



Apr 26th, 11:30 AM - 1:00 PM

## Tourist Preferences for Southern Resident Killer Whale Watching and Rule Changes in the Salish Sea

Abby Schamp

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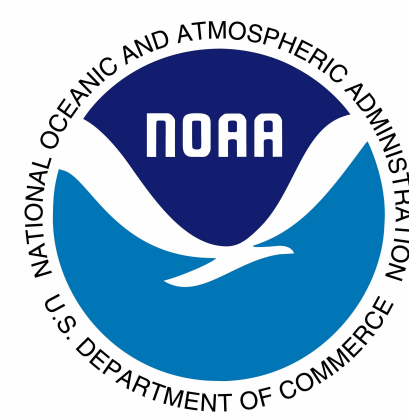


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# **Tourist Preferences for Whale Watching and Rule Changes in the Salish Sea**

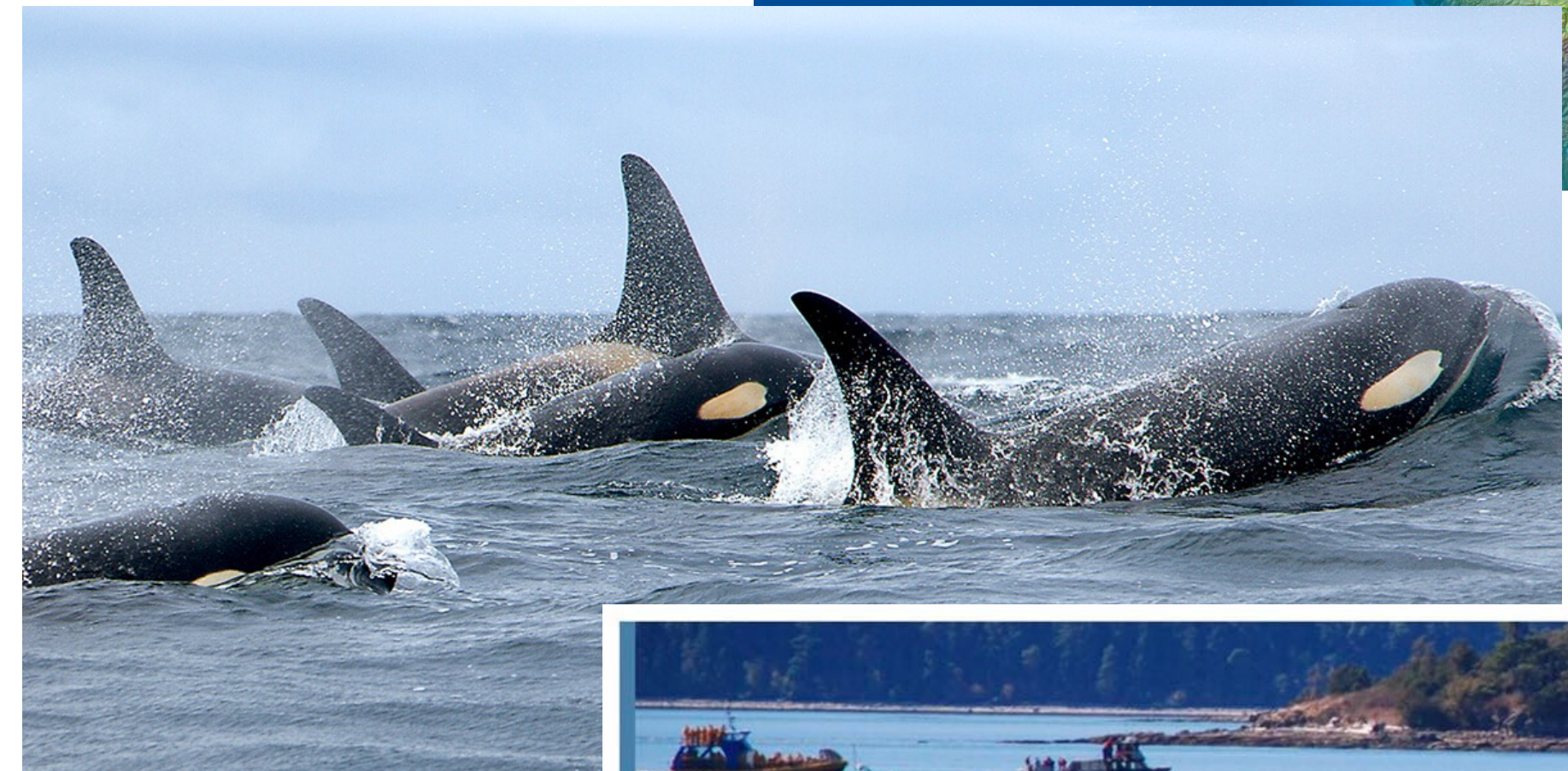
**Presented by Abby Schamp**

**With Hem Nalini Morzaria-Luna, Melissa Knox, and Christopher Anderson**



# Background

- Southern Resident Killer Whales (SRKW)
  - Listed endangered since 2005
- Large whale watching presence
- New rules on commercial whale watching
  - Limit on number of boats near SRKW
  - SRKW viewing limited by time, month
- Salish Sea also has other whales to view
- Whale watching important for local economies



