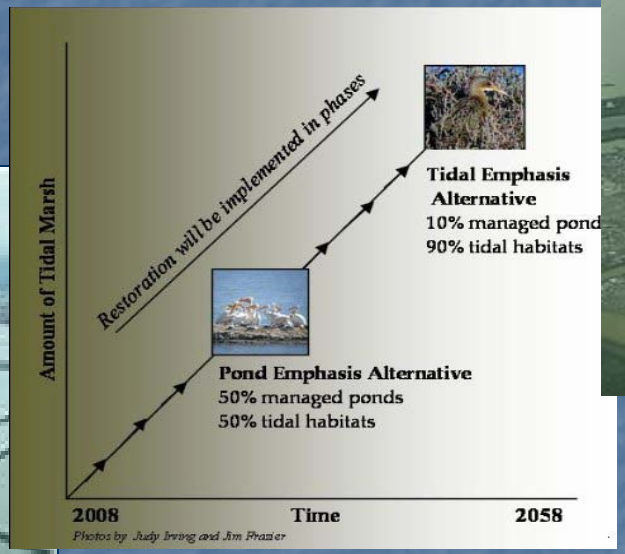
Public Access and Wildlife: Research that Managers Can Use



South Bay Salt Pond Restoration Project

Restoring the Wild Heart of the South Bay

Lynne Trulio, SJSU

September 28, 2010

Six Project Objectives

Potentially-Competing Goals

Public access vs. wildlife protection

Balancing Public Access and Wildlife Needs

- Project is planning and implementing new trails, overlooks, kayak launches
- Will public access reduce species protection?

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Public Access and Birds: A few things we know

- Nesting birds are very sensitive to trail users and other approaches
- Direct approach disturbs shorebirds on beaches/other habitats
- Loud, fast movement more disruptive than quiet, slower movement
- Species responses can differ by location

Needed Public Access Adaptive Management Studies

- Trails and snowy plovers
- Trails and shorebirds
- Trails and waterfowl
- Boating access and harbor seals
- Boating access and waterbirds
- Trails and California clapper rails

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Trails and Waterfowl

White (MS Thesis, SJSU)

Trulio, White, Sokale & Lafferty

Boats and Harbor Seals

Fox (MS Thesis, SJSU)

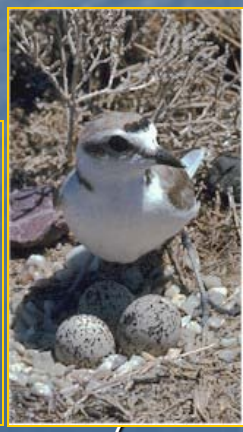
Gunvalson (MS Thesis, SJSU)

Trails and Shorebirds

Trulio & Sokale

Trails and Snowy Plovers

Trulio, Sokale, Nilsen, & Lafferty



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Nesting Snowy Plovers

- Spring/Summer 2010
- 1 trail walker along non-public levee
- Levee within 125m of nest
- Observe when nesting bird flushes: stand up, move away, fly away
- Compared trail walkers, researcher walkers, and control

