

# Recreation habitat vs. ecological habitat in riparian restoration

Adversarial relationship?  
What can we do better?

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# Recreation vs. ecological habitat

How are they different?

Do visitors support restoration goals?

Can we manage for both?





# Merced River in Yosemite Valley





# YOSEMITE NATIONAL PARK

## VIRTUAL TOUR







# Development



>1,000+ hotel units  
>700 campsites  
7,000 vehicles and 20,000 people per day



Many facilities within  
quarter-mile of river







# Swinging Bridge

Highest use area on river





# A multi-variable measure of riparian health

**Assess 14 variables in four categories**

- **Buffer and landscape context**
- **Hydrology**
- **Physical structure**
- **Biotic structure**



**Index scores from 0.0 to 1.0**

**Assessed 81 alternating  
bank areas in 9.9 segment**

**Summarized as  
low-moderate-high**



Recreation habitat:  
Close to river  
Good beach  
Sun and/or shade  
Good wading/swimming





# Methods

- On-site survey n = 806 (92% response rate)
- Roving stratified sampling
- Integrated with NPS use monitoring





**What do visitors think about  
riparian conditions?**





# Evaluating riparian impacts



. The “river bank” photo shows an area used by park visitors along the Merced. National Park Service scientists evaluate river banks from an ecological perspective, but we are interested in how visitors perceive them. Please rate the acceptability of this river bank from your perspective.

Very unacceptable

Marginal

Very acceptable

- 4

- 3

- 2

- 1

0

+ 1

+ 2

+ 3

+ 4



# Evaluating riparian impacts





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What about  
possible solutions?











Give Plants a Chance!



Please Stay Off



NO launching  
of  
Boats, floats,  
tubes, rafts  
from this area!

Put in allowed at Stoneman  
Bridge, located at the Curry  
4-way intersection!!!!

Thank you! N.P.S.-P.S.A.R.-Preventative  
Search and Rescue

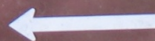




Yosemite National Park  
**AREA CLOSED**  
RESTORATION IN PROGRESS



River Access





# Evaluating fences and boardwalks

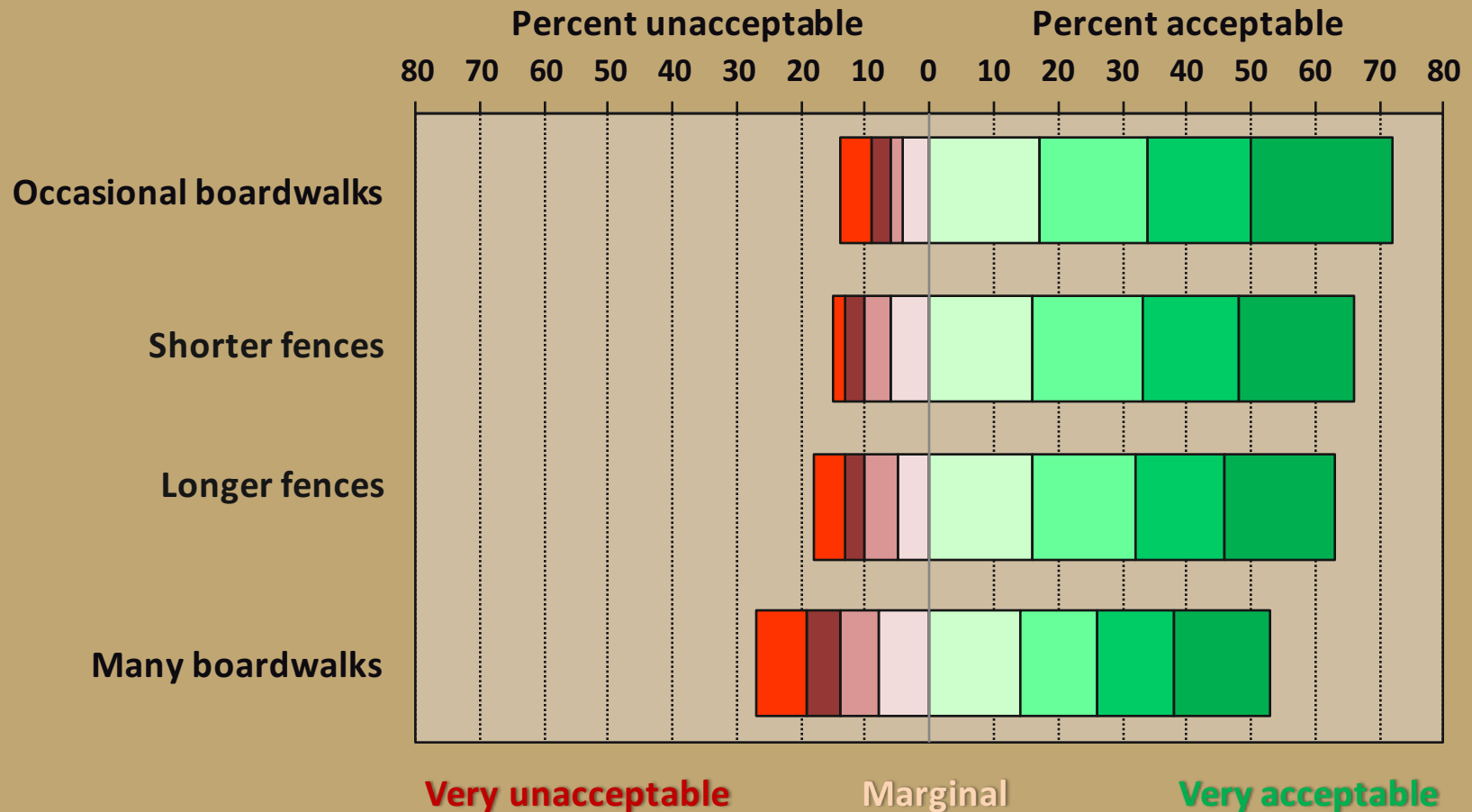


18. To reduce bank and meadow trampling along the river, the Park Service could close sensitive areas (see “split rail fencing” photo) and direct people toward areas that can withstand use (see “boardwalk and stairs” photo). However, these actions may decrease “naturalness,” prevent access to some areas, or lead to congestion in other areas. Please rate the acceptability of the following actions.