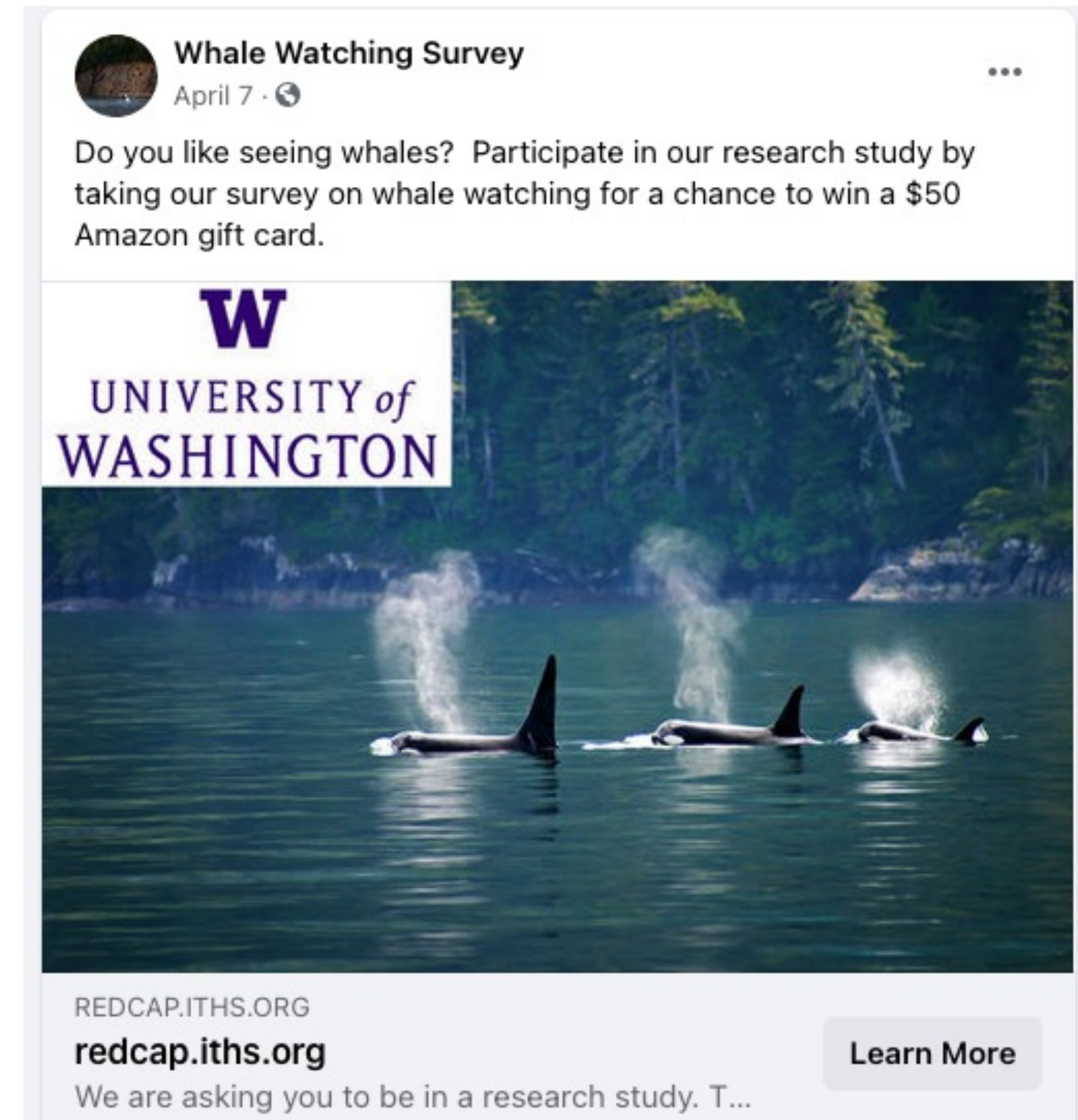


# Research Contributions from this Study

- Willingness-to-pay estimates for whale tours
- Latent Class model to group tourists
- Total willingness-to-pay estimates to measure total demand changes
- Information treatment to understand how potential tour participants respond to learning about a rule change
  
- Focus on multiple types of whales, though new rules only affect SRKW viewing

# Data

- Population of interest: people that would consider paying for whale watching in Salish Sea area (boat tours)
- Recruitment through Facebook ads
  - Targeted to people that like whales and tourism
- 264,000 person “reach”
- 5,981 link clicks, 1,530 completed surveys
- 1,442 responses in sample



The image shows a Facebook advertisement for a whale watching survey. At the top, the profile picture is a circular icon with a whale, and the name is "Whale Watching Survey" with a date of "April 7". The text of the ad asks if the user likes seeing whales and invites them to participate in a research study for a chance to win a \$50 Amazon gift card. Below the text is a large image of three orcas breaching the water in a forested bay. In the top left of the image area, there is a logo for the University of Washington. At the bottom of the ad, there is a URL "redcap.iths.org" and a "Learn More" button.

**Whale Watching Survey**  
April 7 · 🌐

Do you like seeing whales? Participate in our research study by taking our survey on whale watching for a chance to win a \$50 Amazon gift card.

**W**  
UNIVERSITY of  
WASHINGTON

REDCAP.ITHS.ORG  
**redcap.iths.org**  
We are asking you to be in a research study. T...

