

North Carolina's Wildlife Damage Control Agent System

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Abstract: In 1995, North Carolina Wildlife Resources Commission (NCWRC) established policy and rules for handling of nuisance wildlife by Wildlife Damage Control Agents (WDCAs). The policy required a 1-day long training session, culminating in an open book, certification examination. The North Carolina Cooperative Extension Service (NCCES) conducted the training and administered the examination. The certification-training program covered principles of wildlife damage management, wildlife laws and regulations, humane handling of animals and euthanasia, human health risks from exposure to wildlife, professional ethics, and sources of technical information. Between October 1995 and March 1999, 6 certification-training sessions were held and 240 WDCAs were certified, with agents in 56 of 100 counties. The Wildlife Division of NCWRC administered the program. WDCAs are entitled to issue Wildlife Depredation Permits to North Carolina residents suffering damage from native wildlife that are not specially protected by federal or state laws. The depredation permit provides for the listing of the issuing WDCAs as a second party to the permit. While there is no charge for the permit, the WDCAs can charge for removal of the animals and repair of structures. WDCAs must be re-certified every 3 years. We evaluated the WDCAs program by surveying the first group of 47 agents, certified in 1995, when they completed their examinations for recertification in 1998. Additionally, we surveyed wildlife enforcement officers, district wildlife biologists and their supervisors, and cooperative extension agents to gain their views of the WDCAs program. No major problems were reported with program administration or training. The cooperative relationships among leading and supporting agencies were excellent. Increased effort at WDCAs publicity, both locally and statewide are recommended.

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Due to the increasing urbanization of southeastern states and increasing public inability to handle wildlife problems, district wildlife biologists, extension agents and wildlife officers are subject to increasing demands for services that could be handled by professionally trained and administered nuisance wildlife control operators (Brammer et al. 1994, Bromley et al. 1995). Barnes (1997) proposed a model to allow states to maintain administrative oversight of private citizens offering control services, while alleviating the pressures on public officials. In 1995, North Carolina addressed this need by establishing the Wildlife Damage Control Agent (WDCA) program. The WDCA program conforms well to the model proposed by Barnes (1997). Other states considering establishing similar programs could possibly benefit from a review of the North Carolina program. This paper reviews the WDCA program and provides an administrative evaluation of the program over its first 3 years.

Purposes and History

The WDCA program was created to: 1) provide citizens of North Carolina direct assistance with problems caused by wildlife; 2) provide public officials (Cooperative Extension agents, NCWRC biologists and wildlife enforcement officers, U.S. Department of Agriculture (USDA)–Animal Plant Health Inspection Service (APHIS)–Wildlife Services biologists, county animal control officials) assistance in meeting the demand with problem animals; 3) provide income opportunities for citizens, and 4) assure that private citizens who engage in nuisance wildlife control are aware of relevant laws; ethical standards; sources of technical information; approved methods of animal handling, including euthanasia; and human risks, such as rabies, associated with handling animals.

The WDCA program was established in 1995. The Wildlife Damage Committee of the North Carolina Chapter of the Wildlife Society determined the need for such a program in 1993 (Bromley et al. 1995). Initially, a legislative initiative to revise the policy for issuing wildlife depredation permits was recommended. However, in 1995 it was determined that the NCWRC was authorized to grant agent status to Wildlife Damage Control Agents to issue Wildlife Depredation Permits for native wildlife causing damage to private property. The Commission, as a matter of policy, decided not to allow agents to issue permits for those animals listed as threatened or endangered, bats, or big game animals. There could be no direct charge for the WDCA license or for issuance of depredation permits. Following the recommendations of the Wildlife Damage Committee of NCTWS, NCWRC officials determined that WDCAs should be trained, examined, certified upon satisfactory performance on the examination, and required to keep records and report on each Wildlife Depredation Permit (WDP) issued. Quarterly reports to the NCWRC Wildlife Division were required. WDCA certification could be revoked if the WDCA violated wildlife laws, handled animals inhumanely, failed to report activities, or did not renew their certification through re-training in 3 years. Bonding of WDCA was not required; however, individual WDCAs were encouraged in the certification training

session to follow standard business procedures, which would include obtaining appropriate insurance. Relevant rules for WDCAs were stated in 15A N.C. Administrative Code 10B.0106, effective 1 July 1995.

