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.

This survey is funded by the National Oceanic and Atmospheric Administration, a U.S. government agency charged with making decisions about Cook Inlet beluga whale management activities.

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.

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help us place this issue in perspective, answer this question for each issue, compared to what is being done now	uestion based in the U.S., o	on what you k lo you think we	now now.
	Do less	Do about the same	Do more
government more efficient			
ve education			
ct threatened and endangered species			
ve roads and highways			
rage economic growth and jobs			
up air and water pollution			
where it normally lives. A threatened species is a plant or animal species that i where it normally lives. Endangered Species Act requires the federal governments	s likely to bec	ome endangered	l in areas ns to
species such as reptiles and insects, and 718 plants.	When you t	hink of the End	
	help us place this issue in perspective, answer this quantity for each issue, compared to what is being done now doing less, doing about the same, or doing more? For each issue, doing about the same, or doing more? For each issue, doing about the same, or doing more? For each issue, doing about the same, or doing more? For each issue education	help us place this issue in perspective, answer this question based For each issue, compared to what is being done now in the U.S., of doing less, doing about the same, or doing more? For each item, of doing less, doing about the same, or doing more? For each item, or doing less, doing about the same, or doing more? For each item, or doing less, doing about the same, or doing more? For each item, or doing less, doing about the same, or doing more? For each item, or doing less, doin	government more efficient

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

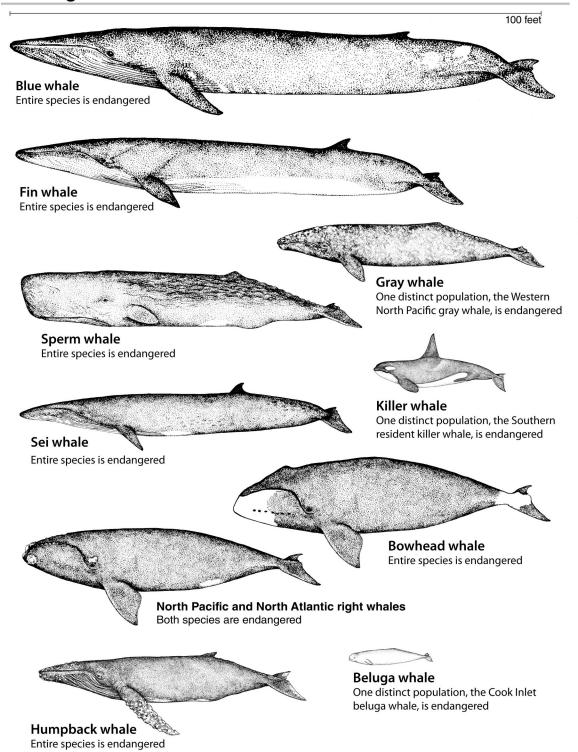
Cook Inlet beluga whales are a distinct population of beluga whales that are geographically

	isolated and do not interact with other	beluga wh	ale populatio	ons in Alasko	l.	J. J		
Q3	Before today, were you aware that the Endangered Species Act protects distinct populations for some species in addition to entire species? <i>Check one box.</i>							
	☐ Yes ☐ No							
Some	people are interested in protecting th	reatened a	nd endangei	red species l	because they	7 *		
•	Are a source of enjoyment and learnin	g for peopl	e now and in	the future.				
•	May help to show whether the environ	nment and e	cosystem are	healthy.				
•	May provide medicines and other help know what these uses are.	oful substan	ces for huma	ns someday,	, even if we c	lon't yet		
•	Have a right to exist and should not be	e endangere	d by man's a	ctions.				
Some they:	people are concerned about actions to	o protect tl	hreatened ar	ıd endangeı	red species b	ecause		
•	May restrict what people can do, such and hunting and fishing activities.	as limit rec	creation, fores	stry, land de	velopment ar	ıd use,		
•	May increase the cost to produce and plumber, which could increase some produce.			ood, housing	, drinking wa	iter, and		
•	May not be effective if the decline of t	the species	is due to caus	ses beyond h	numan contro	1.		
•	Use government funds and resources t	hat could b	e used for otl	ner importan	t issues.			
Q4	From strongly disagree to strongly a Check one box for each statement.	agree, how	do you feel a	about these	statements?			
		Strongly disagree	Somewhat disagree		Somewhat agree	Strongly agree		
	cting threatened and endangered es is important to me							
	cting jobs is more important than cting threatened and endangered	_		_		_		

species.....

