



# Surveys 101: Using Surveys in Visitor Use Management

## Workshop 2

**December 6, 2023**

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Oregon State University





# Overview

- The Role of Surveys in Visitor Use Management
- Approaches
- Sampling
- Data Management & Analysis Considerations
- Tips
- Discussion & Questions



# The Role of Surveys in Visitor Use Management



# The VUM Framework

- Inter-agency approach
- Begins with of statements of desired conditions
- Develops objective indicators & measures
- Uses data to guide adaptive management



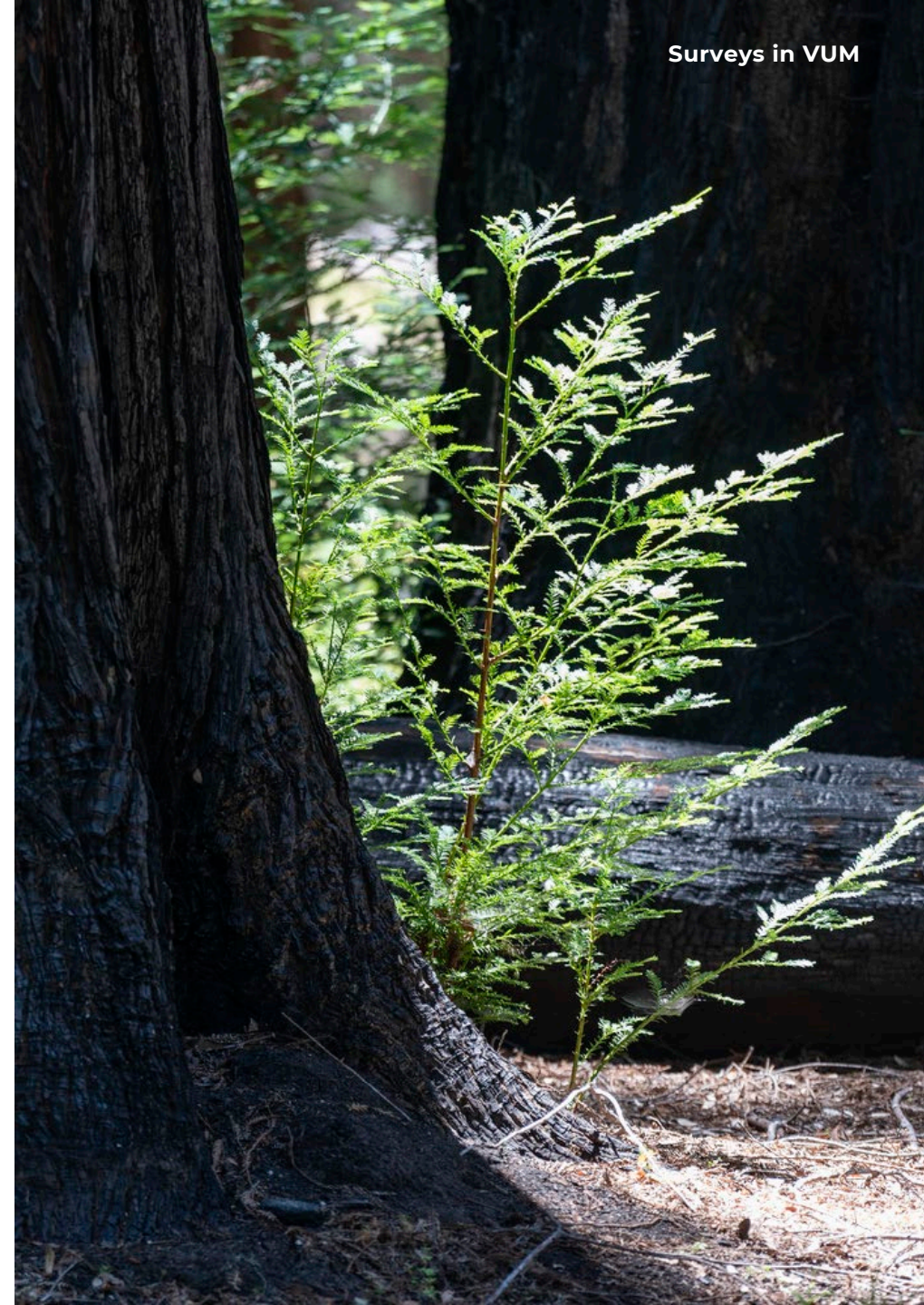
# Formulating experiential desired condition statements

- *What experience should visitors in 10 years expect to find?*
- *What do you tell people about this place?*
- *What is meaningful about a specific zone that differs from others?*



# Examples from Big Basin

- Visitors experience the awe and splendor of old growth redwood trees.
- Visitors experience the historic feel of BB through various eras.
- Visitors of all physical abilities have the opportunity for safe, comfortable, non-strenuous travel among the redwoods.
- Visitors engaged in different activities can all enjoy the setting without interfering with others' enjoyment.



