ated with those options. Wildlife Services has determined lethal control to be the most appropriate management option and does not foresee any significant negative impacts to the other wildlife or the public from this option.

How will this be done?

This would be accomplished through a cooperative action involving the Pennsylvania Game Commission and the U.S. Department of Agriculture. USDA Wildlife Services has obtained all of the necessary permits from the U.S. Fish and Wildlife Service to conduct this operation under the direction of the Pennsylvania Game Commission. The state Department of Conservation and Natural Resources owns Wade Island and has provided approval for this operation.

USDA Wildlife Service biologists/ technicians will remove cormorants from Wade Island using specialized air rifles or suppressed .22 caliber rifles. The equipment used is designed to reduce any risks and is used in the safest manner possible.

During this operation, extreme care is given to not disturb the endangered species nesting on the island. Operations will be stopped immediately if it is perceived that activities are threatening the nesting of egrets or herons. To ensure public

safety, the Game Commission provides law enforcement assistance or arranges for assistance from the Pennsylvania Fish and Boat Commission throughout the operation.



The good news...

The Game Commission has concluded that the lethal removal of a limited number of cormorants on Wade Island is the best way to ensure the continued nesting success of the great egrets and black-crowned night-herons that use this unique nesting area. In addition, the Game Commission will continue to research and look for other methods to help promote the continued existence and wellbeing of these two endangered species and to secure their future within our state.

Please contact us if you are concerned about these issues. You may direct your comments to Pennsylvanian Game Commission, Wildlife Diversity Division, 2001 Elmerton Ave. Harrisburg, PA 17110-9797; or by email to <u>pgccomments@pa.gov.</u>



Wade Island...

Tough Decisions to Protect Endangered Species







PENNSYLVANIA GAME COMMISSION

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P E N N S Y L V A N I A G A M E C O M M I S S I O N

> This brochure has been created to help answer questions about the management of the Double-Crested Cormorants on Wade Island

What makes Wade Island special?

Wade Island, located in the Susquehanna River near Harrisburg, is home to the state's largest nesting colony of black-crowned night-herons and great egrets. Both the black-crowned night-heron and the great egret are listed on Pennsylvania's endangered species list.

What brings these colony nesting birds to Wade Island isn't clear. Perhaps it is good food resources in the Susquehanna River or its proximity to the Chesapeake Bay. Whatever the reason, no other place in the state comes close when comparing the number of nesting sites of these magnificent birds. More than 100 great egrets and between 50

and 100 black-crowned night herons nests typically are active on Wade Island each year. A few egret and less than 100 night-heron nests usually are found at Kiwanis Lake, in York, and a few night-heron colonies, numbering less than 30 nests, can be found in Lancaster and Berks counties. Wade Island consistently proves to be the overwhelmingly preferred nest site for these two endangered species.



What is happening on Wade Island?

Double-crested cormorants – also colony nesters - have invaded the night-heron and egret nesting area. While the double-crested cormorant was at one time relatively rare in Pennsylvania, populations have steadily increased since the early 1980s and is not a species of concern. During the mid-1990s, up to 1,000 cormorants were regularly seen at Presque Isle State Park in Erie. Since then, their population has continued to expand and they are now common throughout the Commonwealth. In fact, populations of doublecrested cormorants have been increasing rapidly in many parts of the U.S. since the mid-1970s. This abundance has led to increased conflicts with various biological and socioeconomic resources, including recreational fisheries, other birds, vegetation, and fish hatchery and commercial aquaculture production.



Cormorants were first confirmed nesting on Wade Island in July of 1996. At that time, only a single nest was found. Since then, though, the number of cormorant nests on Wade Island has increased dramatically. In 2011, 127 nests were confirmed.

Unfortunately, there is a limited number of nesting sites on the Wade Island. This is a particular problem for the great egrets, which prefer nest locations similar to those used by the cormorants.

Studies have shown that when nesting cormorants encroach upon colonies of other nesting birds, including both black-crowned night-herons and great egrets, they reduce the amount of nesting space for those other nesting species. In addition, cormorants have been known to take over egret nests and also kill trees as a result of their nesting activity. Several other cases found that cormorant droppings on the leaves and branches of nesting trees apparently caused egrets to abandon colonies.

In addition to the competition for nesting sites, cormorants also may compete with the herons and egrets for food in the local area around Wade Island. All three birds feed on fish and while cormorants usually dive deeper than herons and egrets for their food, scientists believe that the feeding areas of the three species likely overlap in the shallow depths of the Susquehanna River.

What if we do nothing?

The Pennsylvania Game Commission is responsible for managing all of the Commonwealth's

wildlife species. Particular care must be taken when managing endangered species to protect them from further reduction and their possible disappearance from the state. Disturbances – or increasing competition for nest sites – can cause colony nesters to move abruptly. Wade Island is an extremely important nesting habitat for both the endangered black crowned night-herons and great egrets, but the future use of the island by these two birds is threatened.

Since cormorants began nesting on Wade Island in 1996, their nest numbers have risen exponentially from one to 127 in fifteen years. As the numbers of cormorant nests continue to increase, there is a growing concern that they will displace the great egrets and black-crowned night-herons nesting on Wade Island.

The bad news...

Colony-nesters choose sites for reasons that often defy our understanding. Trying to lure Wade Island's herons and egrets to a nearby island may provide reduced competition for the colony, but an attempt to encourage nest-building on a nearby island was unsuccessful. Egret "decoys" were placed on an island that neighbors Wade Island in 2005 with hopes of attracting some birds away from the growing cormorant population. The use of decoys will continue, but such efforts generally provide only mixed success and may attract cormorants as well. Methods to control the success of the cormorant nests (oiling of eggs, use of poles and highpressure sprays) are not possible on Wade Island, because of the nest height.

Therefore, lethal removal of the cormorants was determined to be the safest, least-disruptive, most cost-efficient and promising control method. In support of this conclusion, USDA Wildlife Services has also considered all available management options and the adverse affects associ-

