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ABSTRACT

In recent years Connecticut, like many other northeastern states, has experienced dramatic suburban encroachment into woodland and farmland areas. The expansion of human population and the accompanying habitat alteration have resulted in a substantial increase in the frequency of wildlife/human conflicts. The Department of Environmental Protection's Wildlife Bureau, mandated to respond to the needs of the people as well as the wildlife of Connecticut, is the state agency given the responsibility of controlling nuisance wildlife problems. Although the Wildlife Bureau provides free technical assistance and educational material, in many cases landowners are either unwilling or unable to resolve nuisance wildlife situations without direct assistance. In 1986, the Wildlife Bureau established a program which uses state-trained and licensed individuals to respond to nuisance wildlife complaints. These individuals, called Nuisance Wildlife Control Operators (NWCOs), are entitled to advertise and charge fees for services provided. In essence, the NWCO program is a user-pay system since the person experiencing problems bears the cost of services provided. The Wildlife Bureau administers the program by training and licensing NWCOs, monitoring their performance and establishing and enforcing policies which govern their activities. Fees and rates of payment are not regulated by the Wildlife Bureau, however NWCO licenses may be revoked in the case of unsatisfactory or unethical performance. A review of the program after one year of operation indicates that the NWCO program has successfully addressed the problem of

suburban wildlife control in Connecticut by supplementing other established nuisance wildlife programs.

BACKGROUND

The role of the Department of Environmental Protection's (DEP's) Wildlife Bureau is to ensure the well-being of Connecticut's wildlife populations while also assuring that wild animals are not posing a threat to human safety or creating unreasonable property, crop or livestock damage. Regulated hunting and trapping seasons are used to manage populations of game species at levels compatible with biological or cultural carrying capacity. However, sport hunting and trapping are not viable nuisance control options under the following conditions:

1. If problems occur in urbanized areas where conventional hunting and trapping can not be conducted safely or effectively.
2. If damage is the result of the actions of an individual animal rather than the result of overpopulation.
3. If damage is extensive and occurs outside the open season.
4. If problems are being caused by species that are normally not harvested during the hunting and trapping seasons due to either a lack of harvest pressure or closed seasons.

The progressive loss of Connecticut's woodlands and farmlands to development is increasing the frequency of conflicts between humans and wildlife. Also, some species have adapted well to human coexistence and have built populations to unnaturally high densities. As a consequence, the Wildlife Bureau receives literally thousands of calls each year from residents reporting wildlife problems. Although the majority of complaints can be

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resolved with technical advice and information provided over the telephone, others require direct assistance. Certain statutes give landowners a great deal of latitude for addressing nuisance wildlife situations, however many landowners, particularly those in urban and suburban areas, are unable or unwilling to handle such problems themselves.

Until recently, nuisance wildlife situations requiring direct and immediate assistance were referred to certified Nuisance Wildlife Volunteer Trappers. Established in 1981, the Volunteer Trapper Program entitled permit-holders to trap and relocate certain species of wildlife outside of the open season to alleviate wildlife-caused problems. The volunteers provided service without charge and also were required to submit an annual log of their activities. The Volunteer Trapper Program, although successful when fully staffed, has suffered from declining participation. By 1984 substantial portions of the state were devoid of volunteers and the Volunteer Trapper Program alone was no longer functioning to fully meet the public's needs. Undoubtedly, the main reason for the failure of the Volunteer Trapper Program was the lack of an adequate compensation mechanism.

The Wildlife Bureau considered two options to supplement the Nuisance Wildlife Volunteer Trapper Program. The first option was to hire additional Wildlife Bureau personnel to serve as state-funded nuisance wildlife control agents. This option presented several disadvantages. Even in a small state such as Connecticut, four or more employees would be kept busy full-time assisting with nuisance problems, particularly during the spring and summer when complaints are most frequent. Each employee would require a vehicle, traps and other equipment. Perhaps more important

was the consideration that by providing free nuisance wildlife service to the public, the Wildlife Bureau would, in fact, be removing any economic incentive a private landowner might have to prevent or solve a problem himself. In summary, this option was not cost-effective to the agency.