# What kind of measures?

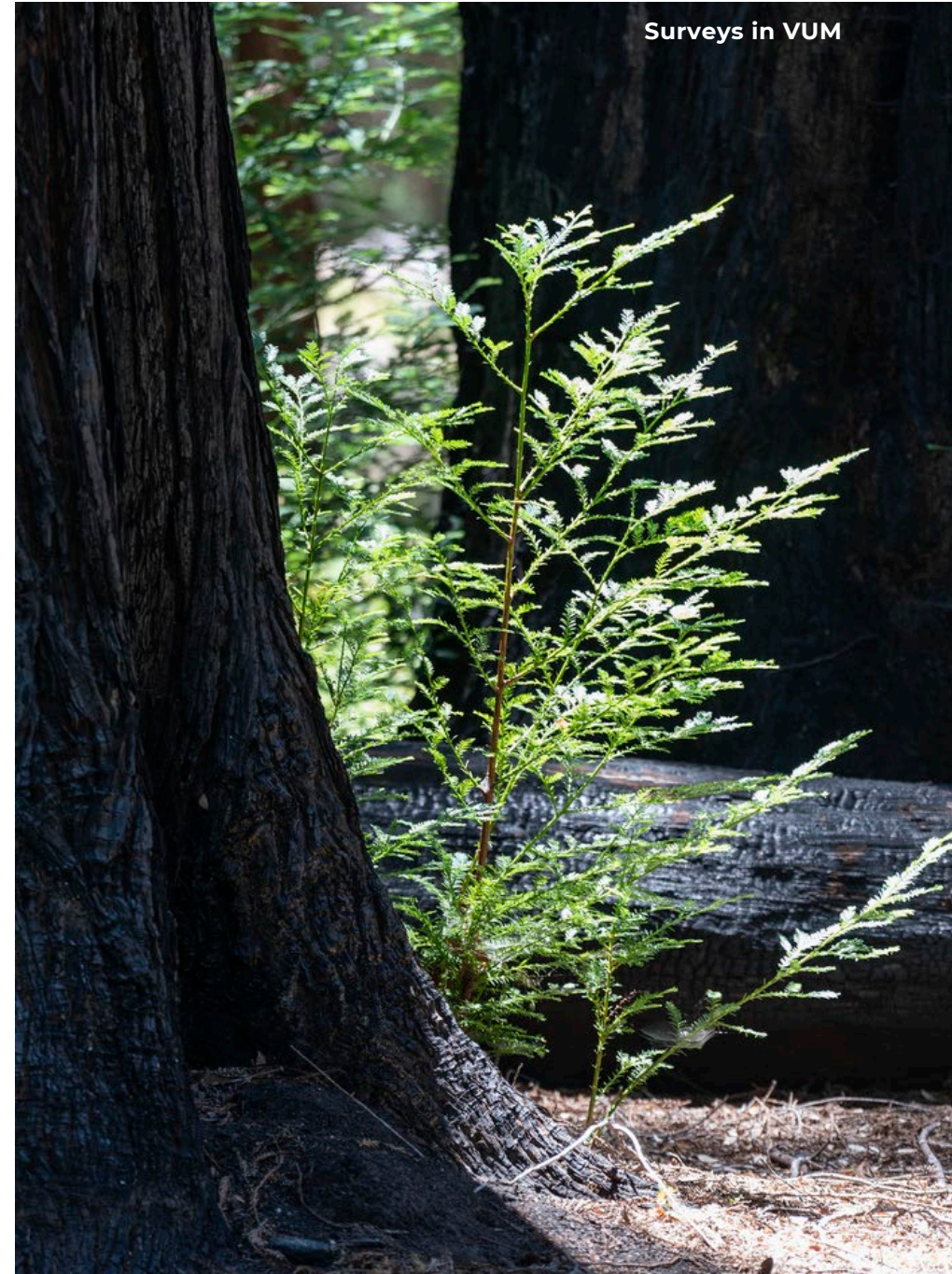
## Safety during your visit

On this visit, did you and your group feel prepared for common safety situations that you might encounter (e.g., sun, heat, lack of drinking water, lack of proper footwear, etc.)?

- Not prepared
  Somewhat prepared
  Very prepared

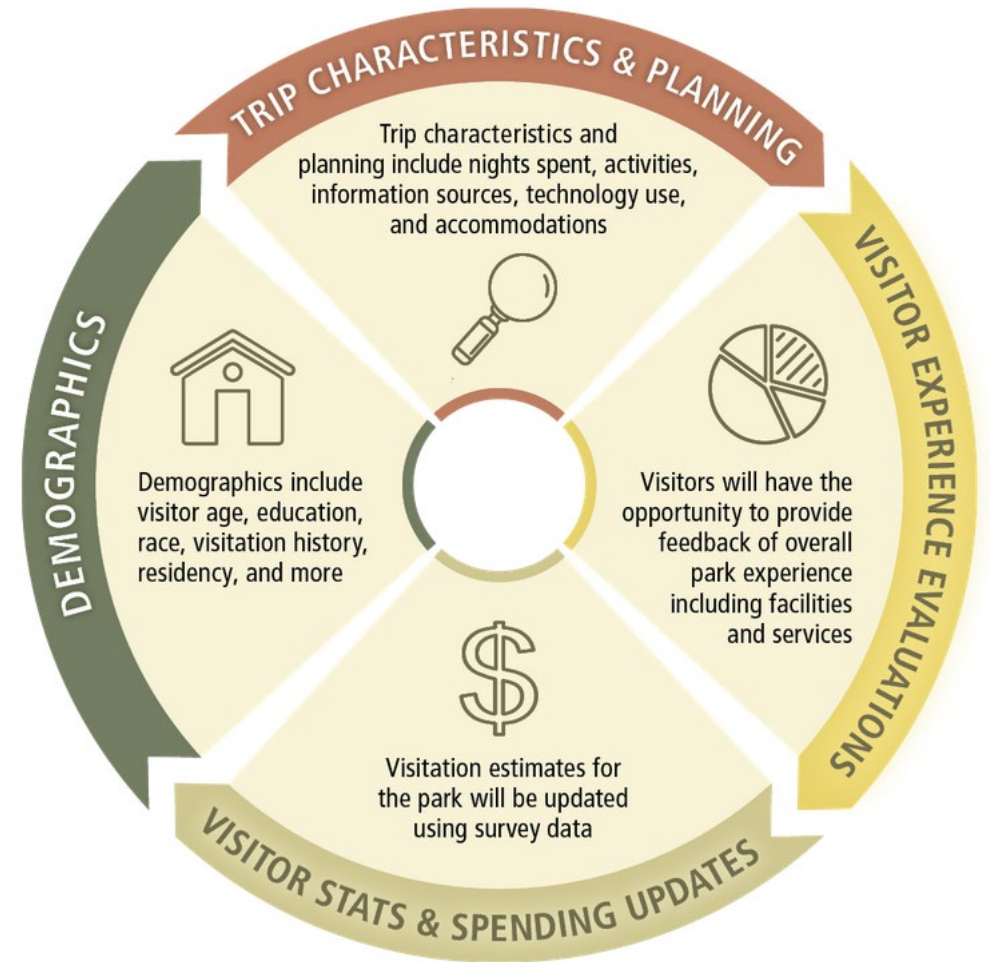
### b) what was your **satisfaction** with this element

