UCONN

Introduction

Water Quality Valuation Study

This survey concerns the value of U.S. national policy that affects your local water quality in rivers and streams. We ask you to complete this survey, that most people complete in less than 30 minutes, in order to help state and national leaders make better decisions that affect you, your community, and the nation.

Because our funding only allows us to survey a modest number of people, as a respondent you would be representing not only yourself but also other people with views and values similar to yours. For this study to provide trustworthy results, it is critical that we receive completed responses from as many people as possible. You were selected by a random process intended to get a broad spectrum of input from people in your community and people in about 19 other communities across the northeastern U.S.

The survey will not only ask questions of a type that might already be familiar to you, but it will also ask you to evaluate some choices that may be challenging, asking you to sort through your values. When we analyze the choice questions from everyone, we are seeking to understand how valuable potential changes in the quality of water in rivers and streams are to you, your household, your community, and the nation.

Your thoughtful responses will greatly help federal and state administrators of the U.S. Clean Water Act understand the value to U.S. residents of decisions affecting water quality near you and across the country. Of course, your participation is completely voluntary and you may chose not to answer any of the questions or stop the survey at any time. However, we encourage you to complete it as results from this survey can affect communities across the U.S., particularly in the northeastern states.





Section I: General Background Questions

Q1.1. How would you describe your proximity of your residence to a river/stream?

O I have a waterfront property

O I live close to a river/stream (Please specify how close in miles, e.g. 1.2 miles)

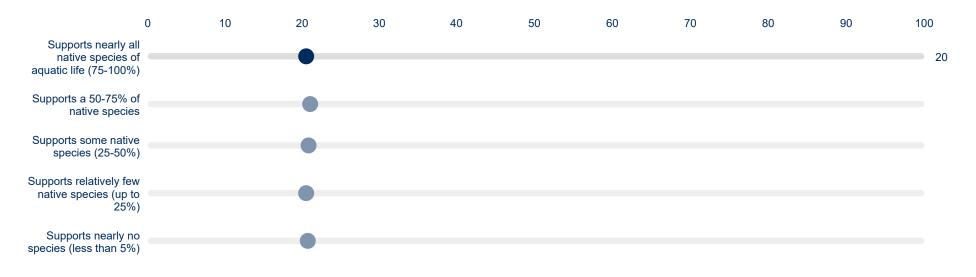
O I can see small streams from my home; I see modest to larger size streams or rivers from my home or on drives I commonly make every week.

- O I do not live close to any river/stream
- Q1.2. On average, how often do you visit a river/stream?
- O Daily
- O Not daily but more than once a week
- O Weekly
- O Not weekly but more than once a month
- O Monthly
- O Less than once a month
- O Never

Q1.3. What share of rivers and streams with which you are familiar do you feel can support following human use activities (total share must sum to 100)



Q1.4. What share of rivers and streams with which you are familiar do you feel match the following description of ecological integrity (health) (total share must sum to 100)



Q1.5. How do you rate the quality of water in rivers and streams in your county in following dimensions?

			١	Veither good no	r		
	Extremely good	Good	Somewhat good	bad	Somewhat bad	Bad	Extremely bad
1. Water Clarity	0	0	0	0	0	0	0
2. Amount of visible trash	0	0	0	0	0	0	0
3. Amount or levels of chemical and pharmaceutical pollutants	0	0	0	0	0	0	0
4. Amount of biologically active pollutants (eg. fecal coliforms, hormones, etc)	0	0	0	Ο	0	0	0
5. Amount or levels of excessive nutrients like Nitrogen and Phosphorus (from fertilizers and animal or human waste) (above natural levels)	Ο	Ο	0	0	0	Ο	0

Q1.6.

In the past year, did you participate in any recreational activity at or near any river or a stream? (please check all that apply)

No, I did not participate in any recreational activity in or near a river or a stream

- Yes, Hiking/Walking
- Yes, Swimming/Wading
- Yes, Wildlife viewing

- Yes, Boating/Canoeing/Kayaking
- Yes, Picnicking
- Yes, Fishing
- Yes, Other

Q1.7. How substantial (high) do you think is the contribution of each of the following pollutant sources in polluting water in rivers and streams in your county (Please answer separately for producers or manufacturers of products or consumers or beneficiaries of these products?