The second option was to rejuvenate the Nuisance Wildlife Volunteer Trapper Program by allowing participants to recoup their expenses by charging a fee for services provided. Under this option, the landowner with a wildlife problem would pay the cost for its resolution if he required direct assistance. The user-pay option would provide a method of compensation for authorized personnel which would serve as an incentive for continued participation. The number and distribution of program participants would provide the public with a more timely response than would have been provided by a limited number of state employees as proposed in the first option.

THE NUISANCE WILDLIFE CONTROL OPERATOR (NWCO) PROGRAM

In 1985 the Connecticut legislature enacted a law which established a license for Nuisance Wildlife Control Operators (NWCOs); individuals authorized to advertise services and charge fees for the purpose of controlling nuisance wildlife. The same law also gave the DEP the authority to govern the actions of NWCOs through agency regulations and policy.

The goal of the NWCO program was to provide a timely, satisfactory response to the public's need for direct assistance while reducing the amount of agency personnel's time devoted to routine nuisance wildlife problems. The NWCO program was developed as a mechanism to relieve DEP personnel of the burden caused by common, primarily suburban, wildlife species whose populations are not

impacted by conventional hunting and trapping. However, the NWCO program was not intended to address complex wildlife nuisance problems, those involving species which are uncommon or economically valuable, or situations for which other programs currently exist. For example, white-tailed deer problems may not be controlled under the NWCO license because statutes and regulations governing the DEP's deer damage policy are already in place.

A special permit system was established to define which nuisance wildlife situations require DEP intervention. Special permits are not required for NWCOs to capture and relocate or dispatch any species listed in Table 1 using methods listed in Table 2. Under these conditions, NWCOs proceed directly after consulting with the landowner. Analysis of previously submitted Volunteer Trapper annual reports indicated that more than 95% of nuisance wildlife handled were species included in Table 1.

Nuisance problems caused by species not listed in Table 1 must be referred to a Wildlife Biologist for review. The biologist may issue a special permit with stipulated conditions or may reject the request outright. Such decisions are made on a case by case basis. In general, the Wildlife Biologist may choose to become directly involved in cases which concern uncommon or protected wildlife or situations requiring specialized methodology.

SELECTION AND TRAINING OF NWCOs

NWCO license applicants must be at least 18 years old and free of any outstanding hunting or trapping violations. Prior to becoming licensed, an individual must satisfactorily complete the DEP's 6-hour Trapper Education Course. Although the course was developed primarily for fur trappers, many topics taught, such as furbearer management, animal life histories and

Table 1. Species which can be captured by NWCOs without a special permit.

Common Name	Scientific Name
Raccoon	<u>Procyon lotor</u>
Opossum	<u>Didelphis virginiana</u>
Striped skunk	<u>Mephitis mephitis</u>
Weasel	<u>Mustela spp.</u>
Rabbit	<u>Sylvilagus spp.</u>
Snowshoe hare	<u>Lepus americanus</u>
European hare	<u>Lepus europaeus</u>
Woodchuck	<u>Marmota monax</u>
Chipmunk	<u>Tamias striatus</u>
Red squirrel	<u>Tamiasciurus hudsonicus</u>
Gray squirrel	<u>Sciurus carolinensis</u>
Porcupine	<u>Erethizon dorsatum</u>
House sparrow	<u>Passer domesticus</u>
Pigeon	<u>Columba livia</u>
Starling	<u>Sturnus vulgaris</u>
Snap. turtle	<u>Chelydra s. serpentina</u>
Bats	All species
Moles	All species
Snakes	All species <u>1/</u>

1/ Exceptions: Black rat snake
(Elaphe o. obsoleta)
Timber rattlesnake
(Crotalus horridus)

Table 2. Methods which can be used by NWCOs without a special permit

Box Traps
Cage Traps
Padded Leghold Traps <u>1/</u>
Legal, nonlethal methods
Shooting <u>2/,3/</u>

- 1/ May be set only in the burrow of an animal;
2/ Subject to all state and municipal restrictions;
3/ NWCO must possess DEP certification from Conservation Education/Firearms Safety Course.

identification of animal tracks and sign, are relevant to nuisance wildlife control. Upon completing the Trapper Education Course, prospective NWCOs are sent a manual which describes all aspects of the NWCO program. They study the manual and then take a written test to rate their knowledge of NWCO regulations, policies and procedures. At the test site, a Wildlife Bureau representative reviews the manual with each applicant. After passing the test, applicants are eligible to purchase a \$50.00 NWCO license which is valid for the calendar year. The relatively high license fee was deliberately established to discourage all but the most serious candidates.