	Very unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied
A welcoming park environment	-2	-1	0	+1	+2
Being able to see redwood forests	-2	-1	0	+1	+2
Seeing iconic big trees (the Auto Tree, Mother Tree, etc.)	-2	-1	0	+1	+2
Hearing natural sounds (birds, wildlife, water, etc.)	-2	-1	0	+1	+2
Opportunities for recreation	-2	-1	0	+1	+2
Positive interactions with other visitors	-2	-1	0	+1	+2



# Additional value of surveys

- Information useful outside VUM
- Long-term planning
  - Facilities
  - Activities
  - Interpretation
- Communications
  - Economic impact
  - Visitor satisfaction





# Writing questions

- Know why you're asking
- Craft questions carefully
- Avoid open-ended questions
- Consult existing surveys



## Comment Card

**US Army Corps of Engineers** *Please give us a minute of your time to help us serve you better.*

OMB 0710-0001

Project \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_ WD  WE

What is the primary purpose of your visit today?

Please  one box: Camping  Boating  DayUse  Home Zipcode \_\_\_\_\_

How would you rate our facilities and services at \_\_\_\_\_?

Please  one box for each:

	Very Good	Good	Average	Poor	Very Poor	Don't Know
Safety and security at the recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance and maintenance of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restroom cleanliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of staff to answer my questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## NPS Pool of Known Questions

2019 NPS Pool of Known Questions.docx

Programmatic Clearance Process for NPS-Sponsored Public Surveys

NPS Pool of Known Questions

OMB: 1024-0224

<https://omb.report/icr/201910-1024-002/doc/95528101>




# Approaches for Surveys




# Modalities

- Mail
- Web
- On-site

**Recreación al aire libre en Oregon**

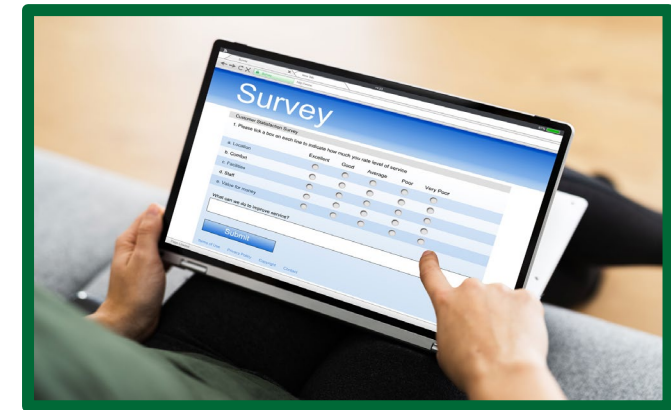


Un estudio hecho por:



O Departamento de Parques y Recreación de Oregon


186



**Utah Department of Outdoor Recreation survey**

By Roger Goldman Published September 29, 2023 at 1:56 PM MDT

▶ LISTEN • 9:31



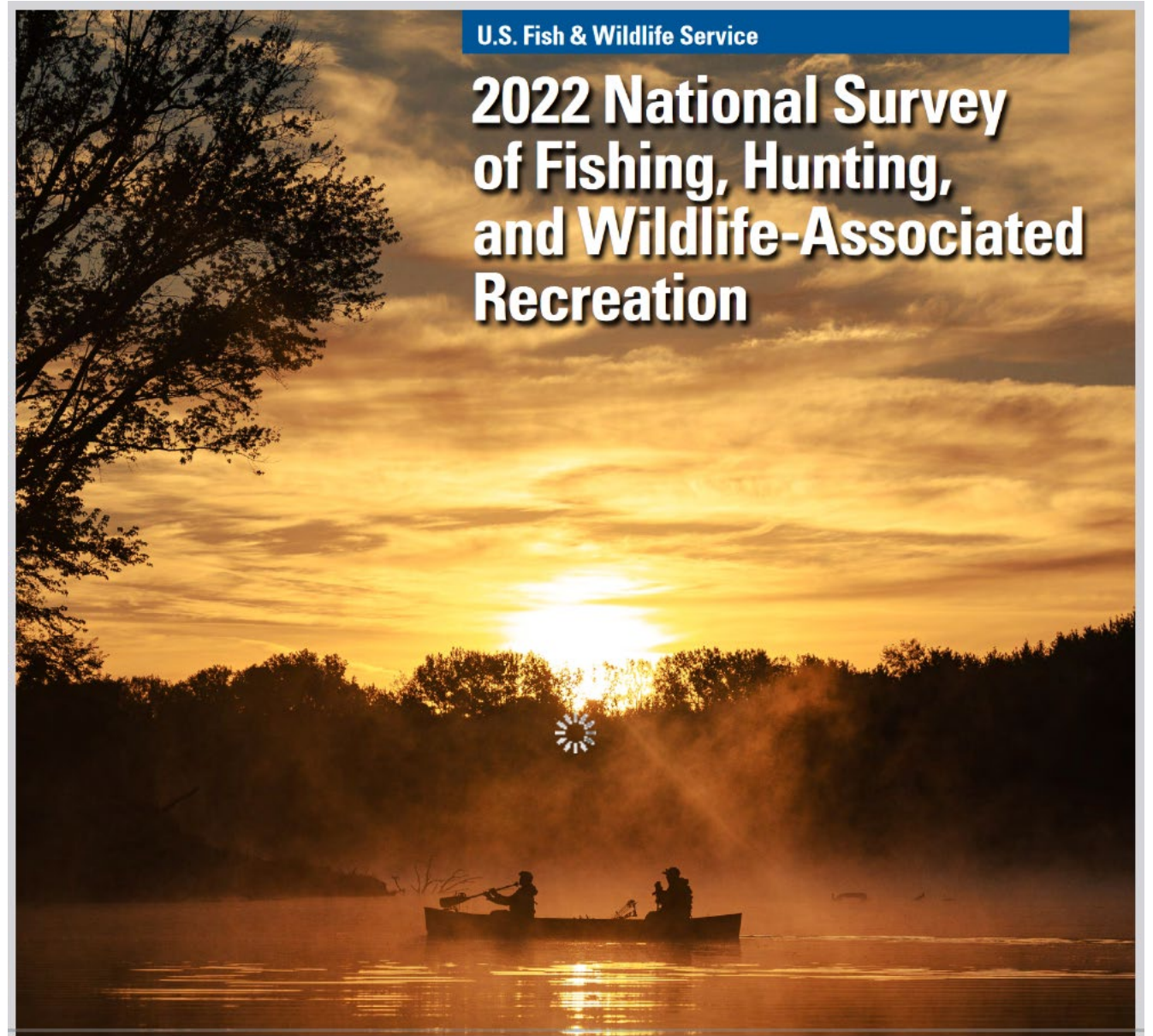
**Do you recreate outside in Utah?**

Help shape outdoor recreation in Utah!  
Please spend 10-15 minutes taking our survey.  
Surveys are available in Spanish and English online.

[www.recreation.utah.gov/  
statewide-comprehensive-outdoor-recreation-plan/](http://www.recreation.utah.gov/statewide-comprehensive-outdoor-recreation-plan/)

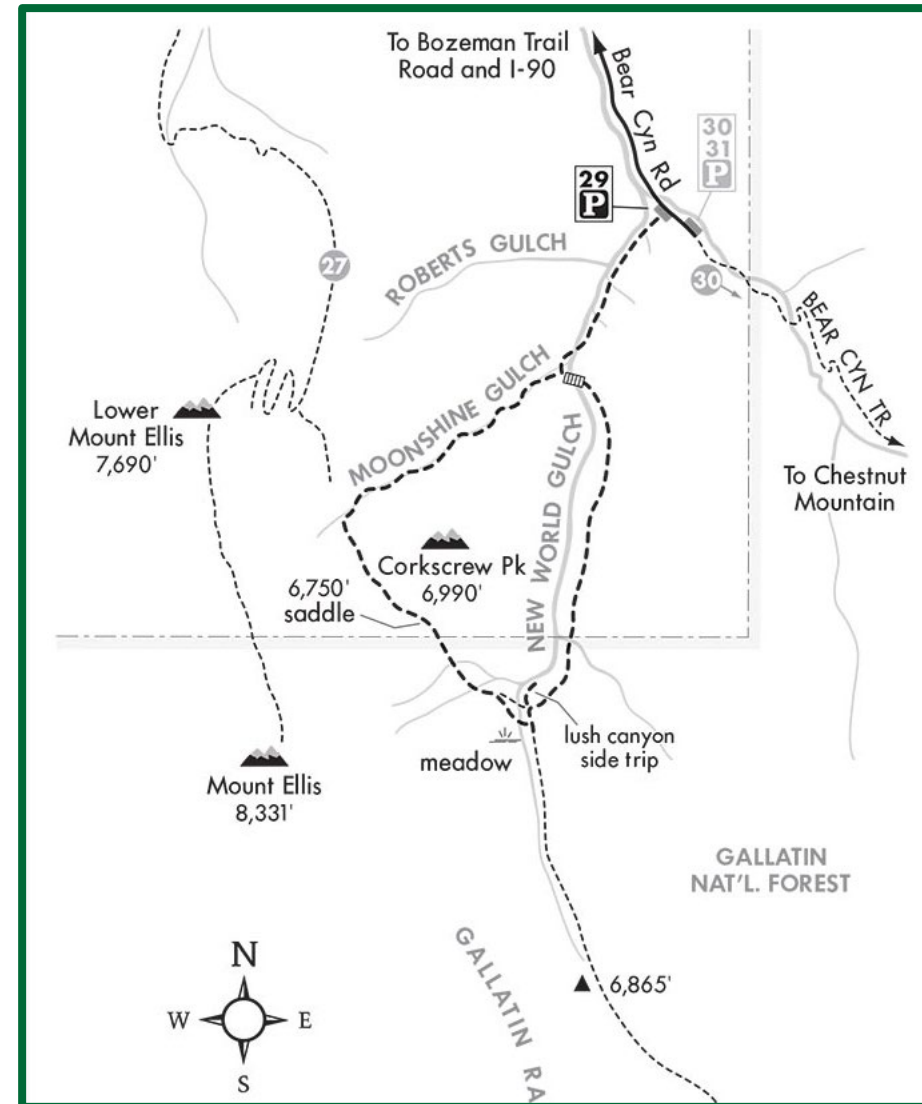
# Modalities

- Mail
  - Poor response rates
  - Requires sample frame
  - Can reach non-visitors



# Modalities

- Web – publicly available
  - Open to anyone
  - Concerns about representativeness



# Modalities

- Web – targeted distribution
  - Visitor convenience
  - No data entry required
  - Representative
  - Poor response rates

Oregon State University, California State Parks, and Parks California are conducting a research survey to learn about the experiences of visitors at Big Basin Redwoods State Park.

**We want to know about your trip to Big Basin today.**

The survey is voluntary and anonymous. It will take approximately 10 minutes to complete and requires internet connectivity.

Your responses will help Big Basin improve the experience of all visitors.

If you would like to participate, please scan the QR code or follow the link below to access the survey.



The survey will ask you for an ID number.