The training was to be conducted by the North Carolina Cooperative Extension Service. Each person attending the training was required to pay \$75 in advance (supporting facility rental, refreshment breaks, and provision of reference material). The reference material consisted of the 2-volume, *Prevention and Control of Wildlife Damage* (Hyingstrom et al. 1994) and the *North Carolina Wildlife Damage Control Certification Notebook* (Bromley and Betsill 1995). The training consisted of a 1-day classroom program. Subjects covered were 1) principles of wildlife damage control, 2) legal aspects of wildlife damage control in North Carolina, 3) proper handling and euthanasia of wild animals, 4) public health risks from rabies and other wildlife disease, 5) additional sources of information, and 6) professional standards expected of WDCAs. The day ended with an open-book examination consisting of 37 multiple-choice questions. The minimum score to pass the test was established at 85%. The open book examination was preferred because, upon certification, each of the WDCAs would have their reference material on hand while conducting their WDC activities. An open-book examination enabled them to become more familiar with their reference materials.

The first training session was conducted in October 1995. Since then, 5 additional WDCA certification-training workshops have been held. All were held in Raleigh. A total of 240 people were certified. WDCAs live in 56 of 100 North Carolina counties. Additionally, 5 reside in South Carolina. North Carolina Chapter of The Wildlife Society members active in establishing the program were instructors in most if not all of the 5 training sessions. Representatives from N.C. Cooperative Extension Service, NCWRC and USDA-APHIS-Wildlife Services instructed in principles of wildlife damage control, laws, ethics, and sources of technical information. Veterinarians from the NCSU College of Veterinary Medicine covered wildlife diseases and proper handling and euthanasia of wild animals.

The administrative aspects of the program were handled with a minimum of difficulty. Coordination between NCWRC and NCCES to put on the training workshops and keep track of the registered WDCAs was excellent. The cooperation among representatives of the agencies involved and with the ad hoc NC-TWS Committee on Wildlife Damage met everyone's expectations.

There were only 4 problems with WDCA performance that required action by NCWRC officials. One WDCA illegally sprayed roosting bats with ammonia to make them leave a roost, resulting in a warning from NCWRC. Another WDCA used the NCWRC logo in advertisements, for which a cease and desist order was issued. One citizen called complaining that a WDCA charged too much for services, for which the citizen was told to contact the local Better Business Bureau. Finally 1 WDCA was observed to display a flying squirrel (*Glaucomys volans*) and a gray squirrel (*Sciurus carolinensis*) in cages publicly to attract attention to his business. This person has been charged with holding wildlife in captivity without a permit in

civil court. If convicted of this misdemeanor, the WDCA will likely lose his agent status.

Quarterly reports provided by WDCAs from April 1996 to December 1998 were analyzed to describe how agents were implementing the program. The reports provided information on the location of agent activity, species and number of animals taken, type of damage encountered, methods used for damage control activities, and the disposition of animals removed. Most agents issued permits for animal damage to or presence in structures (78%). Less than 7% of 3,945 permits were issued for any other single damage type. Most permits were issued in winter (29%), followed by spring (28%), fall (24%), and summer (19%). Based on the number of animals removed by agents, 6% removed 100 or more, 29% removed 1 to 99 animals, and 65% removed no animals. Only 2% of the agents removed more than 500 animals, which most likely indicates a very active full-time business. Gray squirrels accounted for 47% of the animals removed, followed by raccoons (*Procyon lotor*) (19%), opossums (*Didelphis virginianus*) (10%), flying squirrels (5%), muskrats (*Ondatra zibethica*) (4%), and beaver (*Castor canadensis*) (3%). Nineteen other species each accounted for <3% of the animals removed. The highest numbers of animals removed by agents were in and around major urban areas such as Charlotte-Mecklenburg, Raleigh, and Durham. Most animals were removed using live-capture devices (69%), kill-type traps (20%), firearms (6%), or by hand (3%). All other reported methods of capture each accounted for <1% of the total animals removed. Of the 10,124 animals reportedly taken, 54% were killed (euthanized, shot, or killed by trap), 33% relocated, 13% released at the capture site, and <1% transferred to a wildlife rehabilitator.