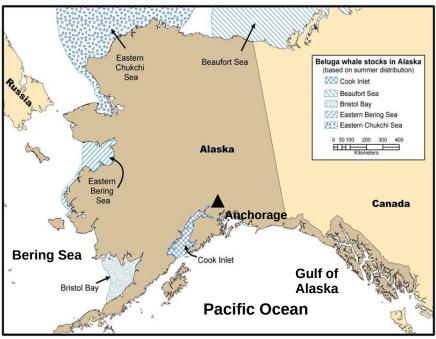
The beluga whale is one of 11 whale species found in U.S. waters that are listed as Endangered under the Endangered Species Act. The figure below shows these endangered whale species (pictures are to scale).

Endangered Whales in U.S. Waters



(Q 5	Have you personally observed whales in nature (outside of aquariums)? Check one box.
		☐ Yes ☐ No ☐ Don't know
		Some Beluga Whale Facts
•		dult beluga whales are white in appearance, can grow to an average of 15 feet long, weigh ore than 3,000 pounds, and live more than 30 years. Males are larger than females.
•	Th	ey are social animals that typically hunt, travel, and interact in groups.
•		luga whales are found in Arctic and subarctic regions of Russia, Greenland, and North nerica, usually in areas of the ocean that are covered by ice during part of the year.
•		ere are 29 distinct beluga whale populations in the world, including five populations in aska.
•		Alaska, beluga whales mostly eat fish, such as cod and salmon. An adult beluga whale by eat 50 pounds of food in one day.
•		me distinct beluga whale populations migrate, but other distinct populations live in one ea year round.
Q	6	Before today, had you ever seen, heard about, or read about beluga whales? Check one box.
		☐ 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 (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	Somewhat	Neither agree nor	Somewhat	Strongly
	disagree	disagree	disagree	agree	agree
Since some distinct populations of U.S. beluga whales are increasing or stable, I am not concerned about the ones that are decreasing					

Cook Inlet Beluga Whales

Of the five distinct beluga whale populations found in the U.S., the <u>Cook Inlet beluga whale</u> 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 <u>endangered</u> under the Endangered Species Act.

$\mathbf{Q8}$	Before today, had you ever seen, heard about, or read about Cook Inlet beluga whales?					
	Check one box.					
	☐ Yes					
	□ No					
	☐ 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 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, human-related 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

Q 9	After looking at the information in this handout, how concerned are you, if at all, a	about
	he Cook Inlet beluga whale? Please check one box.	

Not at all	A little	Somewhat	Very	Extremely
concerned	concerned	concerned	concerned	concerned
•	~	•	▼	▼
U		U		Ц

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 <u>25 percent risk (1 in 4 chance)</u> 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.

	Neither				
	Strongly disagree	Somewhat disagree	agree nor disagree	Somewhat agree	Strongly agree
A 25% risk of extinction in 100 years for Cook Inlet beluga whales makes me	П	П	П	П	П
concerned that they will actually go extinct.	_				

New Cook Inlet Beluga Whale Protection Actions

To help the population <u>recover</u>, 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 <u>higher prices for products you buy</u> and through <u>increases in your federal taxes</u>.
- 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.**

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Even if it costs us more money, we should do more so that the Cook Inlet beluga whale recovers					
Even if businesses and individuals are negatively affected by them, the most effective protection actions should be used to protect Cook Inlet beluga whales					

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 <u>without additional protection actions beyond those currently in place</u>. 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 <u>do more and cost more</u> 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.

	Alternative A Current program	Alternative B	Alternative C
Population status(endangered now)	Endangered	Threatened	Threatened
Risk of extinction by the year 2110(25% now)	25%	15%	10%
Added cost to your household each year for 10 years	\$0	\$40	\$50
	Alternative A	Alternative B	Alternative C
Which alternative do you prefer the most? Check one box>			
Which alternative do you prefer the least? Check one box>			

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 2110	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>			
Which alternative do you prefer the least? Check one box>			

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.

