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Agency Of Natural Resources

MEMORANDUM

To: Roger Allbee, Secretary, Vermont Agency of Agriculture

From: Wayne Laroche, Commissioner, Vermont Fish and Wildlife Department 

Date: October 22, 2010

Re: Herd Management Plan for Irasburg Deer Facility

Thank you for sending us the document titled *Proposed Management Plan for Nelson Farms, Inc, Irasburg, Vermont* for review. It is my understanding that this proposed plan is intended to satisfy Vermont legislative requirements outlined in Sec E.702.1 of the 2010 Appropriations Bill, "Transfer of regulatory oversight and special requirements for facility and herd management." The Vermont General Assembly required that a written herd management plan be prepared addressing all cervidae confined within the facility including plans for disease surveillance and culling of antlerless native cervidae to prevent the herd from overpopulating the enclosed area. As the Agency responsible for maintaining the health of native cervid populations in Vermont, the Fish and Wildlife Department has an interest in the activities conducted at the Irasburg Deer Facility containing cervids. For this reason, we are providing this plan review.

In reviewing the proposed plan submitted to the Agency of Agriculture, we find that it is incomplete, does not adequately address elements of a cervid herd management, and will not enable the facility to comply with applicable regulations. Specifically, it does not include the specific details necessary to provide for a comprehensive herd management plan or to direct herd management activities necessary to operate the facility. The proposed plan appears to be more of a "property management proposal" than an actual "herd management plan."

An acceptable cervid herd management plan should address the following components:

- 1) Herd/Population Management, including target herd numbers, appropriate methods for capturing, handling, tagging and counting all animals in the herd as well as culling/harvesting schedules;
- 2) Habitat Management;
- 3) Fencing;
- 4) Herd Health to include details pertaining to disease testing/monitoring, nutrition, and animal welfare; and
- 5) Record Keeping to include details of animal marking and data to be collected.

Herd/Population Management

The plan is inadequate in identifying and justifying appropriate cervid densities or total animal numbers in relation to facility size (acreage), food supply and other critical elements. For instance, the plan does not identify the need for an accurate count of the animals, but instead relies on these estimates: 60 elk, 20 red deer, 30 fallow deer, 20 sika deer, 200 white-tailed deer, and 10 moose totaling 340 cervids. This “plan” provides no methodology or schedule for determining the actual number of cervids in the facility. Objectives for cervid density or total cervid number objectives are not defined. No strategies to meet herd number goals are described. The plan does not describe how reproduction, recruitment, mortality, and predation will be assessed. Culling schedules, methods and protocol for identification and documentation of all individual animals are not provided. The plan does not contain proper disease monitoring protocols for Chronic Wasting Disease (CWD) as required by the Rules Governing Captive Cervidae and Sec. E.702.1. It is also notable that the plan provides no estimate of the number of other non-cervid animals contained in the facility.

Effective herd management requires an accurate determination of sex, age and number of animals in a herd, goals for the number of animals in the herd by sex, age and number, as well as management strategies and schedules for harvest/culling/removing animals in order to achieve these goals.

The actual facility acreage is important to several components of a herd management plan. There is a considerable disparity between the acreage documented in this plan (i.e. 550 acres) for the facility compared to the 700 acres noted in statute. On page 2 of the plan, the significance of this variable is dismissed (e.g. “no matter the correct acreage”), yet the actual acreage figure is necessary to any determination of stocking rate as well as for the purposes of developing a culling rate that prevents the herd size from overpopulating the enclosed area as required by state law.

A 550-acre area equates to 395 cervid animals per square mile (640 acre) basis, as described in the proposed plan. This stocking rate is 20 times greater than the recommended levels for a sustainable wild population of white-tailed deer. In this region of Vermont, the native free ranging white-tailed deer population is managed at 15 deer per square mile while a stocking rate of not more than one moose per square mile is believed necessary to limit browsing to provide for forest and herd health for these species. While captive herds fed a supplemental diet can be maintained at higher densities, we believe that the animal densities proposed in this plan will destroy the native habitat and reduce animal health. Diminished herd health within facilities containing cervids, especially native cervids, is of concern to the Fish and Wildlife Department because of the possibility that this might pose a threat to native wildlife.