The first group of 47 WDCAs was required to be re-certified by November 1998. Rather than requiring them to come back to Raleigh for a second 1-day training session, NCWRC decided that successful completion of an open-book examination at their home or office would suffice. The minimal passing grade was set at 85%. Of the 30 who wished to continue, 28 passed the examination and were recertified.

Program Evaluation

We evaluated the WDCA program by surveying WDCAs and by surveying professionals most likely to refer people with nuisance wildlife problems to WDCAs.

In August 1998, we mailed a 2-page survey to 47 WDCAs, which was attached to their re-certification examination. WDCAs were asked questions to aid in the description of the services they offer, their perceptions of the program, and the income they generate. A 1-page, 2-question survey was mailed to wildlife law enforcement officers ($N=203$; N respondents=112) and e-mailed to District wildlife biologists and their supervisors ($N=12$; N respondents=11) with NCWRC. The same questionnaire was e-mailed to each county Extension director ($N=100$; N respondents=26). The law enforcement officers, wildlife biologists and their supervisors,

and county Extension directors were asked to describe their familiarity with the program and, if they knew about it, to evaluate its effectiveness.

Perceptions of Wildlife Damage Control Agents

Of the 47 WDCAs surveyed, 30 responded. Thirteen reported that their certification contributed significantly toward their living, while 9 made occasional use of their license, and 7 seldom or never made use of their license. Respectively, WDCAs removed animals from residential buildings (24), repaired damaged buildings (12), and protected gardens, shrubs or landscapes (15). Businesses contracted for removal (23), repair (12), and landscape (13) services. Local governments contracted for removal (12), repair (5), and landscape (4) services.

A wide range of income was reported by WDCAs for 1997. Six WDCAs reported earning less than \$1,000, while 1 reported grossing \$500,000. Most (18) reported using their existing vehicle and equipment, except for purchasing a few tools and traps. Eight incorporated, 14 advertised in the Yellow Pages, 11 distributed flyers and business cards, and 1 got help from the Small Business Administration. One reported affiliating with a national company (Critter Control, Inc[®]).

When asked how they increased their knowledge and competency after gaining their certification, 26 reported learning on the job, 15 read 1 or more trade magazines, such as *Wildlife Control Technology*, 6 attended special training programs, 13 worked with more experienced specialists, and 9 contacted wildlife biologists for special assistance. When asked if the 2-volume set, *Prevention and Control of Wildlife Damage* and the *North Carolina Wildlife Damage Control Agent Certification Workbook* were useful, all respondents answered affirmatively.

NCWRC must maintain records of wildlife removed through issuance of Wildlife Depredation Permits. The WDCAs are required to file reports quarterly. Fifteen respondents felt the quarterly reports helped them keep better records, while 13 stated that these reports were tolerable. Only 4 stated the reports were unnecessary and a waste of time, although 1 person said an annual report should be enough.

The open-ended question at the end of the survey generated some ideas for program growth and improvement. One person advocated all WDCAs go through the official Hunter Education Course and take a Trapper Education Course. Three people wanted to have specialized hands-on training programs in trapping and handling nuisance animals. There were several positive remarks about the program. Overall, responses from the WDCAs indicated general satisfaction with the program.

Perceptions of Wildlife Enforcement Officers

North Carolina wildlife enforcement officers (WEOs) are called frequently to assist residents with wildlife problems. WDCAs are entitled to help with problem animals, and may issue permits for lethal control, except for big game animals, bats, and endangered species. In each county, the potential for cooperation and assistance between WEOs and WDCAs will vary with human and wildlife population density,

traditional uses of wildlife, and personal knowledge of WEOs and WDCAs. Consequently, our survey indicated that 22% of WEOs were frequent users of WDCAs, 33% of WEOs used the program occasionally, 25% of WEOs were aware of the program but did not use it, and 20% of responding WEOs were unaware of the program. When asked to rate the program, 16% of WEOs felt the program was highly successful, 42% rated it moderately successful, 38% were uncertain, and only 4% reported problems with the program.