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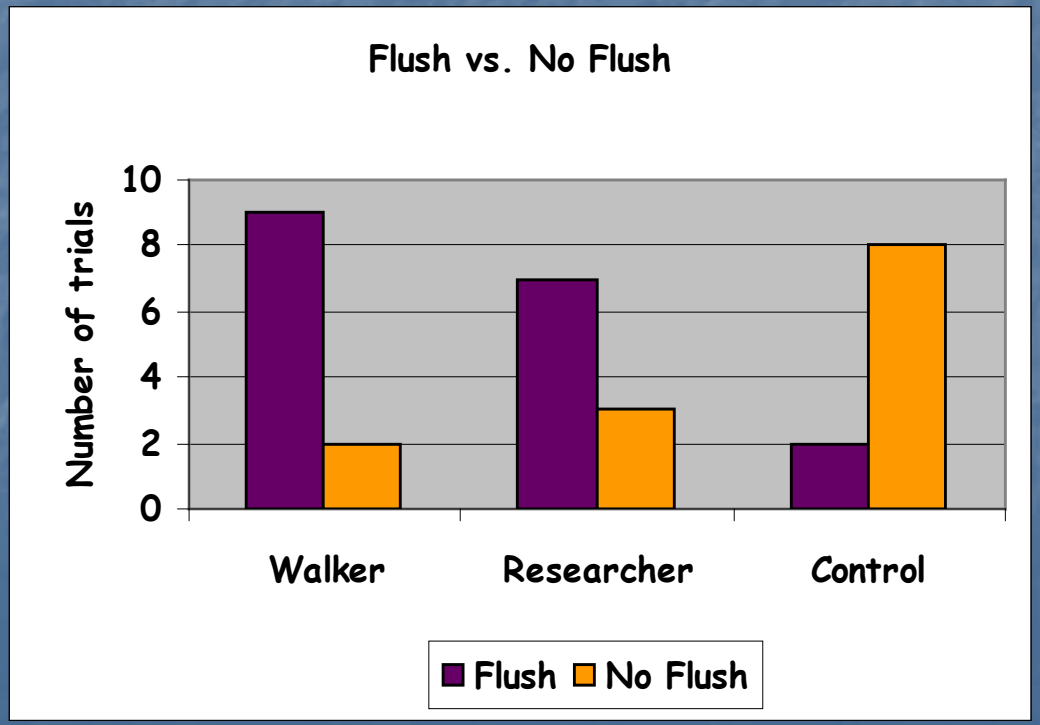
Some Early Data

- No difference in flush distance response to trail walkers vs. researchers (t=0.109, df=19, p=0.914)
- Average flush distance = 133m (SE 16.7m)
- Number of Trials resulting in flushes:
- Small "n";
  Hope to add to this study



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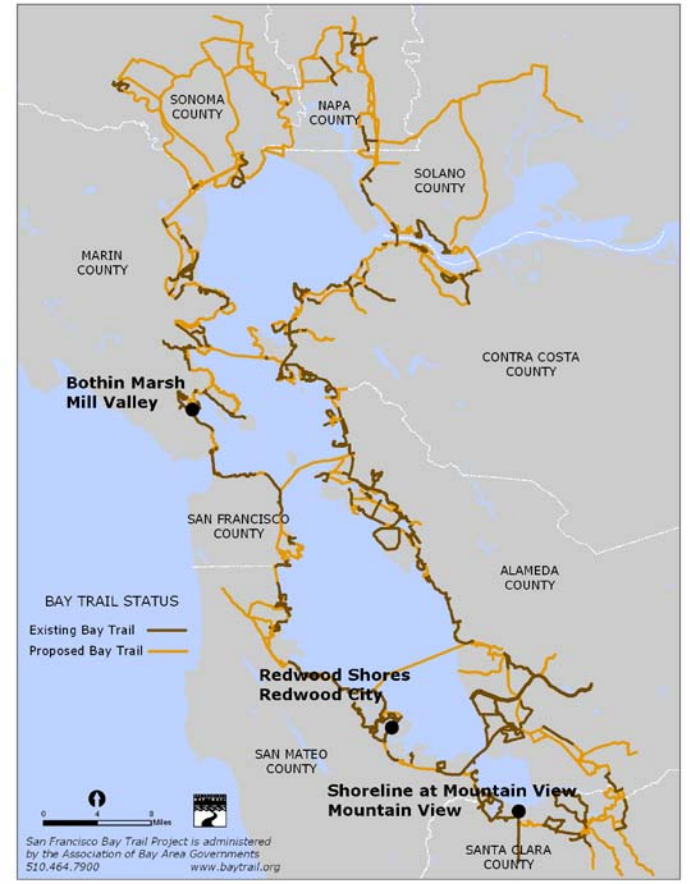
Trails and Shorebirds Study*

- Wintering birds in foraging habitat
- 3 Paired Trail and Non-Trail Sites
- Weekday versus Weekend
- Bird number, Species richness, % foraging

*Trulio and Sokale. 2008. *J. Wildlife Management*. 72:1775-1779.



