul D Curtis

Paul D. Curtis
Associate Professor
Department of Natural Resources
Cornell University

Please Complete Each Question--Indicate N.A. if not applicable

A. SITE DESCRIPTION

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use: ☐ Urban ☐ Industrial ☑ some Commercial ☑ chiefly Residential (suburban) ☐ Rural (non-farm)
   ☐ Forest ☐ Agriculture ☑ Other small portions of the Village remain undeveloped, whether wooded or open fields

2. Total acreage of project area: 1,152 acres.

APPROXIMATE ACREAGE	PRESENTLY	AFTER COMPLETION
Meadow or Brushland (Non-agricultural)	350 acres	no chg. acres
Forested	700 acres	_____ acres
Agricultural (Includes orchards, cropland, pasture, etc.)	0 acres	_____ acres
Wetland (Freshwater or tidal as per Articles 24,25 of ECL)	under 1 acres	_____ acres
Water Surface Area	under 1 acres	_____ acres
Unvegetated (Rock, earth or fill)	under 1 acres	_____ acres
Roads, buildings and other paved surfaces	100 acres	_____ acres
Other (Indicate type) 51 acres roads, 34 acres bldgs, 15acres and other paved surfaces	_____ acres	_____ acres

3. What is predominant soil type(s) on project site? n/a
   a. Soil drainage: ☐ Well drained ____% of site ☐ Moderately well drained ____% of site.
   ☐ Poorly drained ____% of site
   b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? _____ acres (see 1 NYCRR 370).

4. Are there bedrock outcroppings on project site? ☐ Yes ☐ No n/a
   a. What is depth to bedrock _____ (in feet)

5. Approximate percentage of proposed project site with slopes: n/a
   ☐ 0-10% ____% ☐ 10- 15% ____% ☐ 15% or greater ____%

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? ☐ Yes ☐ No n/a

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ☐ Yes ☐ No n/a

8. What is the depth of the water table? n/a (in feet)

9. Is site located over a primary, principal, or sole source aquifer? ☐ Yes ☐ No n/a

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ☐ Yes ☒ No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered? ☐ Yes ☒ No

According to:

see Lab of Ornithology letter

Identify each species:

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations?

☒ Yes ☐ No

Describe:

Newman Tract, Renwick Slope, Palmer Woods; respectively numbers 101, 102 & 104 in the Tompkins County Unique Natural Areas Inventory of January 2000. None of these unique landforms including numerous gorges and streams will be affected by the project.

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?

☒ Yes ☐ No

If yes, explain:

Project site includes both public & private areas with open areas and park land.

14. Does the present site include scenic views known to be important to the community? ☒ Yes ☐ No

Sunset Park, for example

15. Streams within or contiguous to project area:

Various and prolific streams within Cayuga Heights function seasonally as stormwater runoff.

a. Name of Stream and name of River to which it is tributary

Renwick Brook and Pleasant Grove Creek are tributary to Cayuga Lake.

16. Lakes, ponds, wetland areas within or contiguous to project area:

The Village owns no frontage on Cayuga Lake. There are a few small ponds, totalling in area less than one acre. There are two or three Army Corpsof Engineers identified wetlands, again totalling less than one acre.

b. Size (in acres):

see above

17. Is the site served by existing public utilities? ☒ Yes ☐ No

a. If **YES**, does sufficient capacity exist to allow connection? ☐ Yes ☐ No n/a

b. If **YES**, will improvements be necessary to allow connection? ☐ Yes ☐ No n/a

18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☒ No

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? ☐ Yes ☒ No

20. Has the site ever been used for the disposal of solid or hazardous wastes? n/a ☐ Yes ☐ No
The site incorporates the whole Village and the Village has a WWIP.

B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate).

a. Total contiguous acreage owned or controlled by project sponsor: 1.84 sq/mi acres.

b. Project acreage to be developed: 0 acres initially; _____ acres ultimately.

c. Project acreage to remain undeveloped: _____ acres. No change will result from this project.

d. Length of project, in miles: n/a (if appropriate)

e. If the project is an expansion, indicate percent of expansion proposed. n/a %

f. Number of off-street parking spaces existing n/a ; proposed _____

g. Maximum vehicular trips generated per hour: n/a (upon completion of project)?

h. If residential: Number and type of housing units: No change will result from this project.

	One Family	Two Family	Multiple Family	Condominium
Initially				
Ultimately				

i. Dimensions (in feet) of largest proposed structure: n/a height; n/a width; n/a length.

j. Linear feet of frontage along a public thoroughfare project will occupy is? n/a ft.

2. How much natural material (i.e. rock, earth, etc.) will be removed from the site? 0 tons/cubic yards.

3. Will disturbed areas be reclaimed ☐ Yes ☐ No ☒ N/A

a. If yes, for what intended purpose is the site being reclaimed?

b. Will topsoil be stockpiled for reclamation? ☐ Yes ☐ No

c. Will upper subsoil be stockpiled for reclamation? ☐ Yes ☐ No

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? 0 acres.

5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?

☐ Yes ☒ No

6. If single phase project: Anticipated period of construction: _____ months, (including demolition) n/a

7. If multi-phased: see attached

   a. Total number of phases anticipated 3 (number)

   b. Anticipated date of commencement phase 1: tbd month _____ year, (including demolition)

   c. Approximate completion date of final phase: tbd month _____ year.

   d. Is phase 1 functionally dependent on subsequent phases? ☐ Yes ☒ No

8. Will blasting occur during construction? ☐ Yes ☒ No

9. Number of jobs generated: during construction _____; after project is complete _____ see attached

10. Number of jobs eliminated by this project 0.

11. Will project require relocation of any projects or facilities? ☐ Yes ☒ No

If yes, explain:

12. Is surface liquid waste disposal involved? ☐ Yes ☒ No

   a. If yes, indicate type of waste (sewage, industrial, etc) and amount _____

   b. Name of water body into which effluent will be discharged _____

13. Is subsurface liquid waste disposal involved? ☐ Yes ☒ No Type _____

14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ☒ No

If yes, explain:

15. Is project or any portion of project located in a 100 year flood plain? ☐ Yes ☒ No

16. Will the project generate solid waste? ☒ Yes ☐ No

   a. If yes, what is the amount per month? _____ tons see attached

   b. If yes, will an existing solid waste facility be used? ☒ Yes ☐ No

   c. If yes, give name Seneca Meadows Landfil ; location Waterloo, NY

   d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☒ Yes ☐ No
   see attached

Village of Cayuga Heights
SEQR
Deer Remediation Plan

Page 6, question 7

3 anticipated phases:

Phase 1 – Sterilization of does, using tubal ligation surgery, duration 1-2 years. Treated deer will be numbered and tagged.

Phase 2 – Culling of the remaining male and female unsterilized deer, using professional sharpshooters. Phase 2 will begin within the year subsequent to the completion of Phase 1.

Phase 3 – Maintenance of herd size through ongoing monitoring and periodic Sterilization and/or culling. This phase is ongoing and will begin once phase 2 is completed.

Page 6, question 9

Phase 1 – This phase could be implemented utilizing a graduate student or research Associate affiliated with Cornell University, as well as some part time labor of vets.

Phase 2 - The Village will need a Deer Management Director to implement a bait and Shoot culling program. This position could possibly be filled by an employee or A consultant. Sharpshooters may be hired on a contract basis.

Phase 3 – Monitoring and maintenance of the herd will require ongoing part-time work.

Page 6, question 16 a

(a) Population dependent but not expected to exceed 10 tons of solid waste generated over the life of this project. The vast majority of this solid waste production will occur in the month that Phase 2 commences.

SEQR Part 1

Page 6, Question 16

Processing of Culled Deer

The Southern Tier Foodbank through their New York Ag & Markets approved custom slaughterhouse, agrees to take our 'field dressed deer". The Village of Cayuga Heights will dispose of the deer guts by way of metal bin with lime to dissolve the matter and dissipate any related odor. Deer carcasses will then be taken to the processor where their venison will be processed and their hides and antlers will be sold. Southern Tier associated processors are inspected and approved by NYSAG and Marketing, and each deer they take will be properly tagged per NYS/DEC requirements.

e. If yes, explain:

It is possible to dispose of solid waste via composting at local composting facilities as allowed.

17. Will the project involve the disposal of solid waste? [■] Yes [ ] No

a. If yes, what is the anticipated rate of disposal? _____ tons/month. average of 50lbs/deer x # of deer culled See 16a on previous page.

b. If yes, what is the anticipated site life? _____ years. see attached

18. Will project use herbicides or pesticides? [ ] Yes [■] No

19. Will project routinely produce odors (more than one hour per day)? [ ] Yes [■] No

20. Will project produce operating noise exceeding the local ambient noise levels? [x] Yes [ ] No see attached

21. Will project result in an increase in energy use? [ ] Yes [■] No

If yes, indicate type(s)

22. If water supply is from wells, indicate pumping capacity n/a gallons/minute.

23. Total anticipated water usage per day 0 gallons/day.

24. Does project involve Local, State or Federal funding? [■] Yes [ ] No

If yes, explain:

The Village of Cayuga Heights is paying for the project.

Pg 7
Question 17 b.

Part I, Section B, Question 17, part B

Village of Cayuga Heights weekly solid waste is routed through the Tompkins County Recycling and Solid Waste Center which in turn redirects all solid waste to the Seneca Meadows Landfill located in Waterloo, NY. The Seneca Meadows Landfill received a permit in 2007 to build and operate, through 2017 at the currently permitted acceptance rate of 6,000 tons per day, an approximately 178 acre expansion to its existing facilities as per the attached document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER 8-4532-00023/00001-0		EFFECTIVE DATE Renewed October 11, 2007
FACILITY/PROGRAM NUMBER(S) 50S08	**PERMIT** Under the Environmental Conservation Law (ECL)	EXPIRATION DATE(S) October 10,2017 Modified: 11/26/2008

TYPE OF PERMIT ☐ NEW ☐ Renewal X Modification X PERMIT TO CONSTRUCT X Permit to Operate

☐ Article 15, Title 5: Protection of Waters

☐ Article 15, Title 15: Water Supply

☐ Article 15, Title 15: Water Transport

☐ Article 15, Title 15: Long Island Wells

☐ Article 15, Title 27: Wild, Scenic and Recreational Rivers

☐ 6NYCRR 608: Water Quality Certification

☐ Article 17, Titles 7, 8: SPDES

☐ Article 19: Air Pollution Control

☐ Article 23, Title 27: Mined Land Reclamation

☐ Article 24: Freshwater Wetlands

☐ Article 25: Tidal Wetlands

X Article 27, Title 7; 6NYCRR 360: Solid Waste Management

☐ Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management

☐ Article 34: Coastal Erosion Management

☐ Articles 1, 3, 17, 19, 27, 37; NYCRR 380: Radiation Control

☐ Other:

PERMIT ISSUED TO IESI-Seneca Meadows, Inc.			TELEPHONE NUMBER (315)539-5624
ADDRESS OF PERMITTEE 1786 Salcman Road, Waterloo, NY 13165			
CONTACT PERSON FOR PERMITTED WORK Thomas Hasek			TELEPHONE NUMBER (315)539-5624
NAME AND ADDRESS OF PROJECT/FACILITY IESI-Seneca Meadows, Inc., 1786 Salcman Road, Waterloo, NY 13165			
LOCATION OF PROJECT/FACILITY 1786 Salcman Road, Waterloo, NY 13165			
COUNTY Seneca	TOWN Seneca Falls	WATERCOURSE Water Body:	NYTM COORDINATES A/B E:712250 N:1015000 SE E:713500 N:1011000
DESCRIPTION OF AUTHORIZED ACTIVITY:			
Construction and Operation of Mixed Solid Waste Landfills (Existing, A/B Overfill, Southeast and 2007 Expansion) with an approved design capacity of 6000 tons per day. Modified to include Article 24 conditions.			

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (see page 2) and any Special Conditions included as part of this permit.

PERMIT ADMINISTRATOR: Peter A. Lent	ADDRESS 6274 E. Avon-Lima Rd, Avon, NY 14414	
AUTHORIZED SIGNATURE Peter A Lent	DATE 11/26/2008	Page 1 of 23

Page 7, question 20

Phase 2 of the project requires a discharge of a weapon to cull each animal. Upon discharge we would expect a pulse noise level expected to approximate 100 decibels using subsonic 22 caliber ammunition which is only 10 decibels over the 90 decibel level allowed for large trucks under New York State laws.

25. Approvals Required:

			Type	Submittal Date
City, Town, Village Board	☒ Yes	☐ No		
City, Town, Village Planning Board	☐ Yes	☒ No		
City, Town Zoning Board	☐ Yes	☒ No	see attached - J.Gilmore's 12/9/09 statement re:venison distribution	
City, County Health Department	☐ Yes	☒ No		
Other Local Agencies	☐ Yes	☒ No		
Other Regional Agencies	☐ Yes	☒ No		
State Agencies	☒ Yes	☐ No	DEC	
Federal Agencies	☐ Yes	☒ No		

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? ☐ Yes ☒ No

If Yes, indicate decision required:

☐ Zoning amendment ☐ Zoning variance ☐ New/revision of master plan ☐ Subdivision

☐ Site plan ☐ Special use permit ☐ Resource management plan ☐ Other

SEQR Part 1

Page 8, Question 25

Based upon discussions with the Tompkins County Health Department, provided culled venison is not for sale and is solely donated, the complete approval process lies with the New York State Ag & Markets Dept., which works with Foodbank approved processors; therefore venison donations require no permitting process from the Tompkins County Health Department.

JG
12/9/09

2. What is the zoning classification(s) of the site?

various residential and commercial

3. What is the maximum potential development of the site if developed as permitted by the present zoning?

n/a

4. What is the proposed zoning of the site?

no change

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?

n/a

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? ☐ Yes ☐ No

n/a the proposal doesn't have any impact on recommended uses as stated in the local land use plans.

7. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action?

primarily residential and some commercial

8. Is the proposed action compatible with adjoining/surrounding land uses with a ¼ mile? ☒ Yes ☐ No

The proposed action has no impact on land use.

9. If the proposed action is the subdivision of land, how many lots are proposed? n/a

a. What is the minimum lot size proposed? _____

10. Will proposed action require any authorization(s) for the formation of sewer or water districts? ☐ Yes ☒ No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection?

☒ Yes ☐ No

a. If yes, is existing capacity sufficient to handle projected demand? ☒ Yes ☐ No

12. Will the proposed action result in the generation of traffic significantly above present levels? ☐ Yes ☒ No

a. If yes, is the existing road network adequate to handle the additional traffic. ☐ Yes ☐ No

D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

E. Verification

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name Village of Cayuga Heights Date _____

Signature _____

Title Mayor

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

PART 2 - PROJECT IMPACTS AND THEIR MAGNITUDE

Responsibility of Lead Agency

General Information (Read Carefully)

! In completing the form the reviewer should be guided by the question: Have my responses and determinations been **reasonable?** The reviewer is not expected to be an expert environmental analyst.

! The **Examples** provided are to assist the reviewer by showing types of impacts and wherever possible the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.

! The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.

! The number of examples per question does not indicate the importance of each question.

! In identifying impacts, consider long term, short term and cumulative effects.

Instructions (Read carefully)

a. Answer each of the 20 questions in PART 2. Answer **Yes** if there will be **any** impact.

b. **Maybe** answers should be considered as **Yes** answers.

c. If answering **Yes** to a question then check the appropriate box(column 1 or 2)to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.

d. Identifying that an Impact will be potentially large (column 2) does not mean that it is also necessarily **significant**. Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.

e. If reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3.

f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the **Yes** box in column 3. A **No** response indicates that such a reduction is not possible. This must be explained in Part 3.