WEOs made 75 additional comments which commended or made suggestions for improving the program. Nine said the WDCA program was working very well in their jurisdiction, while 8 stated there was little demand for help with nuisance animals. There were 29 requests for additional information. Sixteen wanted a list of WDCAs, and 8 did not know of any WDCA in their county. Ten WEOs suggested that the program be publicized through the print media (brochure, article in North Carolina Wildlife, etc.). Two enforcement officers suggested a meeting with WDCAs be arranged.

Perceptions of Extension Agents

North Carolina Cooperative Extension Services (NCCES) offices receive thousands of calls each year on topics ranging from aquaculture to zoology. Typically, in each county office 1 extension agent (EA) is delegated responsibility for answering nuisance wildlife inquiries. In many of the more densely populated counties and cities, the NCCES has created the Master Gardener Program. In this program, volunteers are trained in garden and landscape problems and solutions, including dealing with wildlife. The EA or volunteer is armed with publications written to help people help themselves. Each office has the University of Nebraska publication, *Prevention and Control of Wildlife Damage*, and each office has North Carolina Cooperative Extension Service publications on controlling beaver, voles (*Microtus* spp.), and snakes. The EA or master gardener on duty typically can provide advice over the phone and may mail a publication. However, if the caller does not have the time or ability to handle the wildlife problem, a direct service is needed. The WDA program was designed to provide that service.

Approximately one-third of North Carolina county Extension offices responded to the questionnaire sent to them via e-mail, and the 26 respondents made a total of 26 written comments on the program. Approximately one-fifth of the EAs reported great success with the WDCA program. One-third of the EAs were familiar with the program but seldom used it. One-fifth of the EAs were aware of the program but did not use it at all. Another 27% reported not knowing about the program.

When asked to assess the success of the WDCA program, 17% of EAs liked the program, while 28% rated it moderately successful. A full 50% were uncertain of its effectiveness and 1 agent reported a problem situation.

Extension agents provided 26 comments. Five reported high satisfaction with the program. Five wanted to know more details about the program and 4 wanted updated lists.

Perceptions of Biologists

A total of 11 of 12 NCWRC biologists responded to the survey. Ninety percent were familiar with the program and had made use of it, while 1 biologist did not refer wildlife calls even though he was familiar with the WDCA program. When asked to rate the success of the WDCA program, 60% of the biologists said it was working either very successfully or with moderate success, while about 40% were uncertain of program success in their area.

Written comments of biologists were diverse and provided thoughtful detail. Six respondents were concerned about the quality, diversity, and cost of services WDCAs were providing. Feedback on services provided was desired by 2 biologists. Three felt the program should be expanded, and 1 felt biologists should be involved in hands-on training. Two felt the program should be better publicized.

Summary and Recommendations for Program Improvement

The Wildlife Damage Control Agent program has spread unevenly across the state of North Carolina, with WDCAs in 56 of 100 counties. All the major urban areas have WDCAs, while many of the more rural areas do not. Due to a lack of funds, our assessment did not include a survey of people who have been served by WDCAs. We surveyed WDCAs, wildlife enforcement officers, Extension agents and NCWRC biologists. There were a significant number of WDCAs and agency personnel reporting satisfaction with the program and no major complaints. Our evaluation indicates a need for increased publicity of the WDCA program. There were calls for greater internal and external communication about the WDCA program. There is a need for a brief statement, likely in the form of a brochure, that would outline the purpose and principles of the WDCA program. The brochure would be distributed to WEO, EA, and NCWRC offices and to WDCAs. County officials need regular updates of the list of active WDCAs. Additionally, Extension agents in counties with WDCAs could improve communication by holding meetings bringing WDCAs, WEOs, EAs and NCWRC biologists together. At these meetings, the basics of the program, the services offered by local providers, and contact information could be exchanged. We conclude that this program is growing to meet the increasing need for control of wildlife damage by the private sector through a partnership of North Carolina and federal agencies, and that it could be a model for other states.

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