Your ID is \_\_\_\_\_

<https://bit.ly/BigBasinVisitorSurvey>

**Thank you!**

# Modalities

- On-site
  - Paper
  - Electronic



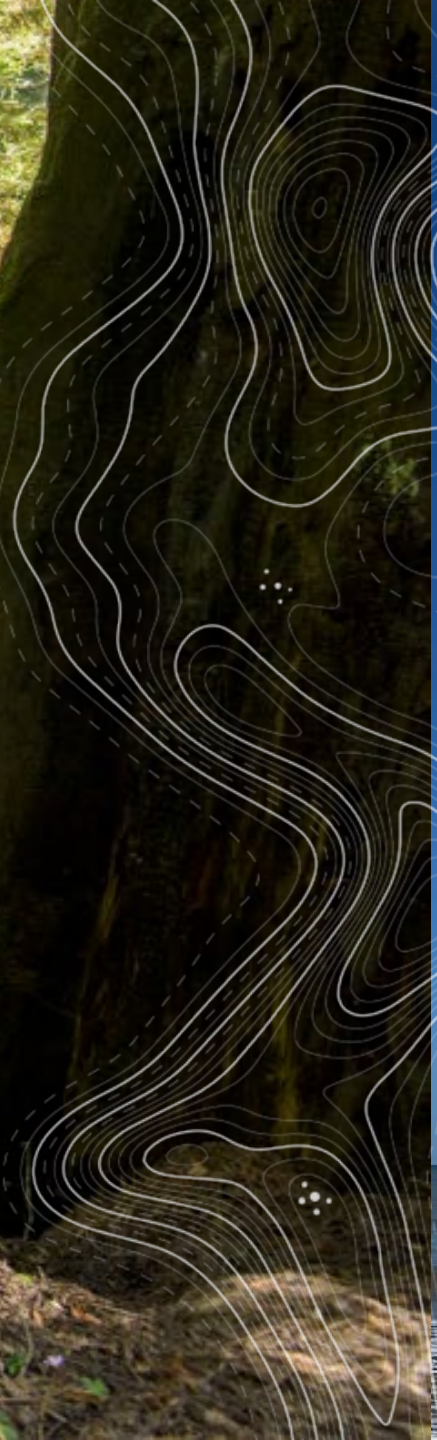
<https://www.esri.com>

Please fold before inserting into envelope  
 Your Opinion Counts!

	PLEASE USE BLUE OR BLACK INK OR PENCIL				CORRECT MARK	FILL IN THE OVAL COMPLETELY	
	Very Good	Good	Average	Poor	●	Very Poor	Not used or not available
<b>Park Facilities</b>							
■ Visitor center	○	○	○	○	○	○	○
■ Exhibits (indoor and outdoor)	○	○	○	○	○	○	○
■ Restrooms	○	○	○	○	○	○	○
■ Walkways, trails, and roads	○	○	○	○	○	○	○
■ Campgrounds and/or picnic areas	○	○	○	○	○	○	○
<b>Visitor Services</b>							
■ Assistance from park employees	○	○	○	○	○	○	○
■ Park map or brochure	○	○	○	○	○	○	○
■ Ranger programs	○	○	○	○	○	○	○
■ Value for entrance fee paid	○	○	○	○	○	○	○
■ Commercial services in the park (food, lodging, gifts, rentals, etc.)	○	○	○	○	○	○	○
Please specify services used _____							



# Sampling Basics





# Sampling

- Do I need a random sample?
- How much data do I need?

It depends

Sampling



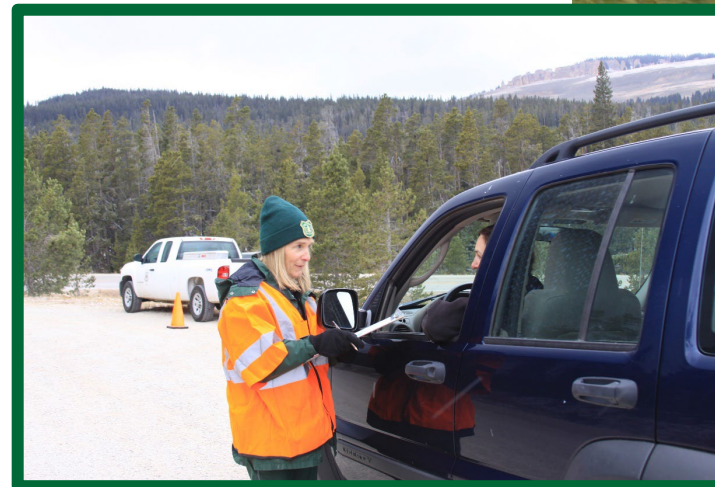
# Sampling

- Random vs. convenience sampling
  - Random = equal opportunity to participate
  - Convenience & purposive sampling
- Why get a random sample?
  - Unbiased
  - Statistical comparisons possible
  - Can track trends over time



# Sampling

- Is convenience sampling always bad?
- Advantages
  - Efficiency (e.g., staff time)
  - Ability to focus on known issues
  - Can generate useful information



# Sampling

- Strategies for random sampling
  - Stratification
  - Start small
- Strategies for convenience sampling
  - Build in procedures to enhance representativeness of the data
  - Collect ancillary data to gauge representativeness