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		Contribution of the producers of consumer products itself				Contribution of regular people who may be beneficiaries of these consumer products				
	Very High	High	Average	Low	Very Low	Very High	High	Average	Low	Very Low
a. Agriculture and forestry (fertilizers and pesticides, nutrients, animal manure, sediments, forest products)	0	0	0	0	0	0	0	0	0	0
b. Motor vehicles on roads, highways, and parking lots (oil, grease, and toxic chemicals)	0	0	0	0	0	0	Ο	0	0	0
c. Industrial or commercial waste (discharges from factories, plants, and offices)	0	0	0	0	0	0	0	0	0	0
d. Household waste (Pet waste, sewerage, litter, soaps and detergents, lawn fertilizers and pesticides, etc.)	0	0	0	0	0	0	0	0	0	0
e. Other(sediments from construction sites, spillage from landfill sites, etc)	0	0	0	0	Ο	0	0	0	0	0
	Very High	High	Average	Low	Very Low	Very High	High	Average	Low	Very Low

Q1.8.

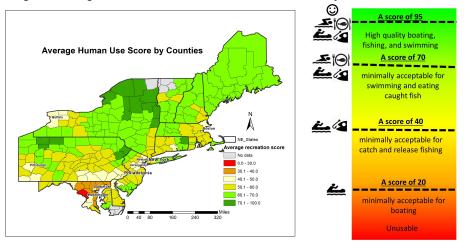
In your opinion, how significant is the relative contribution of you and your household, through goods and services purchased or consumed and daily activities, in adding pollutants to rivers and streams?



Q1.9. Water Quality scale based on Human Use Score

There are minimally acceptable levels of certain measures at which water quality experts have determined a stream, a river or a lake is suitable for boating, fishing,

wading, swimming, etc. As the score increases, the waterbody is more suitable for different activities.



What is your best estimate, even as a non-expert), of the average Human Use Score for rivers and streams throughout your community or county?

- 0 0.0 30.0
- O 30.1 40.0
- **O** 40.1 50.0
- **O** 50.1 60.0
- 0 60.1 70.0
- **O** 70.1 100.0
- O Don't know

Q1.10. How does the average human use score of your county compare with your expectation before seeing the map?

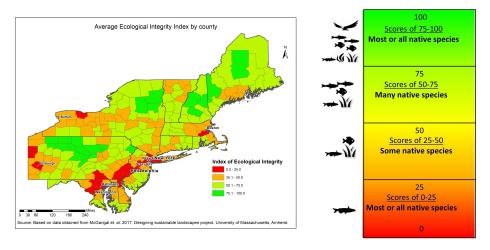
- O Lower than I expected
- O About the same as I expected
- O Higher than you expected

Q1.11.

Water Quality scale based on Ecological Integrity Score

Scientists can rate the quality of wildlife in rivers and streams by combining measures related to the variety, abundance, and condition of animal and plant species that

live in the water.



What is your best estimate, even as a non-expert, of the average <u>ecological integrity score</u> for rivers and streams throughout your community or county?

O 0.0 - 25.0

- **O** 25.1 50.0
- **O** 50.1 75.0
- **O** 75.1 100.0

Q1.12.

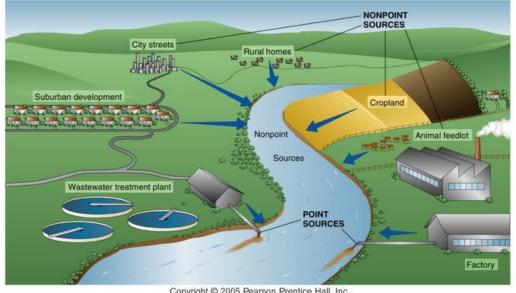
How does the average ecological integrity score of your county compare with your expectation before seeing the map?

