

MANAGEMENT PLAN FOR MUTE SWANS IN NEW YORK STATE

New York State Department of Environmental Conservation Division of Fish, Wildlife, and Marine Resources

December 2013

Note to reviewers: This draft plan was under development while regulations pertaining to invasive species were also being developed by DEC in consultation with the Invasive Species Council. Under the proposed regulations, the mute swan would be designated as a “prohibited species”, which would prohibit the sale, importation, purchase, transport, introduction, or propagation of mute swans in New York. This plan is consistent with that designation, and it proposes additional actions to minimize their potential adverse impacts in New York. The final plan will reflect the status of the Invasive Species regulations at that time.

EXECUTIVE SUMMARY

This plan provides guidance to New York State Department of Environmental Conservation (DEC) staff and the public concerning management of mute swans (*Cygnus olor*). The mute swan is a non-native, invasive species, brought to North America from Eurasia for ornamental purposes in the late 1800s. A free-ranging population of mute swans became established in New York in the early 1900s and has since grown to approximately 2,200 birds statewide. Mute swans can cause a variety of problems, including aggressive behavior towards people, destruction of submerged aquatic vegetation (SAV), displacement of native wildlife species, degradation of water quality, and potential hazards to aviation. DEC has been operating for close to 20 years under a mute swan management policy adopted in 1993 by the Division of Fish and Wildlife and Division of Marine Resources (now combined as the Division of Fish, Wildlife and Marine Resources, or DFWMR). That policy permits removal of mute swans from lands administered by DFWMR, prohibits release of captive mute swans into the wild and authorizes issuance of permits for swan control by others on a site-specific basis. This new plan supports further action by DEC to eliminate free-ranging mute swans from New York by 2025, while allowing responsible ownership of these birds in captivity. This will serve the public interest in protecting ecosystem integrity while allowing licensed individuals to possess captive mute swans in appropriate and controlled settings.

PURPOSE AND BACKGROUND

Mute swans are a non-native, invasive species in New York. There are an estimated 2,200 free-ranging mute swans in New York, distributed in three fairly distinct populations (Long Island, lower Hudson Valley, and Lake Ontario regions). DEC has been operating under a mute swan management policy adopted in 1993 (DFWMR 1993). That policy permits removal of mute swans from lands administered by DFWMR, prohibits release of captive mute swans into the wild, and authorizes issuance of permits for swan control by others on a site-specific basis. The Atlantic Flyway Council adopted a mute swan management plan (AFC 2003) that included a population goal of 500 mute swans in New York by 2013. However, our current management policy has not been effective in reaching that goal because relatively little action was taken.

Instead, the free-ranging mute swan population has expanded in size and distribution over the past 20 years (Fig. 1). The two downstate populations were established nearly a century ago, and their numbers seem to have stabilized during the last decade (Swift et al. 2013). However, they continue to have impacts and they remain a potential source of birds for population expansion in the future. In contrast, the Lake Ontario population has existed for less than 25 years, and their numbers increased dramatically during the last decade. This population likely originated from free-ranging mute swans in Ontario, where there has been little effort to control the population.

