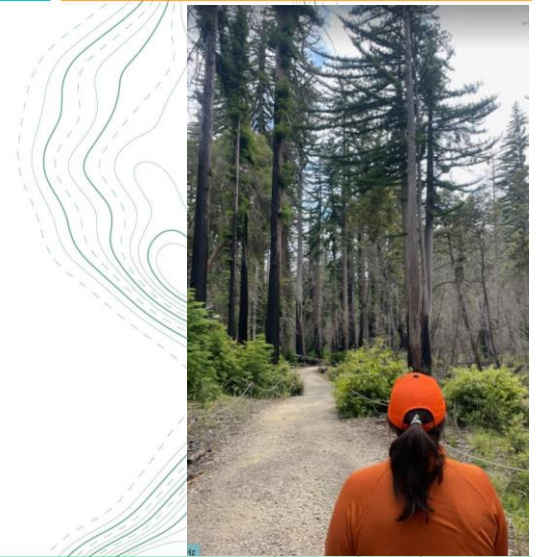Visitor Use Management Protocol

Monitoring Encounters on Hiking Trails to Assess Visitor Experience

Troy E. Hall, Ashley D'Antonio, Conner Wanless, and Madeline Aberg
Department of Forest Ecosystems & Society, Oregon State University

Overview

This protocol is used to estimate encounter rates along a hiking trail. During each survey, you will walk the trail at the pace of an average visitor and record the number of visitors you encounter.

Considerations

1) **Which trail/trails will you monitor?** You may wish to prioritize trails where results will be relevant to management decisions. For example, a backcountry trail where use is increasing might be close to reaching a threshold where management intervention is required, making it a high priority for monitoring. Another consideration might be the ability to fit monitoring into staff duties, in which case a frontcountry trail that is representative of use patterns throughout the park may be a better option.

2) **Do you want to monitor encounters year-round or during a specific time of year?** You might choose to sample only dates during your park's peak visitation season, or you may be interested in differences in encounter rates throughout the year. This consideration may also be impacted by staff availability. An important consideration when making this decision is that you want to ensure that the data you collect are representative of the time period of interest.

3) **What time period during the day will you survey?** This will depend on why you are gathering encounter rate data. In many cases, it may be most useful to survey during peak visitation. Another example would be to sample time periods throughout the day (e.g., 9am – 12pm, 12pm – 3pm, and 3pm – 6pm).

4) **Do you want to stratify your data by any variable?** If you expect that the encounter rate differs based on day of the week, for example, you may wish to stratify your sampling dates into weekends and weekdays. This will ensure that you are able to compare results by the strata of interest.

Protocol

1) Arrive at the predetermined starting location.

2) Record the following information on a *Visitor Encounters Data Sheet*. In the list below, the fields are bolded, followed by definitions of the type of information to record.
   - **Name**: Your first and last name.
   - **Date**: The date of your observation, MM/DD/YYYY
   - **Sky Cover**: "Sunny," "P Cloudy" (partly cloudy), or "Overcast" depending on the predominant conditions during the data collection event.
   - **Precipitation**: Either "present" or "absent" depending on the predominant precipitation conditions during the data collection event.
   - **Temperature**: Check one (check boxes are provided in 10-degree Fahrenheit increments from 40 degrees to 90+ degrees) that represents your best estimate of the predominant temperature during the data collection event.

3) Record the **Start Time** (HH:MM, 24-hour clock) of the count.

4) As you walk the trail, record the number of visitors you encounter during your walk and the direction they are moving. Only count each individuals once. Include babies and children who are in strollers or being carried.
   - **# of People Moving the Same Direction**: The number of people encountered during the survey who are walking the same direction as you.
   - **# of People Moving the Opposite Direction**: The number of people encountered during the survey who are walking the opposite direction as you.

5) When you reach the predetermined ending location, record the **End Time** (HH:MM, 24-hour clock).

6) Use the **Comments** field to document any unusual conditions or events.

Visitor Encounter Data Sheet

Date (MM/DD/YYYY)	Initials	Temp	Precip. (Present/ absent)	Sky Cover	Start Time (HH:MM)	# of People Moving in Same Direction	# of People Moving in Opposite Direction	End Time (HH:MM)	Comments

Data Analysis

Potential Statistics

- The number of visitors encountered while hiking the trail.
- The number of visitors encountered going the same direction.
- The number of visitors encountered going the opposite direction.
- The relationship between the number of visitors encountered and:
  - The number of vehicles in the parking lot (Parking Lot Count Protocol)
  - Total paid day use or other estimates of visitation
- The above summary statistics can be compared by other variables of interest, such as weekday vs. weekend.

Notes

- If there is a lot of variation in the amount of time it takes to complete a monitoring survey, we recommend standardizing the number of visitors encountered by the number of minutes spent surveying. Standardized counts should be presented as counts per the average time it takes to walk the trail (approximately)
  - A 20-minute survey with 5 visitors encountered would be standardized to 0.25 visitors per minute.
  - A 30-minute survey with 5 visitors encountered would be standardized to 0.16 visitors per minute.
  - If the average time to walk the trail these results would be presented as 6.25 visitors per 25 minutes and 4 visitors per 25 minutes, respectively.

SUGGESTED PROTOCOL CITATION

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