[Learn More](#)

# Discrete choice experiment

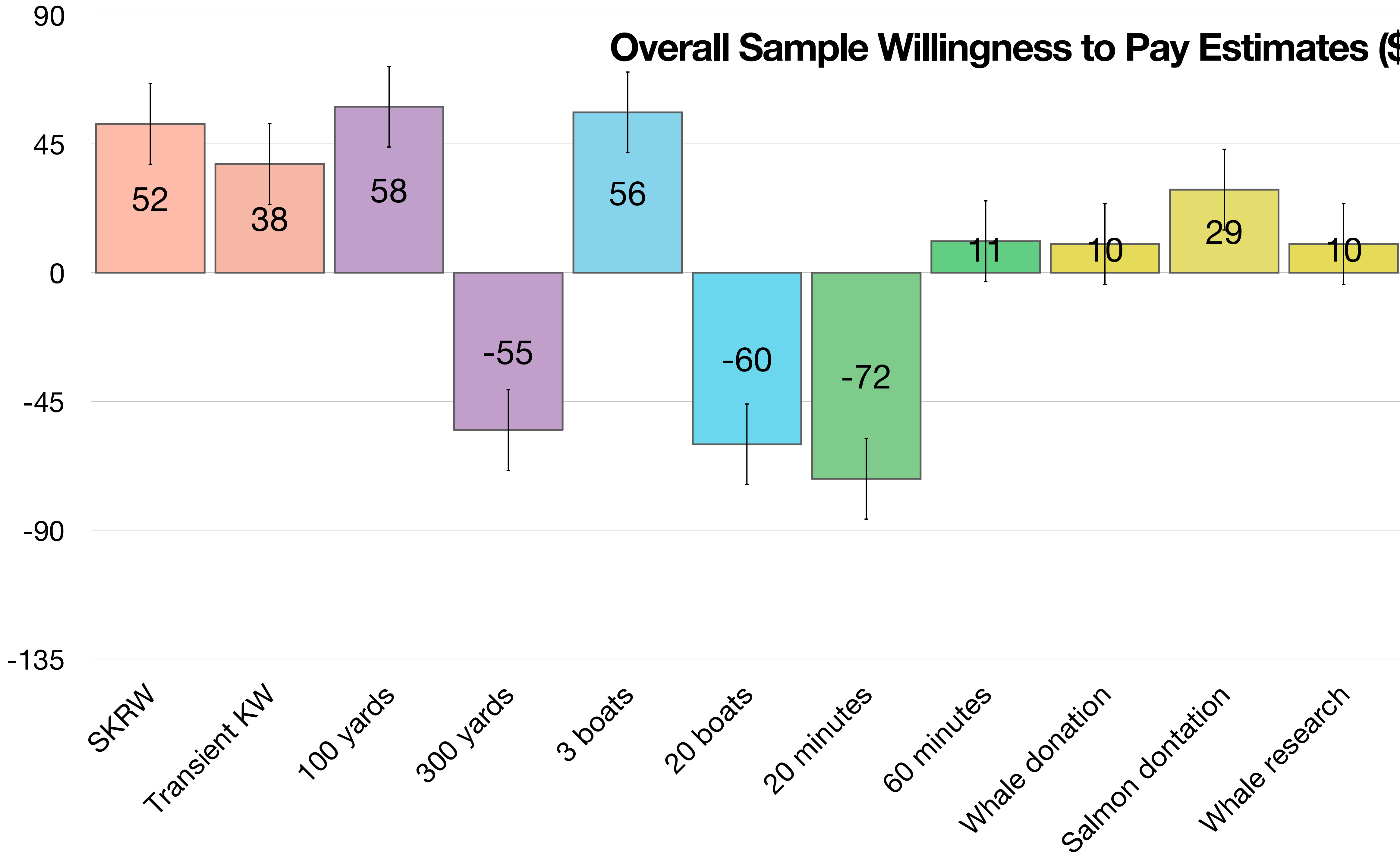
Observe the following three tour choices and choose which one you would prefer.

	Tour 1	Tour 2	Tour 3	
<b>Type of Whale Observed</b>	Southern Resident Killer Whales	Humpback Whales	Humpback Whales	<b>I would not choose to go on any tour</b>  (I will visit a park or a museum...  I will view marine life from shore...  I will do other recreation...)
<b>Distance from Whales</b>	100 yards	100 yards	100 yards	
<b>Time Spent with Whales</b>	40 minutes	40 minutes	20 minutes	
<b>Number of Boats Present with Whales</b>	10 boats	10 boats	10 boats	
<b>Company Environmental Commitment</b>	Company donates to salmon conservation	Company donates to whale conservation	Company participates in whale research	
<b>4 Hour Tour Cost</b>	\$90	\$165	\$90	