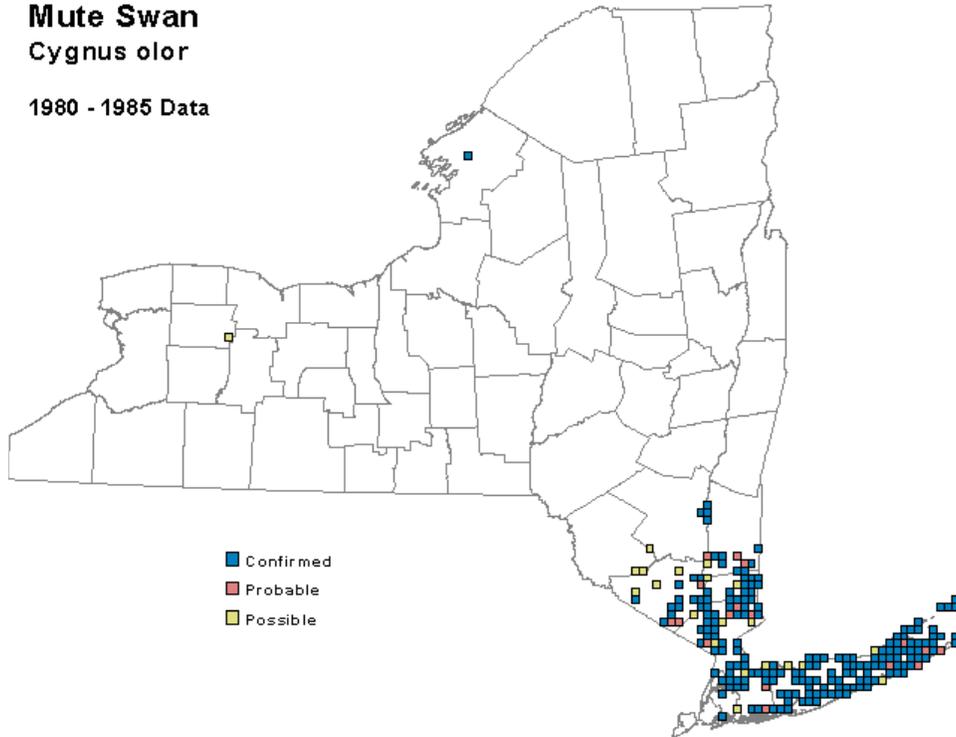
Between 2004 and 2008, DEC conducted research to document abundance, survival, reproduction, movements, ecological impacts and management of mute swans in New York (Swift et al. 2013). Based on that research, growing concerns about invasive species in general, and more concerted efforts to control free-ranging mute swans throughout eastern North America, DEC developed this management plan to replace the 1993 management policy. Although many aspects of the plan are based on information from studies by DEC and others, we do not include an extensive literature review and citations in this document. Instead, we refer readers to other reports that serve that purpose (e.g., Allin et al. 1987, Ciaranca et al. 1997, Maryland DNR 2001 and 2011, AFC 2003, Rhode Island DEM 2006, Craves and Susko 2010, Virginia DGIF 2012, Swift et al. 2013).

Native to Eurasia, mute swans were first brought to New York in the late 1800s by individuals who possessed the birds for ornamental purposes. Around 1910, some of these swans were released or escaped from captivity, establishing free-ranging populations in the lower Hudson Valley and on Long Island (McGowan and Corwin 2008). Since then, free-ranging mute swans have become common throughout these areas and their range has expanded northward. During the past 25 years, mute swans have also become established around Lake Ontario, primarily as a result of population expansion from the province of Ontario. They are largely non-migratory, although some mute swans move south during severe winter weather (Swift et al. 2013). Mute swans typically occur in coastal bays and wetlands, in large emergent marshes, and on inland lakes, rivers and ponds.

Mute swans are conspicuous birds that occur in some of the most densely populated areas of the state. Mute swans have little or no fear of humans so they are easily observed and provide opportunities for people to come in close contact with them. Some people become protective of individual birds that they encounter regularly. However, mute swans can cause problems for people too. Some swans will directly attack humans, especially small children, who get too close to nests or young (Ciaranca et al. 1997). The potential for injury is low, but the aggressive behavior of swans can be a serious nuisance and render some land or water areas inaccessible for outdoor recreation during the nesting season. Where large flocks occur on water bodies used for drinking water or swimming, the deposition of fecal matter may contribute to high fecal coliform counts which in turn may be a concern to local public health and municipal water supply officials. Mute swans have also been associated with high fecal coliform counts in coastal waters, which could affect some shellfishing areas on Long Island (Swift et al. 2013).