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
Impact on Land			
1. Will the Proposed Action result in a physical change to the project site? NO ☒ YES ☐			
Examples that would apply to column 2			
• Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.	☐	☐	☐ Yes ☐ No
• Construction on land where the depth to the water table is less than 3 feet.	☐	☐	☐ Yes ☐ No
• Construction of paved parking area for 1,000 or more vehicles.	☐	☐	☐ Yes ☐ No
• Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.	☐	☐	☐ Yes ☐ No
• Construction that will continue for more than 1 year or involve more than one phase or stage.	☐	☐	☐ Yes ☐ No
• Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
• Construction or expansion of a santary landfill.	☐	☐	☐ Yes ☐ No
• Construction in a designated floodway.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

2. Will there be an effect to any unique or unusual land forms found on the site? (i.e., cliffs, dunes, geological formations, etc.)
   ☒ NO ☐ YES

• Specific land forms:	☐	☐	☐ Yes ☐ No

Impact on Water

3. Will Proposed Action affect any water body designated as protected? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL)
   ☒ NO ☐ YES

Examples that would apply to column 2

• Developable area of site contains a protected water body.	☐	☐	☐ Yes ☐ No
• Dredging more than 100 cubic yards of material from channel of a protected stream.	☐	☐	☐ Yes ☐ No
• Extension of utility distribution facilities through a protected water body.	☐	☐	☐ Yes ☐ No
• Construction in a designated freshwater or tidal wetland.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

4. Will Proposed Action affect any non-protected existing or new body of water?
   ☒ NO ☐ YES

Examples that would apply to column 2

• A 10% increase or decrease in the surface area of any body of water or more than a 10 acre increase or decrease.	☐	☐	☐ Yes ☐ No
• Construction of a body of water that exceeds 10 acres of surface area.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
5. Will Proposed Action affect surface or groundwater quality or quantity? ☒ NO ☐ YES			
Examples that would apply to column 2			
• Proposed Action will require a discharge permit.	☐	☐	☐ Yes ☐ No
• Proposed Action requires use of a source of water that does not have approval to serve proposed (project) action.	☐	☐	☐ Yes ☐ No
• Proposed Action requires water supply from wells with greater than 45 gallons per minute pumping capacity.	☐	☐	☐ Yes ☐ No
• Construction or operation causing any contamination of a water supply system.	☐	☐	☐ Yes ☐ No
• Proposed Action will adversely affect groundwater.	☐	☐	☐ Yes ☐ No
• Liquid effluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.	☐	☐	☐ Yes ☐ No
• Proposed Action would use water in excess of 20,000 gallons per day.	☐	☐	☐ Yes ☐ No
• Proposed Action will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.	☐	☐	☐ Yes ☐ No
• Proposed Action will require the storage of petroleum or chemical products greater than 1,100 gallons.	☐	☐	☐ Yes ☐ No
• Proposed Action will allow residential uses in areas without water and/or sewer services.	☐	☐	☐ Yes ☐ No
• Proposed Action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change

6 Will Proposed Action alter drainage flow or patterns, or surface water runoff?

[■] NO [ ] YES

Examples that would apply to column 2				
• Proposed Action would change flood water flows	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action may cause substantial erosion.	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action is incompatible with existing drainage patterns.	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action will allow development in a designated floodway.	[ ]	[ ]	[ ] Yes	[ ] No
• Other impacts:	[ ]	[ ]	[ ] Yes	[ ] No

IMPACT ON AIR

7 Will Proposed Action affect air quality?

[■] NO [ ] YES

Examples that would apply to column 2				
• Proposed Action will induce 1,000 or more vehicle trips in any given hour.	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action will result in the incineration of more than 1 ton of refuse per hour.	[ ]	[ ]	[ ] Yes	[ ] No
• Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action will allow an increase in the amount of land committed to industrial use.	[ ]	[ ]	[ ] Yes	[ ] No
• Proposed Action will allow an increase in the density of industrial development within existing industrial areas.	[ ]	[ ]	[ ] Yes	[ ] No
• Other impacts:	[ ]	[ ]	[ ] Yes	[ ] No

IMPACT ON PLANTS AND ANIMALS

8. Will Proposed Action affect any threatened or endangered species?

[ ] NO [■] YES

Examples that would apply to column 2				
• Reduction of one or more species listed on the New York or Federal list, using the site, over or near the site, or found on the site.	[■]	[ ]	[ ] Yes	[■] No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
• Removal of any portion of a critical or significant wildlife habitat.	☐	☐	☐ Yes ☐ No
• Application of pesticide or herbicide more than twice a year, other than for agricultural purposes.	☐	☐	☐ Yes ☐ No
• Other impacts:	☒	☐	☐ Yes ☒ No

see attached from John Fitzpatrick, Lab of Ornithology

9. Will Proposed Action substantially affect non-threatened or non-endangered species?
☐ NO ☒ YES

Examples that would apply to column 2

• Proposed Action would substantially interfere with any resident or migratory fish, shellfish or wildlife species.	☐	☐	☐ Yes ☐ No
• Proposed Action requires the removal of more than 10 acres of mature forest (over 100 years of age) or other locally important vegetation.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☒	☐ Yes ☒ No

see attached statement, email from John Fitzparick, Lab of Ornithology, January 9, 2010 Ithaca Journal article, and statement from F. Robert Wesley

IMPACT ON AGRICULTURAL LAND RESOURCES

10. Will Proposed Action affect agricultural land resources?
☒ NO ☐ YES

Examples that would apply to column 2

• The Proposed Action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.)	☐	☐	☐ Yes ☐ No
• Construction activity would excavate or compact the soil profile of agricultural land.	☐	☐	☐ Yes ☐ No
• The Proposed Action would irreversibly convert more than 10 acres of agricultural land or, if located in an Agricultural District, more than 2.5 acres of agricultural land.	☐	☐	☐ Yes ☐ No

Norma Manning

From: Beatrice Szekely [beatrice@twcny.rr.com]
Sent: Monday, January 11, 2010 8:24 PM
To: VCH-Trustees; Jim Gilmore; Norma Manning; Beatrice Szekely; Brent Cross; Jeffrey Silber; Randall Marcus
Subject: Fw: From Bea Szekely re Village of Cayuga Heights deer management proposal

Dear All

Below, as further documentation for our SEQR Long Environmental Assessment Form, please find a message from John Fitzpatrick, Director of the Lab of Ornithology, supporting our draft deer remediation plan.

I have just written him a note of appreciation.

Bea
----- Original Message -----
From: "John Fitzpatrick" <jwf7@cornell.edu>
To: "Beatrice Szekely" <beatrice@twcny.rr.com>
Sent: Monday, January 11, 2010 3:55 PM
Subject: Re: From Bea Szekely re Village of Cayuga Heights deer management proposal

> Dear Beatrice,
>
> Thank you for inviting me to comment briefly on how the enormous
> over-population of white-tailed deer is affecting biodiversity in the
> Ithaca area. As you know, we are quite familiar with this issue, first
> hand. Our forested preserve - Sapsucker Woods - lies at the interface
> of rural residential and settled residential areas, so we are a place
> where deer tend to congregate to forage, rest, and reproduce.
> Moreover, our large staff of professional ecologists is familar with
> numerous case studies about this issue nationally.
>
> In a word, the white-tailed deer population boom has reached a stage I
> now describe as "menacing" for biodiversity. It is well documented
> that deer populations in excess of 12-15 per square mile have
> disastrous consequences on forest understory plants. For a number of
> reasons this, in turn, causes reductions or outright eliminations of
> populations of a number of understory bird species. Especially
> vulnerable as a direct consequence of understory thinning by deer are
> thrushes (in our area, these are Wood Thrush, Veery, and Hermit
> Thrush) and understory warblers (especially Ovenbird and Louisiana
> Waterthrush), but many other species are vulnerable. Indeed, I hasten
> to add that in the long run _all_ the species of forest-inhabiting
> birds -- and hundreds of other forest organisms as well - are at risk
> of major population perturbations. It is increasingly clear that
> unchecked populations of white-tailed deer are causing major,
> long-term alterations in forest structure and composition, especially
> in regions like ours where oak trees dominate. (For example, in a
> survey of 61 foresters in Wisconsin, "more respondents identified deer
> as a strong to very strong contributor to oak regeneration failure
> than any other factor. Of those who responded ... 80% identified deer
> as a strong to very strong contributor to regeneration failures," as
> quoted from the Wisconsin Council on Forestry website). By allowing
> deer populations to remain unnaturally high (subsidized by human

> ornamental plantings, and provided abnormally high survival by the
> absence of
> predators) we risk setting into motion a hundred-year trend away form
> the native mix of hardwoods that belong here in the Ithaca region. I
> view it as essential that we protect our biodiversity -- a major
> attraction of the Ithaca area -- by reducing deer herds to their
> native densities by whatever means necessary. I applaud all efforts to do so.
>
> John W. Fitzpatrick, Ph.D.
> Director, Cornell Laboratory of Ornithology
> 159 Sapsucker Woods Rd.
> Ithaca, NY 14850
> 607-254-2410
> jwf7@cornell.edu
>
>
>
>

The Village of Cayuga Heights has received a report from the DEC Division of Fish, Wildlife & Marine Resources, prepared 1/22/2010 by the New York State Natural Heritage Program. The report specifies 15 imperiled fish, insect and plant species or vulnerable wildlife areas. Due to the confidential nature of the report, the impact on specific species by name is not listed here. However, it is the belief of F. Robert Wesley, Natural Areas Manager and Field Botanist, Cornell Plantations, reducing the whitetail deer population can only have a positive impact on endangered plant species in our project area.

Please see the attachment from F. Robert Wesley describing rare and unusual plant species in our project area and the expected impact from a program that would reduce the population of whitetail deer.

I believe that reducing the density of deer could only have a positive effect on any or all rare, threatened or endangered plant species in the area. Over the years I have watched as a number of plant species have dwindled greatly or disappeared from many sites locally. At first, these tended to be species that are most preferred by deer like wild yew (*Taxus canadensis*) or white trillium (*Trillium grandiflorum*). But after these are gone or nearly so, and the deer populations continue to increase, they will eat anything that is not too terribly poisonous or unpalatable. In some of our forested natural areas, very lush plant communities with many species of herbaceous plants have given way to mostly blue cohosh (*Caulophyllum thalictroides*) or mostly wild leek (*Allium tricoccum*). You can see a drop from 20 species of spring wildflowers to two or three.

Also, it has been demonstrated that that deer have a role in distributing garlic mustard (*Alliaria petiolata*) and other invasive species. These constitute a further threat to species that are already at-risk and to the ecological integrity of the site as a whole, by competetively excluding desirable native species.

Rarities in Cayuga Heights and vicinity

Amelanchier humilis running shadbush
TNC G5 S4 Locally rare
Lake cliffs and steep rocky slopes

Boechera stricta Drummond's rock-cress
NYS Endangered TNC G5 S2 Locally rare
Lake cliffs and Renwick slope and little gorges and steep, rocky slopes.

Carex muehlenbergii var. *enervis* Mühlenberg's sedge
TNC G5 S3 Locally rare
Top of Lake cliffs and steep slopes

Eupatorium sessilifolium upland boneset
State status uncertain Locally rare
Top of Lake cliffs and steep slopes

Lonicera dioica var. *glaucescens* glaucous honeysuckle
TNC G5 S3 Locally scarce
Dry cliffs and steep slopes

Paronychia canadensis forking chickweed
TNC G5 S5 Locally scarce
Dry woods on steep slopes, Renwick Slope, small gorges

Lake cliffs, Renwick slope

Quecus coccinea scarlet oak
TNC G5 S5 Locally scarce
Lake cliffs, ravine slopes

Sericocarpus asteroides white-topped aster
TNC G5 S5 Locally scarce
Lake cliffs, steep, open slopes

Solidago ulmifolia elm-leaved goldenrod
TNC G5 S5 Locally rare
Dry, open woods, Renwick slope

F Robert Wesley March 2010

Phryma leptostachya lopseed
TNC G5 S5 Locally scarce
Woods, lower slopes

Physocarpus opulifolius ninebark
TNC G5 S5 Locally scarce
Dry slopes and cliffs

Pinus rigida pitch pine
TNC G5 S5 Locally scarce
Lake cliffs, ravine slopes

INTRODUCTION

This catalog has been produced to fill the need for a list of rare and scarce plants of the Ithaca area that is up to date regarding both frequency and nomenclature. Data on frequency were gathered through a survey of the relevant literature supplemented by the field observations of the author over more than 25 years. Herbarium specimens were studied to verify the correctness of literature records and more importantly, to gain additional unpublished records. Records of the occurrence of a plant at a site have been dismissed where the site is known to be destroyed or so disturbed as to eradicate the plant. The continued existence of sites in a reasonably undisturbed condition has been determined so far as possible.

Nomenclature employed follows no single source, but is believed to represent current usage. Some freedom has been taken in trying to maintain uniform species and subspecies concepts. Varieties have been ignored except when a variety should really be treated as a subspecies but no validly published combination at subspecies rank exists. Rules of the International Code of Botanical Nomenclature (Stafleu 1983) are consistently followed.

Only species believed to be native in central New York are included here. The best floras for northeastern North America are now considerably out of date. Unfortunately, the number of name changes needed here will likely cause some confusion. Synonyms given are names used in Wiegand and Eames (1926), Clausen (1949), Fernald (1950), and Kartesz and Kartesz (1980), where they differ from this list.

FORMAT

"TNC Rarity" is the system in use by The Nature Conservancy (TNC) for designating the frequency of species. These entries are included as a concise way of showing abundance globally and within the state. "G" is global frequency and "S" is New York State frequency. "T" is the frequency of an infraspecific taxon as opposed to the species as a whole. "1" is the category of highest rarity, denoting one to five occurrences. "2" denotes six to 20 occurrences, "3" denotes 21 to 100 occurrences. "4" is an intermediate category defined as "apparently secure". "5" is defined as "demonstrably secure", which can be interpreted as abundant. "H" indicates historical records not yet verified in the field. "X" means presumed extirpated. "Q" is used to indicate questionable taxonomy, whereas "U" or "?" is used to indicate uncertain frequency. Only species considered to need special protection throughout New York State have entries in this column.

Frequency of species in the Cayuga Lake basin is given in the "Frequency" column. Scarce is six to 20 known occurrences. Rare is two to five occurrences. Very rare means the species presently is known only from one site. Species designated "not seen recently" are known only from herbarium records or have not been seen in nature in 15 years. A species is considered to be extirpated only after extensive searching of historical sites has been undertaken.

LITERATURE CITED

Clausen, Robert T. 1949. Checklist of the Vascular Plants of the Cayuga Quadrangle, 42°- 43° N, 76°- 77° W. Cornell University Agricultural Experiment Station Memoir 291. Ithaca, New York. 87 pp.

Fernald, M. L. 1950. Gray's Manual of Botany, Eighth Edition. American Book Company, New York. 1632 pp.

Gleason, H. A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada, Second Edition. The New York Botanical Garden. Bronx, New York. 910 pp.

Kartesz, J. T. and R. Kartesz. 1980. A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland. University of North Carolina Press, Chapel Hill. 498 pp. and 2 pp. of errata.

Stafleu, Frans A. 1983. International Code of Botanical Nomenclature. Dr. W. Junk, Publishers, The Hague. 457 pp.

Wiegand, Karl M. and Arthur J. Eames. 1926. The Flora of the Cayuga Lake Basin, New York, Vascular Plants. Cornell University Agricultural Experiment Station Memoir 92. Ithaca, New York. 491 pp. (Map.)

