## The Future of Cook Inlet Beluga Whales What is Your Opinion?



The population of beluga whales in the Cook Inlet of Alaska declined rapidly during the 1990s and consequently was listed as an Endangered species under the Endangered Species Act in 2008. Some actions have been taken to protect Cook Inlet beluga whales and more actions are now being considered. This survey collects public opinions about these possible new actions. Government officials will consider your opinions, along with information from scientists and planners, when selecting what and how much to do.

Even though you may not be familiar with this issue, your opinions matter. Government actions to protect Cook Inlet beluga whales will affect all U.S. households through federal government spending.
The material in this survey is based on the best available information from
government, university, and industry scientists.

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Q1 Protecting threatened and endangered species is one of many issues facing the U.S. To help us place this issue in perspective, answer this question based on what you know now. For each issue, compared to what is being done now in the U.S., do you think we should be doing less, doing about the same, or doing more? For each item, check one box.

|  | Do less | Do about the same | Do more |
| :---: | :---: | :---: | :---: |
| Make government more efficient.................................. | $\square$ | $\square$ | $\square$ |
| Improve education. | $\square$ | $\square$ | $\square$ |
| Protect threatened and endangered species....................... | $\square$ | $\square$ | $\square$ |
| Improve roads and highways.......................................... | $\square$ | $\square$ | $\square$ |
| Encourage economic growth and jobs.............................. | $\square$ | $\square$ | $\square$ |
| Clean up air and water pollution...................................... | $\square$ | $\square$ | $\square$ |

## The Issue: Endangered Cook Inlet Beluga Whales

The Cook Inlet beluga whale is protected as an endangered species under the U.S. Endangered Species Act. According to the act:

An endangered species is a plant or animal species that is in danger of going extinct in areas where it normally lives.

A threatened species is a plant or animal species that is likely to become endangered in areas where it normally lives.

The Endangered Species Act requires the federal government to take reasonable actions to protect threatened and endangered species, such as limiting human activities that may harm them and protecting the places where they live.

Q2 The Endangered Species Act currently protects 86 mammals, 90 birds, 138 fish, 294 other species such as reptiles and insects, and 718 plants. When you think of the Endangered Species Act, how positive or negative is your general reaction? Check one box.

- Mostly positive
- Somewhat positive
$\square$ Neither positive nor negative
$\square$ Somewhat negative
Mostly negative
- Don't know

The Endangered Species Act protects either the entire species, or one or more distinct populations within a species. Distinct populations are different from the rest of the species because of physical, genetic, ecological, or behavioral characteristics.

Cook Inlet beluga whales are a distinct population of beluga whales that are geographically isolated and do not interact with other beluga whale populations in Alaska.

Q3 Before today, were you aware that the Endangered Species Act protects distinct populations for some species in addition to entire species? Check one box.

- Yes
- No

Some people are interested in protecting threatened and endangered species because they:

- Are a source of enjoyment and learning for people now and in the future.
- May help to show whether the environment and ecosystem are healthy.
- May provide medicines and other helpful substances for humans someday, even if we don't yet know what these uses are.
- Have a right to exist and should not be endangered by man's actions.

Some people are concerned about actions to protect threatened and endangered species because they:

- May restrict what people can do, such as limit recreation, forestry, land development and use, and hunting and fishing activities.
- May increase the cost to produce and provide goods such as food, housing, drinking water, and lumber, which could increase some prices consumers pay.
- May not be effective if the decline of the species is due to causes beyond human control.
- Use government funds and resources that could be used for other important issues.


## Q4 From strongly disagree to strongly agree, how do you feel about these statements?

 Check one box for each statement.Protecting threatened and endangered species is important to me. $\qquad$


Protecting jobs is more important than protecting threatened and endangered species $\qquad$


The beluga whale is one of 11 whale species found in U.S. waters that are listed as Endangered under the Endangered Species Act. The figure below shows these endangered whale species (pictures are to scale).

## Endangered Whales in U.S. Waters



Q5 Have you personally observed whales in nature (outside of aquariums)? Check one box.