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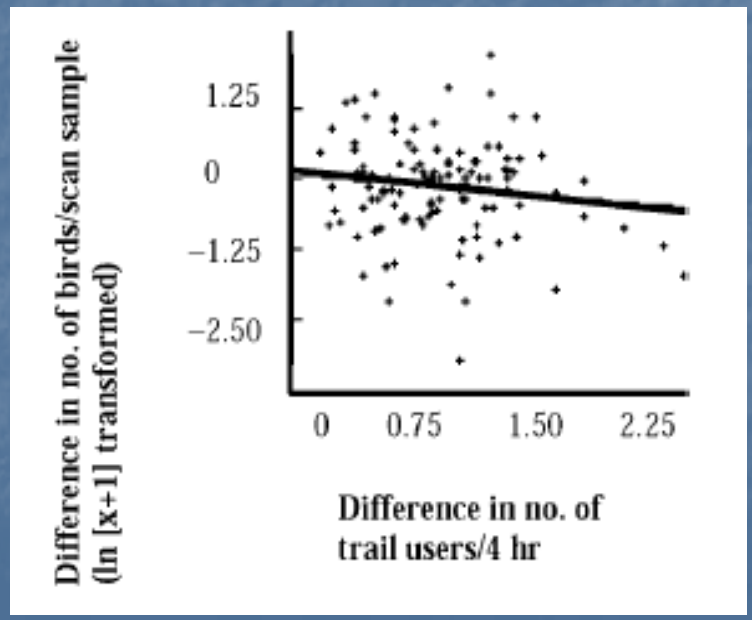
Results

- No reduction in bird numbers, species richness, or proportion foraging at Trail versus Non-trail sites
- Number of birds declined on Weekend days (high trail use) versus Weekdays (low trail use)
- No trail use effect on species richness or proportion of birds foraging



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The Bottom Line…

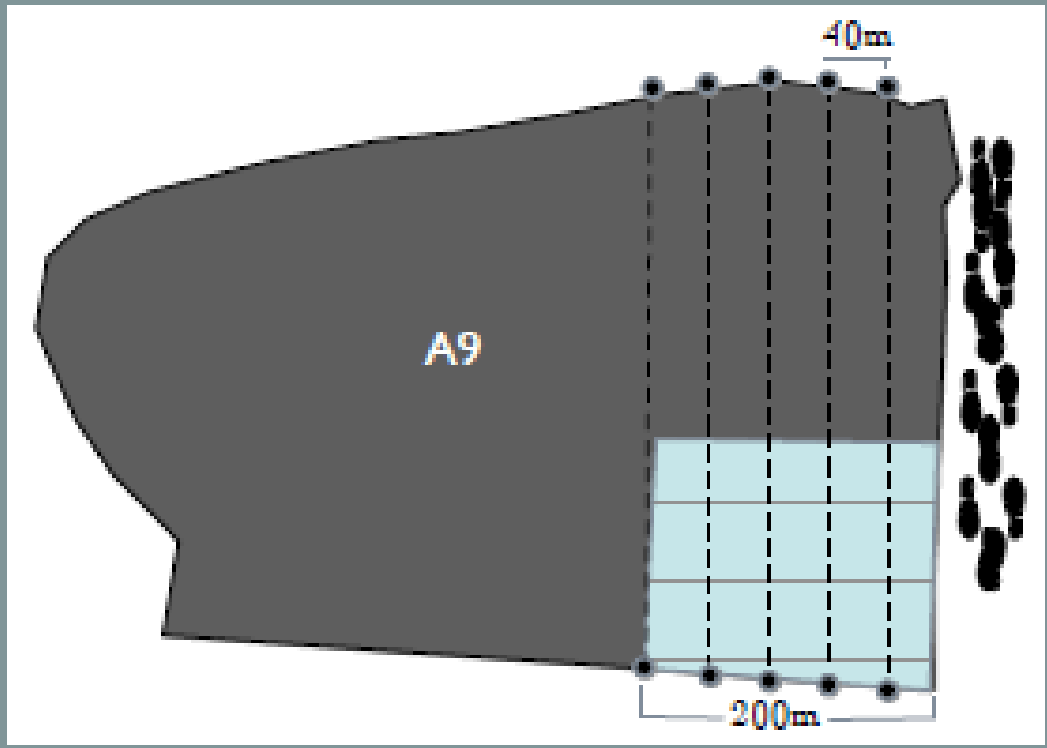
- Comparing Weekdays to Weekends at trail sites, bird numbers declined with increasing trail use.
- But, compared to Non-trail sites, Trails had no negative effects on bird numbers, species richness, or proportion of birds foraging.