Rare and Scarce Vascular Plants of the Cayuga Lake Basin

	TNC Rarity		Species	Family	Frequency
1.			*Abies balsamea* (L.) Mill. BALSAM FIR	Pinaceae	scarce
2.			*Adlumia fungosa* (Ait.) Greene CLIMBING FUMITORY	Fumariaceae	rare
3.	G5T?	S2S3	*Agalinis paupercula* (Gray) Britt. PURPLE GERARDIA (*Gerardia paupercula* (Gray) Britt.) var. *borealis* (Pennell) Deam	Scrophulariaceae	rare
4.			*Agalinis tenuifolia* (Valh) Raf. PURPLE GERARDIA (*Gerardia tenuifolia* Vahl)	Scrophulariaceae	
a.			var. *parviflora* (Nutt.) Pennell		rare
b.			var. *tenuifolia*		rare
5.	G5	S2S3	*Agastache nepetoides* (L.) Kuntze YELLOW GIANT HYSSOP	Lamiaceae	rare
6.			*Agastache scrophulariifolia* (Willd.) Kuntze GIANT HYSSOP	Lamiaceae	rare
7.	G5	S3	*Agrimonia parviflora* Ait. SMALL-FLOWERED AGRIMONY	Rosaceae	rare
8.	G5	S2	*Agrimonia rostellata* Wallr. WOODLAND AGRIMONY	Roscaeae	rare
9.			*Alnus serrulata* (Ait.) Willd. RED ALDER	Betulaceae	scarce
10.			*Amelanchier humilis* Wieg. LIMESTONE SHADBUSH	Rosaceae	rare
11.			*Amelanchier stolonifera* Wieg. SHADBUSH, JUNEBERRY	Rosaceae	rare
12.			*Andromeda polifolia* L. BOG ROSEMARY	Ericaceae	scarce
a.			ssp. *glaucophylla* (Link) Hult. (*A. glaucophylla* Link)		
13.			*Andropogon gerardi* Vitm. BIG BLUESTEM	Poaceae	scarce
14.			*Angelica venenosa* (Greenway) Fern. HAIRY ANGELICA (*A. villosa* (Walt.) BSP.)	Apiaceae	scarce
15.	G5	S1	*Aplectrum hyemale* (Muhl.) Torr. PUTTYROOT, ADAM AND EVE	Orchidaceae	believed extirpated
16.	G5	S1S2	*Arabis drummondii* Gray DRUMMOND'S ROCKCRESS	Brassicaceae	rare
17.			*Arabis glabra* (L.) Bernh. TOWER MUSTARD	Brassicaceae	scarce
18.			*Arabis lyrata* L. LYRE-LEAVED ROCKCRESS	Brassicaceae	rare
19.			*Aralia hispida* Vent. BRISTLY SARSAPARILLA	Araliaceae	scarce
20.			*Arceuthobium pusillum* C. Peck DWARF MISTLETOE	Loranthaceae	rare
21.			*Arctostaphyllos uva-ursi* (L.) Spreng. BEARBERRY	Ericaceae	rare
22.	G4	S2	*Arethusa bulbosa* L. SWAMP PINK, ARETHUSA	Orchidaceae	very rare

	TNC Rarity		Species	Family	Frequency
23.			*Arisaema dracontium* (L.) Schott GREEN DRAGON	Araceae	rare
24.	G4?	S2	*Armoracia aquatica* (Eat.) Wieg. LAKE CRESS (*Armoracia lacustris* (Gray) al-Shehbaz, *Rorippa aquatica* (Eat.) Britton)	Brassicaceae	very rare
25.			*Aronia arbutifolia* (L.) Pers. RED CHOKEBERRY (*Pyrus arbutifolia* (L.) L. f.)	Rosaceae	scarce
26.			*Aronia melanocarpa* (Michx.) Ell. BLACK CHOKEBERRY (*Pyrus melanocarpa* (Michx.) Willd.)	Rosaceae	scarce
27.			*Asclepias exaltata* L. POKE MILKWEED	Asclepiadaceae	scarce
28.			*Asclepias tuberosa* L. ORANGE MILKWEED, BUTTERFLY WEED	Asclepiadaceae	scarce
29.			*Asplenium rhizophyllum* L. WALKING FERN (*Camptosorus rhizophyllus* (L.) Link)	Aspleniaceae	scarce
30.	G5	S2	*Aster borealis* (Torr. & Gray) Prov. RUSH ASTER (*A. junciformis* Rydb., *A. juncoides* of auth., not Ait.)	Asteraceae	scarce
31.	G5	S2S3	*Aster firmus* Nees SMOOTH SWAMP ASTER (*A. lucidulus* (Gray) Wieg., *A. puniceus* var. *firmus* (Nees) Torr. & Gray)	Asteraceae	rare
32.			*Aster paternus* Cronq. WHITE-TOPPED ASTER (*Sericocarpus asteroides* (L.) BSP.)	Asteraceae	scarce
33.			*Aster schreberi* Nees SCHREBER'S ASTER	Asteraceae	scarce
34.			*Astragalus canadensis* L. CANADA MILK VETCH	Fabaceae	scarce
35.	G4	S1	*Astragalus neglectus* (Torr. & Gray) Sheldon COOPER'S MILK VETCH (*A. cooperi* Gray)	Fabaceae	rare
36.			*Athyrium pycnocarpon* (Spreng.) Tidestr. GLADE FERN (*A. angustifolium* (Michx.) Milde, *Diplazium pycnocarpon* (Spreng.) Broun)	Aspleniaceae	scarce
37.			*Azolla filiculoides* Presl MOSQUITO FERN (*A. caroliniana* of auth., not Willd.)	Salviniaceae	very rare not seen recently
38.			*Baptisia tinctoria* (L.) Vent. WILD INDIGO	Fabaceae	very rare not seen recently
39.			*Bartonia virginica* (L.) BSP. YELLOW BARTONIA	Gentianaceae	scarce
40.			*Betula papyrifera* Marsh. PAPER BIRCH (*B. alba* L. ssp. *papyrifera* (Marsh.) Spach)	Betulaceae	scarce
41.	G5	S2	*Betula pumila* L. BOG or SWAMP BIRCH	Betulaceae	very rare
42.	G4G5T4	S3	*Bidens beckii* Torr. var. *beckii* WATER MARIGOLD (*Megalodonta beckii* (Torr.) Greene var. *beckii*)	Asteraceae	rare
43.	G5	S2	*Bidens laevis* (L.) BSP. SMOOTH BUR MARIGOLD	Asteraceae	rare

Rare and Scarce Vascular Plants of the Cayuga Lake Basin

	TNC Rarity		Species	Family	Frequency
					not seen recently
44.			*Blephilia hirsuta* (Pursh) Benth. HAIRY BLEPHILIA	Lamiaceae	scarce
45. a.			*Botrychium lanceolatum* (Gmel.) Ångstr. LANCE-LEAVED ssp. *angustisegmentum* (Pease & Moore) Clausen GRAPE FERN (*B. angustisegmentum* Pease & Moore)	Ophioglossaceae	scarce
46.			*Botrychium multifidum* (Gmel.) Rupr. LEATHERY (*B. multifidum* ssp. *silaifolium* (Presl) Clausen, GRAPE FERN *B. ternatum* (Thunb.) Sw. var. *intermedium* D. Eat.)	Ophioglossaceae	rare not seen recently
47.	G4Q	S1S3	*Botrychium oneidense* (Gilbert) House ONEIDA GRAPE (*B. dissectum* Spreng. var. *oneidense* (Gilbert) Clausen) FERN	Ophioglossaceae	scarce
48.			*Botrychium simplex* E. Hitchc. LITTLE GRAPE FERN (incl. var. *tenebrosum* (A. Eat.) Clausen)	Ophioglossaceae	scarce
49.			*Brasenia schreberi* Gmel. WATER SHIELD	Cabombaceae	scarce
50.			*Bromus kalmii* Gray KALM'S BROME GRASS	Poaceae	scarce
51.	G5T5	S2	*Calamagrostis inexpansa* Gray BOG REED GRASS (*C. neglecta* Gaertn., Meyer & Scherb., *C. stricta* ssp. *inexpansa* (Gray) C. Greene)	Poaceae	rare
52.	G1Q	S1	*Calamagrostis perplexa* Scribn. WOOD REED GRASS (*C. porteri* x *C. canadensis*, *C. porteri* ssp. *perplexa* (Scribn.) Clausen)	Poaceae	very rare endemic
53.			*Calla palustris* L. WATER CALLA, WILD CALLA	Araceae	scarce
54.			*Calopogon tuberosus* (L.) BSP. GRASS PINK (*C. pulchellus* (Salisb.) R. Br.)	Orchidaceae	scarce
55.			*Campanula americana* L. TALL BELLFLOWER	Campanulaceae	rare not seen recently
56.	G5	S3	*Cardamine douglassii* Britt. PURPLE CRESS (*C. bulbosa* var. *purpurea* (Torr.) BSP.)	Brassicaceae	scarce
57.			*Cardamine parviflora* L SMALL-FLOWERED BITTERCRESS	Brassicaceae	rare
58. a.			*Cardamine pratensis* L. CUCKOO-CRESS ssp. *palustris* (Wimm. & Gräb.) Clausen (*C. pratensis* var. *palustirs* Wimm. & Gräb.)	Brassicaceae	scarce
59.			*Carex aestivalis* Curtis SUMMER SEDGE	Cyperaceae	very rare
60.			*Carex alopecoidea* Tuckerm. FOXTAIL SEDGE	Cyperaceae	scarce
61.			*Carex amphibola* Steud. var. *rigida* (Bailey) Fern. (*C. amphibola* var. *turgida* Fern., *C. grisea* Walhenb.)	Cyperaceae	scarce
62.			*Carex annectens* (Bickn.) Bickn. YELLOW FOXTAIL SEDGE	Cyperaceae	rare

	TNC Rarity		Species	Family	Frequency
63.			*Carex aquatilis* Wahl. NORTHERN WATER SEDGE	Cyperaceae	scarce
64.	G5	S1	*Carex arcta* Boott NORTHERN CLUSTERED SEDGE	Cyperaceae	rare not seen recently
65.	G5	S2	*Carex buxbaumii* Wahl. BUXBAUM'S SEDGE (*C. polygama* Schkuhr)	Cyperaceae	rare
66.	G5	S1	*Carex capillaris* L. HAIR-LIKE SEDGE	Cyperaceae	believed extirpated
67.			*Carex careyana* Torr. CAREY'S SEDGE	Cyperaceae	rare
68.	G5	S2	*Carex chordorrhiza* L. f. CREEPING SEDGE	Cyperaceae	very rare
69.			*Carex crawfordii* Fern. CRAWFORD'S SEDGE	Cyperaceae	rare
70.	G4	S3	*Carex cryptolepis* Mackz. SMALL YELLOW SEDGE (*C. flava* L. var. *fertilis* M. Peck)	Cyperaceae	rare
71.			*Carex debilis* Michx. var. *rudgei* Bailey SLENDER SEDGE	Cyperaceae	scarce
72.	G3	SH	*Carex decomposita* Muhl. CYPRESS KNEE SEDGE	Cyperaceae	believed extirpated
73.			*Carex diandra* Schrank PANICLED SEDGE	Cyperaceae	scarce
74.			*Carex digitalis* Willd. SLENDER WOODLAND SEDGE	Cyperaceae	scarce
75.			*Carex foena* Willd. HAY SEDGE (*C. siccata* Dewey)	Cyperaceae	rare
76.			*Carex echinata* Murr. PRICKLY SEDGE (*C. angustior* Mackz., *C. cephalantha* (Bailey) Bickn., *C. stellulata* var. *cephalantha* (Bailey) Fern.. *C. muricata* of auth., not L.)	Cyperaceae	scarce
77.			*Carex folliculata* L. LONG-FRUITED SEDGE	Cyperaceae	scarce
78.	G5	S1	*Carex frankii* Kunth FRANK'S SEDGE	Cyperaceae	very rare
79.	G5T5	S1	*Carex glaucodea* Tuckerm. GLAUCOUS SEDGE (*C. flaccosperma* var. *glaucodea* (Tuckerm.) Kuk.)	Cyperaceae	rare
80.			*Carex grayii* Carey ASA GRAY'S SEDGE	Cyperaceae	rare
81.	G5	S1	*Carex gynocrates* Wormsk. NORTHERN BOG SEDGE (*C. dioica* L., in part)	Cyperaceae	believed extirpated
82.			*Carex hirsutella* Mackenz. HIRSUTE SEDGE (*C. triceps* Michx., not Schrank, *C. triceps* var. *hirsuta* (Willd.) Bailey, *C. triceps* ssp. *hirsutella* (Mackenz.) Clausen)	Cyperaceae	scarce
83.	G5	S2S3	*Carex hitchcockiana* Dewey HITCHCOCK'S SEDGE	Cyperaceae	scarce

	TNC Rarity		Species	Family	Frequency
84.			*Carex howei* Mackz. HOWE'S SEDGE	Cyperaceae	scarce
85.			*Carex incomperta* Bickn. PRICKLY BOG SEDGE	Cyperaceae	rare
86.	G5	S2	*Carex jamesii* Schwein. JAMES' SEDGE	Cyperaceae	rare
87.			*Carex lanuginosa* Michx. WOOLY SEDGE (*C. lasiocarpa* ssp. *lanuginosa* (Michx.) Clausen & Wahl, *C. lasiocarpa* var. *latifolia* (Boeck.) Gleason)	Cyperaceae	scarce
88.			*Carex lasiocarpa* Ehrh. WIRE-GRASS SEDGE	Cyperaceae	scarce
89.			*Carex limosa* L. MUD SEDGE	Cyperaceae	scarce
90.	G4	S2S3	*Carex lupuliformis* Sartw. SARTWELL'S HOP SEDGE	Cyperaceae	rare
91.	G4	S2	*Carex molesta* Mackz. TROUBLESOME SEDGE (*C. brevior* (Dewey) Mackz., *C. festucacea* var. *brevior* (Dewey) Fern.)	Cyperaceae	scarce
92.			*Carex muhlenbergii* Schkuhr MUHLENBERG'S SEDGE	Cyperaceae	
a.			var. *enervis* Boott		rare
b.			var. *muhlenbergii*		rare
93.			*Carex oligocarpa* Schkuhr FEW-FRUITED SEDGE	Cyperaceae	rare
94.			*Carex pauciflora* Lightf. FEW-FLOWERED BOG SEDGE	Cyperaceae	rare
95.			*Carex paupercula* Michx. BOG SEDGE	Cyperaceae	rare
96.			*Carex prairea* Dewey WET PRAIRIE SEDGE	Cyperaceae	scarce
97.			*Carex pseudo-cyperus* L. NUT-GRASS SEDGE	Cyperaceae	rare
98.			*Carex radiata* (Wahl.) Small STELLATE SEDGE (*C. rosea* of auth., not willd.)	Cyperaceae	rare
99.	G5	S1S2	*Carex retroflexa* Muhl. REFLEXED SEDGE	Cyperaceae	scarce
100.			*Carex rosea* Willd. SEDGE (*C. convoluta* Mackz.)	Cyperaceae	scarce
101.	G4G5	S1S2	*Carex sartwellii* Dewey SARTWELL'S SEDGE	Cyperaceae	rare
102.	G3	S2S3	*Carex schweinitzii* Dewey SCHWEINITZ'S SEDGE	Cyperaceae	rare
103.			*Carex sterilis* Willd. SEDGE	Cyperaceae	rare
104.			*Carex sprengelii* Dewey LONG-BEAKED SEDGE (*C. longirostris* Torr.)	Cyperaceae	rare
105.			*Carex tetanica* Schkuhr SEDGE	Cyperaceae	rare
106.			*Carex trisperma* Dewey THREE-FRUITED SEDGE	Cyperaceae	scarce

	TNC Rarity		Species	Family	Frequency
107.			*Carex tuckermanii* Dewey TUCKERMAN'S SEDGE	Cyperaceae	rare
108.			*Carex vesicaria* L. INFLATED SEDGE	Cyperaceae	scarce
109.			*Carex virescens* Muhl. RIBBED SEDGE	Cyperaceae	scarce
110.			*Carex viridula* Michx. MARLY SHORE SEDGE (*C. oederi* var. *pumila* (Coss. & Germ.) Fern., *C. chlorophylla* Mackenz.)	Cypercaeae	rare
111.	G5	S2	*Carex willdenowii* Schkuhr WILLDENOW'S SEDGE	Cyperaceae	rare
112.	G5	S2	*Carya laciniosa* (Michx. f.) G. Don WESTERN SHAGBARK HICKORY	Juglandaceae	rare
113.	G5	S1	*Castilleja coccinea* (L.) Spreng. SCARLET PAINTED-CUP, INDIAN PAINTBRUSH	Scrophulariaceae	believed extirpated
114.			*Celtis occidentalis* L HACKBERRRY	Ulmaceae	scarce
115.			*Cerastium nutans* Raf. NODDING CHICKWEED	Caryophyllaceae	rare
116.	G5	S1	*Chaerophyllum procumbens* (L.) Crantz WILD CHERVIL	Apiaceae	rare not seen recently
117.	G5	S1S2	*Chamaelirium luteum* (L.) Gray DEVIL'S-BIT, BLAZING-STAR, FAIRY WAND	Liliaceae	rare not seen recently
118.			*Chenopodium capitatum* (L.) Aschers. STRAWBERRY BLITE	Chenopodiaceae	rare
119.	G5	S2	*Chenopodium rubrum* L. COAST BLITE, RED GOOSEFOOT	Chenopodiaceae	rare
120.			*Chimaphila maculata* (L.) Pursh SPOTTED WINTERGREEN	Ericaceae	rare
121.			*Cimicifuga racemosa* (L.) Nutt. BUGBANE, BLACK COHOSH	Ranunculaceae	scarce
122.			*Circaea* x*intermedia* Ehrh. ENCHANTER'S NIGHTSHADE (*C. alpina* x *C. lutetiana*, *C. canadensis* Hill, not L.)	Onagraceae	rare
123.			*Cirsium discolor* (Muhl.) Spreng. PRAIRIE THISTLE	Asteraceae	rare
124.			*Cirsium muticum* Michx. SWAMP THISTLE, FEN THISTLE	Asteraceae	scarce
125.			*Cladium mariscoides* (Muhl.) Torr. TWIG-RUSH (*Mariscus mariscoides* (Muhl.) Kuntze)	Cyperaceae	rare
126.			*Clematis occidentalis* (Hornem.) DC. PURPLE CLEMATIS (*C. verticillaris* DC.)	Ranunculaceae	rare
127.			*Coeloglossum viride* (L.) Hartm. FROG ORCHIS (*C. viride* var. *virescens* (Muhl.) Luer, *Habenaria viridis* (L.) R. Br., *H. viridis* var. *bracteata* (Muhl.) Gray, *H. viridis* ssp. *bracteata* (Muhl.) Clausen, *H. bracteata* (Muhl.) R. Br.)	Orchidaceae	rare