O Lower than I expected

- O About the same as I expected
- O Higher than you expected

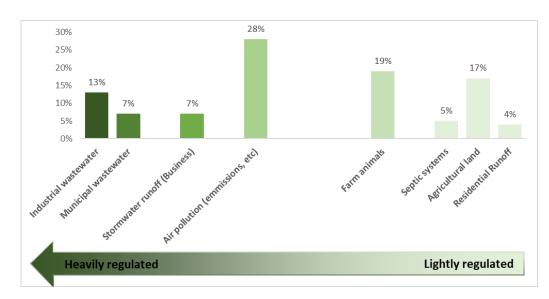
SECTION II: CHOICE QUESTIONS (Instructions)

Please take a look at the illustration below, depicting sources of the water pollutants. This illustration will help you think about different sources of pollutants of water in rivers and streams. Non-point sources refer to pollutants washed into rivers and streams through rainwater runoff.



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An Example: Sources of water pollutants by share of pollution contribution and extent of regulation. The shares are based on a study conducted in a major waterway in North-Atlantic region of the United States. (Taller bars indicate greater contribution to adding Nitrogen to rivers and streams).



Q2.1. What aspect of the chart above do you find most surprising? Least surprising?

Most surprising	
Least surprising	

Q2.2.

In your opinion, how significant is the relative contribution of you and your household, through goods and services purchased or consumed and daily activities, in impacting the quality of water in rivers and streams?

Not significant							Highly significant				
	0	10	20	30	40	50	60	70	80	90	100
You or your household's contribution to wate pollutior	r 🔵										

SECTION III: CHOICE QUESTIONS (experiment)

Deciding Future Actions - Next Questions, tough choices

Imagine that you were given the opportunity to vote on water pollution reduction or water quality improvement programs. Our next questions present choices (votes) for you to make. Local, state and federal policy makers, under existing legal guidelines, will use your votes from this survey and the votes from others as input to choose the best possible program to improve the quality of water in rivers and streams.

It is important that you carefully consider how you might actually vote if the choice was in a binding referendum or ballot measure. Your votes here will be taken as input to help federal and state decision makers to better understand the preferences and values of people like you. If implemented, these programs would cost your household different amounts of money in the form of an increase in your household's taxes.

Please assume that any taxes would be dedicated to only be used for the changes or outcomes described in a particular choice set. This dedication would be accomplished, for example, through a taxing approach integrated in the State Constitution of each collaborating state. Such a system would be designed so that these dedicated taxes could not be re-directed without direct statewide voter approval or state legislative approval.

Other households are also being surveyed, so please only think of the costs to your own household when deciding the program that you would prefer. Please note that these tax increases to household will relate to the share of costs to be paid by residential households. Other polluting entities (such as businesses and industry) are paying other taxes, regulatory costs or fines under existing laws. That is, the costs shown would be your household's share after others pay

a share related to their circumstances.

<u>When answering the choice questions below, please think of a collection of a total of 100 miles of rivers and streams within your county.</u> Please note: this 100 miles of rivers and streams can come from multiple locations across your county. Thus, the choice questions below ask you to consider new programs or No Action options that affect the water quality in locations scattered around your county.

For the choice questions that follow, please assume that new taxes and fees would be raised through federal taxes you would have to pay, with federal money passed to your state for water quality programs.

Q3.1. Suppose only three program options (No Action, Program A, Program B) are available and their expected outcomes for rivers and streams in your county in <u>10 years</u> are listed here. If you were voting now, which option would you vote for? (*Mark one box at the bottom to indicate which option you would prefer.*)

Waterways Characteristics	↓ _{No Action} ↓	$\Psi_{\text{Program A}}\Psi$	↓ Program B ↓
Distribution of river and stream miles rated by the Human Use Score Scoring system for your reference Scoring system for your reference			

https://uconn.co1.qualtrics.com/WRQualtricsControlPanel/Ajax.php?action=GetSurveyPrintPreview

