



The purpose of this survey is to collect data for dissertation research at the University of Delaware. The objective of the research is to provide information to national resource managers in the Delaware Bay area to assist with wildlife management.

We are interested in everyone's opinion whether you care about wildlife or not. The information is confidential. You are part of a carefully selected random sample and your participation in this survey is essential to the completion of the research and overall success of the results. Your thoughts and opinions are important and we greatly appreciate your input.

The survey will take approximately ten minutes to complete. If you have any questions or comments regarding the research or the survey please contact the primary researcher by phone or by email that is listed at the end of the survey. In addition, there will be a comment section where you are free to leave any remarks or thoughts about the survey.

Thank you for participation, and enjoy the survey!

1. Consider some of the following issues commonly found at the State level. Please take a moment to tell us how you value each statement, where one is not important and ten is very important:

	Not Important								Very Important	
Improving basic education	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Reducing crime	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Improving healthcare	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Protecting wildlife	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Creating Jobs	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Reducing state taxes	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>

2. States spend money on a variety of different programs for different reasons. Please indicate how you feel about the amount of money States currently spend on these programs:

	Increased greatly		Stay the same		Decreased greatly	
Providing prescription drug assistance	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Providing public transportation	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Building new state prisons	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Maintaining state roads and highways	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Preserving open space	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Maintaining public library services	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	

These are just a few of the things that States spends money on.

Often times, proposals are made for the purpose of funding new programs. This requires assistance from the public in the form of taxes, contributions or an increase in the prices of related goods and services. In order for the state to make a decision to undertake new programs, it is important to give people like you information about it so that you can help contribute to the decision making process.

3. Have you ever taken a survey like this in order to get your opinion on how the state should spend its money? (Circle number)

- 1 YES
- 2 NO
- 3 NOT SURE

Please take a moment to consider the following natural resource issue concerning shorebirds on the Delaware Bay:

Each year the Delaware Bay is home to a natural phenomenon that combines the world's largest concentration of breeding horseshoe crabs and the annual migration of shorebirds from South America to the Arctic.

The four primary shorebirds are the ruddy turnstone, sanderling, semi-palmated sandpiper and the red knot. The birds rely on the Delaware Bay to provide them with enough nourishment in the form of horseshoe crab eggs to double their body weight before leaving for the Arctic. (See attached map and pictures).

4. Were you aware of the shorebird/horseshoe crab phenomenon? (Circle number)

- 1 AWARE AND VERY KNOWLEDGABLE
- 2 AWARE AND SOMEWHAT KNOWLEDGABLE
- 3 AWARE BUT NOT KNOWLEDGABLE
- 4 NOT AWARE

Surveys over the past ten years have shown a decline in both the total population of horseshoe crabs and the shorebirds who visit the bay. If these trends continue, scientists estimate that one of these species, the red knot, will be extinct by the year 2010. Red knots have shown no sign of recovery, despite a four-fold reduction in horseshoe crab harvests since 1998.

5. Were you aware of this issue before? (Circle number)

- 1 AWARE AND VERY KNOWLEDGABLE
- 2 AWARE AND SOMEWHAT KNOWLEDGABLE
- 3 AWARE BUT NOT KNOWLEDGABLE
- 4 NOT AWARE

6. Do you consider this to be an important issue in the state of Delaware?

- 1 YES
- 2 NO
- 3 NO OPINION

In order to prevent the continued decline of the red knot and to protect the population of the other shorebird species, a number of management measures would be required. Some people feel that the decline in both the red knot and the horseshoe crab population is a problem that requires management attention, for others it does not. We are interested in your opinion whether or not you feel that this is an issue.

7. Suppose a special shorebird rehabilitation fund is established by the states in the Mid-Atlantic region (Delaware, Maryland, New Jersey). Money from the trust would be used to fund a program to manage horseshoe crab populations and the surrounding ecosystem. This may include but is not limited to the protection of existing wetlands and beaches and limiting the harvesting of horseshoe crabs. With the program, the red knot population and related shorebird species will likely remain a viable species in the Delaware Bay. Without the program, the red knot will likely disappear and other related shorebird species may diminish in population. (This adopts wording used by Cherry et al in their Cutthroat study)

To fund this program, a contribution from each household in the Mid-Atlantic region would be needed to support the “Shorebird Conservation Fund”

Suppose an annual payment of \$X would be needed from each household in the Mid-Atlantic region. Would you be willing to contribute \$X each year over the next ten years to support the program? (Circle number)

- 1 YES
- 2 NO

8. If No, why? (Circle number)

- 1 THE PROGRAM IS NOT WORTH THAT MUCH MONEY
- 2 DO NOT WANT TO CONTRIBUTE
- 3 SOMEWHAT DIFFICULT TO PAY
- 4 DO NOT BELIEVE PROGRAM WILL WORK
- 5 DO NOT TRUST ALLOCATION OF STATE FUNDING
- 6 OTHER (Please Specify)

The next few questions will help us analyze the results of this survey. As previously mentioned, **all** answers to **all** questions are completely confidential.

9. Do you belong to any bird watching societies? (Circle number)

- 1 YES
- 2 NO
- 3 DO NOT KNOW

10. Do you belong to any fishing groups or associations? (Circle number)

- 1 YES
- 2 NO
- 3 DO NOT KNOW

11. Which of the following activities do you enjoy doing for recreational purposes?
(Circle all that apply)

- 1 HIKING/CLIMBING
- 2 BICYCLING
- 3 VISITING NATIONAL LANDMARKS/HISTORICAL SITES
- 4 FISHING
- 5 BEACH USE/SWIMMING
- 6 NONE OF THE ABOVE

12. Have you ever visited the Delaware Bay (ocean or bay) for the purpose of shorebird watching?

- 1 YES
- 2 NO (Go to question #14)

13. Approximately how many trips have you taken to the Delaware Bay (ocean or bay) in the last twelve months for the primary purpose of shorebird watching?

_____ trips

14. What is the zip code of your permanent residence?

15. Are you male or female? (Circle number of your answer)

- 1 Male
- 2 Female

16. Your present marital status: (Circle number)

- 1 NEVER MARRIED
- 2 MARRIED
- 3 DIVORCED
- 4 SEPERATED
- 5 WIDOWER

17. Number of children you have in each age group in your household. (If none, write "0")

_____ UNDER 5 YEARS OF AGE
_____ 5 TO 13
_____ 14 TO 18
_____ 19 TO 24
_____ 25 AND OVER

18. What is your age?

_____ YEARS

19. What is the highest degree or level of school that you have completed (Circle number)

- 1 NO FORMAL EDUCATION
- 2 SOME HIGH SCHOOL
- 3 HIGH SCHOOL DEGREE
- 4 SOME COLLEGE
- 5 ASSOCIATE DEGREE
- 6 BACHELOR'S DEGREE
- 7 SOME GRADUATE WORK
- 8 GRADUATE DEGREE

20. Which category best describes your household income (before taxes) in 2005? (Circle number)

- 1 LESS THAN \$15,000
- 2 15,000 TO \$29,999
- 3 \$30,000 TO \$49,999
- 4 \$50,000 TO \$74, 999
- 5 \$75,000 TO \$99,999
- 6 \$100,000 AND ABOVE

Thank you for your contribution to our research. Your participation is greatly appreciated. Please return the survey in the enclosed envelope. If you have any questions or comments please feel free to list them below.

Comments:

Questions??? Please contact the primary researcher, Kelley Appleman at (302) XXX-XXX or by email: kapplema@udel.edu.