Mute Swan
Cygnus olor

1980 - 1985 Data



Mute Swan
Cygnus olor

2000 - 2005 Data

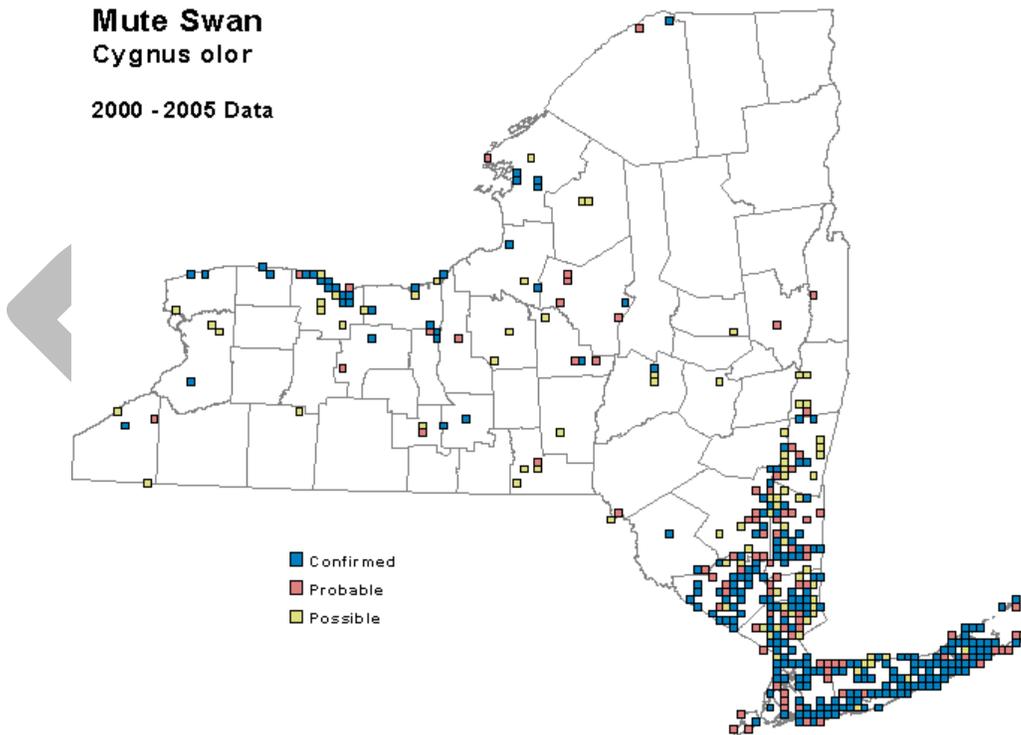


Figure 1. Breeding distribution of mute swans based on New York State Breeding Bird Atlas data, 1980-1985 (Andrle and Carroll 1988) and 2000-2005 (McGowan and Corwin 2008).

Annual winter counts of mute swans increased from less than 700 statewide in the 1970s to more than 2,500 by the year 2000 (Swift et al. 2013). Although counts have stabilized in recent years, further population growth seems possible, especially in the Great Lakes region and other inland water bodies. An annual population growth rate of 13% per year is predicted for the Lake Ontario area of New York, based on survival and reproductive data recently collected by the DEC (Petrie and Francis 2003, Swift et al. 2013). Without management, the only factors that may help to slow swan population growth are flooding of nests, predation of cygnets, starvation during severe winters, and collisions with power lines or other structures. In the absence of human intervention, the number of free-ranging mute swans in New York is likely to increase until the species is common throughout most of the state.

The Atlantic Flyway Council (AFC) adopted a mute swan management plan in 2003 that called for substantial reductions in the number of free-ranging mute swans throughout the flyway by 2013 (AFC 2003). The plan included a goal of 500 mute swans in New York by 2013, as suggested by DEC, a reduction of about 80%. The plan also included a number of policy recommendations adopted by AFC in 1997. Numerous wildlife conservation organizations, including the Association of Fish and Wildlife Agencies, National Audubon Society, and the American Bird Conservancy have expressed strong support for reducing free-ranging mute swan populations in accordance with the Atlantic Flyway mute swan management plan.