For managers this means…

- Factors to consider: tangential approach, small birds, non-motorized, urbanized area
- Trail use under these conditions may have little effect on foraging shorebird use of mudflat areas but many unknowns, so…
- Plan for substantial no-access areas

What about Wintering Waterfowl?

(White & Trulio, SJSU)



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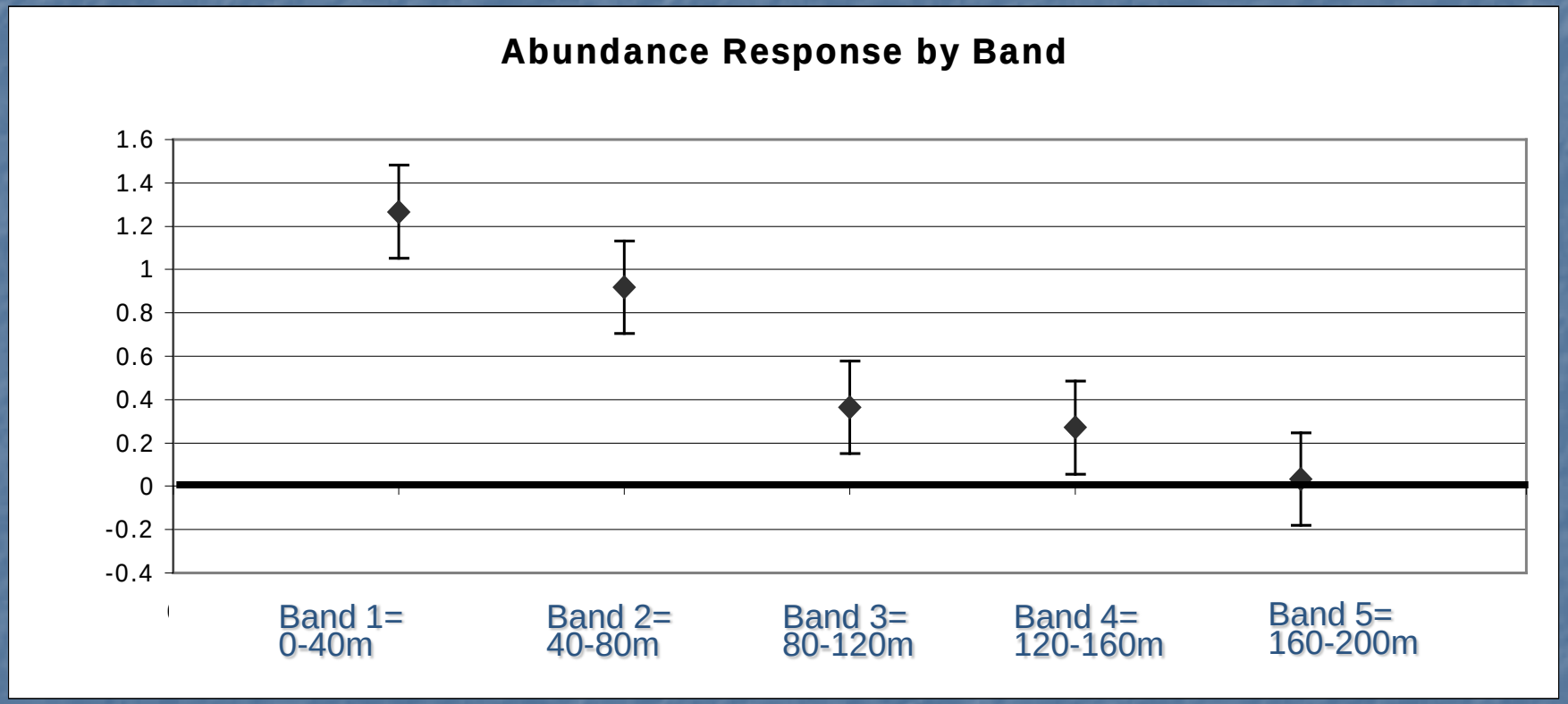
Ducks Care A LOT!