	TNC Rarity		Species	Family	Frequency
128.			*Convolvulus spithamaeus* L. UPRIGHT BINDWEED (*Calystegia spithamaea* (L.) Pursh)	Convolvulaceae	scarce
129.			*Corallorhiza odontorhiza* (Willd.) Nut. FALL CORALROOT	Orchidaceae	rare
130.			*Corallorhiza trifida* Chat. EARLY or SPRING CORALROOT	Orchidaceae	scarce
131.			*Cornus canadensis* L. BUNCHBERRY	Cornaceae	scarce
132.	G5	S2	*Corydalis aurea* Willd. GOLDEN CORYDALIS	Fumariaceae	believed extirpated
133.	G5	S3	*Corydalis flavula* (Raf.) DC. YELLOW CORYDALIS	Fumariaceae	rare
134.			*Corydalis sempervirens* (L.) Pers. PINK CORYDALIS	Fumariaceae	rare
135.			*Corylus americana* Walt. AMERICAN HAZELNUT	Betulaceae	scarce
136.			*Crataegus chrysocarpa* Ashe ROUND-LEAVED THORN (*C. dodgei* Ashe, *C. margaretta* of auth., not Ashe)	Rosaceae	scarce
137.			*Crataegus intricata* Lange LANGE'S THORN (*C. boyntonii* Beadle, *C. straminea* Beadle)	Rosaceae	scarce
138.			*Crataegus macracantha* Lodd. LONG-THORNED HAW	Rosaceae	scarce
139.			*Crataegus submollis* Sarg. EMERSON'S THORN (*C. champlainensis* Sarg.)	Rosaceae	rare
140.			*Cryptogramma stelleri* (Gmel.) Prantl SLENDER CLIFF-BRAKE	Adiantaceae	rare
141.	G5	S1	*Cuscuta cephalanthii* Engelm. BUTTONBUSH DODDER	Convolvulaceae	rare
142.			*Cuscuta corylii* Engelm. HAZEL DODDER	Convolvulaceae	rare
143.	G5T4	S1S2	*Cynoglossum boreale* Fern. NORTHERN WILD COMFREY (*C. virginianum* var. *boreale* (Fern.) Cooperrider)	Boraginaceae	rare
144.			*Cyperus diandrus* Torr. LOW CYPERUS	Cyperaceae	scarce
145.	G5	S3	*Cyperus erythrorhizos* Muhl. RED-ROOTED CYPERUS	Cyperaceae	rare
146. a.			*Cyperus filiculmis* Vahl SLENDER CYPERUS var. *macilentus* Fern.	Cyperaceae	scarce
147.	G5	S3	*Cyperus odoratus* L. RUSTY CYPERUS (*C. engelmannii* Steud., *C. ferax* Rich., *C. ferruginescens* Boeckl.)	Cyperaceae	rare
148.			*Cyperus squarrosus* L. AWNED CYPERUS (*C. aristatus* Rottb., *C. inflexus* Muhl.)	Cyperaceae	rare
149.			*Cypripedium parviflorum* Salisb. SMALL YELLOW (*C. calceolus* var. *parviflorum* (Salisb.) Fern.) LADYSLIPPER	Orchidaceae	scarce

	TNC Rarity		Species	Family	Frequency
150.			*Cypripedium pubescens* Willd. LARGE YELLOW (*C. calceolus* var. *pubescens* (Willd.) Correll, LADYSLIPPER *C. parviflorum* var. *pubescens* (Willd.) Knight)	Orchidaceae	scarce
151.			*Cypripedium reginae* Walt. SHOWY LADYSLIPPER	Orchidaceae	scarce
152.			*Deschampsia caespitosa* (L.) Beauv. LIMY SHORE GRASS	Poaceae	rare
153.			*Deschampsia flexuosa* (L.) Trin. HAIR GRASS	Poaceae	rare
154. a.	G5T5	S1	*Descurainia pinnata* (Walt.) Britt. TANSY MUSTARD ssp. *brachycarpa* (Rich.) Detl. (*D. pinnata* var. *brachycarpa* (Rich.) Fern., *Sisymbrium brachycarpon* (Rich.) Wats.)	Brassicaceae	believed extripated
155.	G5	S2S3	*Desmodium ciliare* (Muhl.) DC. TICK-TREFOIL	Fabaceae	very rare
156.			*Desmodium marilandicum* (L.) DC. TICK-TREFOIL	Fabaceae	rare
157.			*Desmodium rotundifolium* DC. PROSTRATE TICK-TREFOIL	Fabaceae	scarce
158.			*Diplachne maritima* Bickn. SALT MEADOW GRASS (*Leptochloa fascicularis* var. *maritima* (Bickn.) Gleason)	Poaceae	rare
159.			*Disporum lanuginosum* (Michx.) Nichols. YELLOW MANDARIN, HAIRY DISPORUM	Liliaceae	scarce
160.	G4	S2	*Draba arabisans* Michx. ROCKCRESS WHITLOW GRASS	Brassicaceae	rare
161.			*Drosera intermedia* Hayne SPATULATE-LEAVED SUN DEW (*D. longifolia* L.)	Droseraceae	rare
162.			*Dryopteris clintoniana* (D. Eat.) Dowell CLINTON'S WOOD (*D. cristata* var. *clintoniana* (D. Eat.) Underw.) FERN	Aspleniaceae	scarce
163.			*Dryopteris goldiana* (Hook.) Gray GOLDIE'S FERN	Aspleniaceae	scarce
164.			*Eleocharis elliptica* Kunth SLENDER SPIKERUSH var. *elliptica* (*E. capitata* (L.) R. Br.)	Cyperaceae	scarce
165.			*Eleocharis olivacea* Torr. SPIKERUSH	Cyperaceae	rare
166.			*Eleocharis parvula* (R. & S.) Link DWARF SPIKERUSH (*Scirpus nanus* Spreng.)	Cyperaceae	very rare
167.			*Eleocharis pauciflora* (Lightf.) Link SPIKERUSH (*E. quinqueflora* var. *fernaldii* Svens., *Scirpus pauciflorus* Lightf.)	Cyperaceae	rare
168.	G4	S2	*Eleocharis quadrangulata* (Michx.) R. & S. FOUR-ANGLED SPIKERUSH	Cyperaceae	very rare
169.			*Eleocharis rostellata* Torr. TIP-ROOTING SPIKERUSH	Cyperaceae	rare
170.			*Elymus villosus* Muhl. HAIRY WILD RYE (*E. striatus* Willd.)	Poaceae	scarce

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	TNC Rarity		Species	Family	Frequency
171.			*Elymus wiegandii* Fern. WIEGAND'S WILD RYE (*E. canadensis* var. *wiegandii* (Fern.) Bowd.)	Poaceae	rare
172.			*Epilobium strictum* Muhl. DOWNY WILLOWHERB (*E. densum* Raf.)	Onagraceae	scarce
173.	G5	SX	*Equisetum laevigatum* A. Br. SMOOTH SCOURING RUSH	Equisetaceae	believed extirpated
174.	G5	S2	*Equisetum palustre* L. MARSH WILLOWHERB	Equisetaceae	very rare
175.			*Equisetum scirpoides* Michx. DWARF HORSETAIL	Equisetaceae	scarce
176.			*Equisetum variegatum* Schliech. VARIEGATED HORSETAIL	Equisetaceae	scarce
177.			*Eragrostis capillaris* (L.) Nees LACE GRASS	Poaceae	rare
178.			*Eriophorum gracile* Koch SLENDER COTTON GRASS	Cyperaceae	rare
179.			*Eriophorum tenellum* Nutt. ROUGH COTTON GRASS	Cyperaceae	very rare not seen recently
180. a.			*Eriophorum vaginatum* L. HARE'S-TAIL COTTON GRASS ssp. *spissum* (Fern.) Hult. (*E. spissum* Fern., *E. callithrix* of auth., not Cham.)	Cyperaceae	rare
181.			*Eriophorum virginicum* L. VIRGINIA COTTON GRASS	Cyperaceae	scarce
182.			*Eupatorium sessilifolium* L. UPLAND BONESET	Asteraceae	rare
183.			*Fimbristylis autumnalis* (L.) R. & S.	Cyperaceae	very rare not seen recently
184.			*Floerkia proserpinacoides* Willd. FALSE MERMAID-WEED	Limnanthaceae	scarce
185.			*Fraxinus tomentosa* Michx. f. PUMPKIN ASH (*F. profunda* Bush)	Oleaceae	believed extirpated
186.			*Galearis spectabilis* (L.) Raf. SHOWY ORCHIS (*Orchis spectabilis* L.)	Orchidaceae	scarce
187.			*Galium labradoricum* (Wieg.) Wieg. NORTHERN MARSH BEDSTRAW	Rubiaceae	scarce
188.			*Galium pilosum* Ait. HAIRY BEDSTRAW	Rubiaceae	rare
189.			*Gaultheria hispidula* (L.) Muhl. CREEPING SNOWBERRY (*Chiogenes hispidula* (L.) Torr. & Gray)	Ericaceae	scarce
190.			*Gentiana andrewsii* Griseb. ANDREWS' BOTTLE GENTIAN	Gentianaceae	rare
191.			*Gentiana clausa* Raf. CLOSED or BOTTLE GENTIAN	Gentianaceae	scarce
192.			*Gentianella quinquefolia* (L.) Small STIFF GENTIAN, (*Gentiana quinquefolia* L.) AGUE-WEED	Gentianaceae	scarce

	TNC Rarity		Species	Family	Frequency
193.			*Gentianopsis crinita* (Froel.) Ma FRINGED GENTIAN (*Gentiana crinita* Froel.)	Gentianaceae	rare
194.			*Geranium bicknellii* Britt. BICKNELL'S CRANESBILL	Geraniaceae	rare
195. a.			*Geranium carolinianum* L. CAROLINA CRANESBILL var. *carolinianum*	Geraniaceae	rare
196.	G5	S1S2	*Geum vernum* (Raf.) T. & G. SPRING AVENS	Rosaceae	scarce
197.	G5	S2	*Geum virginianum* L. CREAMY-WHITE AVENS	Roscaece	rare
198.			*Glyceria acutiflora* Torr.	Poaceae	scarce
199.			*Glyceria borealis* (Nash.) Batch. NORTHERN MANNA GRASS	Poaceae	scarce
200. a.			*Glyceria canadensis* (Michx.) Trin. RATTLESNAKE GRASS var. *canadensis*	Poaceae	scarce
201.			*Glyceria melicaria* (Michx.) Hubb.	Poaceae	scarce
202.			*Glyceria septentrionalis* Hitchc. FLOATING MANNA GRASS	Poaceae	rare
203.			*Goodyera repens* (L.) R. Br. DWARF RATTLESNAKE PLANTAIN (*G. repens* var. *ophioides* Fern.)	Orchidaceae	rare
204.			*Goodyera tesselata* Lodd. LODDIGES' RATTLESNAKE PLANTAIN	Orchidaceae	scarce
205.	G5	S1	*Gymnocladus dioica* (L.) Koch KENTUCKY COFFEE-TREE	Fabaceae	rare
206.			*Hedyotis caerulea* (L.) Hook. BLUETS (*Houstonia caerulea* L.)	Rubiaceae	scarce
207.			*Helianthemum bicknellii* Fern. HOARY FROSTWEED	Cistaceae	rare
208.			*Helianthemum canadense* (L.) Michx. FROSTWEED	Cistaceae	rare
209.			*Heteranthera dubia* (Jacq.) MacM. WATER STAR GRASS, MUD PLANTAIN	Pontederiaceae	scarce
210.			*Hibiscus moscheutos* L. SWAMP ROSE MALLOW (*H. palustris* L.)	Malvaceae	scarce
211.			*Hieracium canadense* (L.) Michx. CANADA HAWKWEED	Asteraceae	scarce
212.			*Hierochloë odorata* (L.) Beauv. INDIAN or SWEET GRASS	Poaceae	rare
213.	G5	S1	*Hippuris vulgaris* L. MARE'S-TAIL	Haloragaceae	believed extirpated
214.			*Humulus lupulus* L. HOP	Cannabinaceae	scarce
215.			*Hybanthus concolor* (Forst.) Spreng. GREEN VIOLET	Violaceae	scarce

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	TNC Rarity		Species	Family	Frequency
216.	G4	S2	*Hydrastis canadensis* L. GOLDENSEAL	Ranunculaceae	rare
217.	G4	S3	*Hypericum ascyron* L. GIANT ST. JOHN'S-WORT (*H. pyramidatum* Ait.)	Clusiaceae	rare not seen recently
218.			*Hypericum majus* (Gray) Britt. ST. JOHN'S-WORT	Clusiaceae	rare
219.	G5	S2	*Hypericum prolificum* L. SHRUBBY ST. JOHN'S-WORT (*H. spathalatum* (Spach) Steud.)	Clusiaceae	very rare
220.			*Isoëtes eatonii* Dodge EATON'S QUILLWORT	Isoëtaceae	very rare
221.			*Isoëtes engelmannii* A. Br. ENGELMANN'S QUILLWORT	Isoëtaceae	rare
222. a.			*Isoëtes muricata* Durieu BRAUN'S QUILLWORT var. *braunii* (Durieu) Reed (*I. echinospora* var. *braunii* (Durieu) Engelm., *I. echinospora* ssp. *muricata* (Durieu) Löve & Löve, *I. braunii* Durieu, not Unger)	Isoëtaceae	rare
223.			*Isotria verticillata* (Muhl.) Raf. WHORLED POGONIA	Orchidaceae	rare
224.	G5	S2	*Jeffersonia diphylla* (L.) Pers. TWINLEAF	Berberidaceae	rare
225.			*Juncus alpinus* Vill. ssp. *alpinus* ALPINE RUSH (*J. alpinus* var. *fuscescens* Fern.)	Juncaceae	scarce
226.			*Juncus brevicaudatus* (Engelm.) Fern. RUSH	Juncaceae	rare
227.			*Juncus canadensis* Gray CANADA RUSH	Juncaceae	scarce
228.	G5	S1	*Juncus debilis* Gray WEAK RUSH, SLENDER RUSH	Juncaceae	believed extirpated
229.			*Juncus gerardii* Loisel. BLACK GRASS	Juncaceae	rare
230.			*Juncus torreyi* Cov. TORREY'S RUSH	Juncaceae	scarce
231.			*Juniperus communis* L. GROUND or COMMON JUNIPER (*J. communis* var. *depressa* Pursh, *J. communis* var. *saxatilis* Pallas)	Cupressaceae	rare
232.			*Justicia americana* (L.) Vahl WATER WILLOW (*Dianthera americana* L.)	Acanthaceae	rare
233.			*Kalmia latifolia* L. MOUNTAIN LAUREL	Ericaceae	scarce
234.			*Kalmia polifolia* Wang. BOG LAUREL	Ericaceae	rare
235.	G5?	S1	*Lactuca hirsuta* Muhl. HAIRY LETTUCE	Asteraceae	rare not seen recently
236.			*Larix laricina* (DuRoi) Koch TAMARACK	Pinaceae	scarce
237.	G4G5	S3	*Lathyrus ochroleucus* Hook. PALE WILD PEA	Fabaceae	rare not seen recently