Recent court decisions and Congressional action have affirmed that mute swans are a non-native species that is not protected by federal laws or regulations associated with the Migratory Bird Treaty Act. Thus, it is up to each state to adopt policies and implement measures deemed necessary to achieve their own management goals. Maryland has been most aggressive to date, adopting a plan (with strong public support) that calls for direct culling of swans to the lowest possible number. By 2010, they had reduced their population to approximately 200 birds from nearly 4,000 birds in 1999 (Maryland DNR 2011). Many other states have implemented control programs as well and, as of 2008, New York had more mute swans than any other state in the Atlantic Flyway (AFC, unpublished data).

All free-ranging mute swans are defined as “migratory game birds” under ECL section 11-0103. Under current regulations, mute swans may not be taken by hunting in New York State, but DEC has the authority to establish seasons and bag limits for this species. Some hunters in New York have expressed interest in hunting mute swans, especially on Long Island, where the species often occurs in association with other waterfowl (ducks and geese) that may be legally hunted. Hunting for tundra swans (*Cygnus columbianus*), a species native to North America, is allowed by federal law in some states and is very popular. Hunters in Pennsylvania, Virginia, North Carolina, and perhaps other states, are currently allowed to take mute swans, but harvest estimates are not available. Hunter take of mute swans in New York could be an effective way to help reduce the free-ranging population in some areas, especially in natural areas that are important for native migratory waterfowl species.

In addition to free-ranging populations, dozens of mute swans are privately owned by DEC-licensed game bird breeders and other individuals throughout New York State, including an unknown number of people who are not licensed to possess these birds. Most mute swans held in captivity are defined as “domestic game birds” under ECL section 11-0103. Some property

owners and municipal park managers have mute swans for ornamental purposes, and the birds are available from a number of commercial breeders across the U.S. Prices can range from \$200 per bird to more than \$1,500 for a breeding pair. However, sellers and purchasers may be unaware of permit requirements, and at least two states (California and Maryland) prohibit importation of mute swans.

This plan calls for increased efforts by DEC to reduce the free-ranging population of mute swans in New York, while allowing responsible ownership of these birds in captivity. Increased efforts by DEC to remove mute swans from the wild, including allowing hunters and others to take mute swans into possession for personal use, is a cost-effective way to achieve the management goals stated below. This approach will best serve the public interest in conserving our natural resources, while providing opportunities for use and enjoyment of the species in more controlled settings.

MANAGEMENT GOALS AND STRATEGIES

The long-term goal of this management plan is to eliminate free-ranging mute swans from New York State by 2025. The immediate goal is to prevent any further range expansion, minimize their potential adverse impacts on natural resources, and establish a significant downward trend in the number of mute swans breeding in New York.

Ultimately, achieving these goals will require a variety of actions to eliminate potential sources of free-ranging swans in New York, to reduce the public demand for having a wild population of mute swans in the state, to actively control or remove mute swans that exist in the wild in New York, and to ensure that captive mute swans remain in captivity. To address each of these elements, we will adopt the following management strategies:

1. Inform the public about concerns associated with free-ranging mute swans.

Lack of public understanding is a contributing factor to the existence of free-ranging mute swans in New York and an impediment to management actions prescribed in this plan. Outreach efforts are needed to inform the general public (as well as wildlife rehabilitators, game bird breeders, and others) that mute swans are a non-native, invasive species that has the potential to adversely impact native wildlife and their habitats. This may include printed brochures, updating the DEC website, and presentations by DEC staff, cooperating conservation groups or others to the public. Efforts will be coordinated with DEC's Invasive Species Program and Special Licenses Unit. The goal of such outreach is to increase public awareness and acceptance of population control efforts, including ending supplemental feeding. Some bird conservation groups and environmental organizations have previously expressed support for mute swan control, so cooperative outreach efforts involving their members will be most effective. As trumpeter swans (*Cygnus buccinator*) and tundra swans (both of which are native to North America) become more common in New York, they may satisfy some of the public desire to see free-ranging swans in New York, so outreach efforts will direct some interests to those native species. In addition to general information, greater awareness of the legal requirements and conditions for possession of mute swans is needed. This will help ensure compliance and effectiveness of efforts to prevent future introductions of mute swans into the wild in New York.