	Very unacceptable				Marginal			Very acceptable	
<b>Longer split rail fences</b> (over 200 feet) to protect <b>large areas</b> from trampling, with short openings for river access.	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4
<b>Shorter split rail fences</b> (under 50 feet) to restore <b>small sites</b> with heavy trampling.	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4
<b>Occasional boardwalks and stairs</b> through meadows and sensitive areas to provide access to areas like beaches.	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4
Trail networks with <b>many boardwalks &amp; stairs</b> directing use to less sensitive areas and discouraging off-trail use.	- 4	- 3	- 2	- 1	0	+ 1	+ 2	+ 3	+ 4

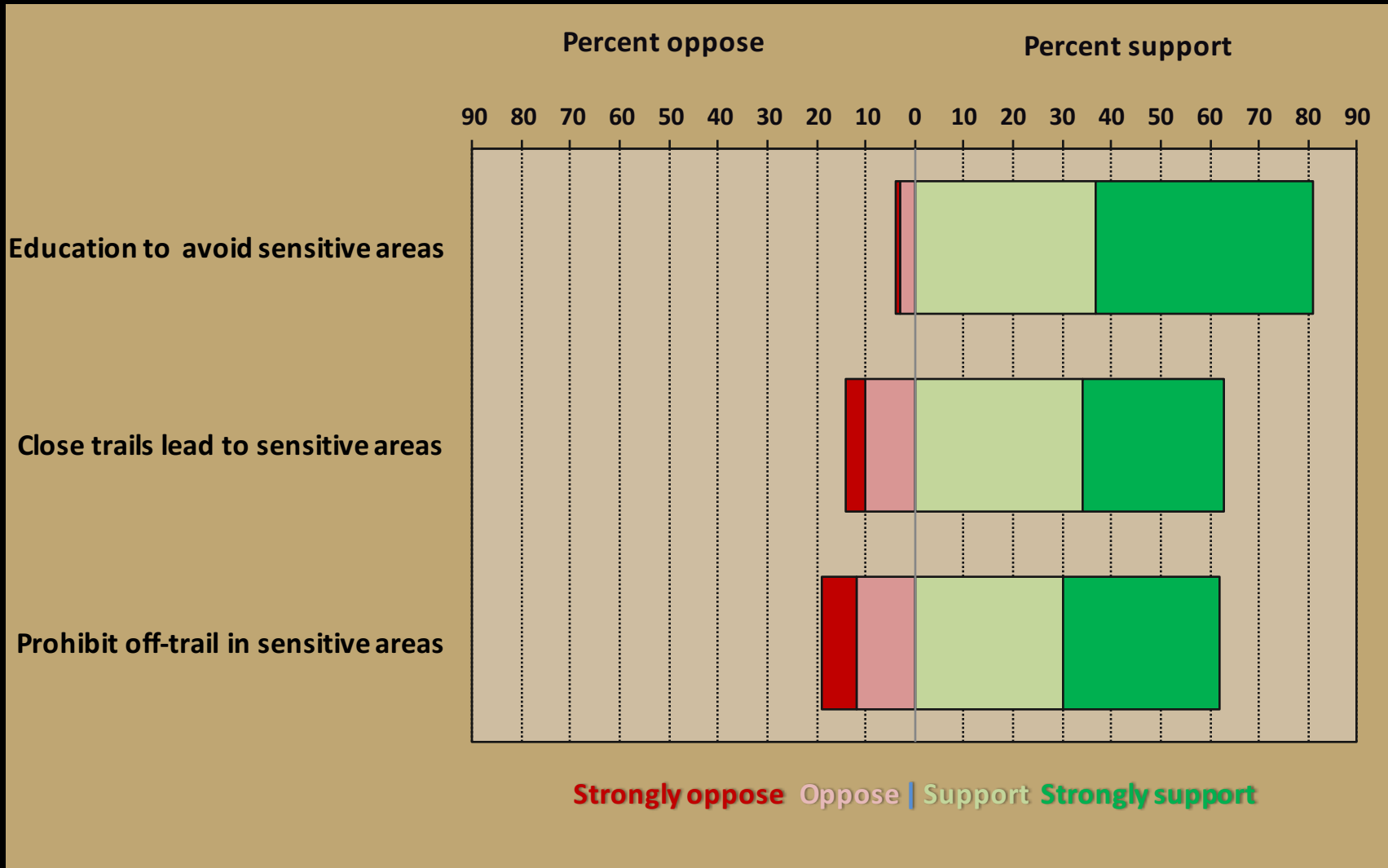


# Evaluating fences and boardwalks





# Managing use in sensitive areas





































Recreation habitat is different  
Extensive support for restoration goals  
Manage use to protect riparian or restored areas?  
Provide high-quality recreation habitat?  
Leave Yosemite, examples from Green/Colorado system

















