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A TECHNIQUES MANUAL AND VIDEO FOR THE MANAGEMENT OF PROBLEM URBAN CANADA GEESE

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ABSTRACT: Social and management problems associated with urban Canada geese (*Branta canadensis*) are increasing in area, scope and magnitude. Although there are many articles on the management of urban Canada geese, none provide enough information for a reader to understand the impact geese have on different people, the ecology of the urban goose, evaluate the effectiveness of potential control options, choose appropriate management techniques, and then implement the chosen techniques. The authors present a manual and video, which in combination, they believe are not deficient in any of these areas. The video is intended to increase the awareness and knowledge of human/goose conflicts in urban and suburban environments. The manual covers the biology of Canada geese relevant to problem management in an urban setting and a comprehensive list of management techniques. Detailed instructions for implementation, permit requirements, sources of equipment and supplies, and a discussion of advantages, disadvantages, and characteristics, are included for each technique. To assist in choosing and locating appropriate techniques, quick reference summary tables are included.

KEY WORDS: birth control, Canada geese, habitat modification, hazing, removal, techniques manual, urban wildlife

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INTRODUCTION

Canada geese are perhaps the most widely recognized bird in North America. Geese flying in V-formation signal changes in season and for many people have come to symbolize nature and wildlife. Canada goose numbers were once reduced to the point of near elimination in most parts of North America by unrestricted egg harvest, commercial hunting, and draining of wetland habitat. Thanks to enactment of strict harvesting regulations, creation of protective refuges, changes in crop planting and harvesting techniques, and creation of large, open grassy areas, Canada geese have rebounded and are no longer at risk. This astounding recovery is partly due to the fact that Canada geese are opportunistic and readily adapt to urban and suburban areas.

Scientists recognize several "races" or subspecies of Canada geese. The geese most commonly found in urban areas during spring and summer are called giant Canada geese (*Branta canadensis maxima*) and are the largest of the races. Giant Canada geese have undergone a phenomenal population increase from only a few thousand in 1965 in all of North America (Hanson 1965) to an estimated 1.1 million in just the central U.S. in 1996 (Wood et al. 1996). This growth rate is not peculiar to North America; in Britain there has been an estimated 8% annual increase in numbers of Canada geese from 1976 to 1991 (Allan et al. 1995). Although a few geese may be desirable in a park, suburban pond, or backyard, such small populations increase rapidly and usually lead to problems which can be very difficult to control. Conflicts between Canada geese and humans in the urban environment have increased as goose populations have increased (Conover and Chasko 1985). Problems may be only a nuisance, such as droppings, aggressive behavior,

and noise, or may represent a serious environmental threat or potential risk to human health and safety.

As a result of the increasing numbers of geese using urban areas, some major metropolitan areas in the upper Midwest and Northeast are faced with the increasing challenge of balancing Canada goose use of urban sites with human needs. As each municipality, wildlife agency, concerned citizens group or private organization has realized a human/goose conflict, they have discovered a single reference containing basic Canada goose management information is lacking. In some cases, local wildlife resources agencies have developed an informational bulletin or handout summarizing the dynamics of human/goose conflicts, outlining potential (and sometimes only favored) management techniques, and usually ending with phone numbers of the agency.

The authors have developed a techniques manual and video which will reduce the load on the resources of wildlife agencies to produce summary brochures or answer many questions over the phone. The combination of the video and manual will cover the problems associated with Canada geese in urban/suburban environments, Canada goose biology, state, provincial and federal regulations relevant to Canada goose management, techniques applicable to goose management in urban environments, and a wide list of suppliers.

The video is intended to increase awareness and knowledge of the human/goose problem, particularly the human dimensions components. It is 28.5 minutes long and is styled similarly to Public Broadcasting educational shows. The strength of the video is its ability to introduce the problems associated with human/goose conflicts to policy makers or general audiences. A summary of typical human/goose problems are

introduced, alternative views from individuals with differing backgrounds are presented, then overviews of commonly used management techniques are shown.

The manual contains enough technical information that it may be used as a reference manual by professional wildlife biologists. However, it is written in a style that ordinary citizens can understand. The manual covers Canada goose biology as it relates to the urban/suburban environment including descriptions and general behavior, breeding behavior, nesting, molting, migration, and mortality. The Migratory Bird Treaty Act requires permits to harvest, or even handle, Canada geese. Information on U.S. and Canadian regulations and permits concerning Canada geese is provided, including some example permit applications.

A section of the manual is devoted to the ideas of matching the ecology of the geese with various techniques and the importance of developing an integrated management strategy. This includes establishment of management goals, publicity, combining techniques for enhanced effects, and potential problems and advice for field personnel when applying certain techniques.

The largest section, and the focal point of the manual, is techniques. This section represents a sincere effort to document the state of knowledge about urban goose management practices as it existed in 1997. The primary intent is to provide a list of techniques currently in use or previously tried to alleviate human/goose conflicts in urban areas. Some techniques are highly specialized, site-specific, or may best be used in combination with other techniques. Thus, no attempt was made to rate or scale the techniques from "best" to "worst." Techniques are categorized on the basis of impact on geese (from least to greatest); prohibiting feeding, habitat modification, repellents, hazing/scaring, birth control, and removal. Within categories, groupings are based on similarity of techniques. Each technique is fully described and cited to the original studies or for further details. Each technique is also related to the part(s) of the goose ecology it affects, and strengths and weaknesses discussed. If a technique's effect may be enhanced if used in conjunction with another, the combination is noted.

Following the techniques section is a continent-wide listing of commercial suppliers of the preceding techniques. The compilation was made from a thorough literature search, however, some suppliers were undoubtedly omitted. This table is provided as a convenience, and no endorsement is implied for those included nor were any suppliers intentionally omitted. The final section consists of a summary look-up table for the techniques. Each technique is summarized by its strengths, weaknesses, qualitative cost estimates, timing and area of application, permits required for implementation, and a page number referencing its detailed description.

When these products are available, announcements will be made on The Wildlife Society (TWS) and WDAMAGE email lists and in the Probe and TWS Wildlife Damage Management Working Group newsletters.

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