

# Nests, Nests, Everywhere: Adaptive Management in Action at Pond A19

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SBSRP Science  
Symposium  
May 2022



NATIONAL  
**WILDLIFE**  
REFUGE SYSTEM

  
**ALLUVION**  
Biological Consulting



**South Bay Salt Pond  
Restoration Project**  
*Restoring the Wild Heart of the South Bay*









A19-21: Circa 1928






Pond A21

Pond A19

Coyote Creek



IKONOS CIR Satellite Photos, May 2004 Provided

 **H.T. HARVEY & ASSOCIATES**  
**ECOLOGICAL CONSULTANTS**

**Island Pond Tidal Marsh Establishment Projections:  
Initial Stewardship Plan Breach Locations**

File No. 2456-01	Date 1/13/05	Figure 3
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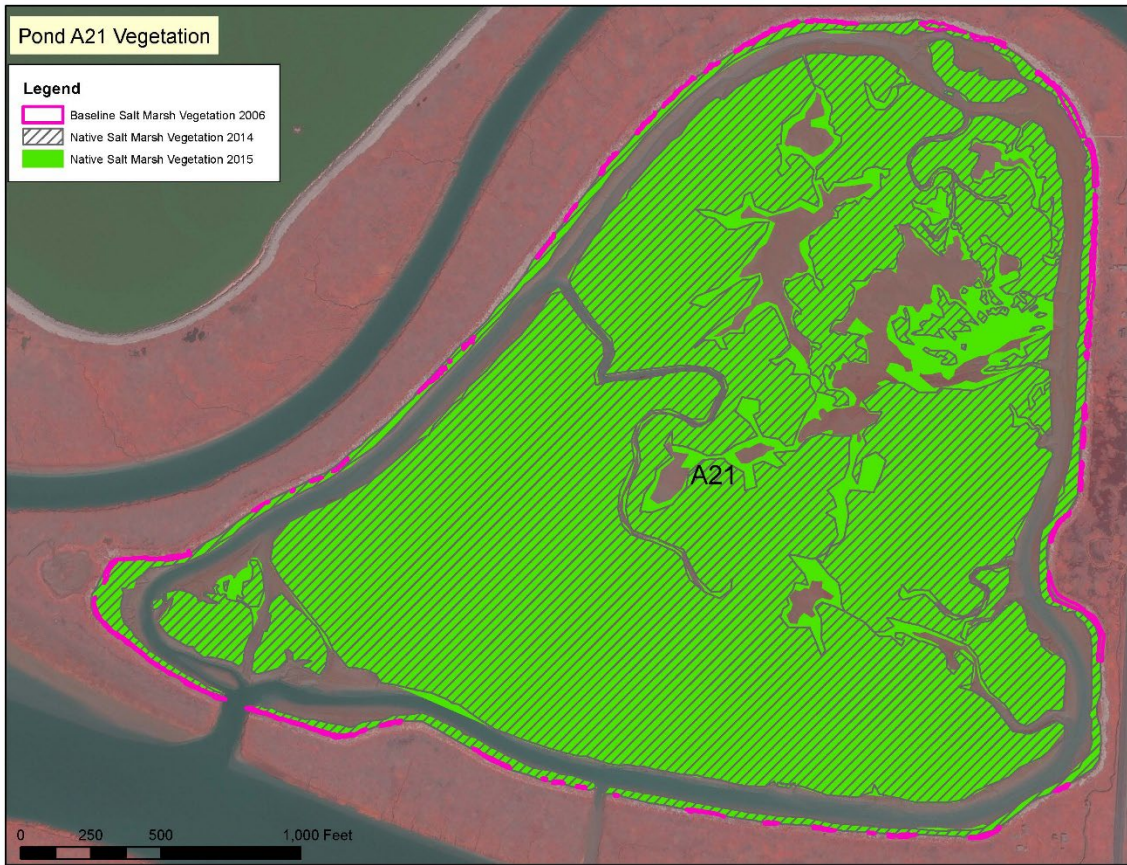
# Breaching the Island Ponds

January 2006





# Digitized Vegetation from Satellite Imagery in Pond A20 and A21, Comparison over Several Years 2006–2015







R. Tertes

9 years  
later!