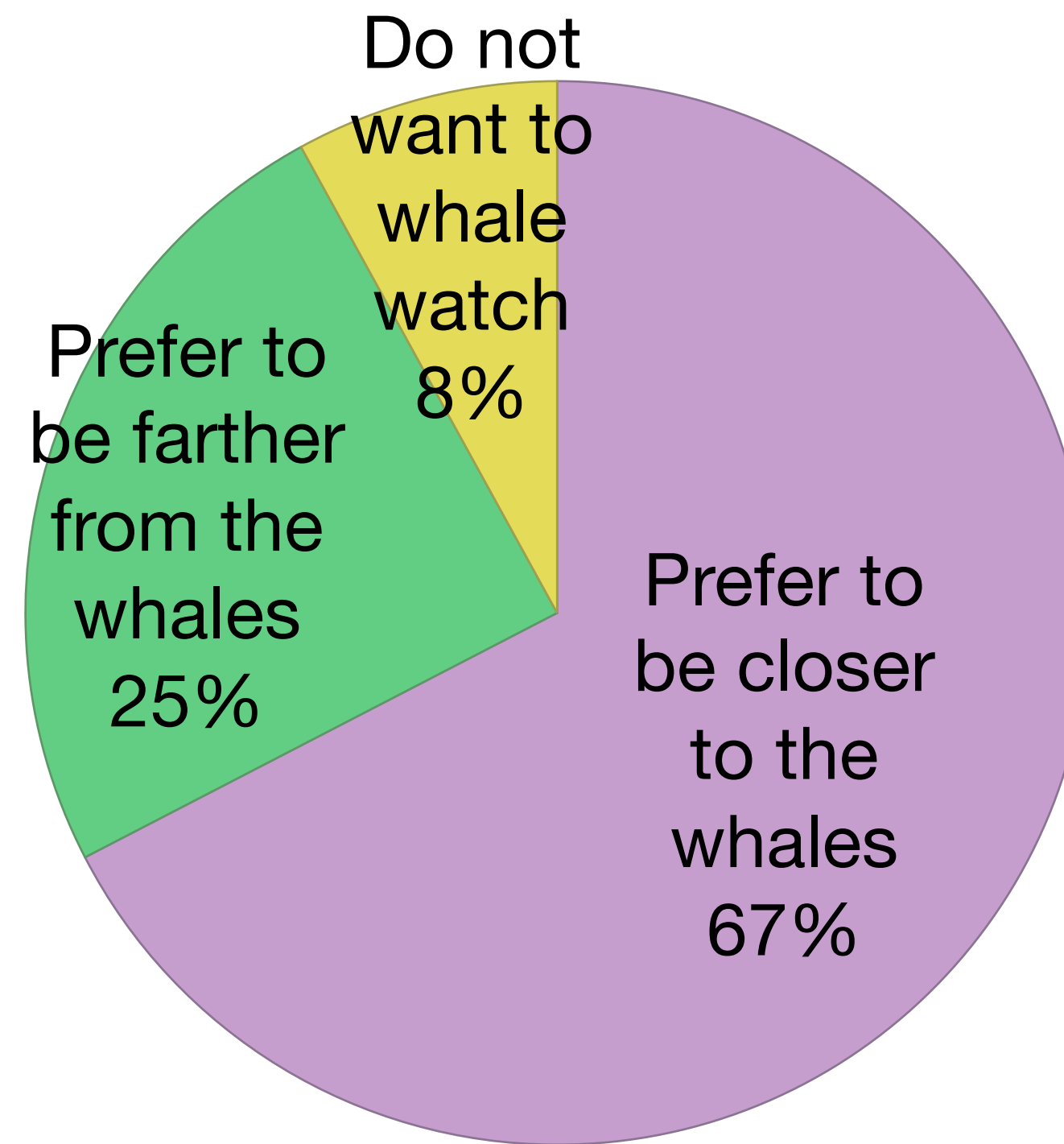
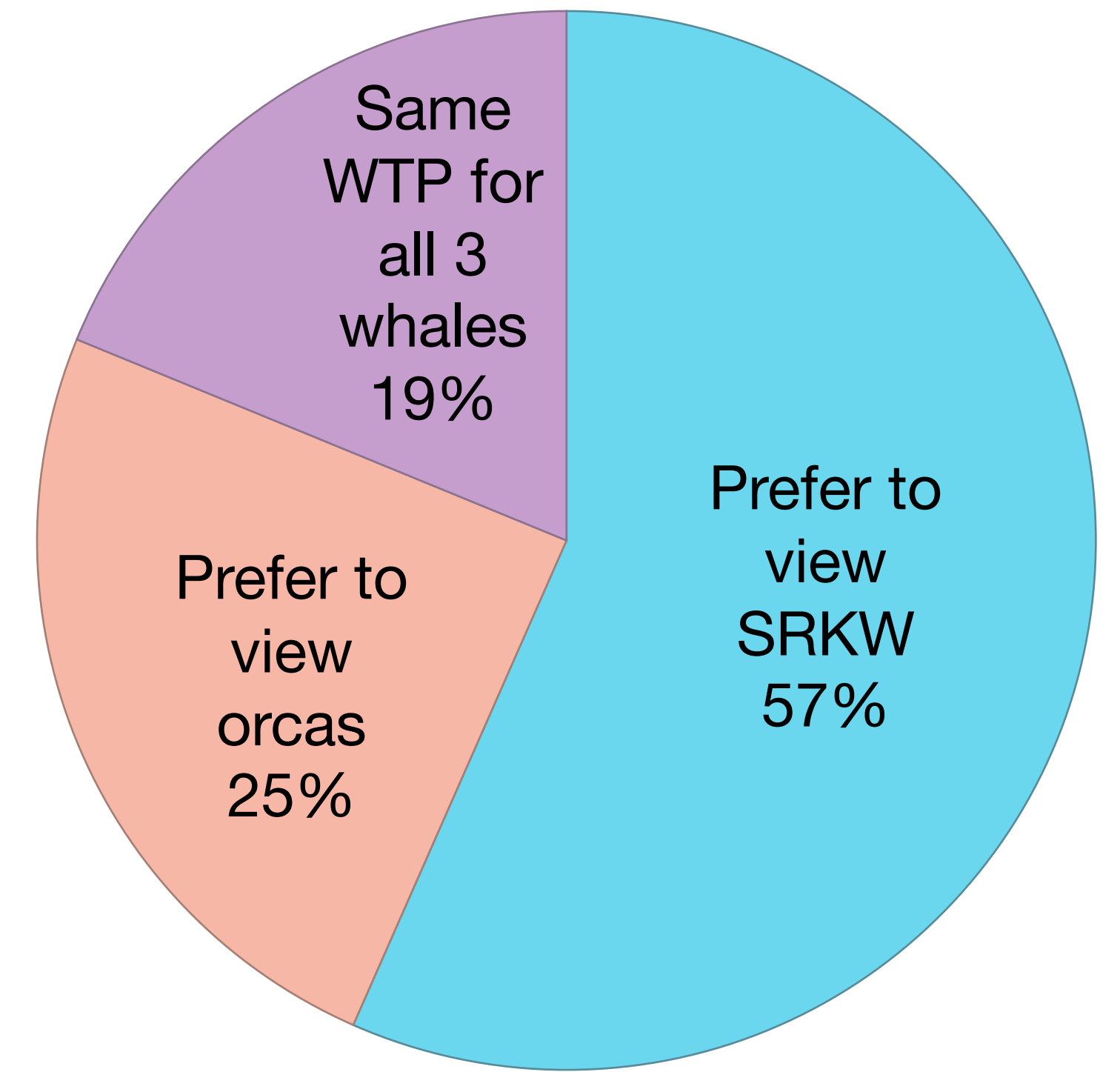
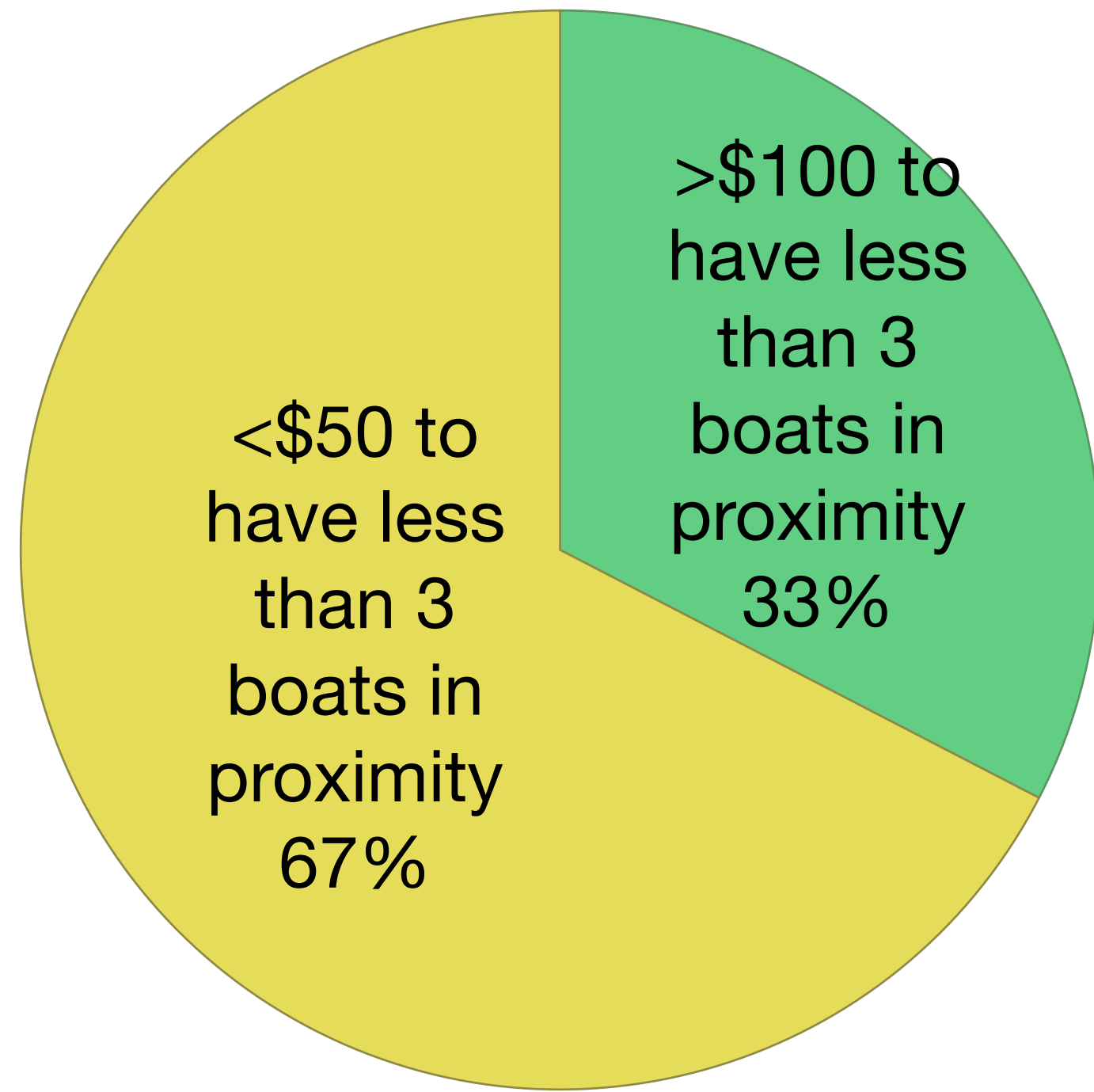
$$\begin{aligned}
 U_j = & ASC + \beta_{SRKW} * SRKW + \beta_{KW} \\
 & * KW + \beta_{dist} * distance \\
 & + \beta_{boat} * boat + \beta_{whale.don} * WD \\
 & + \beta_{salmon.don} * SD + \beta_{whale.research} \\
 & * WR + \beta_{cost} * cost
 \end{aligned}$$