# Sampling

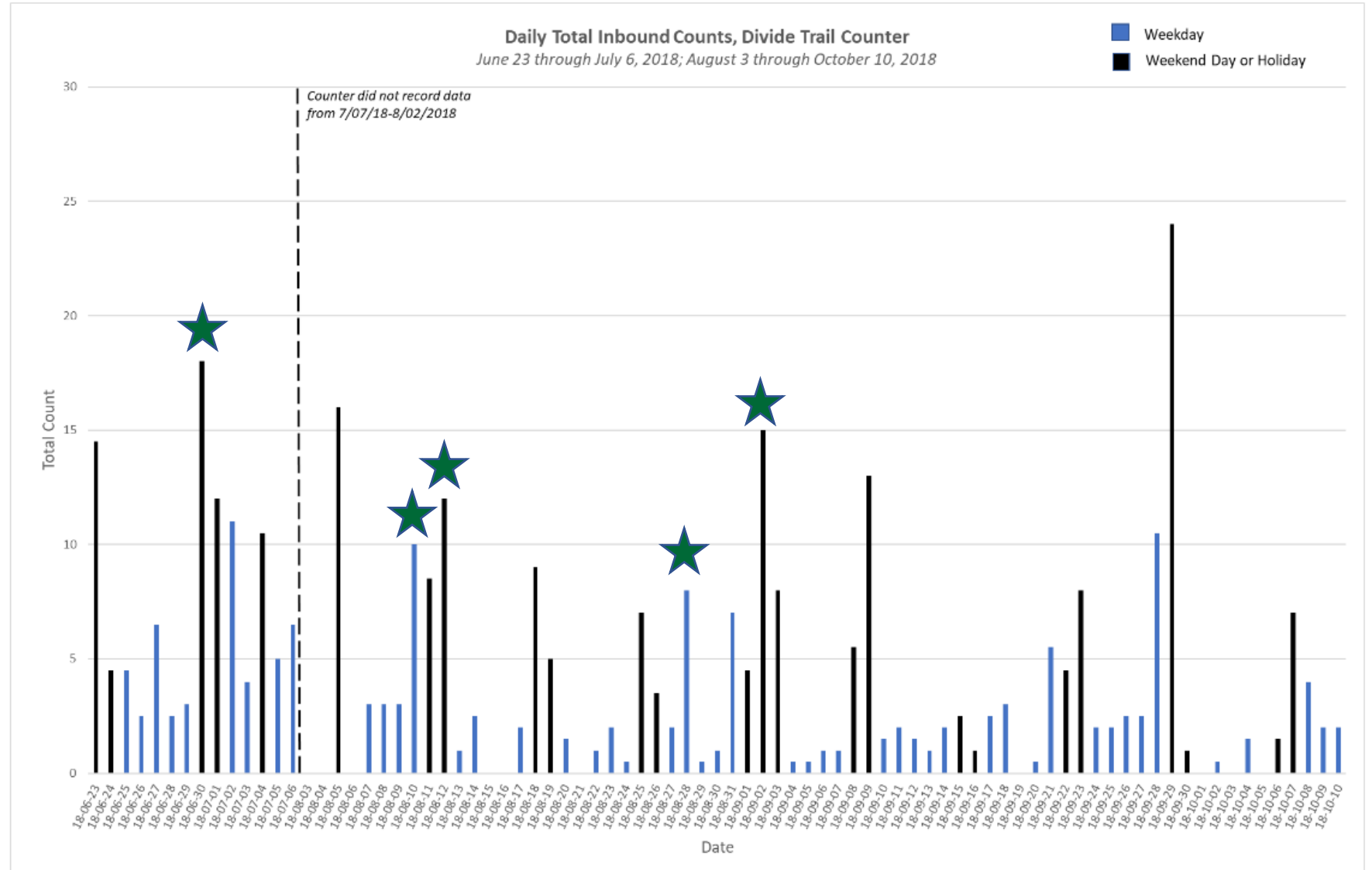


Figure 6. Daily total inbound counts for the Divide Trail counter for each date during the data collection period, excluding dates with missing data