	TNC Rarity		Species	Family	Frequency
238.			*Lathyrus palustris* L. MARSH PEA, VETCHLING	Fabaceae	rare
239.			*Lechea intermedia* Leggett LARGE-FRUITED PINWEED	Cistaceae	rare
240. a.			*Ledum palustre* L. LABRADOR-TEA ssp. *groenlandicum* (Oeder) Hult. (*L. groenlandicum* Oeder)	Ericaceae	rare
241.			*Lespedeza capitata* Michx. YELLOW BUSH CLOVER	Fabaceae	believed extirpated
242.			*Lespedeza hirta* (L.) Hornem. HAIRY BUSH CLOVER	Fabaceae	scarce
243.			*Lespedeza intermedia* (S. Wats.) Britt. PURPLE BUSH CLOVER	Fabaceae	scarce
244.			*Lespedeza procumbens* Michx. CREEPING BUSH CLOVER	Fabaceae	rare
245.	G5	S3	*Lespedeza repens* (L.) Barton CREEPING BUSH CLOVER	Fabaceae	very rare
246.	G5	S3	*Lespedeza violacea* (L.) Pers. PURPLE BUSH CLOVER	Fabaceae	rare
247. a.			*Lilium canadense* L. CANADA LILY ssp. *editorum* (Fern.) Wherry	Liliaceae	scarce
248. a.			*Lindernia dubia* (L.) Pennell FALSE PIMPERNEL ssp. *dubia* (*Ilysanthes dubia* (L.) Barnh.)	Scrophulariaceae	scarce
249. a.			*Linnaea borealis* L. TWINFLOWER ssp. *americana* (Forbes) Hult. (*L. borealis* var. *americana* (Forbes) Rehder)	Caprifoliaceae	scarce
250.			*Linum virginianum* L. WILD YELLOW FLAX	Linaceae	scarce
251.	G5	S1	*Liparis lilifolia* (L.) Rich. LILY-LEAVED TWAYBLADE	Orchidaceae	rare
252.			*Liparis loeselii* (L.) Rich. LOESEL'S TWAYBLADE	Orchidaceae	scarce
253.	G4	S1S2	*Listera australis* Lindl. SOUTHERN TWAYBLADE	Orchidaceae	rare
254.			*Lithospermun latifolium* Michx. BROAD-LEAVED GROMWELL	Boraginaceae	rare
255.			*Lobelia cardinalis* L. CARDINAL FLOWER	Lobeliaceae	scarce
256.			*Lobelia kalmii* L. BROOK LOBELIA	Lobeliaceae	scarce
257.			*Lonicera dioica* L. SMOOTH-LEAVED or GLAUCOUS HONEYSUCKLE	Caprifoliaceae	scarce
258.			*Lonicera hirsuta* Eat. HAIRY HONEYSUCKLE	Caprifoliaceae	rare
259.			*Lonicera oblongifolia* (Goldie) Hook. SWAMP FLY HONEYSUCKLE	Caprifoliaceae	scarce
260.			*Lupinus perennis* L. WILD BLUE LUPINE	Fabaceae	scarce

	TNC Rarity		Species	Family	Frequency
261.			*Lycopodium annotinum* L. STIFF CLUBMOSS	Lycopodiaceae	scarce
262.			*Lycopodium inundatum* L. BOG CLUBMOSS	Lycopodiaceae	rare
263.			*Lycopodium tristachyum* Pursh GROUND-PINE, GROUND-CEDAR	Lycopodiaceae	scarce
264.			*Lyonia ligustrina* (L.) DC. MALE BERRY	Ericaceae	rare
265. a.			*Malaxis monophyllos* (L.) Sw. GREEN ADDER'S MOUTH var. *brachypoda* (Gray) Morris & Eames (*M. brachypoda* (Gray) Fern., *Microstylis monophyllos* (L.) Lindl.)	Orchidaceae	scarce
266.			*Malaxis unifolia* Michx. WHITE ADDER'S MOUTH (*Microstylis unifolia* (Michx.) BSP.)	Orchidaceae	rare
267.			*Malus coronaria* (L.) Mill. WILD CRABAPPLE (*Pyrus coronaria* L.)	Rosaceae	scarce
268.			*Menispermum canadense* L. MOONSEED	Menispermaceae	scarce
269.			*Menyanthes trifoliata* L. BOGBEAN, BUCKBEAN	Menyanthaceae	scarce
270.			*Mertensia virginica* (L.) Pers. VIRGINIA BLUEBELLS	Boraginaceae	scarce
271.			*Mikania scandens* (L.) Willd. CLIMBING BONESET	Asteraceae	rare
272.			*Milium effusum* L. MILLET GRASS	Poaceae	scarce
273.			*Mitella nuda* L. LACY MITERWORT	Saxifragaceae	scarce
274.	G5	S1S2	*Monarda clinopodia* L. WILD BALM (*M. fistulosa* var. *clinopodia* (L.) Cooperrider)	Lamiaceae	rare not seen recently
275.			*Monarda punctata* L. HORSEMINT	Lamiaceae	very rare
276.			*Moneses uniflora* (L.) Gray ONE-FLOWERED PYROLA	Ericaceae	believed extirpated
277.			*Morus rubra* L. RED MULBERRY	Moraceae	rare
278.			*Muhlenbergia glomerata* (Willd.) Trin. FEN TIMOTHY, (*M. racemosa* of auth., not (Michx.) BSP.) SATIN GRASS	Poaceae	scarce
279.			*Muhlenbergia sylvatica* (Torr.) Torr. WOODLAND DROPSEED	Poaceae	scarce
280.			*Myosotis verna* Nutt. EARLY or WHITE SCORPION GRASS (*M. virginica* (L.) BSP.)	Boraginaceae	scarce
281.			*Myrica gale* L. SWEET GALE, BAY BUSH	Myricaceae	rare
282.			*Myrica pensylvanica* Loisel. BAYBERRY	Myricaceae	rare
283.			*Myriophyllum heterophyllum* Michx. WATER MILFOIL	Haloragaceae	rare

	TNC Rarity		Species	Family	Frequency
284.			*Myriophyllum verticillatum* L. WATER MILFOIL (*M. verticillatum* var. *pectinatum* Wallr.)	Haloragaceae	rare
285.	G5	SH	*Najas marina* L. NAIAD	Najadaceae	rare
286.	G5T4?	S1?	*Najas olivacea* Rosend. & Butters NAIAD (*N. guadalupensis* var. *olivacea* (Rosend. & Butters) Haynes)	Najadaceae	rare
287.	G4	S1	*Nelumbo lutea* (Willd.) Pers. WATER or YELLOW LOTUS (*Nelumbo pentapetala* (Walt.) Fern.)	Nelumbonaceae	very rare
288.			*Nemopanthus mucronatus* (L.) Loesener MOUNTAIN HOLLY	Aquifoliaceae	scarce
289.			*Nuphar microphyllum* (Pers.) Fern. SMALL YELLOW (*N. luteum* ssp. *pumilum* (Timm.) Beal) POND LILY	Nymphaeaceae	rare
290.			*Nyssa sylvatica* Marsh. TUPELO, BLACK GUM	Nyssaceae	scarce
291.			*Onosmodium hispidissimum* Mackz. HAIRY FALSE GROMWELL	Boraginaceae	rare
292.			*Ophioglossum vulgatum* L. ADDER'S-TONGUE FERN	Ophioglossaceae	rare
293.			*Orobanche uniflora* L. ONE-FLOWERED CANCER-ROOT	Orobanchaceae	scarce
294.			*Oryzopsis pungens* (Torr.) Hitchc. RICE GRASS	Poaceae	rare
295.			*Oryzopsis racemosa* (Sm.) Ricker RICE GRASS	Poaceae	scarce
296.			*Panax quinquefolius* L. GINSENG	Araliaceae	scarce
297.			*Panicum clandestinum* L. DEER-TONGUE GRASS	Poaceae	rare
298.			*Panicum columbianum* Scribn. PANICUM (*P. tsugetorum* Nash)	Poaceae	rare
299.			*Panicum commutatum* Schultes PANICUM (*P. ashei* Pearson, *P. commutatum* var. *ashei* (Pearson) Fern., *P. umbrosum* LeConte)	Poaceae	rare
300.			*Panicum depauperatum* Muhl. POVERTY GRASS (*P. depauperatum* var. *psilophyllum* Fern.)	Poaceae	rare
301.			*Panicum dichotomum* L. PANICUM	Poaceae	scarce
302.	G5	S2	*Panicum flexile* (Gatt.) Scribn. WIRY WITCH GRASS	Poaceae	rare
303.			*Panicum gattingeri* Nash GATTINGER'S WITCH GRASS	Poaceae	scarce
304.			*Panicum sphaerocarpon* Ell. PANICUM (*P. polyanthes* Schultes)	Poaceae	rare
305.			*Panicum tuckermanii* Fern. WOODLAND WITCH GRASS (*P. philadelphicum* var. *tuckermanii* (Fern.) Steyerm. & Schmoll)	Poaceae	scarce

	TNC Rarity		Species	Family	Frequency
306.			*Panicum virgatum* L. SWITCH GRASS	Poaceae	rare
307.			*Panicum xanthophysum* Gray PANICUM	Poaceae	rare
308.			*Parnassia glauca* Raf. GRASS OF PARNASSUS (*P. caroliniana* Michx.)	Parnassiaceae	scarce
309.			*Paronychia canadensis* (L.) Wood FORKED CHICKWEED (*Anychia canadensis* (L.) BSP.)	Caryophyllaceae	scarce
310. a.			*Paspalum setaceum* Michx. SLENDER BEADGRASS var. *muhlenbergii* (Nash) Banks (*P. muhlenbergii* Nash, *P. pubescens* Muhl., *P.ciliatifolium* var. *muhlenbergii* (Nash) House)	Poaceae	very rare
311.	G5	S2	*Pedicularis lanceolata* Michx. SWAMP LOUSEWORT	Scrophulariaceae	rare
312.			*Pellaea atropurpurea* (L.) Link PURPLE-STEMMED CLIFF-BRAKE	Adiantaceae	rare
313.	G5T5	S1	*Petasites palmatus* (Ait.) Gray PALMATE SWEET- (*P. frigidus* var. *palmatus* (Ait.) Cronq.) COLTSFOOT	Asteraceae	believed extirpated
314.			*Phegopteris connectilis* (Michx.) Watt NORTHERN (*Dryopteris phegopteris* (L.) Christ., BEECH FERN *Thelypteris phegopteris* (L.) Slosson)	Aspleniaceae	scarce
315.			*Phegopteris hexagonoptera* (Michx.) Fée BROAD BEECH (*Dryopteris hexagonoptera* (Michx.) Christ., FERN *Thelypteris hexagonoptera* (Michx.) Weath.)	Aspleniaceae	scarce
316.			*Phlox subulata* L. MOSS PHLOX	Polemoniaceae	scarce
317.			*Phryma leptostachya* L. LOPSEED	Phrymaceae	scarce
318.			*Physocarpus opulifolius* (L.) Maxim. NINEBARK	Rosaceae	scarce
319.			*Picea mariana* (Mill.) BSP. BLACK SPRUCE	Pinaceae	rare
320.	G5	S2	*Pinguicula vulgaris* L. BUTTERWORT	Lentibulariaceae	rare
321.			*Pinus rigida* Mill. PITCH PINE	Pinaceae	scarce
322.			*Platanthera blephariglottis* (Willd.) Lindl. WHITE FRINGED (*Habenaria blephariglottis* (Willd.) Hook.) ORCHID	Orchidaceae	rare
323.	G5	S1	*Platanthera ciliaris* (L.) Lindl. ORANGE FRINGED ORCHID (*Habenaria ciliaris* (L.) R. Br.)	Orchidaceae	believed extirpated
324.			*Platanthera clavellata* (Michx.) Luer CLUBBED SPUR (*Habenaria clavellata* (Michx.) Spreng.) ORCHID	Orchidaceae	scarce
325.			*Platanthera dilatata* (Pursh) Lindl. FRAGRANT WHITE (*Habenaria dilatata* (Pursh) Hook.) BOG ORCHID	Orchidaceae	scarce
326.			*Platanthera flava* (L.) Lindl. TUBERCLED ORCHID (*Habenaria flava* (L.) Gray, *H. flava* var. *herbiola* (R. Br.)	Orchidaceae	scarce

	TNC Rarity		Species	Family	Frequency
			Ames & Correll		
327.			*Platanthera grandiflora* (Bigel.) Lindl. LARGER PURPLE FRINGED ORCHID (*Habenaria fimbriata* (Ait.) R. Br., *H. grandiflora* (Bigel.) Torr., *H. psycodes* var. *grandiflora* (Bigel.) Gray)	Orchidaceae	scarce
328.	G5	S1	*Platanthera hookeri* (Torr.) Lindl. HOOKER'S ORCHID (*Habenaria hookeri* Torr.)	Orchidaceae	rare
329.			*Platanthera orbiculata* (Pursh) Lindl. LARGE ROUND-LEAVED ORCHID (*Habenaria orbiculata* (Pursh) Rich.)	Orchidaceae	rare
330.			*Poa languida* Hitchc. WOODLAND BLUEGRASS (*P. debilis* Torr., not Thuill.)	Poaceae	scarce
331.	G3	S1	*Poa paludigena* Fern. & Wieg. SLENDER MARSH BLUEGRASS	Poaceae	rare
332.			*Poa saltuensis* Fern. & Wieg. OLD-PASTURE BLUEGRASS	Poaceae	scarce
333.	G5	S1	*Poa sylvestris* Gray WOODLAND BLUEGRASS	Poaceae	rare
334.			*Pogonia ophioglossoides* (L.) Juss. ROSE POGONIA	Orchidaceae	scarce
335.			*Polanisia dodecandra* (L.) DC. CLAMMY WEED (*P. graveolens* Raf.)	Capparidaceae	scarce
336.			*Polygala senega* L. SENECA SNAKEROOT	Polygalaceae	scarce
337.			*Polygonum arifolium* L. HALBERD-LEAVED TEAR-THUMB	Polygonaceae	scarce
338.	G5	SH	*Polygonum erectum* L. UPRIGHT KNOTWEED	Polygonaceae	rare
339.			*Polygonum robustius* (Small) Fern. STOUT WATER SMARTWEED	Polygonaceae	rare
340.	G4G5	SH	*Polymnia uvedalia* L. LARGE-FLOWERED LEAFCUP	Asteraceae	very rare not seen recently
341.			*Pontederia cordata* L. PICKERELWEED	Pontederiaceae	rare
342.			*Populus balsamifera* L. BALSAM POPLAR, TACCAMAHAC	Salicaceae	
a.			ssp. *balsamifera* (*P. tacamahacca* Mill.)		rare
343.			*Porteranthus trifoliatus* (L.) Britt. BOWMAN'S ROOT, INDIAN PHYSIC (*Gillenia trifoliata* (L.) Moench)	Rosaceae	scarce
344.			*Potamogeton filiformis* Pers. SLENDER PONDWEED	Potamogetonaceae	
a.	G5T5	S1	var. *alpinus* (Blytt) Aschers.		rare
b	G5T5	S1	var. *occidentalis* (Robbins) Morong (*P. vaginatus* Turcz.)		rare
345.			*Potamogeton friesii* Rupr. FRIES' PONDWEED	Potamogetonaceae	scarce
346.	G3	S2	*Potamogeton hillii* Morong HILL'S PONDWEED	Potamogetonaceae	rare