- Yes
- No
- Don't know


## Some Beluga Whale Facts

- Adult beluga whales are white in appearance, can grow to an average of 15 feet long, weigh more than $\mathbf{3 , 0 0 0}$ pounds, and live more than 30 years. Males are larger than females.
- They are social animals that typically hunt, travel, and interact in groups.
- Beluga whales are found in Arctic and subarctic regions of Russia, Greenland, and North America, usually in areas of the ocean that are covered by ice during part of the year.
- There are 29 distinct beluga whale populations in the world, including five populations in Alaska.
- In Alaska, beluga whales mostly eat fish, such as cod and salmon. An adult beluga whale may eat 50 pounds of food in one day.
- Some distinct beluga whale populations migrate, but other distinct populations live in one area year round.

Q6 Before today, had you ever seen, heard about, or read about beluga whales? Check one box.
$\square$ Yes

- No

Don't know

Beluga Whales in the U.S.


Summer distribution of beluga whale stocks in Alaska
From: National Oceanic and Atmospheric Administration, Fisheries Service. 2008.
Five beluga whale populations (or "stocks") live in U.S. waters off the coast of Alaska in the Beaufort Sea, Chukchi Sea, Bering Sea, Bristol Bay, and Cook Inlet (see map).

Population estimates for the 5 distinct populations of beluga whales in the U.S.:

| U.S. beluga whale distinct population | Approximate size of distinct population <br> (current population trend) |
| :--- | :---: |
| Beaufort Sea | 40,000 (not known if increasing or decreasing) |
| Eastern Chukchi Sea | 3,700 (appears to be stable) |
| Eastern Bering Sea | 18,000 (not known if increasing or decreasing) |
| Bristol Bay | 3,300 (appears to be increasing) |
| Cook Inlet | 284 (decreasing) |

Q7 From strongly disagree to strongly agree, how do you feel about the following statement? Check one box.

|  | Strongly <br> disagree | Somewhat <br> disagree | Neither <br> agree nor <br> disagree | Somewhat <br> agree | Strongly <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Since some distinct populations of U.S. <br> beluga whales are increasing or stable, I am <br> not concerned about the ones that are <br> decreasing............................................................ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

## Cook Inlet Beluga Whales

Of the five distinct beluga whale populations found in the U.S., the Cook Inlet beluga whale is considered by scientists to be the most isolated, both geographically and genetically, from the other populations. It is also the smallest of the five beluga whale populations in the U.S. The Cook Inlet beluga whale lives in Cook Inlet year round.

Currently, the Cook Inlet beluga whale is listed as endangered under the Endangered Species Act.

Q8 Before today, had you ever seen, heard about, or read about Cook Inlet beluga whales? Check one box.
$\square$ Yes
$\square$ No
$\square$ Don't know

Cook Inlet beluga whales live mostly in the northern part of Cook Inlet near Anchorage, Alaska's largest city. Because of where they live, the Cook Inlet beluga whale population is vulnerable to human activities.

- In Alaska, Alaska Native tribes have hunted beluga whales for food, oil, and traditional uses for centuries. Beluga whale hunting in U.S. waters is only permitted for Alaska Native tribes and is illegal for all others.
- Between 1994 and 1998, more than 300 beluga whales were killed in the Cook Inlet by Alaska Natives in legal hunts. This was a dramatic increase from the hunts reported in the past.
- The population declined by almost a half during this same period.

Scientists believe Alaska Native hunting was the primary cause for this decline. In 1999, the federal government began restricting Cook Inlet beluga whale hunting by Alaska Natives.

- Between 1999 and 2006, Alaska Natives killed a total of five Cook Inlet beluga whales in legal hunts.
- Beginning in 2007, all hunting of Cook Inlet beluga whales was suspended until the population has increased enough for hunting to resume.

As a result of these protection actions, federal government scientists predicted the Cook Inlet beluga whale population would begin increasing by $\mathbf{2 \%}$ to $6 \%$ per year.