The training process continues after individuals purchase a license. NWCOs are encouraged to call Wildlife Bureau biologists if they encounter problems or require specific information and guidance. All active NWCOs are entered on a computerized mailing list and, through correspondence, are notified of any changes in the program. Voluntary workshops also are being planned to standardize methodologies and to foster an exchange of experiences and ideas between NWCOs.

MONITORING THE ACTIVITIES OF NWCOs

Except when circumstances warrant a special permit, NWCOs and land-owners enter into a verbal agreement without DEP intervention. The DEP does not regulate fees charged, but does advise callers that charges may be variable and encourages callers to contact three or more NWCOs to compare prices.

Prior to commencing any work, NWCOs are required to provide each client with a DEP pamphlet which outlines the NWCO program. The pamphlet informs the client of procedures for filing a complaint if a NWCO performs in an unsatisfactory or unethical manner. NWCOs who accumulate substantiated complaints

may have their license revoked after a hearing before a DEP board.

The DEP is not liable for the actions of NWCOs or their clients. However, prior to entering into an agreement, NWCOs must provide the client with: 1) identification of the species and the approximate number of animals involved, 2) recommended methods of control, 3) conditions which will constitute a mutually agreed upon solution and 4) an estimate of the fee to be charged.

NWCOs are required to maintain an up-to-date log of their activities. The log may be examined by DEP authorities at any time throughout the year and must be submitted, in its entirety, to the DEP in December of each year as a condition for license renewal. The logs are used to evaluate the NWCO program annually.

PROGRAM RESULTS

Thirty-five licenses were sold in 1986, the first year of operation for the NWCO program. Surprisingly few fur trappers or Nuisance Wildlife Volunteer Trappers participated as they accounted for approximately half of the licenses sold. Pesticides applicators, retirees, nature center personnel, chimney sweeps and tree service employees also purchased NWCO licenses. Many of these individuals had been charging fees for removing nuisance wildlife in the course of their work and, unknowingly, had been acting illegally. They took advantage of the NWCO program to legitimize their wildlife removal activities.

Despite the NWCO program, a limited number of Nuisance Wildlife Volunteer Trappers have chosen not to charge fees and continue to volunteer their services. Whenever possible, callers requesting assistance are referred to nearby volunteers. Currently, Nuisance Wildlife Volunteer Trappers tend to be distributed throughout the less

populated (unshaded portion of Figure 1) regions of the state. Conversely, the majority of NWCOS are located in urban/suburban regions where nuisance wildlife complaints are most frequent (Figure 1).

NWCOS trapped more than 1,300 animals in 1986. Raccoons accounted for nearly half (46%) of all animals handled. Skunks (17%), gray squirrels (13%), opossums (8%) and woodchucks (4%) were frequently handled nuisance wildlife. Bats and snakes also were the source of many complaints. As expected, species other than those listed in Table 1 were seldom handled by NWCOS. Fewer than two dozen special permits were issued in 1986, the majority of which were for muskrat.

The most frequent course of action chosen by NWCOS was trap and transfer. Under the conditions specified by the Wildlife Bureau, animals to be relocated must be taken to suitable habitat at least 10 miles from the capture site. Although such suitable habitat is scarce in some urban parts of Connecticut, more than 95% of all animals captured were subsequently relocated. NWCOS are also authorized to humanely destroy nuisance wildlife, particularly persistent offenders or overpopulated species. Few individuals exercised this option.

Thirty-two (91%) of the 35 original NWCOS renewed their license in 1987. The high renewal rate is encouraging as the success of the program is dependent upon the quality and quantity of participants. Most of the NWCOS had other occupations, however, at least 5 NWCOS relied upon the program as their main source of income. In general, the NWCOS reporting the most activity were those located in the heavily populated regions of the state.

SUMMARY

Connecticut's NWCOS program has provided a mechanism to address the increasing number of wildlife

nuisance complaints, particularly in urban and suburban areas. The Wildlife Bureau devotes a considerable amount of time in selecting, training and monitoring NWCOS under the premise that such an investment is justified by more professional performance resulting in fewer complaints.

The user-pay concept of nuisance wildlife control has been well-received by the public. Most callers are more interested in immediate assistance rather than cost. The NWCOS program has resulted in a statewide network of licensed individuals who can provide timely service to persons requiring assistance.