Habitat Management

The habitat analyses provided in the plan is inadequately addressed. Forage production and carrying capacity are critical for determination of proper stocking rate and total

number of animals that should be contained within the facility. The size of the enclosed area and habitat conditions, especially forage production, are important in preventing the herd from overpopulating the enclosed area and causing damage to vegetation. Captive cervid herds that greatly exceed the upper limits of natural herd densities are known to radically alter their environment. An assessment of forage production within the enclosure would be the most biologically sound and effective way to determine the number of cervids that facility could sustain without destroying habitat and forage production.

The plan describes four habitat management units and proposes general habitat management activities for each suggesting that these actions would provide the natural food and cover to benefit some cervid undefined densities. We believe that the current stocking rate exceeds the rate that would provide for habitat and forest health. We also believe that palatable vegetation and cover would be difficult to re-establish and maintain given the current high cervid stocking rate. As an example, management recommendations in the proposed plan for Management Unit 1 include the use of pesticides and disking to promote the establishment of woody vegetation for forage and cover. These recommendations are offered with no evaluation of whether cervid densities will allow such habitat management activities to succeed.

The plan does not provide specific silvicultural or other necessary actions to successfully manage for habitat conditions. For example, the value of Management Unit 2 as conifer (no species is listed) winter thermal cover for cervids is referenced. The plan's habitat management recommendations (i.e., small patch cuts) are inadequate to maintain or enhance this cover. There is no reference to forest rotation duration or patch cut size as well. In Vermont, the preferred forest stand characteristics and management strategies for cover for wild deer vary by trees species (e.g., hemlock, spruce/fir in winter).

Lastly, there is no assessment of how proposed management actions might translate into increased forage production that must alter any sustainable stocking rate that might provide for habitat health within the facility.

Fencing

The fencing description is lacking in detail and submitted more in the format of suggestions to the owner of the facility rather than a formal, detailed plan. The plan describes an interior fence of two miles within an enclosure with a perimeter of approximately five miles. The plan is insufficient in regards to description of methods and schedules for erection, monitoring and regular maintenance of the fences.

The request for 8'- wide cattle-guards at gates is an appropriate measure to prevent nose-to-nose contact through a gate where electric fencing is absent; but cattle-guards are not a standalone crossing deterrent as deer can jump over them when a gate is open. The plan should include keeping gates shut and locked when not in use. Electric fencing is also an appropriate recommendation to prevent nose-to-nose contact through a fence and help prevent ingress or egress simultaneously.

The Fish and Wildlife Department has an interest in the construction and maintenance of effective fencing that will prevent escape and/or contact of animals from the Irasburg Deer Facility with free ranging, native cervids.

Herd Health (Disease Testing/Monitoring)

There are a number of problems with reference to disease testing and monitoring with white-tailed deer densities of at least 250/mi² in the facility. High rates of fatal brain-worm infections in moose are to be expected because of the high density of white-tailed deer that are co-mingling with them at the facility. The plan does not address this threat.

This plan does not address how the facility will come into compliance with state regulations requiring that it be a CWD Monitored Herd. One of the requirements of a CWD Monitored Herd is that all cervids killed or dying in the Irasburg facility must be tested for CWD. It is also required that all deer be tagged and all escaping animals be reported.

The plan does not describe any plans or schedules for cervid CWD or other disease testing for animals in the facility. Any adequate plan for herd health must identify the specific sample size of animals that needs to be killed and tested to meet requirements of health testing. The plan calls for removing the annual recruitment of white-tailed deer, but it offers no prescription that would satisfy the testing requirement of 30 animals of Sec. E.702.1 (c)(2)(A).