Despite these measures, the Cook Inlet beluga whale population is not growing as predicted, and has declined to 284 whales. It is not known whether this is a result of natural factors, humanrelated factors, or a combination of both.

Numerous factors could be contributing to the continued decline of Cook Inlet beluga whales, and the extent to which each factor affects the population is being investigated by scientists. They include the following:

## Natural factors

- Beluga whales being stranded in the mud during low tide
- Killer whales preying on beluga whales
- Illness caused by parasites and disease


## Human-related factors

- Illegal hunting
- Commercial and recreational fishing, which decreases available food for beluga whales
- Illness or injury caused by pollution from sewage, airports, cities, and other sources
- Oil spills from tankers and drilling platforms
- Dredging and building activities where beluga whales live
- Ships and boats hitting or disturbing beluga whales
- Underwater noise that may damage or interfere with beluga whales’ hearing

Q9 After looking at the information in this handout, how concerned are you, if at all, about the Cook Inlet beluga whale? Please check one box.

| Not at all <br> concerned | A little <br> concerned | Somewhat <br> concerned | Very <br> concerned | Extremely <br> concerned |
| :---: | :---: | :---: | :---: | :---: |
| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

Federal government scientists have predicted that without changes to reverse the continued decline of the Cook Inlet beluga population, the population is likely to permanently disappear. With a small population, Cook Inlet beluga whales are more vulnerable to rare events, such as oil spills or a low number of successful births.

Using the best information and prediction methods available, government scientists have estimated that under current conditions, there is a 25 percent risk ( 1 in 4 chance) that the population will be extinct in 100 years (by the year 2110).

Q10 How much do you agree or disagree with the following statement? Check one box.
A 25\% risk of extinction in 100 years for

## New Cook Inlet Beluga Whale Protection Actions

To help the population recover, federal and state governments may consider additional actions to protect Cook Inlet beluga whales and their habitat from human activities that may increase their risk of extinction.

- Recover means the species’ population has improved to the point where the risk of extinction in the foreseeable future is very small and the species can be removed from the endangered and threatened species list.
- Possible protection actions that could occur include: further regulate commercial fishing, reduce pollution (chemical and noise) sources, minimize impacts from coastal development on beluga whales, increase monitoring activities to identify and rescue stranded whales, and prevent illegal hunting.
- The costs associated with additional protection actions vary a great deal, and depend upon the specific actions taken. Regardless of the action taken, more enforcement of existing restrictions will be required and more monitoring and research done to improve our understanding of the distinct population and the threats to it, particularly in areas of Cook Inlet used most by beluga whales.

Additional protection actions beyond those currently in place for the Cook Inlet beluga whales will cost more money. These costs may take various forms.

- Your household's costs may increase through higher prices for products you buy and through increases in your federal taxes.
- Most of the increased cost would occur in the first 10 years while industries adjust to new requirements, and to fund more government enforcement and monitoring.

Q11 How much do you agree or disagree with the following statement? Please check one box. Even if it costs us more money, we should
do more so that the Cook Inlet beluga
whale recovers....................................................

## What Alternatives Do You Prefer?

As we have discussed, new alternatives may be considered to protect Cook Inlet beluga whales. Your opinions are important to help understand what alternatives the public prefers, and will be used to help decision makers set policy.

The next questions compare the expected results for the Cook Inlet beluga population after 50 years under hypothetical alternative programs of regulations, and government enforcement and monitoring. In each question, you are asked to compare Alternative A with two other alternatives:

- Alternative A presents the expected Endangered Species Act status and risk of extinction of the Cook Inlet beluga population after 50 years without additional protection actions beyond those currently in place. Continuing the current actions would not increase the costs to your household.
- Alternative B and Alternative C present the expected Endangered Species Act status and risk of extinction of the Cook Inlet beluga whale population after 50 years under a range of the many possible alternatives that do more and cost more to protect Cook Inlet beluga whales.
- The added cost to your household each year for 10 years above the cost of the current program is also listed.
- Remember, if you spend money for this, it won't be available to buy other things.