Before vs. After Disturbance: All species combined showed significant band effect



$F_{(4,145)} = 5.596,\ p < 0.001$

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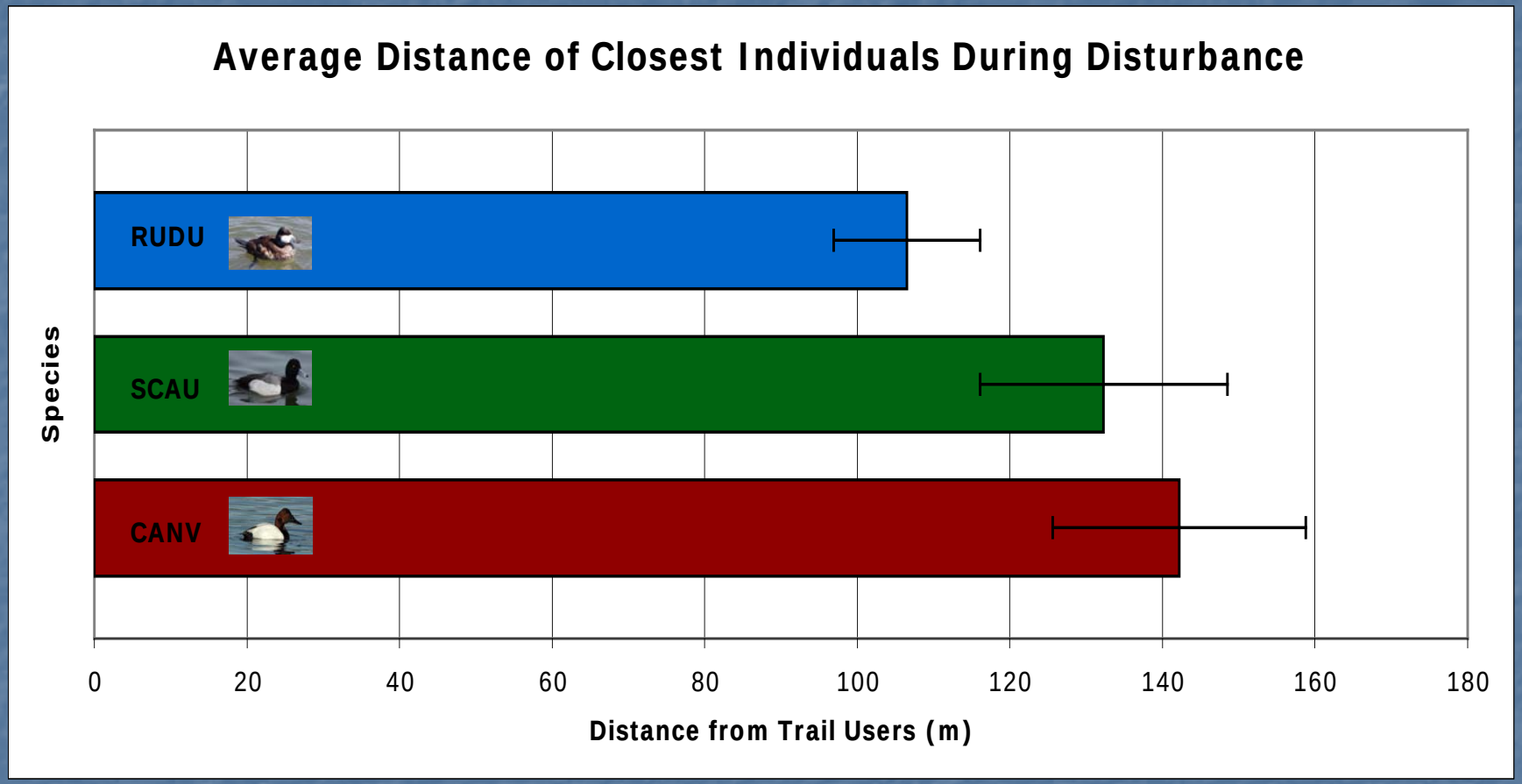
Ducks Care A Lot!