The plan provides inaccurate statements in regard to Vermont's testing of CWD in free-ranging deer population. The plan claims that annual testing of 400 harvested deer since 2002 is "*a very small sampling effort.*" This claim is false and does not recognize that the Fish and Wildlife Department also tests all sick-acting deer taken in Vermont. Annual sampling under Fish and Wildlife Department protocols ensure > 95% probability of detecting a 1% infection rate in free ranging white-tailed deer. Cumulatively, the sampling efforts conducted to date ensure a 99% probability of detecting a 0.1% infection rate within Vermont's free ranging white-tailed deer population. The results of CWD testing in Vermont's free-ranging deer confirm that Vermont is currently CWD-free and should be considered "at risk" for purposes of CWD strategic monitoring and management. If CWD has been eradicated from New York (no positive samples since 2005), then the nearest enzootic-infected free-ranging deer population is in Virginia, and overland travel from that location should take many decades. If CWD is found in the Irasburg Deer Facility, we believe it would have been introduced either by bringing in deer from outside of Vermont or from contaminated feed and not from any free-ranging deer.

Record Keeping and Marking Animals

The plan proposes to continue the practice of not marking the white-tailed deer in the Irasburg Deer Facility, stating on page 15, paragraph 3: "*When the large whitetail herd is considered, however, I see no realistic way every whitetail in the herd, plus annual*

production, can be marked as above.” This plan does not provide methods to accomplish this task despite applicable regulations that require it. The Fish and Wildlife Department does not believe that this task is unrealistic or even impractical. An acceptable herd management plan must describe methods for handling, marking, and inventorying all cervids enclosed so that the herd can be adequately monitored and managed.

Clearly visible marks placed on captive animals is the only way that captive white-tailed deer and moose escaping from the Irasburg Deer Facility can be distinguished from free ranging white-tailed deer and moose. Escaped animals need to be removed from the wild population as soon as possible to prevent the likelihood of a disease or other condition to enter Vermont’s wildlife populations.

The plan provides no description of methods for record keeping to document herd composition, feeding, health monitoring, disease testing, disease treatment, habitat assessment and monitoring, or other management activities. This record keeping element is critical to any suitable herd management plan for the purposes of tracking captive animals to: 1) assure that all animals are adequately accounted for (i.e., to make sure they are either present in the facility or culled); 2) track disease testing; 3) monitor nutrition and feeding strategies; and 4) monitor the results of the recommended habitat management practices.

It is critical that all animals be double-marked as required by your Agency’s captive cervid rule. The plan notes this as a requirement for CWD certification, but fails to identify it as necessary in this herd management plan.

The plan fails to identify a process for administering and monitoring any drugs, vitamins, antibodies or other manufactured substances placed in the feed given to the animals to ensure that the substances have been tested and approved to be administered to cervids and that meat from such animals is permissible for human consumption.

Animal Health

Accurate herd counts are necessary in order to assess stocking rates and manage captive populations of mixed species to levels where nutrition and other animal welfare issues can be properly addressed. Cervids need proper nutrition in order to maintain health. This plan fails to identify and provide a plan for this important element of herd management.

The plan acknowledges the presence of predators such as coyotes and black bears in the fenced area. While bears may have been able to climb in and out of the existing fencing, the proposal to add electric fencing to the existing fence may or may not restrict them from crossing the new fence. Is their presence a disease or predation concern? The plan needs to address any issues related to these species within the enclosure.

Conclusion

This “*Proposed Management Plan for Nelson Farms, Inc., Irasburg, Vermont*” is lacking key elements and missing details necessary to ensure any proper management of all cervidae that will enable the facility to operate in compliance with Vermont law. The Irasburg cervid herd does not meet the requirements necessary to be certified free of CWD. This plan fails to provide methods or schedules to satisfy this requirement. Furthermore, the plan offers little, if any assurance, that management of this captive herd will be conducted in such a manner as to secure the health of Vermont’s free-ranging white-tailed deer and moose populations. The Fish and Wildlife Department believes that all of the elements identified above are critical and necessary for legitimate herd management and none of the elements we have identified should be waived by the Vermont Agency of Agriculture or other governing bodies of the State of Vermont.

**cc: Jonathan Wood, Secretary, Agency of Natural Resources
Kristin Haas, D.V.M., State Veterinarian, Agency of Agriculture
Mark Scott, Director, Wildlife Division, Fish & Wildlife Department
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