$$WTP_i = - \frac{\beta_i}{\beta_{cost}}$$

# Overall Sample Willingness to Pay Estimates (\$)



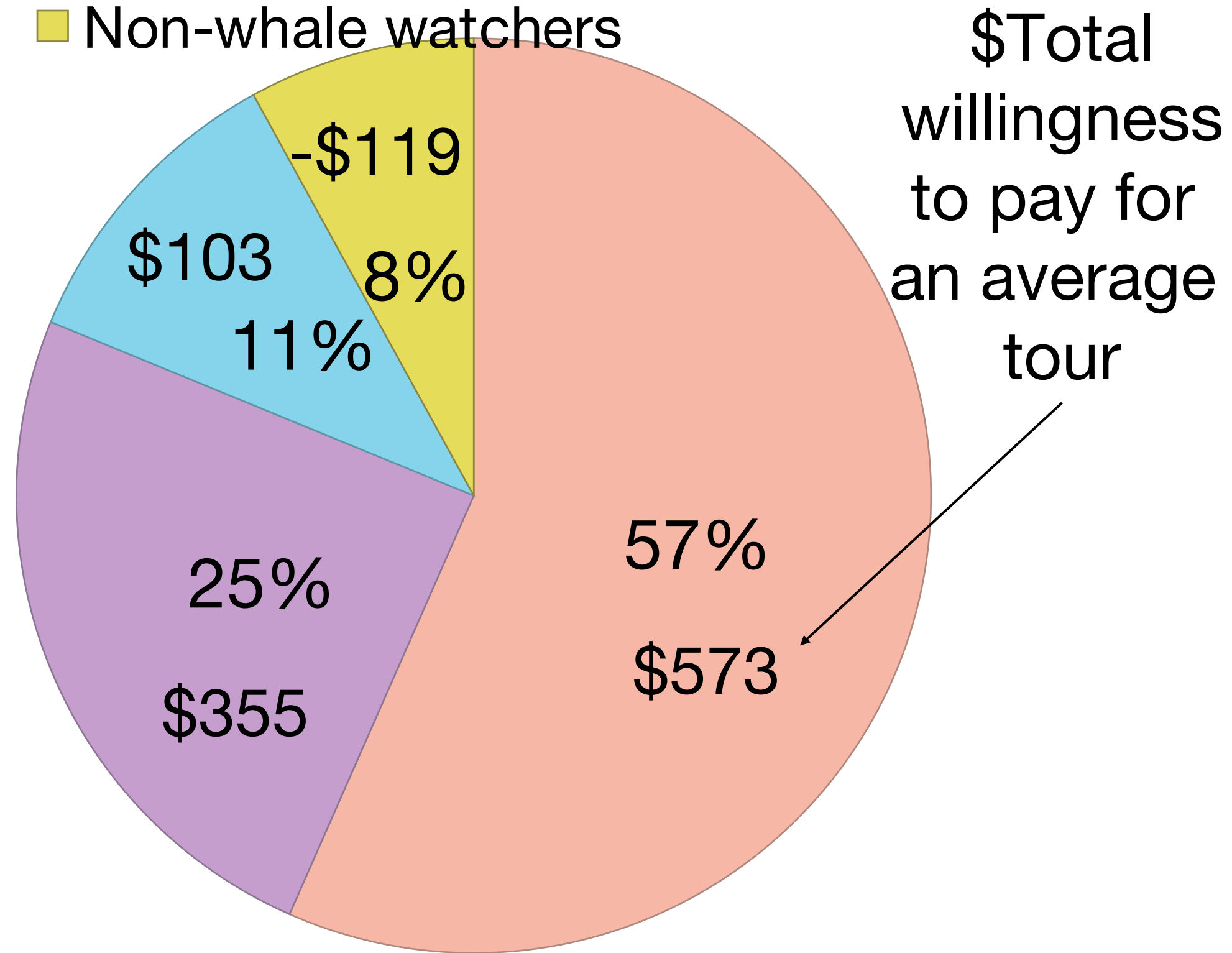




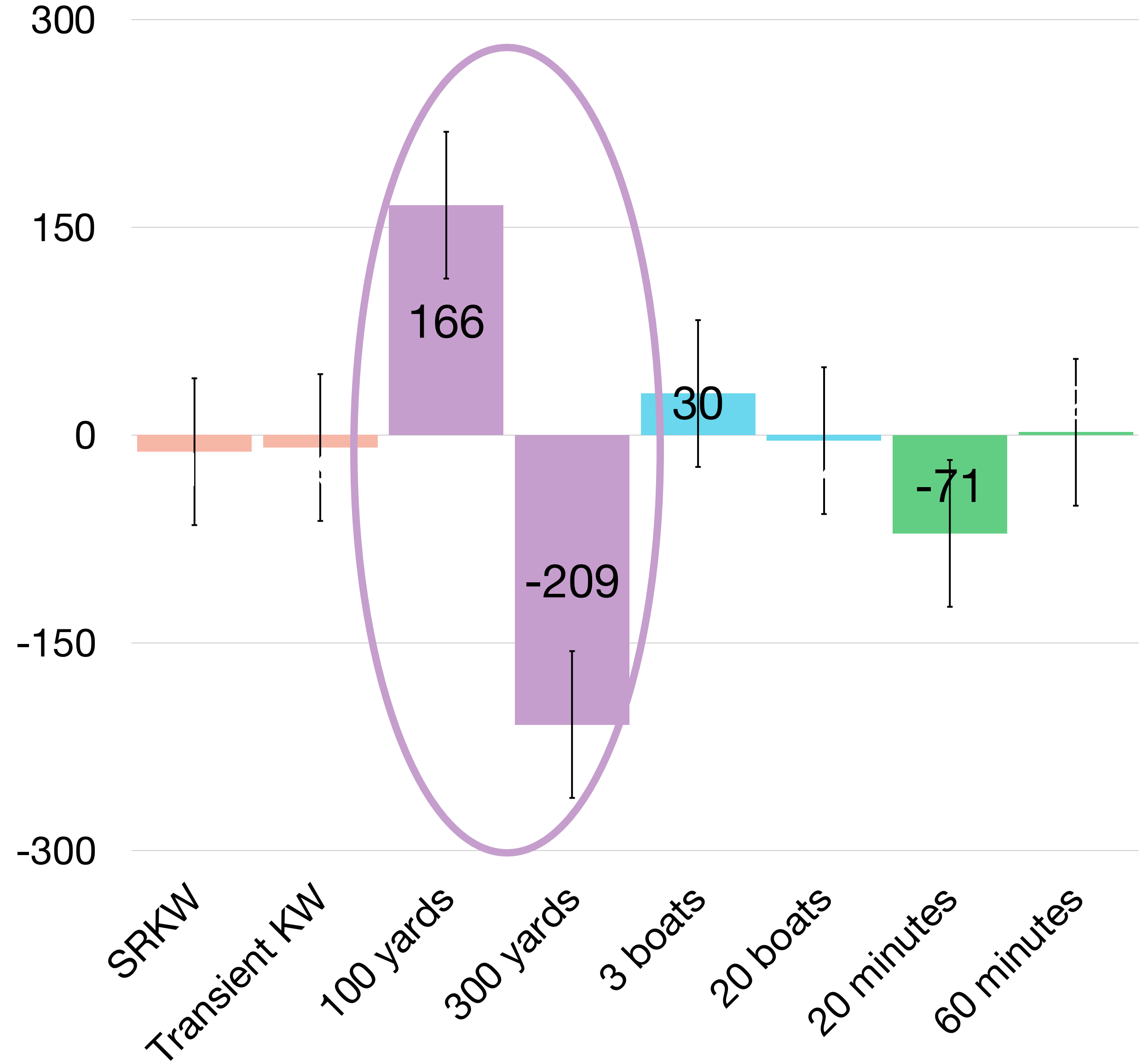
- Some respondents willing to pay over \$100 to have less boats
- 25% of respondents prefer to view whales from farther away



- Enthusiastic whale watchers
- Nature tourists
- Value-minded whale watchers
- Non-whale watchers



Value-minded whale watcher willingness to pay estimates



- Value-minded whale watchers determine demand for tours
- They are willing to pay the most for viewing distance

# Rule Changes

- SRKW viewing changes:
  - Farther viewing distance
  - Max 3 commercial boats
  - Limits on month/times to view
- Can affect tour attributes
  - Distance, whale viewed, distance
- Can also affect perceptions
  - Do tourists think whale watching is eco-friendly? Do tourists think they will see whales if they go whale watching?



## New Washington laws going into effect in 2021

Alex Halverson, Seattle P-I

Dec. 31, 2020










Pacific Northwest orca with Mount Baker in the background near the Strait of Georgia off the coast of Vancouver, British Columbia  
Sergio Amati/Getty Images

The new year brings changes, and more laws at both state and local levels. In [Washington](#), 2021 will bring new wages, a law concerning criminal background checks and new rules to protect orcas.