Questions 12, 13, 14, and 15 cover a range of alternatives and costs. Since scientists are still working on the alternatives and estimating the possible costs, the results and costs for the hypothetical alternatives may vary across questions. Please answer each question considering only the results and costs presented in that question.

For hypothetical questions like these, studies have shown that many people say they are willing to pay more for protecting threatened and endangered species than they actually would pay out of their pockets. We believe this happens because people do not really consider how big an impact an extra cost actually has to their family's budget when answering these types of questions.

To avoid this, as you consider each question, please imagine your household actually paying the cost for the alternative you select from your household's budget.

Q12 Here is the current program with two alternatives. Which alternative do you most prefer and which alternative do you least prefer? Please indicate your responses below the table.


Q13 Here is the current program with two different alternatives. Which alternative do you most prefer and which alternative do you least prefer? Please indicate your responses below the table.

|  | Alternative A Current program | Alternative B | Alternative C |
| :---: | :---: | :---: | :---: |
| Population status....................... (endangered now) | Endangered | Recovered | Threatened |
| Risk of extinction by the year | 25\% | Less than 1\% | 5\% |
| Added cost to your household each year for 10 years. | \$0 | \$100 | \$60 |
|  | Alternative A | Alternative B | Alternative C |
| Which alternative do you prefer the most? Check one box------> | $\square$ | $\square$ | $\square$ |
| Which alternative do you prefer the least? Check one box------> | $\square$ | $\square$ | $\square$ |

Q14 Here is the current program and two more alternatives. Which alternative do you most prefer and which alternative do you least prefer? Please indicate your responses below the table.


Q15 Here, again, is the current program and two other alternatives. Which alternative do you most prefer and which alternative do you least prefer? Please indicate your responses below the table.

|  | Alternative A Current program | Alternative B | Alternative C |
| :---: | :---: | :---: | :---: |
| Population status. (endangered now) | Endangered | Threatened | Recovered |
| Risk of extinction by the year | 25\% | 15\% | Less than 1\% |
| Added cost to your household each year for 10 years. | \$0 | \$40 | \$100 |
|  | Alternative A | Alternative B | Alternative C |
| Which alternative do you prefer the most? Check one box------> | $\square$ | $\square$ | $\square$ |
| Which alternative do you prefer the least? Check one box------> | $\square$ | $\square$ | $\square$ |

Q16 The following are statements some people tell us about their answers to Q12, Q13, Q14, and Q15. How much do you agree or disagree with each of the following statements? Mark the box of your response for each statement.

| When answering Q12, Q13, Q14, and Q15... | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I do not feel it is my responsibility to pay for the protection of Cook Inlet beluga whales. $\qquad$ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| There is not enough information for me to make an informed choice between the alternatives. $\qquad$ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| The added costs I am willing to pay are just to protect Cook Inlet beluga whales, and not to protect other species. $\qquad$ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| I am concerned that the federal government will not effectively protect Cook Inlet beluga whales. $\qquad$ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| I feel I should not have to pay more federal taxes for any reason. | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| I don't think that scientists can make good predictions about what will happen in 50 or 100 years. | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| I don't feel qualified to choose between different levels of risks of extinction........ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| I don't want to pay for Cook Inlet beluga whale protections if there is still a risk it may become extinct in the future............ | $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

Q17 These questions were asked to obtain public input for decision makers to consider along with information from scientists and planners. People feel differently about how confident they are with their selection of alternatives and the costs they would have to pay.

How confident are you that your answers in Q12 through Q15 accurately reflect how you feel about the alternatives for protecting Cook Inlet beluga whales? Check the best answer.

| Not at all | Slightly | Somewhat | Very | Extremely |
| :---: | :---: | :---: | :---: | :---: |
| confident | confident | confident | confident | confident |
| $\square$ | $\square$ | $\square$ | $\square$ |  |

## Q18 Listed below are statements about the relationship between humans and the environment. For each statement please indicate how much you agree or disagree by checking the appropriate box.