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Please v	vote for your p	referred prog	gram below	Λ _{No Action}	↑ Program A ↑	↑ Program B ↑
Your cost Your household's annual contribution for the next 10 years (other households pay in relation to their circumstances; corporations pay through compliance costs and fines or other taxes)				\$000/year	\$450/year to achieve these program outcomes	\$350/year to achieve these program outcomes
0-25 None or few native species	Some native species	50-75 Many native species	75-100 Most or all native species 75 100			
Sco	oring system	for your ref	aranca		1	1

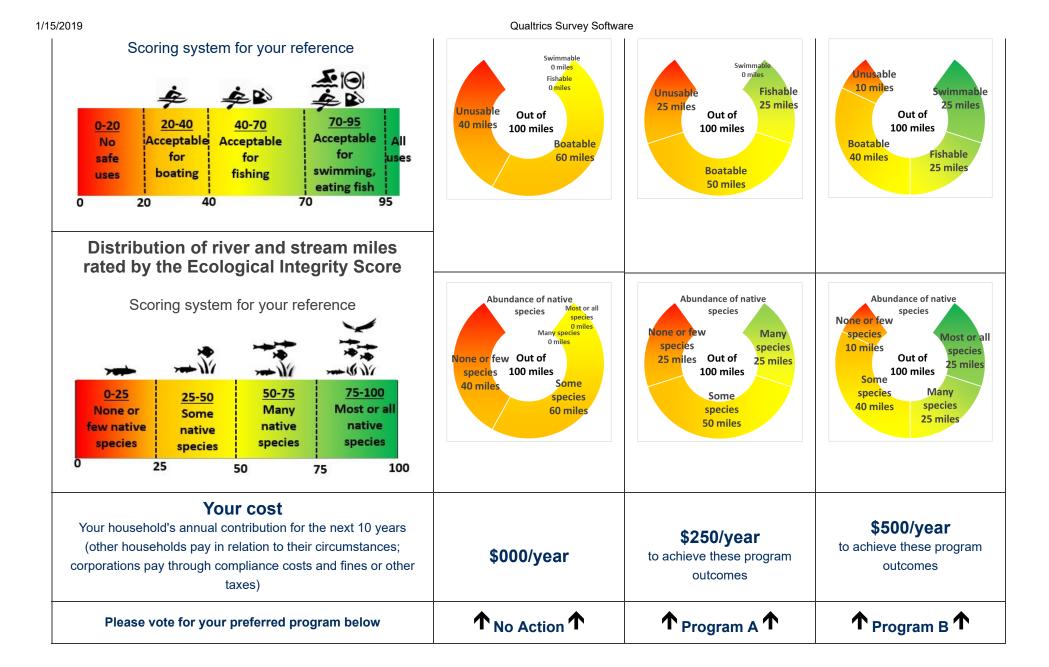
O No Action

O Program A

O Program B

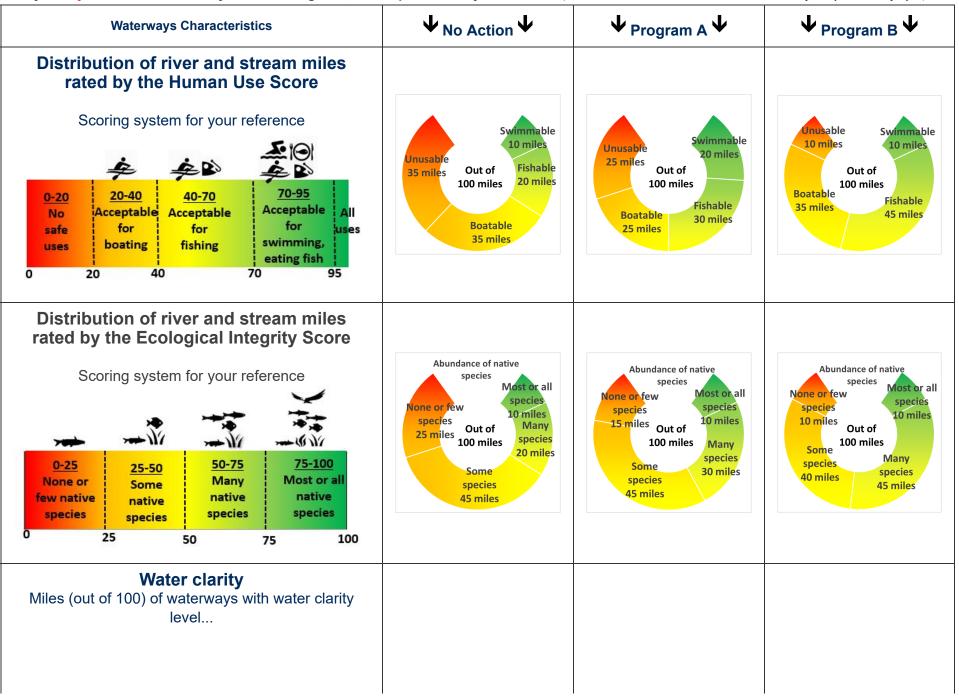
Q3.2. Suppose only three program options (No Action, Program A, Program B) are available and their expected outcomes for rivers and streams in your county in <u>10 years</u> are listed here. If you were voting now, which option would you vote for? (*Mark one box at the bottom to indicate which option you would prefer.*)

Waterways Characteristics	$\Psi_{ m No\ Action} \Psi$	$\Psi_{ m Program A} \Psi$	↓ Program B ↓
Distribution of river and stream miles rated by the Human Use Score			



- O No Action
- O Program A
- O Program B

Q3.3. Suppose only three program options (No Action, Program A, Program B) are available and their expected outcomes for rivers and streams in your county in <u>10 years</u> are listed here. If you were voting now, which option would you vote for? (*Mark one box at the bottom to indicate which option you would prefer.*)



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	25 miles Very Unclear 100 miles 25 miles 25 miles 25 miles Clear	20 miles Very Unclear 20 miles Unclear 30 miles Unclear 30 miles Clear	20 miles Very Unclear 30 miles 30 miles 30 miles Unclear 20 miles 20 miles Clear
Land cover next to rivers and streams Miles of river bank or lake shores (out of 100 miles) that consist of	Residential/ Commercial use 40 miles 40 miles Forest area 30 miles 30 miles	Residential/ Commercial use 30 miles Farmland or grassland 40 miles Forest area 30 miles	Residential/ Commercial use 30 miles Farmland or grassland 30 miles Forest area 40 miles
Your cost Your household's annual contribution for the next 10 years (other households pay in relation to their circumstances; corporations pay through compliance costs and fines or other taxes)	\$000/year	\$250/year to achieve these program outcomes	\$400/year to achieve these program outcomes
Please vote for your preferred program below	Λ _{No Action} Λ	↑ Program A ↑	↑ Program B ↑