	TNC Rarity		Species	Family	Frequency
347.			*Potamogeton illinoensis* Morong SHINING PONDWEED (*P. angustifolius* of auth., not Bercht. & Presl, *P. lucens* of auth., not L.)	Potamogetonaceae	scarce
348. a.			*Potamogeton perfoliatus* L. CLASPING-LEAVED PONDWEED ssp. *bupleuroides* (Fern.) Clausen (*P. bupleuroides* Fern.)	Potamogetonaceae	scarce
349.			*Potamogeton robbinsii* Oakes ROBBIN'S PONDWEED	Potamogetonaceae	rare
350.			*Potamogeton spirillus* Tuckerm. SPIRAL PONDWEED (*P. dimorphus* Raf.)	Potamogetonaceae	rare
351.			*Potentilla anserina* L. SILVERWEED	Rosaceae	scarce
352.			*Potentilla arguta* Pursh ssp. *arguta* TALL CINQUEFOIL	Rosaceae	scarce
353.			*Potentilla fruticosa* L. SHRUBBY CINQUEFOIL	Rosaceae	scarce
354.			*Potentilla palustris* (L.) Scop. MARSH CINQUEFOIL	Rosaceae	scarce
355.	G5	S2	*Primula mistassinica* Michx. CANADIAN PRIMROSE, BIRD'S-EYE PRIMROSE	Primulaceae	rare
356.			*Proserpinaca palustris* L. MERMAID-WEED	Haloragaceae	scarce
357.			*Prunus americana* Marsh. WILD PLUM	Rosaceae	scarce
358.			*Prunus nigra* Ait. WILD PLUM	Rosaceae	scarce
359.			*Prunus susquehanae* Willd. DWARF CHERRY (*P. pumila* var. *susquehanae* (Willd.) Jaeger, *P. pumila* ssp. *susquehanae* (Willd.) Clausen)	Rosaceae	very rare
360.	G5	S1	*Pterospora andromedea* Nutt. GIANT PINE DROPS	Ericaceae	believed extirpated
361.			*Pycnanthemum incanum* (L.) Michx. HOARY MOUNTAIN-MINT	Lamiaceae	scarce
362.			*Pycnanthemum virginianum* (L.) Dur. & Jacks. VIRGINIA MOUNTAIN-MINT	Lamiaceae	rare
363. a.			*Pyrola asarifolia* Michx. PINK PYROLA var. *purpurea* (Bunge) Fern. (*P. asarifolia* var. *incarnata* (Fisch.) Fern.)	Ericaceae	rare
364.			*Pyrola chlorantha* Sw. GREEN PYROLA (*P. virens* Schweig.)	Ericaceae	scarce
365.			*Pyrola secunda* L. ONE-SIDED PYROLA (*Orthilia secunda* (L.) House)	Ericaceae	scarce
366.			*Quercus coccinea* Muenchh. SCARLET OAK	Fagaceae	scarce
367.			*Quercus muhlenbergii* Engelm. YELLOW OAK, CHINQUAPIN OAK	Fagaceae	rare

	TNC Rarity		Species	Family	Frequency
368.			*Ranunculus allegheniensis* Britt. ALLEGHENY CROWFOOT	Ranunculaceae	rare
369.	G5	S1	*Ranunculus cymbalaria* Pursh SEASIDE BUTTERCUP, SEASIDE CROWFOOT	Ranunculaceae	very rare
370.			*Ranunculus fascicularis* Muhl. EARLY LIMESTONE BUTTERCUP	Ranunculaceae	rare
371.			*Ranunculus flabellaris* Raf. YELLOW WATER-BUTTERCUP (*R. delphinifolius* Torr.)	Ranunculaceae	scarce
372.			*Ranunculus longirostris* Godr. WHITE WATER-BUTTERCUP (*R. circinatus* of auth., not Sibth., *R. subrigidus* Drew)	Ranunculaceae	scarce
373.			*Ranunculus reptans* L. CREEPING SPEARWORT	Ranunculaceae	rare
374.			*Ranunculus trichophyllus* Chaix ex Vill. WHITE WATER- (*R. aquatilis* var. *capillaceus* (Thuill.) DC.) BUTTERCUP	Ranunculaceae	rare
375.			*Rhexia virginica* L. VIRGINIA MEADOW-BEAUTY, DEER GRASS	Melastomaceae	believed extripated
376.			*Rhododendron maximum* L. GREAT LAUREL, WHITE LAUREL, ROSEBAY	Ericaceae	rare
377.			*Rhynchospora capillacea* Torr. CAPILLARY BEAK-RUSH	Cyperaceae	rare
378.			*Ribes glandulosum* Grauer SKUNK CURRANT (*R. prostratum* L'Her.)	Grossulariaceae	scarce
379.			*Ribes rotundifolium* Michx. WILD GOOSEBERRY	Grossulariaceae	rare
380.			*Rumex maritimus* L. GOLDEN DOCK	Polygonaceae	
a.	G5T5	S1	ssp. *fueginus* (Phill.) Hult.		rare
381.			*Rumex orbiculatus* Gray GIANT WATER DOCK (*R. britannica* of auth., not L.)	Polygonaceae	scarce
382.			*Rumex verticillatus* L. SWAMP DOCK, WATER DOCK	Polygonaceae	scarce
383.			*Ruppia maritima* L. DITCHGRASS	Ruppiaceae	rare
384.			*Sagittaria cuneata* Sheldon WAPATO, ARROWHEAD	Alismataceae	scarce
385.			*Sagittaria rigida* Pursh STIFF ARROWHEAD (*S. heterophylla* Pursh)	Alismataceae	scarce
386.			*Salix candida* Flügge HOARY WILLOW	Salicaceae	rare
387.			*Salix pedicellaris* Pursh BOG WILLOW (*S. pedicellaris* var. *hypoglauca* Fern.)	Salicaceae	rare
388.			*Salix petiolaris* Sm. SLENDER WILLOW (*S. gracilis* Anderss.)	Salicaceae	scarce
389.			*Salix serissima* (Bailey) Fern. AUTUMN WILLOW	Salicaceae	rare

	TNC Rarity		Species	Family	Frequency
390. a.			*Samolus valerandii* L. WATER PIMPERNEL, BROOKWEED ssp. *parviflorus* (Raf.) Hult. (*S. floribundus* Kunth, *S. parviflorus* Raf.)	Primulaceae	scarce
391.			*Sanguisorba canadensis* L. CANADIAN BURNET	Rosaceae	rare
392.			*Sarracenia purpurea* L. PITCHER PLANT	Sarraceniaceae	scarce
393.			*Saururus cernuus* L. LIZARD'S TAIL	Saururaceae	scarce
394.	G5	S2	*Saxifraga aizoides* L. YELLOW MOUNTAIN SAXIFRAGE	Saxifragaceae	very rare
395. a.	G5	S3	*Scheuchzeria palustris* L. BOG ARROW-GRASS, ssp. *americana* (Fern.) Hult. SCHEUCHZERIA	Scheuchzeriaceae	rare
396.			*Scirpus acutus* Muhl. HARD-STEMMED BULRUSH	Cyperaceae	scarce
397.			*Scirpus americanus* Pers. THREE-SQUARE, CHAIR-MAKER'S RUSH (*S. olneyi* Gray)	Cyperaceae	scarce
398.			*Scirpus atrocinctus* Fern. NORTHERN WOOL-GRASS	Cyperaceae	rare
399.			*Scirpus fluviatilis* (Torr.) Gray RIVER BULRUSH	Cyperaceae	rare
400.			*Scirpus hudsonianus* (Michx.) Fern. ALPINE COTTON GRASS (*Eriophorum alpinum* L.)	Cyperaceae	rare
401.	G5	S1	*Scirpus maritimus* L. MARSH BULRUSH (*S. campestris* var. *paludosus* (Nels.) Fern., *S. maritimus* var. *fernaldii* (Bickn.) Beetle, *S. paludosus* var. *atlanticus* Fern.)	Cyperaceae	rare
402.			*Scirpus microcarpus* Presl RED-BANDED BULRUSH (*S. rubrotinctus* Fern.)	Cyperaceae	scarce
403.			*Scirpus polyphyllus* Vahl BULRUSH	Cyperaceae	rare not seen recently
404.			*Scirpus smithii* Gray BULRUSH	Cyperaceae	rare not seen recently
405.			*Scirpus verecundus* Fern. WOODLAND CLUB-RUSH (*S. planifolius* Muhl.)	Cyperaceae	rare
406. a.	G5T4T5	S1	*Scleria pauciflora* Muhl. NUT-RUSH var. *caroliniana* (Willd.) Wood	Cyperaceae	believed extirpated
407.	G5	S1	*Scleria verticillata* Muhl. SMALL NUT-RUSH	Cyperaceae	very rare
408.			*Selaginalla apoda* (L.) Fern. CREEPING SPIKEMOSS	Selaginellaceae	rare
409.			*Selaginella rupestris* (L.) Spreng. ROCK SPIKEMOSS	Selaginellaceae	very rare
410.			*Shepherdia canadensis* (L.) Nutt. BUFFALO BERRY	Elaeagnaceae	scarce

	TNC Rarity		Species	Family	Frequency
411.			*Silene stellata* (L.) Ait. f. STARRY CAMPION	Caryophyllaceae	rare
412.			*Smilacina trifolia* (L.) Desf. THREE-LEAVED SOLOMON'S SEAL	Liliaceae	scarce
413.	G4	S2	*Solidago ohioensis* Riddell OHIO GOLDENROD	Asteraceae	rare
414.			*Solidago squarrosa* Muhl. STOUT GOLDENROD, SQUARROSE GOLDENROD	Asteraceae	scarce
415.			*Solidago uliginosa* Nutt. BOG or FEN GOLDENROD (*S. humilis* Pursh, *S. purshii* Porter, *S. uniligulata* (DC.) Porter)	Asteraceae	scarce
416.			*Solidago ulmifolia* Muhl. ELM-LEAVED GOLDENROD	Asteraceae	rare
417.			*Sorbus americana* Marsh. MOUNTAIN ASH (*Pyrus americana* (Marsh.) DC.)	Rosaceae	rare
418.			*Sorghastrum nutans* (L.) Nash INDIAN GRASS, WOOD GRASS	Poaceae	scarce
419.	G5	S2	*Sparganium natans* L. SMALL BUR-REED (*S. minimum* (Hartm.) Fries)	Sparganiaceae	rare
420.			*Spartina pectinata* Link CORD GRASS, MARSH GRASS (*S. michauxiana* Hitchc.)	Poaceae	rare
421.			*Spergularia marina* (L.) Griseb. SALT MARSH SAND-SPURRY (*S. alata* Wieg., *S. media* of auth., in part, not (L.) Presl)	Caryophyllaceae	scarce
422.			*Spiraea latifolia* (Ait.) Borkh. MEADOWSWEET	Rosaceae	rare
423.			*Spiranthes gracilis* (Bigel.) Beck SLENDER LADIES'-TRESSES (*S. lacera* var. *gracilis* (Bigel.) Luer)	Orchidaceae	scarce
424.			*Spiranthes romanzoffiana* Cham. HOODED LADIES'-TRESSES	Orchidaceae	scarce
425.			*Sphenopholis intermedia* (Rydb.) Rydb. BUNCH GRASS (*S. obtusata* var. *major* (Torr.) Erdm., *S. pallens* of auth., not (Biehl.) Scribn.)	Poaceae	scarce
426.			*Sphenopholis nitida* (Biehl.) Scribn. WEDGE GRASS	Poaceae	scarce
427.			*Sporobolus neglectus* Nash RUSH-GRASS, DROPSEED	Poaceae	scarce
428.			*Sporobolus vaginiflorus* (Torr.) Wood SHEATHED RUSH-GRASS (*S. vaginiflorus* var. *inaequalis* Fern.)	Poaceae	rare
429.			*Stachys palustris* L. WOUNDWORT, HEDGE-NETTLE (incl. *S. palustris* varieties)	Lamiaceae	scarce
430.			*Stachys tenuifolia* Willd. HEDGE-NETTLE	Lamiaceae	rare

	TNC Rarity		Species	Family	Frequency
			(*S. hispida* Pursh, *S. tenuifolia* var. *hispida* (Pursh) Fern., *S. tenuifolia* var. *platyphylla* Fern.)		
431.			*Staphylea trifolia* L. BLADDERNUT	Staphyleaceae	scarce
432.			*Stellaria borealis* Bigel. ssp. *borealis* NORTHERN (*S. calycantha* of auth., not (Ledeb.) Bong.) STITCHWORT	Caryophyllaceae	scarce
433.			*Stellaria longifolia* Muhl. MARSH STITCHWORT OR (*S. longipes* var. *laeta* (Richardson) S. Wats.) CHICKWEED	Caryophyllaceae	scarce
434.			*Symphoricarpos albus* (L.) Blake SNOWBERRY, var. *albus* WAXBERRY	Caprifoliaceae	scarce
435.			*Tephrosia virginiana* (L.) Pers. GOAT'S-RUE, CATGUT	Fabaceae	rare
436.			*Teucrium canadense* L. AMERICAN GERMANDER (*T. occidentale* Gray, *T. canadense* var. *occidentale* (Gray) McClintock & Epling)	Lamiaceae	scarce
437.			*Thalictrum revolutum* DC. WAX-LEAVED MEADOW-RUE	Ranunculaceae	rare
438.			*Thuja occidentalis* L. NORTHERN WHITE CEDAR, ARBOR VITAE	Cupressaceae	rare
439.			*Torreyochloa fernaldii* (Hitchc.) Church FERNALD'S (*Glyceria fernaldii* (Hitchc.) St. John, MANNA GRASS *Puccinellia fernaldii* (Hitchc.) Voss, *T. pallida* var. *fernaldii* (Hitchc.) Church)	Poaceae	scarce
440.			*Torreyochloa pallida* (Torr.) Church PALE MANNA GRASS (*Glyceria pallida* (Torr.) Trin., *Puccinellia pallida* (Torr.) Clausen)	Poaceae	rare
441.			*Trichostema dichotomum* L. BLUECURLS	Lamiaceae	rare not seen recently
442.			*Triglochin maritima* L. SEASIDE ARROW-GRASS	Juncaginaceae	rare
443.	G5	S2	*Triglochin palustris* L. MARSH ARROW-GRASS	Juncaginaceae	rare
444.			*Trillium cernuum* L. NODDING TRILLIUM (*T. cernuum* var. *macranthum* Eames & Wieg.)	Liliaceae	very rare
445.			*Triodanis perfoliata* (L.) Nieuwl. VENUS' LOOKING-GLASS (*Specularia perfoliata* (L.) A. DC.)	Campanulaceae	scarce
446.	G3G4	S1S2	*Triphora trianthophora* (Sw.) Rydb. THREE BIRDS ORCHID, NODDING POGONIA	Orchidaceae	rare not seen recently
447.	G3	S3	*Trollius laxus* Salisb. ssp. *laxus* AMERICAN GLOBEFLOWER	Ranunculaceae	scarce
448.	G5	S2S3	*Ulmus thomasii* Sarg. CORK ELM, ROCK ELM (*U. racemosa* Thomas)	Ulmaceae	scarce
449.			*Utricularia cornuta* Michx. HORNED BLADDERWORT	Lentibulariaceae	rare

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What to do with the Cayuga Heights deer

[illegible] KCASHLER@GANNETT.COM [illegible]

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Sent 1/9/10

The Ithaca Journal

Deer graze Thursday at midday in a Hanshaw Road yard near Cayuga Heights Road. (File photo)

The Cayuga Heights village trustees are scheduled to discuss their deer plan again at a special meeting at 9:15 a.m. Wednesday, Jan. 13 in Marcham Hall, 836 Hanshaw Road.

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According to three national experts uninvolved in the Cayuga Heights deer debate, mice are a bigger problem than deer in spreading Lyme disease, deer overpopulation is the greatest threat to biodiversity in New York state, and contraception could effectively reduce the deer herd but would take longer than the village's plan.

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The Cayuga Heights Board of Trustees is nearing a decision on its plan to sterilize 20 to 60 does in the village, then cull or kill the rest of the herd. The last scientific deer count, in 2006, found 147 deer in the 1.4-square-mile village.

Among the issues debated are the role of deer in spreading Lyme disease, the impact of the deer herd on other plant and animal species, and the feasibility of reducing the herd with or without hired sharpshooters.

Lyme Disease

From 2003 through 2007, an average of six confirmed Lyme disease cases were reported annually throughout Tompkins County, according to the county Health Department.

In 2008, there were 35 reported cases. In that year the New York State Health Department changed its definition of a confirmed case of Lyme disease, meaning the number can't easily be compared with previous years. In addition, while cases were confirmed in the county, exposure did not necessarily occur here, according to the health department.

Phillip Baker, executive director of the American Lyme Disease Foundation, said his organization has no stance on deer hunting in relation to Lyme disease. They focus instead on alternative Lyme disease control measures such as deer bait stations that passively apply tick pesticide while deer eat.

Deer are most responsible for transporting ticks over long distances, but mice are more responsible for keeping Lyme disease "percolating" in a given area, Baker said.