We are approaching the limit of the number of people the earth can support. $\qquad$
Humans have the right to modify the natural environment to suit their needs......
When humans interfere with nature it often produces disastrous consequences. $\qquad$
Human ingenuity will insure that we do not make the earth unlivable. $\qquad$
Humans are severely abusing the environment. $\qquad$
The earth has plenty of natural resources if we just learn how to develop them. $\qquad$
Plants and animals have as much right as humans to exist. $\qquad$
The balance of nature is strong enough to cope with the impacts of modern industrial nations.

Despite our special abilities, humans are still subject to the laws of nature. $\qquad$
The so-called "ecological crisis" facing humankind has been greatly exaggerated...

The earth is like a spaceship with very limited room and resources. $\qquad$
Humans were meant to rule over the rest of nature $\qquad$
The balance of nature is very delicate and easily upset. $\qquad$
Humans will eventually learn enough about how nature works to be able to control it...
If things continue on their present course, we will soon experience a major ecological catastrophe $\qquad$

| Strongly <br> disagree | Somewhat <br> disagree | Neither <br> agree nor <br> disagree | Somewhat <br> agree | Strongly <br> agree |
| :---: | :---: | :---: | :---: | :---: |
| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
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| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |
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| $\square$ | $\square$ | $\square$ | $\square$ | $\square$ |

## About You and Your Household

This information is used to compare our survey respondents with the U.S. population. Your responses will be kept confidential and separate from your name and address. Material identifying you will be destroyed at the end of the study.

Q19 Are you male or female? Check the box of your answer.
$\square$ Male
$\square$ Female

Q20 In what year were you born?
19 $\qquad$

Q21 How many people do you live with in each of the following age groups? If none for a category please write " 0 ".
$\qquad$ Under 18 18 to 35 $\qquad$ 36 to 60 $\qquad$ Over 60

Q22 Which of the following best describes your employment status? Check the box of your answer.
$\square$ Employed full-time
Retired
Currently unemployed
Other (please specify)
[ Homemaker
Other (please specify)
$\square$ Student
Q23 Have you ever been a member of, or contributed time or money to, an environmental or conservation organization? Check the box of the best answer.
$\square$ Yes

- No
$\square$ Don't know

Q24 How many hunting trips and sport or non-commercial fishing trips, if any, have you taken in the last 3 years? For each type of trip, check the best answer.


Q25 What is the highest grade or level of school you have completed? Check the best answer.
$\square$ Some high school or less
High school diploma or equivalent
Some college
$\square$ Two year college degree (AA, AS) or technical school
$\square$ Four year college graduate (BA, BS)
Some graduate work but did not receive a graduate degree
$\square$ Graduate degree (MA, MS, MBA, PhD, JD, MD, etc.)

Q26 Do you own or rent your residence? Check your answer.
$\square$ Own
$\square$ Rent

Q27 Are you Hispanic or Latino? Check the box of the best answer.

| $\square$ | Yes |
| :--- | :--- |
| $\square$ | No |

Q28 Which of the following best describes you? Check one or more.

| $\square$ Asian | Native Hawaiian or Other Pacific Islander |
| :--- | :--- |
| $\square$ American Indian or Alaska Native | $\square$ White |
| $\square$ Black or African American |  |

Q29 What was your household income (before taxes) in 2011? Check the box of the best answer.
Less than $\$ 10,000$
$\$ 10,000$ to $\$ 19,999$
\$20,000 to $\$ 29,999$
$\$ \$ 30,000$ to $\$ 39,999$
$\square \$ 40,000$ to $\$ 49,999$
$\square \$ 50,000$ to $\$ 59,999$
\$60,000 to $\$ 79,999$
$\$ 80,000$ to $\$ 99,999$
$\$ 100,000$ to $\$ 124,999$
\$125,000 to $\$ 149,999$
$\$ 150,000$ to $\$ 200,000$
\$200,000 or more

Is there anything we overlooked?
Please use the space below to provide us with any other comments you would like to make.


[^0]:    Public reporting burden for this collection of information is estimated at 25 minutes, including time for reviewing instructions, reviewing existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. Your name and address will be kept separate from your responses. Only your responses will be provided to the researchers for analysis.