	Alternative A Current program	Alternative B	Alternative C
Population status (endangered now)	Endangered	Endangered	Threatened
Risk of extinction by the year 2110	25%	20%	2%
Added cost to your household each year for 10 years	\$0	\$30	\$80
	Alternative A	Alternative B	Alternative C
Which alternative do you prefer the most? Check one box>			
Which alternative do you prefer the least? Check one box>			

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 2110	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>			
Which alternative do you prefer the least? Check one box>			

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					
There is not enough information for me to make an informed choice between the alternatives					
The added costs I am willing to pay are just to protect Cook Inlet beluga whales, and not to protect other species					
I am concerned that the federal government will not effectively protect Cook Inlet beluga whales					
I feel I should not have to pay more federal taxes for any reason					
I don't think that scientists can make good predictions about what will happen in 50 or 100 years					
I don't feel qualified to choose between different levels of risks of extinction					
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					

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

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.

appropriate box.			NT 1.1		
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
We are approaching the limit of the number of people the earth can support					
Humans have the right to modify the natural environment to suit their needs					
When humans interfere with nature it often produces disastrous consequences					
Human ingenuity will insure that we do not make the earth unlivable					
Humans are severely abusing the environment					
The earth has plenty of natural resources if we just learn how to develop them					
Plants and animals have as much right as humans to exist					
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					
The so-called "ecological crisis" facing humankind has been greatly exaggerated					
The earth is like a spaceship with very limited room and resources					
Humans were meant to rule over the rest of nature					
The balance of nature is very delicate and easily upset					
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					

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.		
	☐ Male ☐ Female			
Q20	In what year were you born?	19		
Q21	How many people do you live with in each of the following age groups? If none for a category please write "0".			
	Under 18 18 to 35	36 to 60 Over 60		
Q22	Which of the following best describes ye answer.	our employment status? Check the box of your		
	☐ Employed part-time	Retired Currently unemployed Other (please specify)		
Q23	Have you ever been a member of, or conconservation organization? Check the b	ntributed time or money to, an environmental or ox of the best answer.		
	☐ Yes ☐ No ☐ Don't know			
Q24	How many hunting trips and sport or n taken in the last 3 years? For each type	on-commercial fishing trips, if any, have you of trip, check the best answer.		
	Hunting trips: ☐ None Fish ☐ 1 to 3 ☐ 4 or more	ing trips: None 1 to 3 4 or more		

Q25	What is the highest grade or level of s	chool you have completed? Check the best answer.
	☐ Some high school or less ☐ High school diploma or equivalent ☐ Some college ☐ Two year college degree (AA, AS) of ☐ Four year college graduate (BA, BS) ☐ Some graduate work but did not recollege Graduate degree (MA, MS, MBA, Paraduate degree (MA, MS, MBA, MBA, MBA, MBA, MBA, MBA, MBA, MBA) eive a graduate degree
Q26	Do you own or rent your residence?	Check your answer.
	☐ Own ☐ Rent	
Q27	Are you Hispanic or Latino? Check the	he box of the best answer.
~	☐ Yes	
	□ No	
Q28	Which of the following best describes	you? Check one or more.
	☐ Asian	☐ Native Hawaiian or Other Pacific Islander
	American Indian or Alaska Native	☐ White
	☐ Black or African American	
Q29	What was your household income (be	fore taxes) in 2011? Check the box of the best answer.
	☐ Less than \$10,000	□ \$60,000 to \$79,999
	□ \$10,000 to \$19,999	□ \$80,000 to \$99,999
	\$20,000 to \$29,999 \$30,000 to \$39,999	□ \$100,000 to \$124,999 □ \$125,000 to \$149,999
	□ \$40,000 to \$49,999	□ \$150,000 to \$149,999 □ \$150,000 to \$200,000
	\$50,000 to \$59,999	□ \$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.

YOUR PARTICIPATION IS GREATLY APPRECIATED!