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Wintering Waterfowl Findings

- Sensitive to new trail use
- Disturbance zone ~100-160m
- Locate trails next to large ponds to allow birds to escape trail use
- Plan for significant areas without trails to protect foraging ducks

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Some Questions that Remain

But…might waterfowl become habituated to trail use?

How do shorebirds respond to newly-introduced trail use?

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More Research Ahead

- Nesting Snowy Plover Response to Trail Use
- Trail Use and Waterbirds – Habituation?
  - Shorebird response to newly-introduced trail use
  - Waterfowl response to long-term trail use
- Trail User Satisfaction Study – What users want
- Harbor Seal Response to Boaters
  - Kathy Fox, SJSU—Response to boats at Bair Island
  - Megan Gunvalsen, SJSU—Are on-water monitors successful in reducing kayak disturbance?

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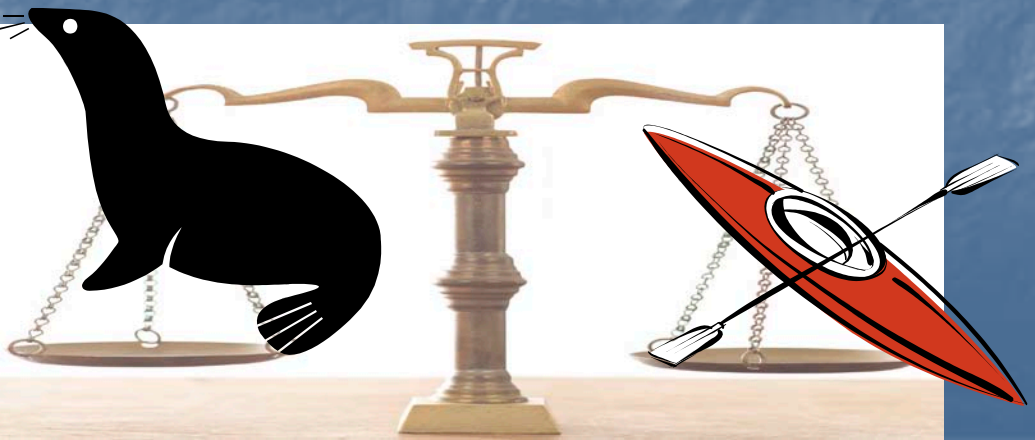
Adaptive Management
Information helps managers…

- Understand different species' sensitivities
- Design/locate features
- Determine the balance



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  - City of Redwood City
  - Marin Open Space District
  - Department of Fish and Game
  - US Fish and Wildlife Service

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Learn more… www.southbayrestoration.org

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