2. Prohibit the importation and propagation of mute swans in (to) New York.

Currently, there are no clear prohibitions on the import, export, sale, trade, barter, possession or propagation of mute swans in New York. The only restriction is that a DEC Game Bird Breeder's License or a DEC License to Collect and Possess is required for any of these purposes. Those licenses prohibit release of swans or their progeny to the wild. However, many people are unaware that a license is required and there are swan breeders across the country that will ship birds to any location (except to California or Maryland, which have prohibitions). DEC will adopt and enforce regulations pursuant to the Invasive Species law (Environmental Conservation Law 09-1709) or other sections of the ECL to prohibit the importation, possession, propagation and sale of mute swans by any person except for scientific research, education, or other authorized purposes. Such authorizations will include conditions to prevent and recover any intentional or accidental releases to the wild, e.g., total enclosure or pinioning and sterilization, and permanent marking of any mute swans possessed in New York. Known suppliers of mute swans, license holders, wildlife rehabilitators and anyone else known to possess mute swans already, will be notified of the regulations once they are enacted. *(Note: under new Invasive Species regulations proposed by DEC in October 2013, mute swan would be designated as a "prohibited species", which would prohibit the sale, importation, purchase, transport, introduction, or propagation of mute swans in New York.)*

3. Prohibit the release or escape of captive mute swans into the wild in New York.

ECL Section 11-0507 states that "No person shall willfully liberate within the state any wildlife except under permit from the department... These provisions do not apply to migratory game birds, importation of which is governed by regulation of the department." As noted above, all current licenses to possess mute swans prohibit releases to the wild. However, there are several areas of confusion and concern, including the apparent exception for migratory game birds (which mute swans are in some cases, according to the ECL) and the fact that some people possess mute swans without a license or they do not think of captive mute swans as "wildlife" (so they may not know that release is prohibited). DEC will adopt and enforce regulations pursuant to the Invasive Species law, or other section of the ECL, to prohibit the intentional or accidental releases of mute swans or their progeny to the wild. This will involve: 1) total enclosure; 2) pinioning and sterilization; or 3) pinioning only of swans kept in single-sex groups. In addition, any mute swans possessed in New York will have to be permanently marked to identify who owns each one. In the case of mute swans taken to a licensed wildlife rehabilitator, licenses will be amended to prohibit release back into the wild. Acceptable disposition will include euthanasia, use for zoological purposes, or transferring the birds to someone licensed to keep mute swans in captivity (see Strategy #5). Wildlife rehabilitators and anyone else known to possess mute swans will be notified of the regulations once they are enacted.

4. Encourage control of mute swans in neighboring states and provinces.

Free-ranging swan populations currently exist in Ontario, Connecticut, Rhode Island, New Jersey, and Pennsylvania, and all are potential sources of mute swans immigrating into New York. These and most other states and provinces in the Atlantic Flyway support control of mute swan populations, as indicated by their adoption of a flyway management plan for this species

(AFC 2003). The stated goal of that plan is: *“To reduce mute swan populations in the Atlantic Flyway to levels that will minimize negative ecological impacts to wetland habitats and native migratory waterfowl and to prevent further range expansion into unoccupied areas”*; a substantial reduction or elimination of mute swans is called for in most jurisdictions (AFC 2003). The most aggressive control program has been in Maryland, where the free-ranging swan population has been reduced from nearly 4,000 birds in 2000 to less than 200 by 2010 (Maryland DNR 2011). Vermont has been successful at preventing a free-ranging swan population from becoming established, and control programs (nest and egg treatment or removals) are ongoing in Connecticut and Rhode Island. Ontario has conducted some mute swan control (primarily egg-oiling) in conjunction with efforts to promote restoration of a breeding population of native trumpeter swans in that province. The flyway plan is expected to be updated in 2014, and we will support continued efforts to reduce free-ranging mute swan populations in all jurisdictions.