The special permit system has allowed the Wildlife Bureau to retain control over species and situations of special concern. Under this system, NWCOS have taken over the vast bulk of routine nuisance wildlife assistance, freeing the professional staff to pursue other endeavors.

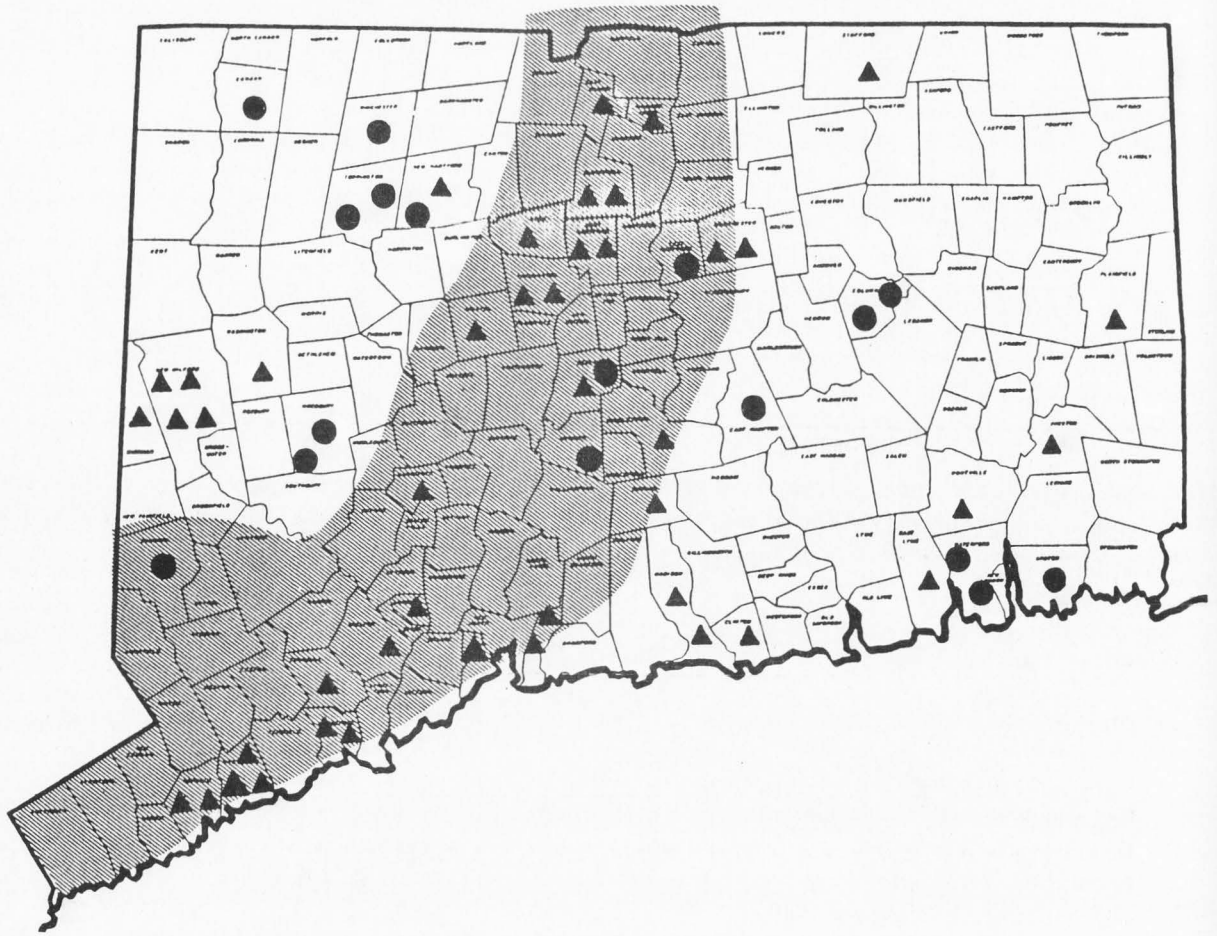


Figure 1. Distribution of Nuisance Wildlife Volunteer Trappers (●) and Nuisance Wildlife Control Operators (▲) in Connecticut as of August, 1987. Shaded area represents urbanized regions of the state.