O No Action

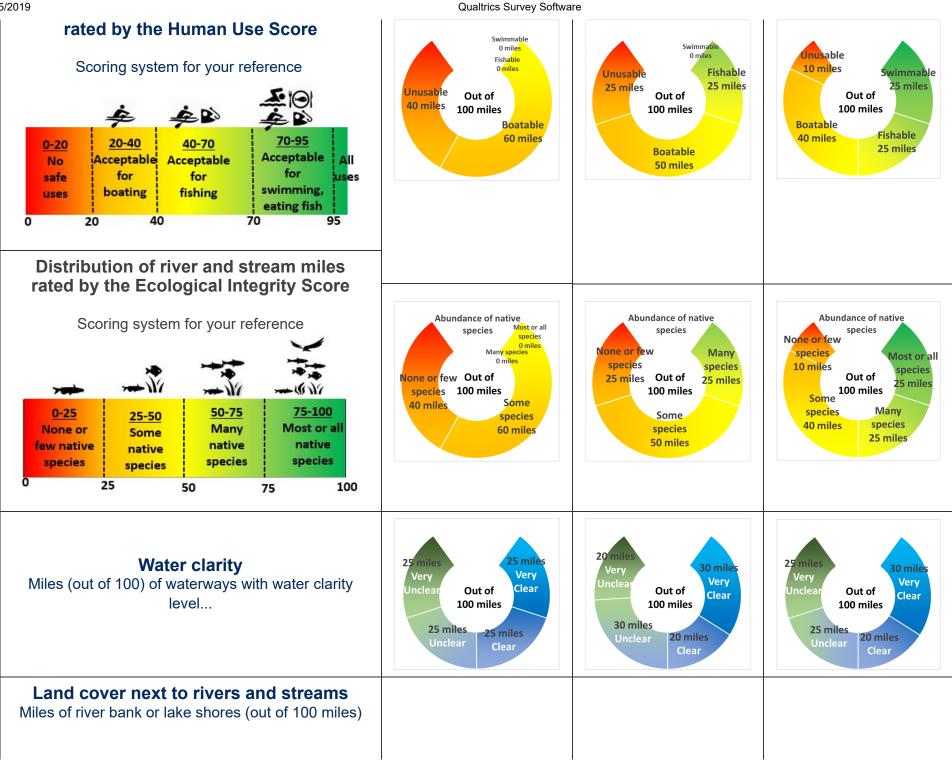
O Program A

O Program B

Q3.4. Suppose only three program options (No Action, Program A, Program B) are available and their expected outcomes for rivers and streams in your county in <u>10 years</u> are listed here. If you were voting now, which option would you vote for? (*Mark one box at the bottom to indicate which option you would prefer.*)

Waterways Characteristics	↓ _{No Action} ↓	$\Psi_{\text{Program A}}\Psi$	$\Psi_{\text{Program B}}\Psi$
Distribution of river and stream miles			





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that consist of	Residential/ Commercial use 30 miles Forest area 30 miles	Residential/ Commercial use 30 miles Parmland or grassland 30 miles Prorest area 40 miles	Residential/ Commercial use 40 miles Farmland or grassland 30 miles Forest area 30 miles
Your cost Your household's annual contribution for the next 10 years (other households pay in relation to their circumstances; corporations pay through compliance costs and fines or other taxes)	\$000/year	\$250/year to achieve these program outcomes	\$500/year to achieve these program outcomes
Please vote for your preferred program below	Λ _{No Action} Λ	↑ Program A ↑	↑ Program B ↑

O No Action

O Program A

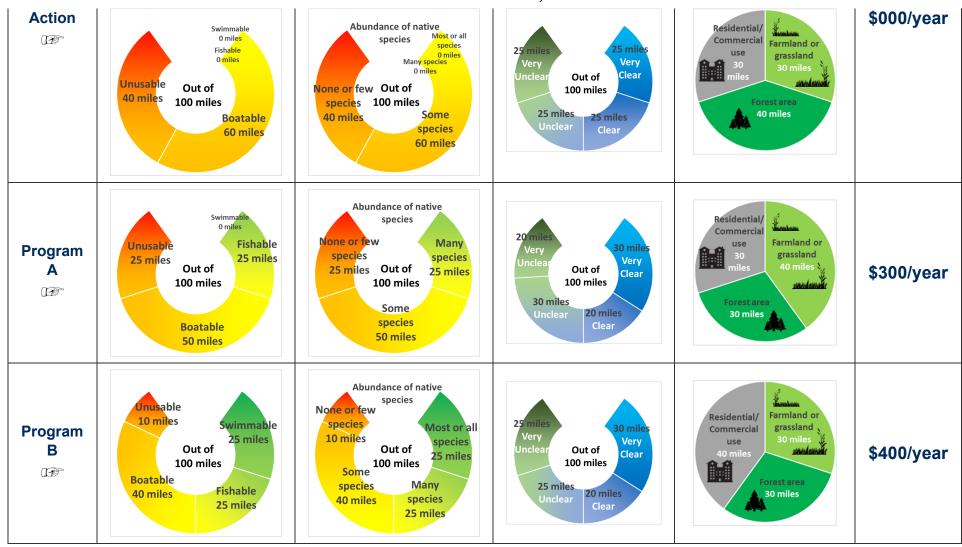
O Program B

Q3.5. Suppose only three program options (No Action, Program A, Program B) are available and their expected outcomes for rivers and streams in your county in <u>10 years</u> are listed here. If you were voting now, which option would you vote for? (*Mark one box at the bottom to indicate which option you would prefer.*)

