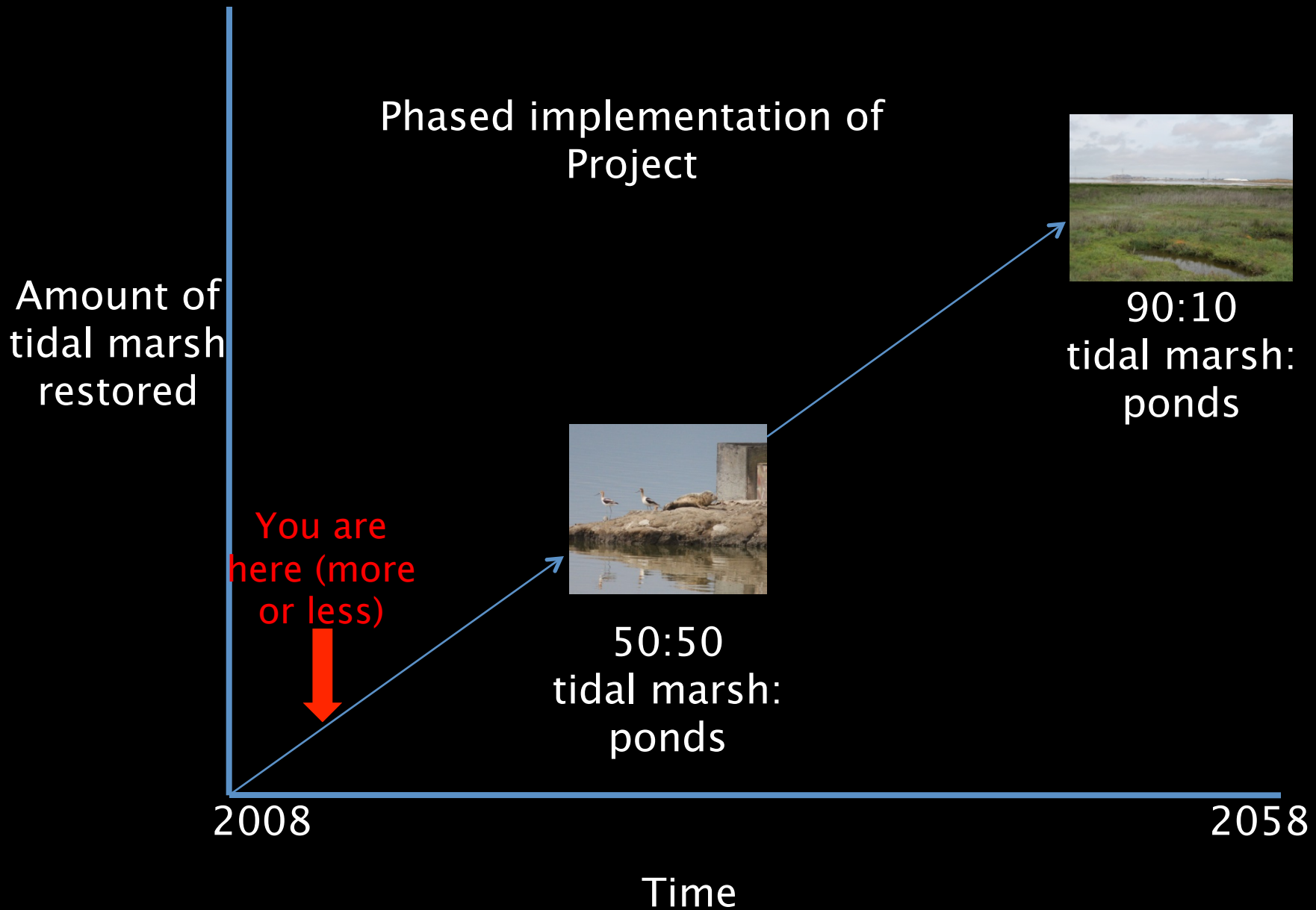


# Adaptive Management Restoration



# Trade-offs

- Tidal marsh species *and* managed pond species
- Public use and wildlife needs
- Flood risk management



# Select key uncertainties

- Wildlife use of changing habitats
- Habitat evolution and sediment dynamics
- Mercury methylation



C. Strong



D.  
Thomson



# Key Uncertainties

- Wildlife use of changing habitats



R. Golden



A.

Chandos

# Maintaining shorebirds and waterfowl in a smaller number of ponds

Since 2003, shorebird and dabbling duck numbers have increased

Newly restored ponds provide foraging habitat similar to mudflats

Islands for nesting habitat is critical for breeding birds



## 2011 Nests on SF2

### American Avocets:

- 153 on islands
- 27 on salt flats
- 12 on internal levees

### Snowy Plovers:

- 5 on islands
- 13 on salt flats



# California gulls and nesting birds in managed ponds



R. Golden



D. Thomson

California gull numbers decreased to 38,000 in 2011

Largest colony was on A9 levee

Will continue to haze gulls and decrease gull habitat in sensitive areas

# Public access and bird use of habitats

trails need to be ~150 meters from nesting western snowy plovers





# Increased tidal habitats and native fish

31 species of fish found in restored ponds and adjacent waters



C. Strong



C. Strong



# Key uncertainties

- Wildlife use of changing habitats
- Habitat evolution and sediment dynamics



# Sedimentation and marsh development

There is sufficient sediment to sustain marsh restoration

The mudflat near SF2 is increasing overall  
annual cycle: accretes in winter and erodes in summer

Using satellite imagery we have developed a remote sensing model to track changes in habitat over time





C. Benton



# Key uncertainties

- Wildlife use of changing habitats
- Habitat evolution and sediment dynamics
- **Mercury methylation**



# Mercury methylation and scour in Alviso Slough

Final year of sampling has taken place in Alviso area

analysis has begun for biosentinels (fish and bird  
eggs), sediment and water

final report and analysis due January 2013



# Looking Ahead to Phase 2



D. Thomson

# Phase 2 Applied Studies

- Use of dredge materials
- Sub-tidal habitat enhancement
- Public access survey
- Ecotone restoration
- Sea level rise



# Phase 2 Applied Studies

- Mercury monitoring
- Trails and upland transition zones
- Benefits of salt panne habitats
- Tidal prism changes at Eden Landing
- California gull monitoring

