

## Survey of Rim-to-Rim Hikers at Grand Canyon National Park (GRCA)

### Dear Grand Canyon National Park Visitor:

We are conducting this survey to learn more about Rim-to-Rim hikers at Grand Canyon National Parks to improve our service to you. You have been asked to participate in this survey because you are hiking Rim-to-Rim. Your contribution is important to us. The entire survey will take about 12 minutes to complete over the course of your hike. You will be asked a short series of questions starting here, then at the Phantom Ranch Ranger Station halfway through your hike and then at the trailhead where you will end your hike. The information you provide will be anonymous and your responses are voluntary. The entire survey will take 12 minutes to complete. The surveyor will ask the questions and we ask that you respond to the best of your ability. Because we are also studying the nutritional intake of our study participants, we are asking you to keep and turn in all the wrappers of food or snacks you consume during your hike and provide them to the surveyor at each station.

**PAPERWORK REDUCTION and PRIVACY ACT STATEMENTS:** The National Park Service is authorized by 16 U.S.C. 1a-7 to collect this information. This information will be used by park managers to understand the physiological behaviors of Rim-to-Rim hikers in the Grand Canyon. Your response to this request is voluntary and anonymous. No action may be taken against you for refusing to supply the information requested. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

**BURDEN ESTIMATE:** Public reporting burden to complete the three surveys in this collection is estimated to be 12 minutes per respondent. Direct comments regarding the burden estimate or any other aspect of this collection Christian Malcolm, Preventive Search and Rescue (PSAR) Supervisor; Branch of Emergency Services, [Christian\\_Malcolm@nps.gov](mailto:Christian_Malcolm@nps.gov) (email), Grand Canyon National Park, 3 Clinic Rd, Grand Canyon Village, AZ 86023.

Date \_\_\_\_\_ Time \_\_\_\_\_ Location \_\_\_\_\_ Group # \_\_\_\_\_

## Starting Trailhead (North Kaibab, South Kaibab, or Bright Angel Trailhead)

This portion of the survey takes about 5 minutes to complete. The information you provide will be anonymous. Please listen to each question carefully and respond to the best of your ability.

1. **What is your gender?** (Please mark one)

- Male     Female     Do not wish to respond

2. **In what year were you born?** 19 \_\_\_\_\_

3. **Where do you live?**

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_  
Country (if not US) \_\_\_\_\_

4. **Have you visited Grand Canyon National Park before today?**

- Yes     No

If YES, approximately how many times have you visited [during specific time period]? \_\_\_\_\_

5. **Have you hiked Rim-to-Rim before today?**

- Yes     No

If YES, about how many times have you hiked Rim-to-Rim, including this visit? \_\_\_\_\_

6. **Please tell us how you planned to stay hydrated during your hiking trip. Which of the following items did you use during your hike today?** (Mark all that apply)

- Bottle  
 Bladder Hydration System (e.g. Camelback)  
 Other \_\_\_\_\_  
 None of the above

7. **Since 4:00pm yesterday, please tell us the types and amount fluids you consumed** (Mark all that apply)

Types of Fluids	How much did you <i>drink</i> (liters)?
<input type="checkbox"/> Water	_____
<input type="checkbox"/> Sports Drink (e.g. Gatorade)	_____
<input type="checkbox"/> Electrolyte Mix (e.g. Powder)	_____
<input type="checkbox"/> Other _____	_____
<input type="checkbox"/> None	

8. **Since 4:00pm yesterday, what have you had to eat?**

Types of Food	How much did you eat?
_____	_____
_____	_____
_____	_____
_____	_____
<input type="checkbox"/> None	

## Phantom Ranch Ranger Station (mid-point)

This portion of the survey takes about 2 minutes to complete. The information you provide will be anonymous. Please listen to each question carefully and respond to the best of your ability.

1. Since the beginning of your hike, please tell us the types and amount fluids you consumed during your hike. (Mark all that apply)

Types of Fluids	How much did you <i>drink</i> (liters)?
<input type="checkbox"/> Water	_____
<input type="checkbox"/> Sports Drink (e.g. Gatorade)	_____
<input type="checkbox"/> Electrolyte Mix (e.g. Powder)	_____
<input type="checkbox"/> Other _____	_____
<input type="checkbox"/> None	

2. Since the start of your hike, what have you had to eat?  
(Please provide any food wrappers you might have to a surveyor)

Types of Food	How much did you eat?
_____	_____
_____	_____
_____	_____
<input type="checkbox"/> None	

## Ending Trailhead (North Kaibab, South Kaibab, or Bright Angel Trailhead)

This portion of the survey takes about 5 minutes to complete. The information you provide will be anonymous. Please listen to each question carefully and respond to the best of your ability.

1. Since Phantom Ranch, please tell us the types and amount fluids you consumed during your hike.  
(Mark all that apply)

Types of Fluids	How much did you <i>drink</i> (liters)?
<input type="checkbox"/> Water	_____
<input type="checkbox"/> Sports Drink (e.g. Gatorade)	_____
<input type="checkbox"/> Electrolyte Mix (e.g. Powder)	_____
<input type="checkbox"/> Other _____	_____
<input type="checkbox"/> None	

2. Since Phantom Ranch, what have you had to eat?  
(Please provide any food wrappers you might have to a surveyor)

Types of Food	How much did you eat?
_____	_____
_____	_____
_____	_____
<input type="checkbox"/> None	

3. How fatigued do you consider yourself to be?

No fatigue	Minimal fatigue	Mild fatigue	Moderate fatigue	Strong fatigue	Severe fatigue	Worst possible fatigue
0	1	2	3	4		5

4. During your hike in the Grand Canyon, please indicate (on a scale of 1-5) the extent to which the following factors you either agree or disagree with concerning your hydration patterns. (Circle the number of your choice for each statement)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I wanted to stay well hydrated and always drank the maximum amount of fluids I could tolerate at a time	1	2	3	4	5
I took small sips of fluid now and then in order to prevent that "cotton-mouth" feeling	1	2	3	4	5
I only drank fluids whenever I was thirsty and only amounts in order to quench my thirst	1	2	3	4	5
I adjusted my fluid intake based on urine output and appropriate color of urine during the hike	1	2	3	4	5
I only consumed fluids with a meal or a snack	1	2	3	4	5
I think I did not drink enough during my hike, but I plan on rehydrating as soon as I can relax and have a	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
meal					
Whenever there was water available on the trail, I drank as much as I could	1	2	3	4	5
I think I drank too much fluids during my hike	1	2	3	4	5
I relied upon water sources along the trail for support during my hike	1	2	3	4	5
I drank fluids at predetermined time intervals	1	2	3	4	5
I sipped fluids while I hiked and consumed larger amounts of fluids with a meal when I rested	1	2	3	4	5

5. How prepared for this hike did you consider yourself to be?

Under prepared	Somewhat under prepared	Adequately prepared	Somewhat over prepared	Over prepared
1	2	3	4	5

6. How difficult was your hike?

Much easier than expected	Somewhat easier than expected	About what you expected	Somewhat harder than expected	Much harder than expected
1	2	3	4	5