	Distribution of river and stream miles rated by the Human Use Score Scoring system for your reference	Distribution of river and stream miles rated by the Ecological Integrity Score Score Scoring system for your reference	Water clarity Miles (out of 100) of waterways with water clarity level	Land cover next to rivers and streams Miles of river bank or lake shores (out of 100 miles) that consist of	Your cost Your household's annual contribution
Νο					

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O No Action

O Program A

O Program B

SECTION IV: Attitudes Questions: Thinking about how you just voted...

Q4.1. Please rate how much you agree or disagree with the following statements on the conservation of natural waterways such as river, streams and lakes. (Please click on one answer for each statement.)

	Strongly Disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I/we think conservation is important	0	0	0	0	0	0	0
Federal government should pay for conservation	0	0	Ο	Ο	0	0	0
Local governments should pay for conservation	0	0	0	0	0	Ο	0
I/we think the waterways should be cleaned and/or prevented from degrading, but we are not willing to pay for it	Ο	Ο	0	0	Ο	Ο	0
Polluting entities/companies should pay for conservation	0	0	0	0	0	Ο	0
Only those who use the water bodies regularly should pay for their conservation	0	0	0	0	0	0	0
My use of water bodies has been affected because of degradation of water bodies	0	0	0	0	0	0	0
It is important for our generation to protect the environment and water bodies for future generations	Ο	Ο	0	0	0	Ο	0
Clean water bodies will have significant positive impact on the quality of life of members of this community	Ο	Ο	0	0	Ο	Ο	0
I think that conservation of rivers and streams in this area mostly benefits communities downstream	Ο	Ο	0	0	0	Ο	0
I am willing to help communities upstream from where I live to do better to protect water quality in rivers and streams	Ο	Ο	0	0	Ο	0	0
It is important to me personally that rivers and streams have water quality that supports natural ecosystems that are typical of the area where I live	Ο	Ο	Ο	0	Ο	0	Ο
It is important to me personally that the water quality in rivers and streams flowing from my community not create a burden on communities downstream	Ο	Ο	Ο	0	Ο	Ο	0

Q4.2.

WTP follow-up questions (Possible reasons for unwillingness to pay)

Please rate how much you agree or disagree with the following statements. (Please circle one number for each statement.)

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	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I voted as if my household would actually face the costs shown in the questions	Ο	Ο	0	Ο	0	Ο	0
I do not trust the government to make proper use of tax money.	0	Ο	0	Ο	0	Ο	0
I voted as if the programs would actually achieve the results shown by 10 years.	Ο	Ο	Ο	0	Ο	Ο	0
I would vote differently if the programs took longer to achieve the results shown.	Ο	Ο	Ο	0	Ο	Ο	0
I am against any regulations and more government spending.	Ο	0	0	0	0	0	0
My household should not have to pay any amount to improve water quality in rivers, streams, and lakes.	Ο	Ο	0	0	0	Ο	0
It is important to improve waters in this area, no matter how high the costs.	Ο	0	Ο	0	0	0	0
I think the attribute/choice levels presented in this survey were within reasonable bounds	Ο	Ο	Ο	0	0	Ο	Ο
I believe that expenditure in improvement of water resources is not a priority for my community	Ο	Ο	Ο	0	Ο	Ο	0
Me and my family are not very interested in this matter	0	0	Ο	0	Ο	0	0
The change is too small to be of importance	Ο	Ο	0	0	0	0	0
Polluting companies should be made to pay for improvement in rivers, not public.	Ο	Ο	0	0	Ο	Ο	0
I answered the questions without giving much thought because of time constraint	Ο	Ο	Ο	Ο	Ο	Ο	0

SECTION V: Questions about you and your household

Q5.1. What is your gender?