# Sampling

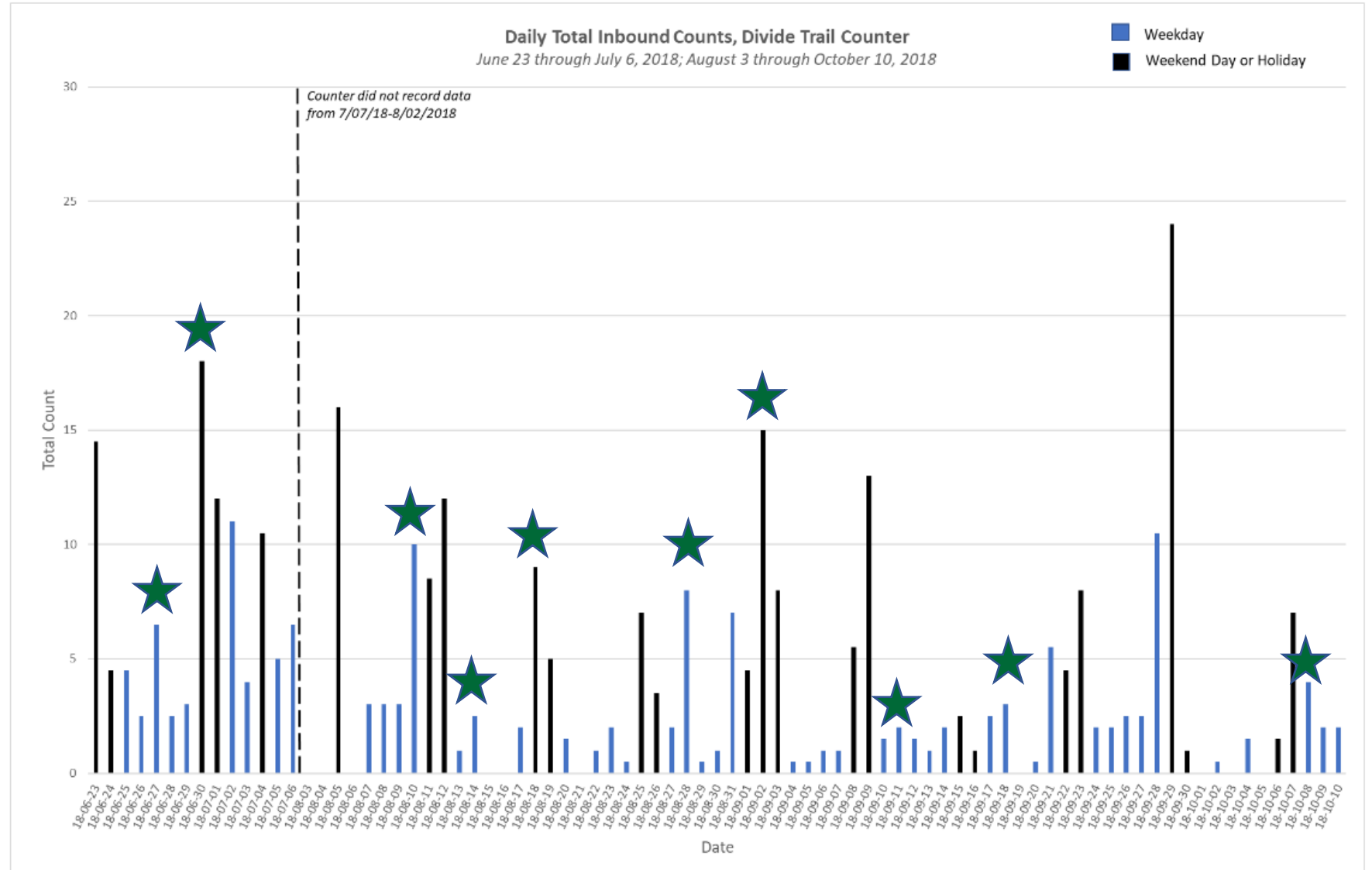


Figure 6. Daily total inbound counts for the Divide Trail counter for each date during the data collection period, excluding dates with missing data

# Sampling

- How much data depends on...
  - Intrinsic variation in the population
  - Your desired level of confidence
  - The number of comparison units (e.g., locations, seasons, user types)



# Sampling

As a general rule, increasing sample size improves power when samples are small, but after a point there is little value in having more data





# Data Management & Analysis

# Data Management

- Record keeping
- Data entry
- QA/QC



THE AMERICAN STATISTICIAN  
2018, VOL. 72, NO. 1, 2-10  
<https://doi.org/10.1080/00031305.2017.1375989>

OPEN

## Data Organization in Spreadsheets

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**ABSTRACT**  
Spreadsheets are widely used software tools for data entry, storage, analysis, and visualization. Focusing on the data entry and storage aspects, this article offers practical recommendations for organizing spreadsheet data to reduce errors and ease later analyses. The basic principles are: be consistent, write dates like YYYY-MM-DD, do not leave any cells empty, put just one thing in a cell, organize the data as a single rectangle (with subjects as rows and variables as columns, and with a single header row), create a data dictionary, do not include calculations in the raw data files, do not use font color or highlighting as data, choose good names for things, make backups, use data validation to avoid data entry errors, and save the data in plain text files.



# Interpreting results

- Understand the difference between statistical significance and practical significance



# Interpreting results

- For convenience samples, consider
  - Number of surveys
  - Distribution across characteristics of interest
  - Other information to gauge representativeness



**CITY OF SAN JOSÉ**  
**PARK USER SURVEY**

Please follow this link to share your thoughts on all things **park-related**.

[bit.ly/SJParkUserSurvey2021](https://bit.ly/SJParkUserSurvey2021)

Parks user satisfaction is very important to us. We listen to what you say and implement changes.

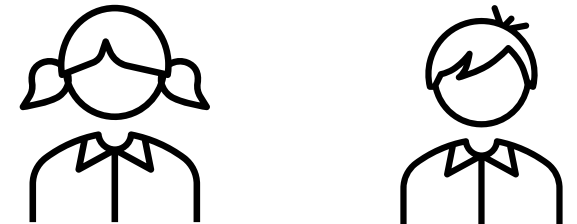
San Jose's 2021 Annual Trail Survey will be open from December 1 to December 18, 2021.

SAN JOSE  
PARKS, RECREATION & NEIGHBORHOOD SERVICES  
Building Community Through Fun

The poster features a photograph of a person fishing in a park stream, with a picnic table in the foreground. The text is overlaid on the image in white and yellow boxes.