# Attribute Changes

	Whale	Distance	Number of Boats	Percent of sample going on tours	Change in demand for tours
<b>Transient</b>		200	10	87%	-
<b>Transient</b>		100	10	92%	6%
<b>Transient</b>		300	10	81%	-7%
<b>Transient</b>		200	3	92%	5%
<b>Transient</b>		200	20	87%	-1%
<b>SRKW</b>		300	10	81%	-7%
		100	10	92%	6%

# Information Treatment

- Half the respondents read treatment information, half read control information
- Treatment information
  - Recent WDFW rule change
  - SRKW info
- Control information
  - SRKW info

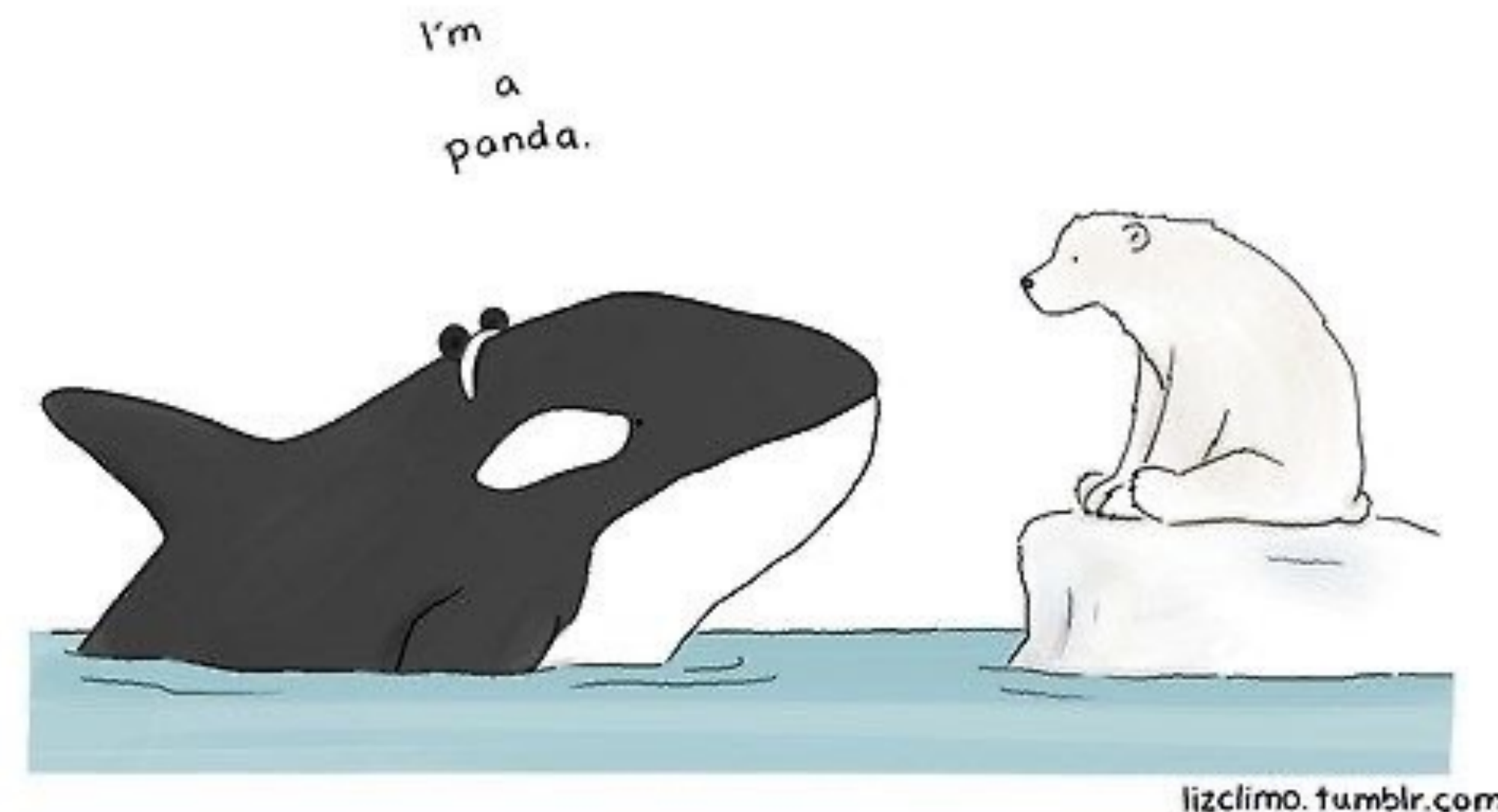


# Information Treatment Results

- Likelihood of whale watching in Washington in next 5 years =  $\beta_0 + \beta_{treatment} * treatment + \beta_{whale.watching.history} * whale.watching.history$
- Treatment information does not effect respondent stated likelihood to whale watch in Washington or in the world in the next 5 years
- Concern about the impact of commercial whale watching boats is correlated with a decrease in the likelihood of whale watching in Washington
  - Half a point on a 5-point Likert Scale of whale watching likelihood
- Respondents that think they are more likely to see whales if they go whale watching are more likely to go whale watching in Washington
  - 0.4 on a 5-point Likert Scale

# Summary

- Tourists love whales and are willing to pay
  - Many come to northwest for killer whales
- Other key attributes: distance, # of boats
- The group that affects overall demand for whale watching the most is willing to pay the most to be close to whales
  - Viewing distance is the most important attribute
- Learning about the rule change did not cause large changes in stated likelihood of future whale watching





# Acknowledgements

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