O Male

O Female

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O Other	Other																			
Q5.2. What is your age (in years)?																				
Age (in years)	0	5	10	15	20	25	30	35	40	45	50 55	60	65	70	75	80	85	90	95	100
Q5.3. What is the siz	e of yc	our hou	seholo	d?																
	0	1		2	3	4		5	6	7	8	9	10		11	12	13		14	15
Household size	,																			
Q5.4. How many chil	dren u	nder a	ge 18	are livi	ing in y	our hou	ısehol	d?												
Q5.4. How many chil Number of children under age 18	0	nder ag		are livi 2	ing in y 3	our hou 4		d? 5	6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your ei	0	1		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your ei O Employed full time	0 mployr	1		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your ei O Employed full time O Employed part time	0 mployr	1 ment st		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your ei O Employed full time	0 mployr	1 ment st		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your en Employed full time Employed part time Unemployed looking	0 mployr	1 ment st		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your en Employed full time Employed part time Unemployed looking Unemployed not loo	0 mployr	1 ment st		2					6	7	8	9	10		11	12	13		14	15
Number of children under age 18 Q5.5. What is your en Employed full time Employed part time Unemployed looking Unemployed not loo Retired	0 mployr	1 ment st		2					6	7	8	9	10		11	12	13		14	15

Q5.6.

What is your occupation (for full-time or part-time employed individuals) ?

O 11- Management

- O 13- Business and Financial Operations occupations
- O 15- Computer and Mathematical occupations
- O 17- Architecture and Engineering
- O 19- Life, Physical, and Social Science
- O 21- Community and Social Services
- O 23- Legal
- O 25- Education, Training, and Library
- O 27- Arts, Design, Entertainment, Sports, and Media
- O 29- Healthcare Practitioners and Technical
- O 31- Healthcare Support
- O 33- Protective Service
- O 35- Food Preparation and Serving Related
- O 37- Building and Grounds Cleaning and Maintenance
- O 39- Personal Care and Service
- O 41- Sales and Related
- O 43- Office and Administrative Support
- O 45- Farming, Fishing, and Forestry
- O 47- Construction and Extraction
- O 49- Installation, Maintenance, and Repair
- O 51- Production
- O 53- Transportation and Material Moving
- O 55- Military Specific

Q5.7.

Have you or any member of your family ever worked in any of the following industries or jobs?

- Agriculture/Farming
- Fishing related
- Environmental protection or conservation
- Extraction/mining related
- Tourism
- None of these

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Q5.8.



Q5.10. What is the highest degree or level of schooling you have completed?

- O Elementary or high school, but no high school diploma or GED
- O High school diploma, GED, or other high school completion
- O Some college credit, no degree
- O Associate's Degree (for example: AA, AS)
- O Bachelor's Degree (for example: BA, BS)
- O Master's degree, professional degree, or doctorate degree (for example: MA, MSW, MD, DDS, JD, PhD, EdD)

Q5.11. Do you own a house?

O Yes

O No

Q5.12.

What do you think is the current market valuation of your home/property?

- O Less than 100,000 dollars
- **O** 100,000 200,000 dollars
- O 200,000 300,000 dollars
- **O** 300,000 400,000 dollars
- **O** 400,000 500,000 dollars
- O 500,000 -750,000 dollars
- O 750,000-1,000,000 dollars
- O More than 1,000,000 dollars

Q5.13. Approximately how much do you pay in local property taxes per year (including local and school taxes)?

- O Less than 1,000 dollars
- O 1,000 2,500 dollars
- O 2,500 5,000 dollars
- O 5,000 7,500 dollars
- O 7,500 10,000 dollars
- O more than 10,000 dollars

Q5.14. Are you currently living in your own house?

O Yes

- O No, living in a rental house/ apartment
- O No, other

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