"Getting rid of mice -- as well as chipmunks -- or the ticks on mice, would do more to control Lyme disease than eliminating deer. However, that is a much more difficult task," he said by e-mail.

Biodiversity Threat

Donald J. Leopold is chair of the Department of Environmental and Forest Biology at SUNY Syracuse. Leopold said deer overpopulation is the greatest threat to biodiversity in New York state, even greater than climate change.

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"No other real or perceived threat is so pervasive throughout the entire state, nor eliminates the majority, if not all, of the understory of natural communities, greatly reducing the diversity of our natural communities and the function of these communities," he said. "Climate change isn't eliminating species, only moving their ranges."

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Deer overpopulation is problematic throughout the Northeast and Midwest, and Leopold said he gives "dozens of talks each year" to communities worried about it.

"The deer overpopulation problem was created by people and can only be solved by people. Ignoring what deer are doing to our natural heritage is worse than throwing litter on the highways, driving gas guzzlers, not recycling, and many other actions," he said. "People who believe that we are stewards, not masters, of the land understand that we have an obligation to preserve as much of our natural heritage as possible, not just focus on a single species," he said.

Deer Contraception

Jay Kirkpatrick is director of the Science and Conservation Center at Montana State University Billings. He has been administering and studying the effectiveness of contraception in everything from feral cats to African elephants for more than 40 years.

Wildlife contraception was developed as a way to reduce species population without killing or even handling animals, for ethical reasons, he said.

As part of a Cornell research project between 2002 and 2004, Cayuga Heights sterilized roughly 20 deer using a one-time procedure similar to spaying a cat. Then in 2005, the village switched to contraceptives to save money, but the program was unsuccessful because the vaccine was faulty.

But deer contraception can work, Kirkpatrick said – a program he oversaw at the Fire Island National Seashore reduced deer population density 58 percent over a nine-year period.

The cost, including vaccine, dart and labor, was approximately $15,000 per 100 deer. If a doe lives a full 12 years, she must be darted six to eight times in her life to maintain fertility control, he said.

The village estimates sterilization will cost $1,100 per deer.

Deer reduction plans that are based on strictly culling are ineffective because they create a "habitat vacuum," and new deer just move in to take the place of the old deer, he said.

Kirkpatrick emphasized that he has nothing against sterilization, and has no opinion about what Cayuga Heights decides to do with its deer. He said he does think the village's plan will effectively reduce the deer herd, because the sterilized core herd will slow in-migration of other deer.

"White-tailed deer are incredibly territorial. They live in matriarchal family groups. They don't roam all over the place. White-tailed deer that have adequate food and are not disturbed will spend their entire lives in a one-half-square-mile to one-square-mile area," he said. "As long as that matriarchal family group is intact, whether it's 10 in the group or three in the group, they will maintain their territory."

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Arrest just latest for Ithaca robbery defendant (87)

Freeville man sought in shooting caught in Groton (27)

Former employee accuses Cornell University of unfair admissions practices (24)

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	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
• The Proposed Action would disrupt or prevent installation of agricultural land management systems (e.g., subsurface drain lines, outlet ditches, strip cropping); or create a need for such measures (e.g. cause a farm field to drain poorly due to increased runoff).	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

IMPACT ON AESTHETIC RESOURCES

11. Will Proposed Action affect aesthetic resources? (If necessary, use the Visual EAF Addendum in Section 617.20, Appendix B.)
☐ NO ☒ YES

Examples that would apply to column 2 • Proposed land uses, or project components obviously different from or in sharp contrast to current surrounding land use patterns, whether man-made or natural.	☐	☐	☐ Yes ☐ No
• Proposed land uses, or project components visible to users of aesthetic resources which will eliminate or significantly reduce their enjoyment of the aesthetic qualities of that resource.	☐	☐	☐ Yes ☐ No
• Project components that will result in the elimination or significant screening of scenic views known to be important to the area.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☒	☐ Yes ☒ No

see attached

IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

12. Will Proposed Action impact any site or structure of historic, prehistoric or paleontological importance?
☒ NO ☐ YES

Examples that would apply to column 2 • Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Register of historic places.	☐	☐	☐ Yes ☐ No
• Any impact to an archaeological site or fossil bed located within the project site.	☐	☐	☐ Yes ☐ No
• Proposed Action will occur in an area designated as sensitive for archaeological sites on the NYS Site Inventory.	☐	☐	☐ Yes ☐ No

2/24/10
SEQR part 2

Page 16, Question 11

Other Impacts:

Aesthetically important used of both public and private land will be affected positively by reducing the size of the deer herd. Deer have killed enormous numbers of plants and shrubs and greatly damaged trees that are a significant element in the aesthetic quality of life in our Village.

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
• Other impacts:	☐	☐	☐ Yes ☐ No

IMPACT ON OPEN SPACE AND RECREATION

13. Will proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities?
☐ NO ☒ YES

Examples that would apply to column 2

• The permanent foreclosure of a future recreational opportunity.	☐	☐	☐ Yes ☐ No
• A major reduction of an open space important to the community.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☒	☐ Yes ☒ No

see attached

IMPACT ON CRITICAL ENVIRONMENTAL AREAS

14. Will Proposed Action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6NYCRR 617.14(g)?
☒ NO ☐ YES

List the environmental characteristics that caused the designation of the CEA.

Examples that would apply to column 2

• Proposed Action to locate within the CEA?	☐	☐	☐ Yes ☐ No
• Proposed Action will result in a reduction in the quantity of the resource?	☐	☐	☐ Yes ☐ No
• Proposed Action will result in a reduction in the quality of the resource?	☐	☐	☐ Yes ☐ No
• Proposed Action will impact the use, function or enjoyment of the resource?	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☐	☐ Yes ☐ No

2/2/10
SEQR part 2

Page 17, Question 13

Other Impacts:

Open space use will be positively affected when residents no longer need worry about excessive amounts of deer waste and the growing deer tick populations on their properties.

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change

IMPACT ON TRANSPORTATION

15. Will there be an effect to existing transportation systems?

[x] NO [ ] YES

Examples that would apply to column 2			
• Alteration of present patterns of movement of people and/or goods.	[ ]	[ ]	[ ] Yes [ ] No
• Proposed Action will result in major traffic problems.	[ ]	[ ]	[ ] Yes [ ] No
• Other impacts:	[ ]	[ ]	[ ] Yes [ ] No

IMPACT ON ENERGY

16. Will Proposed Action affect the community's sources of fuel or energy supply?

[x] NO [ ] YES

Examples that would apply to column 2			
• Proposed Action will cause a greater than 5% increase in the use of any form of energy in the municipality.	[ ]	[ ]	[ ] Yes [ ] No
• Proposed Action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use.	[ ]	[ ]	[ ] Yes [ ] No
• Other impacts:	[ ]	[ ]	[ ] Yes [ ] No

NOISE AND ODOR IMPACT

17. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action?

[ ] NO [x] YES

Examples that would apply to column 2			
• Blasting within 1,500 feet of a hospital, school or other sensitive facility.	[ ]	[ ]	[ ] Yes [ ] No
• Odors will occur routinely (more than one hour per day).	[ ]	[ ]	[ ] Yes [ ] No
• Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures. See Part 1, Page 7, Question 20 attachment	[ ]	[ ]	[ ] Yes [x] No
• Proposed Action will remove natural barriers that would act as a noise screen.	[ ]	[ ]	[ ] Yes [ ] No
• Other impacts: see attached	[x]	[ ]	[ ] Yes [x] No

2/24/10
SEQR part 2

Page 18, Question 17

Other Impacts:

The field dressing process will generate odors occasionally in localized areas.

]

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change

IMPACT ON PUBLIC HEALTH

18. Will Proposed Action affect public health and safety?
☐ NO ☒ YES

	1	2	3
• Proposed Action may cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission.	☐	☐	☐ Yes ☐ No
• Proposed Action may result in the burial of "hazardous wastes" in any form (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.)	☐	☐	☐ Yes ☐ No
• Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.	☐	☐	☐ Yes ☐ No
• Proposed Action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☒	☐ Yes ☒ No

see attached

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD

19. Will Proposed Action affect the character of the existing community?
☐ NO ☒ YES

	1	2	3
Examples that would apply to column 2 • The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.	☐	☐	☐ Yes ☐ No
• The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.	☒	☐	☐ Yes ☒ No
• Proposed Action will conflict with officially adopted plans or goals.	☐	☐	☐ Yes ☐ No
• Proposed Action will cause a change in the density of land use.	☐	☐	☐ Yes ☐ No
• Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community.	☐	☐	☐ Yes ☐ No
• Development will create a demand for additional community services (e.g. schools, police and fire, etc.)	☐	☒	☐ Yes ☒ No

2/24/10
SEQR part 2

Page 19, Question 18

Other Impacts:

Lyme disease has been positively identified by the Tompkins County Department of Public Health as having been contracted in our County. Their website at http://www.tompkins-co.org/health/summer/lyme-faq.html states "yes" in answer to the question: "Can I get Lyme disease from a tick in Tompkins County?"
"The New York State Department of health Arthropod-Borne Disease Program has estimated that approximately an average of 20% of deer ticks in Tompkins County and throughout New York State are infected with the causative organism, B. burgdorferi." Please see the web citation for further detail.

Public safety will be positively impacted by the reduction in deer vehicle accidents in the Village caused by too many deer on our 21 miles of roads. In 2008, our police recorded 6 vehicular accidents and 16 incidents involving deer. In 2009 there were 24 car/deer accidents and 31 deer incidents in the Village. Unfortunately we have a problem of under reporting because DVA's are so common that many residents don't bother to tell the police even though the law requires same for accidents of over $1,000 in damage. See attached 2/16/10 memo from Chief Boyce. See also attached Tompkins Insurance letter dated 12/16/09. Further, this program includes a culling operation requiring the discharge of weapons; please see the attached statement on Public Safety from Police Chief Boyce dated 1/12/10. The lethal culling phase of the draft deer population control plan involves discharging a firearm. The Board recognizes that discharging a firearm in a densely populated area such as the Village of Cayuga Heights represents a potential threat to the safety of the local population.

We believe the selection of only a reputable contractor with a strong record of safety and efficacy in culling deer in populated environs, an emphasis on the safety of the ammunition employed in the culling process, and safety oversight by the Village of Cayuga Heights Police Department (see attached Police Chief Thomas Boyce memo dated 1/12/2010) will help to minimize this potential safety concern.

Also attached: Police Chief's memo dated 1/12/10
Insurance Company memo dated 12/16/09
Police Chief's memo on statistics dated 1/26/10
Police Chief's memo dated 2/5/10
White Buffalo Safety Protocol letter

29 14
Section 17
Other Impacts

CAYUGA HEIGHTS POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Gilmore & Board of Trustees Date: 1/12/10

FROM: Chief Thomas L. Boyce

SUBJECT: Safety (Deer Culling Operation)

There is no question that safety is the number one factor and issue that has to be considered for any type of operation when dealing with weapons inside the corporate limits of the Village of Cayuga Heights.

No matter what contractor is chosen to perform a culling operation in the Village of Cayuga Heights it will have to be understood that the Chief of Police, or his designee, will inspect all the bait sites for safety and would have to approve the site for safety. This inspection process would be in addition to any form of protocol that the contractor would supply to the Village of Cayuga Heights.

If for any reason any member of the Cayuga Heights Police Department were to observe any safety issue, all operation would be stopped immediately, the issue would have to be addressed prior to commencing the operation again. The same member of the Cayuga Heights Police Department would be able to restart the operation after they were convinced that the safety issue was adequately dealt with and they thought it was safe to commence the operation.

The Village of Cayuga Heights would also dictate what type of operation would be chosen to be implemented in the taking of the deer. I would be in favor of the tree stand approach which would elevate the contractor above the deer and make a downward trajectory of the projectile toward the ground.

There is no question that safety would have to be the most important concern of the contractor and the Village of Cayuga Heights.

	TNC Rarity		Species	Family	Frequency
450.	G4G5	S3	*Utricularia geminiscapa* Benj. BLADDERWORT	Lentibulariaceae	rare
451.			*Utricularia gibba* L. SWOLLEN-SPURRED BLADDERWORT	Lentibulariaceae	rare
452.			*Utricularia intermedia* Hayne FLAT-LEAVED BLADDERWORT	Lentibulariaceae	scarce
453.	G5	S2S3	*Utricularia minor* L. SMALL BLADDERWORT	Lentibulariaceae	rare
454.			*Vaccinium macrocarpon* Ait. LARGE CRANBERRY (*Oxycoccus macrocarpon* (Ait.) Pers.)	Ericaceae	scarce
455.			*Vaccinium myrtilloides* Michx. VELVET-LEAF (*V. canadense* Kalm) BLUEBERRY	Ericaceae	scarce
456.			*Vaccinium oxycoccus* L. SMALL CRANBERRY (*Oxycoccus microcarpus* Turcz.)	Ericaceae	rare
457.	G4	S1S2	*Valeriana uliginosa* (T. & G.) Rydb. MARSH, SWAMP or (*V. sitchensis* ssp. *uliginosa* (T. & G.) Mey.) FEN VALERIAN	Valerianaceae	rare
458.			*Veronica anagallis-aquatica* L. WATER SPEEDWELL, BROOK-LIME	Scrophulariaceae	scarce
459.			*Veronica scutellata* L. MARSH SPEEDWELL	Scrophulariaceae	scarce
460.	G4	S2	*Veronicastrum virginicum* (L.) Farw. CULVER'S ROOT (*Veronica virginica* L.)	Scrophulariaceae	rare
461.			*Viburnum trilobum* Marsh. CRANBERRY VIBURNUM (*V. opulus* var. *americanum* (Mill) Ait., *V. opulus* ssp. *trilobum* (Marsh.) Clausen)	Caprifoliaceae	scarce
462.			*Viburnum rafinesquianum* Schultes DOWNY ARROWWOOD (*V. affine* var. *hypomalacum* Blake, *V. rafinesquianum* var. *affine* (Bush) House)	Caprifoliaceae	scarce
463.			*Vicia americana* Muhl. WILD VETCH	Fabaceae	scarce
464.			*Vicia caroliniana* Walt. SPRING VETCH, WOOD VETCH	Fabaceae	scarce
465.			*Viola affinis* LeConte LECONTE'S VIOLET (*V. latiuscula* Greene)	Violaceae	scarce
466.			*Viola canadensis* L. CANADA VIOLET	Violaceae	scarce
467.			*Viola fimbriatula* Sm. OVATE-LEAVED VIOLET (*V. sagittata* var. *ovata* (Nutt.) T. & G.)	Violaceae	scarce
468.			*Viola palmata* L. PALMATE VIOLET	Violaceae	scarce
469.			*Viola renifolia* Gray KIDNEY-LEAVED WHITE VIOLET, (*V. renifolia* var. *brainerdii* (Greene) Fern.) BRAINERD'S VIOLET	Violaceae	scarce
470.			*Viola selkirkii* Pursh SELKIRK'S VIOLET, LARGE-	Violaceae	scarce

TNC Rarity	Species	Family	Frequency
	SPURRED VIOLET		
471.	*Viola striata* Ait. STRIPED or CREAMY-WHITE VIOLET	Violaceae	scarce
472.	*Wolffia borealis* (Engelm.) Landolt WATERMEAL (*W. punctata* Griseb.)	Lemnaceae	rare
473.	*Wolffia columbiana* Karst. WATERMEAL	Lemnaceae	rare
474.	*Woodsia ilvensis* (L.) R. Br. RUSTY WOODSIA	Aspleniaceae	scarce
475.	*Woodsia obtusa* (Spreng.) Torr. BLUNT-LOBED WOODSIA	Aspleniaceae	scarce
476.	*Woodwardia virginica* (L.) Sm. VIRGINIA CHAIN FERN (*Anchistea virginica* (L.) Presl)	Aspleniaceae	rare
477.	*Zannichellia palustris* L. HORNED PONDWEED	Zannichelliaceae	scarce
478.	*Zanthoxylum americanum* Mill. PRICKLY ASH	Rutaceae	scarce
479.	*Zizania aquatica* L. WILD RICE	Poaceae	
a.	var. *angustifolia* Hitchc. (*Z. palustris* L.)		rare
b.	var. *aquatica*		rare
480.	*Zizia aptera* (Gray) Fern. HEART-LEAVED ALEXANDERS (*Z. cordata* (Walt.) DC.)	Apiaceae	scarce

F. Robert Wesley August 1987, revised October 2001

TOMPKINS
INSURANCE AGENCIES INC.
A Tompkins Trust Company

December 16, 2009

Ronald Bors, Trustee
Village of Cayuga Heights
121 Texas Lane
Ithaca, NY 14850

Re: Deer Claims and Reporting

Dear Ron,

As you are aware, I have 32 years experience in the insurance industry handling claims and selling insurance. I worked for Banfield & Associates Inc. and it's predecessor for 27 years and for the last 5 years for Tompkins Insurance Agencies Inc. I work out of the Tompkins Financial Center here in Cayuga Heights and I live on West Hill in Ithaca, which has the same deer dilemma.