5. Allow free-ranging mute swans to be taken and possessed by licensed persons.

Ultimately, all mute swans in New York are descendants of birds that escaped or were released from captivity. Demand for possession of mute swans for ornamental display or propagation purposes is considerable, and a single pair of yearling mute swans can sell for \$1,500 or more from commercial breeders. As discussed in Strategy #2 above, DEC will pursue a general prohibition on importation and possession of mute swans in New York. DEC will not authorize acquisition of captive-reared mute swans for ornamental use, hobby collections, propagation, or to displace nuisance Canada geese. However, we anticipate several situations where possession of mute swans might be allowed, including some that may help achieve the management plan goals. These situations would include: mute swans possessed as part of legitimate scientific or zoological collections for general viewing, education or research; mute swans lawfully possessed prior to enactment of any regulations (“grandfathered” birds); and mute swans taken from the wild in New York and kept in captivity in accordance with a special license or other written authorization from DEC. In these cases, a Game Bird Breeder license, License to Collect and Possess, or an Invasive Species permit (pending adoption of regulations) will be required to possess any mute swans, whether raised in captivity or taken from the wild. All authorizations to possess mute swans in New York will include conditions to prevent intentional or accidental releases of the birds or their progeny to the wild, including total enclosure or pinioning and sterilization (or single-sex groups), and permanent marking of any swans possessed to help identify and recover any that escape. Animal care and use considerations will be applied to authorized methods of capture, handling and possession of mute swans taken from the wild.

Because we propose to prohibit importation and possession of captive-reared mute swans, some of the demand for captive swans can be satisfied by allowing take and possession of mute swans from the wild in New York. This practice will help accomplish the management goal of eliminating free-ranging mute swan populations in the state. It is also responsive to concerns of people who favor the use of non-lethal control methods whenever possible. To implement this strategy, we will develop procedures to authorize taking of mute swans from the wild by licensed individuals (who must have appropriate facilities for keeping the birds in captivity), and compile a list of people or facilities that are authorized to take or accept mute swans from the wild.

6. Prohibit supplemental feeding of free-ranging mute swans.

Mute swans will readily accept human handouts of food, consistent with their history of domestication and origins from captive birds in New York. The enjoyment that people derive from feeding mute swans can be accommodated with lawfully-possessed captive birds rather than free-ranging birds. Unlike most other waterfowl in New York, mute swans are largely sedentary and have limited ability to migrate or move long distances when natural food sources become unavailable. As a result, some people feel compelled to provide supplemental food for the birds, especially during winter. However, this makes the swans more dependent on and accustomed (and sometimes aggressive) to people, helps sustain their populations, and conflicts with efforts to discourage feeding of ducks and Canada geese in many areas. DEC will seek any necessary authority to adopt and enforce regulations to prohibit the supplemental feeding of free-ranging mute swans, similar to what was enacted to prohibit the feeding of bears in New York.

7. Increase mute swan population control activities.

DEC has conducted mute swan control activities throughout the state for many years in accordance with the management policy adopted in 1993. That policy authorized staff to remove mute swans from lands administered by the DFWMR, but it did not specify the extent to which those activities should occur. Consequently, the amount of effort and type of controls conducted (e.g., nest/egg treatment, shooting or removal of adult birds) varied among regions of the state, and overall effectiveness for population control was limited. During 2005-2012, more than 500 adult mute swans and close to 2,500 eggs were taken from the wild across the state. Going forward, DEC staff may conduct mute swan control on any accessible public or private lands (with landowner consent) or waters in New York State. Staff will be encouraged to conduct control activities wherever possible and cooperators, such as USDA Wildlife Services, New York State Office of Parks, Recreation and Historic Preservation, New York City Department of Environmental Protection, municipalities and others, will be authorized to assist in these efforts. Participating partners conducting control activities will be trained by either qualified DEC or USDA Wildlife Services staff in the identification of mute swans as well as their nests and eggs to assure there will be no adverse impact to non-target species. DEC will give priority to mute swan removal efforts, especially breeding pairs, to prevent population or range expansion around Lake Ontario, the upper Hudson and Lake Champlain valleys, and other upstate counties where free-ranging populations are not already well established. In the lower Hudson Valley and Long Island, where populations have existed for many years, DEC will remove mute swans whenever opportunities arise, but priority will be given to reducing the number of birds where large numbers congregate and may be impacting coastal fish and wildlife species or habitats. DEC will also assist with removal of mute swans that threaten public safety (e.g., near airports) or preclude public use of lands or waters by their aggressive behavior towards people.