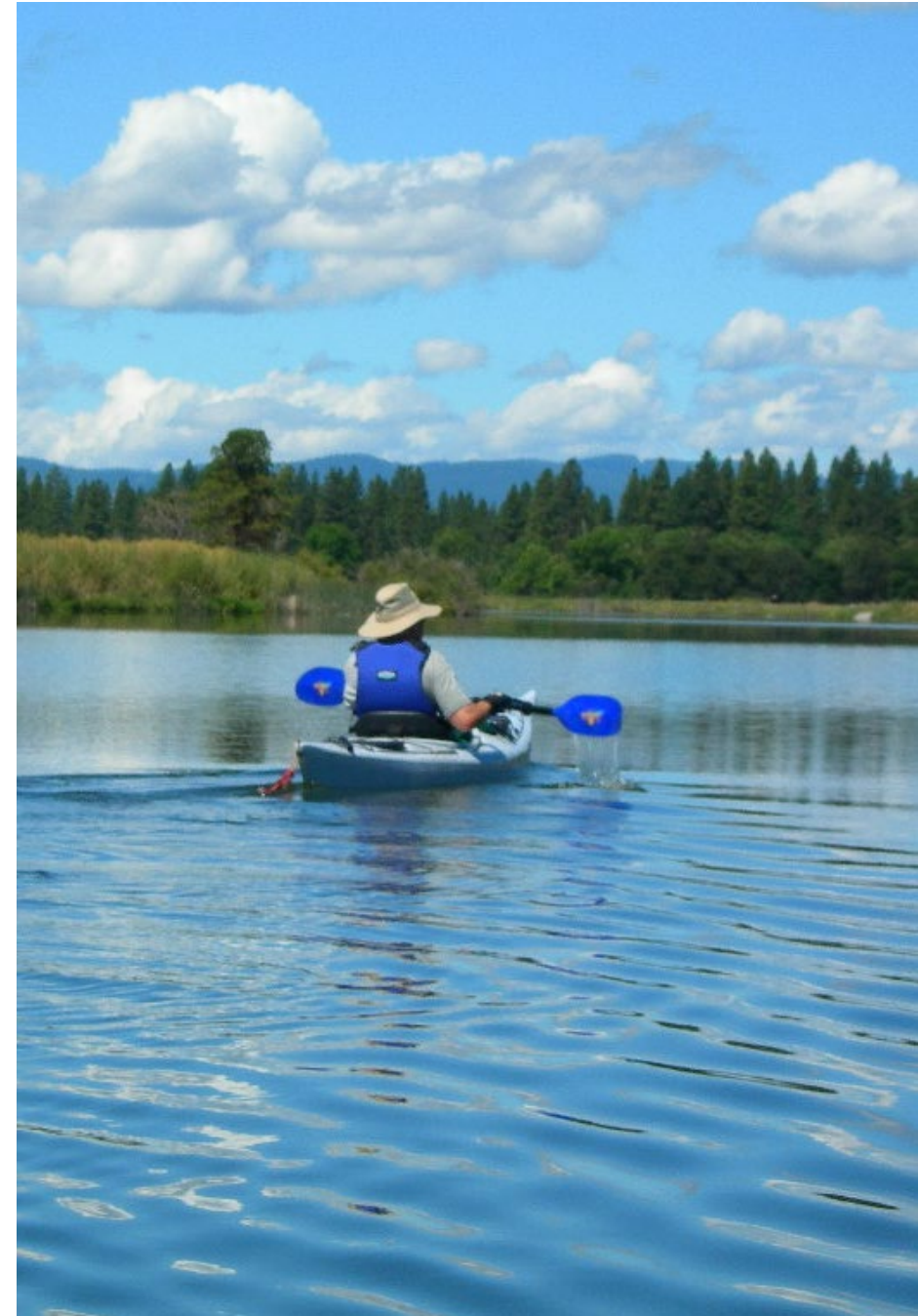
# Interpreting results

- For tracking trends over time
  - The data must be comparable
  - Consider any differences in methods or characteristics of the sample



# Final Tips

- Think about how you will use the data
- The major cost is in the effort – collect what will help you in the long run

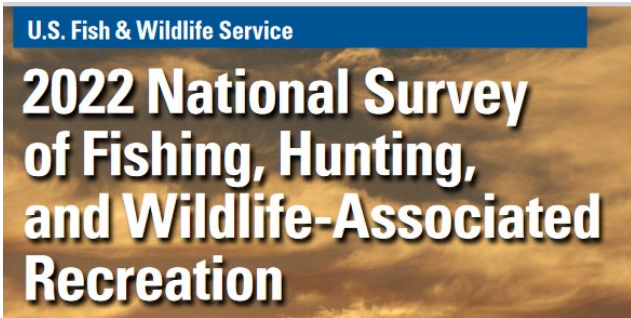


# Final Tips



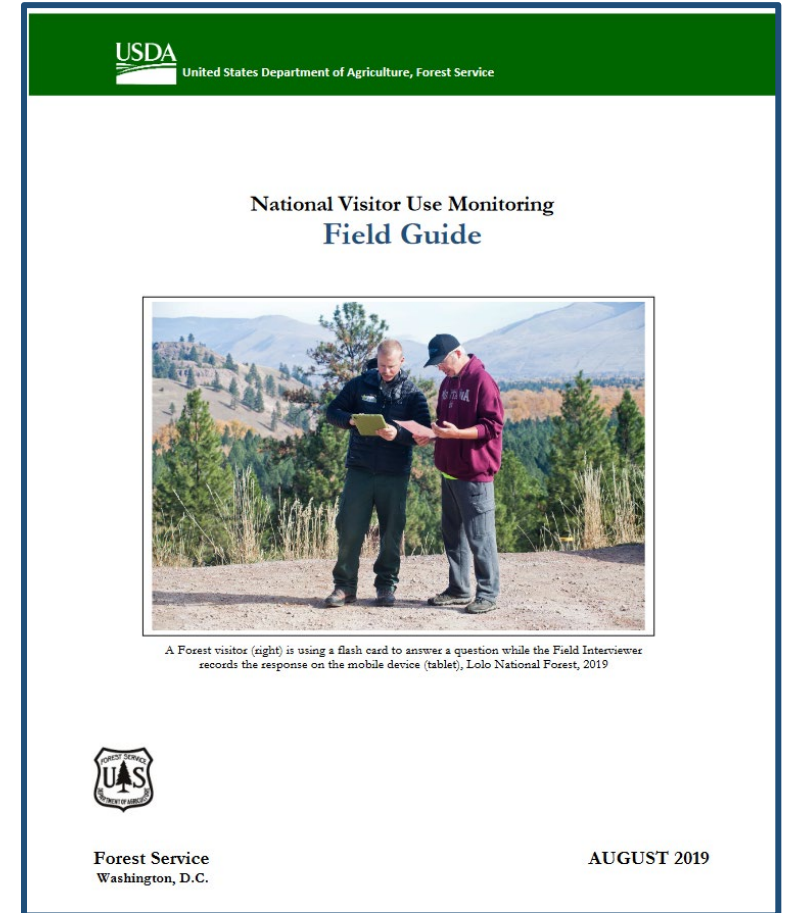
# Final Tips

- Training & documentation
- For long-term monitoring, consistency matters



## Comparability With Previous Surveys

As a result of major changes to the questions and methodology, the results from the 2022 Survey should not be directly compared to results from any previous Surveys.





# Recap

- 1** Understand how survey data can (shouldn't) be used
- 2** Select the approach that best suits your needs
- 3** Understand the limitations/benefits of different approaches
- 4** Design the effort carefully
- 5** Attend to training and documentation