You had asked me for some information on police reporting of deer claims. In my experience I believe around 50% of deer losses never get reported to the police departments, this might actually be a conservative number. There are many reasons that people do not report them, they may not have comprehensive coverage on their vehicle so feel no need to do so, it may be after dark and somewhat scary sitting along the road waiting for the police to show up, they are in a hurry and can't take the time, the damage may not be visible right away to them due to darkness or weather conditions, the deer might run away and they see no need to call the police, they may have had a couple of drinks and fear calling the police. I asked for a sampling report of our claims in our agency and was given a report for just December 2009, we have had 12 deer claims reported, of those claims, 5 were reported to the police, 7 were not reported. Again there may have been other incidents where the claim did not get reported to us as the customer realizes they have no coverage for the damage to their vehicle etc. Although this is a sampling, I feel it gives you a pretty good idea of the way deer claims are handled by the public. Claims seem to get reported when a tow truck has to come to the scene, when there are injuries and an ambulance must come, and once in a while, when a person feels it's the right thing to do. If all the deer claims were reported, the police departments would need additional staff.

I hope this information is helpful in your determinations and let me know if I can be of further assistance.

Regards,

Sally A Hoyt, CIC
Asst Vice President/Account Executive

832 Hanshaw Road • Ithaca, New York 14850 • (607) 257-4440 • Fax (607) 266-7673

CAYUGA HEIGHTS POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Gilmore & Board of Trustees Date: 1/26/10

FROM: Chief Thomas L. Boyce

SUBJECT: Statistics on Deer

On January 22, 2010 I sent the Mayor an e-mail with the statistics on Car/Deer Accidents and Deer Incidents, which occurred within the corporate limits of the Village of Cayuga Heights. The period of time that was show cased was 2007, 2008, and 2009. The numbers that were presented for this block of time were as followed:

2007- 12 car/deer accidents and 13 deer incidents.

2008- 6 car/deer accidents and 16 deer incidents.

2009- 24 car/deer accidents and 31 deer incidents.

The above numbers show a big increase of accidents and incidents with deer from previous year to last year. I believe these numbers represent a more informed and aware public to the fact those car/deer accidents and deer incidents must be reported to the Cayuga Heights Police Department.

The Cayuga Heights Police Department has not changed the way we classify car/deer accidents or deer incidents. So with that preface, let's examine the way the Cayuga Heights Police Department classifies and makes a distinction of these two classes.

The way in which we classify car/deer accidents is to determine that a deer collided in some way or fashion with a motor vehicle. We need a complainant to report that they hit a deer with their vehicle, whether there is damage to the vehicle or not. If the Damage to the motor vehicle is $1,000.00 dollars or more the report would be on an MV-104 form. If the damage was less than $1,000.00 dollars the report could be documented on a Cayuga Heights Police Department report form. The big fact in determining a car/deer accident is showing that a deer collided with a motor vehicle!

The way in which we classify a deer incident is to determine that the Cayuga Heights Police Department received a report of any incident that involved a deer. This could be any number of things from a dead deer in the roadway, having to shoot an injured deer, to any incident that involves a deer.

I know this is a very simple explanation of how we classify and make these distinctions, but it really is that simple.

Sincerely submitted,

Thomas L. Boyce
Chief of Police

Thomas Boyce

From: Thomas Boyce

Sent: Friday, January 22, 2010 12:23 PM

To: Jim Gilmore

Subject: Statistics on deer

Hi Mayor:

We ran the deer statistic and came up with the following numbers:

2007- 12 car/deer accidents and 13 deer incidents
2008- 6 car/deer accidents and 16 deer incidents
2009- 24 car/deer accidents and 31 deer incidents

Thanks, Chief Boyce

p.19

CAYUGA HEIGHTS POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Gilmore/Board of Trustees **Date: 2/5/10**

FROM: Chief Thomas L. Boyce

SUBJECT: Part Two of the SEQRA long Form, question #19

While attending the Village of Cayuga Heights Special Meeting of the Board of Trustees to perform the SEQRA long form review for the Draft Deer Remediation Plan dated 2/5/2010, I was asked to comment on the potential demand for additional community services on policing.

The deer remediation issue in the Village of Cayuga Heights is not any different from the controversial issues that have been faced by many other municipalities that have tried to tackle this very difficult situation. And because other municipalities have persevered before us in this very controversial topic, I believe we can look at the difficulties that they faced and expect the same problems.

I should first say that there is no way for me to look into a crystal ball and say for certain that the Village of Cayuga Heights will experience the exact problems that other police agencies faced while conducting bait and shoot events. But, I am sure we will face similar if not the same problems.

The Irondequoit Police Department experienced some significant problems when they started up their remediation program of bait and shoot. They had a lot of protestors that came out against the program which created a demand on police services. They had people tampering with the bait sites and tainting the site in an attempt to keep the deer from visiting the site so that the program was hindered. They had people calling in reports of noise from the gun shots. And the biggest problem that they experienced by far was fake bombs. People made bomb devices and put them in the area of the bait site. Even though the bombs were fake bombs, the same police procedure had to be adhered too. The full bomb squad had to be called out and the determination had to be made that the bomb device was a fake. This type of problem is a huge demand on police services.

I believe the Cayuga Heights Police Department will experience problems with protestors, Disorderly Conduct, Trespassing, bait site tampering, Criminal Mischief, and possible the fake bomb

issues.

I can not say for certain what will happen, but be assured that we will have additional demands on the police services of our community.

Sincerely submitted,

Thomas L. Boyce
Chief of Police

WHITE BUFFALO, INC.
26 Davison Road Moodus, CT 06469
Phone: 860-873-2782 wbuffaloinc@aol.com

1 March 2010

Attn: Kate Supron
Village of Cayuga Heights, NY

RE: Sharpshooting safety protocol

To whom it may concern;

I am writing to summarize why sharpshooting deer can be conducted safely, effectively and humanely in developed environments. Subsequent to a decision by a community and the state wildlife management agency to implement a controlled deer reduction using White Buffalo, Inc. the following procedures are used:

1) Prior to initiating any field activities the target area/s and surrounding properties are thoroughly surveyed using digital aerial images followed by field confirmation. By knowing the location of every occupied structure and areas of human use we are better able to work safely, discretely, and efficiently;

2) Bait sites are selected with the involvement of the landowner/s, local law enforcement officials, and the cooperating state agency. Each site is selected based on safety concerns and deer activity;

3) We conduct field operations during hours of lowest human activity. In addition, during the removal operation we search intensively for people and non-target animals to avoid mishaps;

4) Deer of all ages and sexes are harvested, however, adult does are prioritized. Deer are shot over bait from a tree stand with a rifle during the day or at night;

5) During suburban deer reductions there is continuous open communication between community members, municipality officials, and White Buffalo, Inc. to keep people well informed regarding field activities to avoid conflicts;

The following are reasons why White Buffalo, Inc. is on the leading edge of urban deer management:

1) We have the best available equipment with numerous hours of hands-on use to ensure precise shot placement. This results in safe use of equipment and humane treatment of target animals;

2) We have spent the last 15 years committed to improving both technology and techniques to maximize safety and efficiency for the management of white-tailed deer (i.e., ballistics testing, bullet development, baiting techniques, adaptation of other technologies for use in deer management);

3) We have thoroughly tested and selected bullets, in addition to having developed specialized bullets. As a result of our extensive testing, we have found that no bullet fragments with significant size or inertia exit the target animal or ricochet;

4) We have extensive experience in both killing (>9000 deer) and capturing deer (>1000 deer) in a variety of human occupied environments without incident. We have used our discretion in the selection of shooting sites with complete satisfaction of both state and local officials, and property owners;

5) We collect all pertinent data related to herd health, advancements in management techniques, and other aspects of each removal program which will be included in scientific journals, professional conferences, or written reports submitted to the community and cooperating state agency.

In conclusion, although safety is the primary issue to be considered when implementing a sharpshoot to reduce deer numbers, with the above precautionary measures and the expertise of White Buffalo, Inc., it need not be a concern.

Sincerely,

Anthony DeNicola, Ph.D.
President

www.whitebuffaloinc.org WBUFFALOINC@aol.com

a nonprofit organization

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated by Project Change
• Proposed Action will set an important precedent for future projects.	☐	☐	☐ Yes ☐ No
• Proposed Action will create or eliminate employment.	☐	☐	☐ Yes ☐ No
• Other impacts:	☐	☒	☐ Yes ☒ No

see attached

20. Is there, or is there likely to be, public controversy related to potential adverse environment impacts?

☐ NO ☒ YES

see attached

If Any Action in Part 2 Is Identified as a Potential Large Impact or If you Cannot Determine the Magnitude of Impact, Proceed to Part 3

2/2/10
SEQR part 2

Page 20, Question 19

Other Impacts:

While many Villagers want to see a reduced deer population and will be positively affected by the plan, some enjoy seeing a large deer population in the Village.

SEQR Full Environmental Assessment Form

Part 2, question 20, page 20

Is there, or is there likely to be, public controversy related to potential adverse environmental impacts?

Yes

The proposed deer population control program, which is intended to reduce the number of whitetail deer – not an endangered species -- to a total number of 20 to 60 animals, is controversial. Public controversy exists and will likely continue throughout the life of the project.

Controversy has been caused by opposition to culling the deer herd and, to a much lesser degree, by opposition to sterilization. Opposition comes from a relatively small minority of residents and primarily from individuals living outside the Village of Cayuga Heights.

Given that New York State does not authorize holding a referendum for such purposes, the best gauges of support for the proposed policy of sterilization and culling are the last two Village elections and a public hearing that was held at the outset of the SEQR process. Both the elections and the hearing, along with a great deal of support provided by mail, email and in personal conversations with Village Trustees and members of the Deer Remediation Advisory Committee, have registered strong support for the Village's plan.

In the most recent Board of Trustees election, in March 2009, the three candidates who strongly advocated for sterilization and culling won 73%, 71% and 67% of the 570 votes cast, which was by far the largest voter turnout in the Village's history. The opposition ran as a largely single-issue party opposed to the proposed policy. Many residents have concluded that the election resulted in a mandate to carry out the policy.

At a public hearing held by the Village Board on October 28, 2009, 34 persons living in the Village spoke in favor of the policy and 12 against. Many persons present supported the policy judging by applause and incidental conversation. Opposition was primarily provided by non-residents.

Non-residents of the Village make their opinions known principally through the activities of CayugaDeer.org, an organization whose leadership and key supporters attend and videotape all Village Board meetings, speak at Board meetings during privilege of the floor, exhibit posters making explicit their opposition, demonstrate in numbers of roughly 12 to 25 persons outside the Village Hall before some Board meetings, and orchestrate letter writing and on-line petition campaigns in concert with other like-minded groups. A petition was circulated in the City of Ithaca this fall opposing our plan; of 35 pages of signatures, 11 were duplicates, leaving 272 purportedly valid adult signatures. A website,

www.cayugadeer.org is the principal medium by which CayugaDeer.org circulates its opinion, along with letters to the editor of our local newspaper, The Ithaca Journal.

Ongoing activities orchestrated by Cayuga Deer are anticipated. Village residents opposing the deer population control program will likely continue to speak during privilege of the floor at meetings of the Board of Trustees, write letters and send email.

Articles and letters to the editors that may be retrieved from The Ithaca Journal's on-line archive at www.ithacajournal.com document the process by which the Cayuga Heights Board has achieved broad public support for the proposed policy, despite its controversial nature. The present Board is resolved with unanimity to press forward.

Part 3 - EVALUATION OF THE IMPORTANCE OF IMPACTS

Responsibility of Lead Agency

Part 3 must be prepared if one or more impact(s) is considered to be potentially large, even if the impact(s) may be mitigated.

Instructions (If you need more space, attach additional sheets)

Discuss the following for each impact identified in Column 2 of Part 2:

1. Briefly describe the impact.
2. Describe (if applicable) how the impact could be mitigated or reduced to a small to moderate impact by project change(s).
3. Based on the information available, decide if it is reasonable to conclude that this impact is **important**.

   To answer the question of importance, consider:

   ! The probability of the impact occurring
   ! The duration of the impact
   ! Its irreversibility, including permanently lost resources of value
   ! Whether the impact can or will be controlled
   ! The regional consequence of the impact
   ! Its potential divergence from local needs and goals
   ! Whether known objections to the project relate to this impact.

Reset

2/24/2010

Part 3 - Evaluation of the Importance of Impacts

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QUESTION 9

1. See attachment to Part 2, question 9.
   Proposed deer population control by sterilization and culling to reduce the size of the deer herd in the Village of Cayuga Heights, estimated to be approximately 196 deer as of Spring 2009, will have a positive environmental impact by restoring biodiversity.

   Bringing the size of the herd to a biological carrying capacity of 15 to 20 deer per square mile will significantly impact the resident deer population within the Village, but will also result in the recovery of populations of insect, birds, small mammals and plant species which live and grow in the understory of woodlots, on open land and properties that have been over grazed and greatly damaged by deer.

2. The project's goal will reduce the deer population to between 20 -60 deer in total; any change to the plan will mean not achieving this goal.

3. Since the goal of the plan is to substantially reduce the population of deer (a non-threatened non-endangered species) within the Village of Cayuga Heights, the key consideration in determining whether the environmental impact is important is to consider the impact on other non-endangered non-threatened species. We believe these impacts are beneficial as described in attachments to question 9. Notwithstanding all the beneficial impacts that the Village's proposed program will provide, there is no question that reducing the deer herd size by approximately 150 deer has a significant adverse impact on the culled deer.

QUESTION 11

1. See attachment to Part 2, Question 11.
2. Any change to the plan will mean not achieving the plan's goal of restoring biodiversity and habitat of numerous species of plants, shrubs, trees, birds and small mammals.
3. If the plan is successful and biodiversity and habitat are restored, there will be a significant beneficial impact on the esthetic qualities that #11 has focused on.

QUESTION 13

1. See attachment to Part 2, question 13.
2. Any change to the plan will mean not achieving the plan's goal of reducing the herd and therefore the associated excessive amounts of deer waste and controlling the

growing deer tick population and the associated risk of lyme disease would not be achieved.

3. If the plan is successful in reducing the deer herd, the resulting reduction of deer waste, deer tick population and risk of lyme disease should deliver a beneficial impact on open space usage.

QUESTION 18

1. See attachments to Part 2, Question 18.
2. Any change to the plan may mean not achieving the goal of significantly reducing the number of deer vehicle accident and incidents in the Village of Cayuga Heights, as well as the risk of lyme disease within the Village.
3. If the plan is successful in reducing the deer herd population, the associated risks of DVA's and lyme disease should also be reduced and any potential impact should be beneficial.

QUESTION 19

1. See Part 2, Question 19 and attachments.
2. The Village will provide any and all police services necessary to insure the health, safety and welfare of Village residents. This component of the Plan will not be reduced.
3. The project's goal will reduce the deer population to between 20 -60 deer in total; any change to the plan will mean not achieving this goal. Restoration of the biodiversity in the Village to the conditions existing before the explosion in the deer population in recent decades should have a beneficial impact on the character of the community.

QUESTION 20

1. See attachments to Part 2, #20.
2. The proposed plan includes elements of culling and sterilization which are necessary to the execution of the plan. Public controversy is rooted in the culling and sterilization elements which are both necessary to accomplish the program.
3. Given the controversy to date, the Village anticipates significant protest activities. We recognize a small but vocal minority that is opposed to the draft plan. While it is difficult to estimate how visible public controversy is likely to become, it is not unreasonable to assume that it may, from time to time, have a significant negative environmental impact.