Any mute swans removed will be euthanized or turned over to persons with suitable facilities and licensed to keep the birds in captivity, at the discretion of the Department. Lethal control methods will include shooting of free-ranging swans and live capture and euthanasia in accordance with established guidelines for wildlife (e.g., Julien et al. 2010, AVMA 2013). Consideration will be given to donating the meat (or any other parts of birds killed) to charitable organizations (e.g., food pantries) or scientific, educational or zoological institutions. Non-lethal

population control methods may include nest destruction, treating eggs with corn oil or puncturing to prevent hatching, and surgical or chemical sterilization. Mute swan control activities will be documented and evaluated by DEC.

8. Allow property owners and others to conduct mute swan control activities.

Most mute swan control work by DEC staff and cooperators will focus on population reduction or control, and protection of sensitive habitats and public safety. However, DEC will authorize any property owner, land or water management authority, municipality or other responsible party to control or remove mute swans from their property for any reason. Various control methods may be authorized, including but not limited to: oiling, puncturing, shaking, freezing, replacing or removing eggs; destruction of nests; sterilization of birds; shooting; and capture and removal of swans to be euthanized or turned over to persons licensed to keep the birds in captivity. However, hazing of mute swans will not be authorized, as this could promote range expansion. Authorizations will include conditions to ensure that control measures are safe, humane, responsible and effective. The same animal care and treatment considerations will be applied to these activities as for actions by DEC staff. This may be accomplished through individual permits, a general depredation permit, or by adoption of regulations.

9. Allow take of mute swans by waterfowl hunters in some situations.

ECL Section 11-0103 defines all swans as “migratory game birds”, although DEC has not previously established an open season for taking mute swans. Waterfowl hunters in New York have mixed views on the desirability of allowing them to take mute swans. Some would like the opportunity to take these birds in addition to the various species of ducks and geese that they may take currently. Swans are a large, impressive, and palatable bird that many hunters encounter in the field already, especially in coastal areas of Long Island and in the Hudson River estuary where we are very concerned about ecological impacts of these birds. Other hunters do not favor a swan hunting season because of concerns that it may contribute to negative public attitudes toward hunting. In consideration of these views, we will consider adopting a regulation that allows waterfowl hunters to take some number of mute swans in appropriate locations (e.g., in the Southeastern and Long Island Waterfowl Hunting Zones) where it could contribute significantly to population control in those regions. Hunters would not be allowed to take mute swans in areas where trumpeter swans and/or tundra swans occur often enough that accurate species identification would be especially important. Other hunting constraints, such as season dates, bag limits, distance from developed areas, will be included primarily to minimize conflicts or adverse public reaction. Harvest of mute swans by hunters will be monitored by DEC. This action would not be taken before 2015, after other measures have been implemented and outreach has occurred to support its adoption.

EVALUATION OF MANAGEMENT SUCCESS

The management actions described in this plan will take time to implement, and most will take even longer to have the desired effects. A realistic time frame to begin evaluating success would be 5 years (i.e., beginning in 2020), assuming that most of the prescribed actions are in place within two to three years (e.g., by 2015-16). Whether that happens or not depends on DEC’s

ability to commit the staff time and resources necessary, and on public acceptance of this plan's goals and proposed strategies.

Ultimately, the success of this plan will be measured by periodic surveys of mute swan distribution and abundance. DEC will monitor the results of available population monitoring programs for waterfowl and other birds, including agency-sponsored surveys, as well as independent, volunteer-based surveys such as winter waterfowl counts, Christmas Bird Counts, and breeding bird surveys. If necessary, specific surveys will be conducted to document the status of free-ranging mute swan populations every three to five years.

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