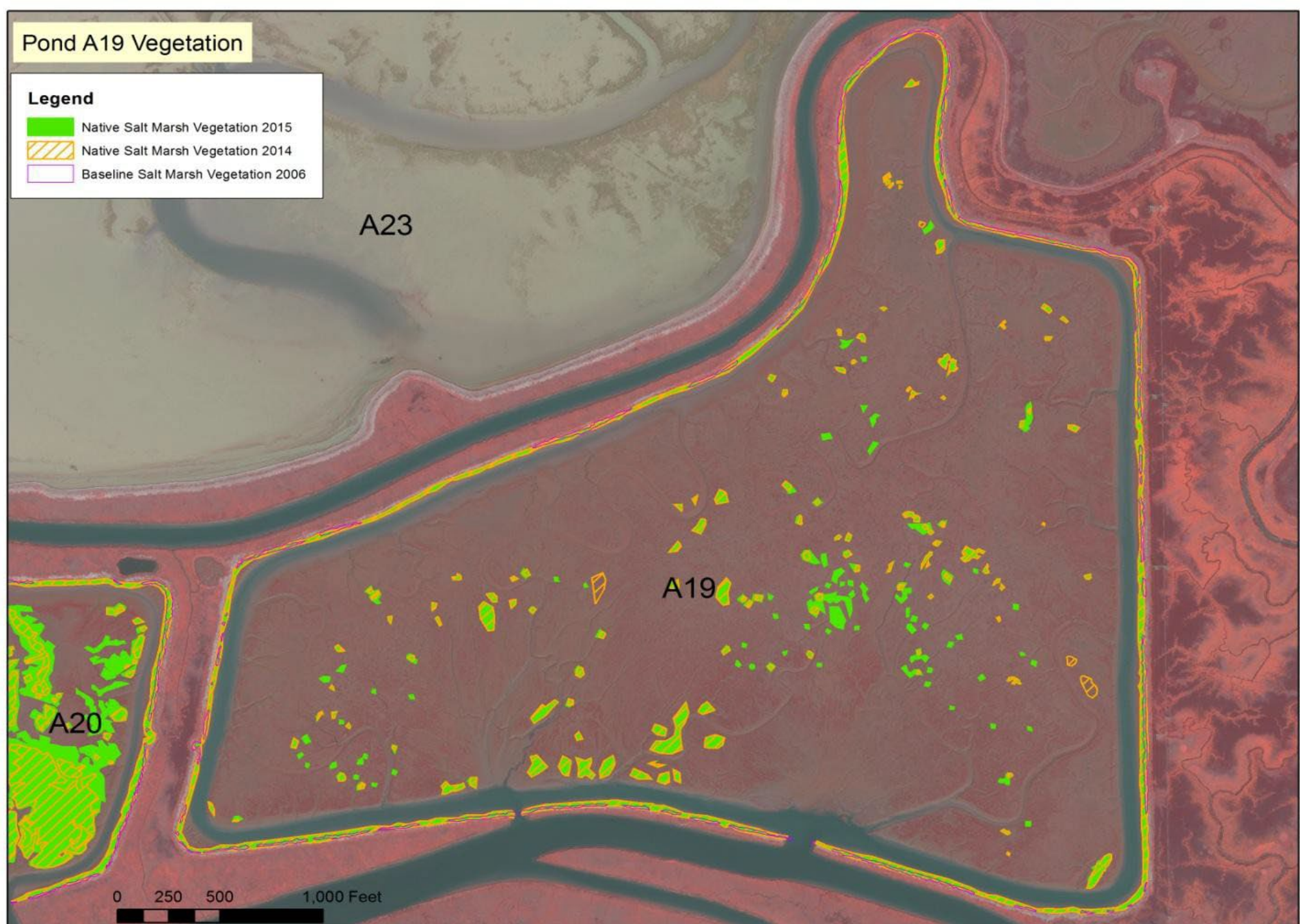


J. Kitzenberger



# What about A19?

Digitized  
Vegetation from  
2006-2015









A19 in  
2015



Valley  
Water

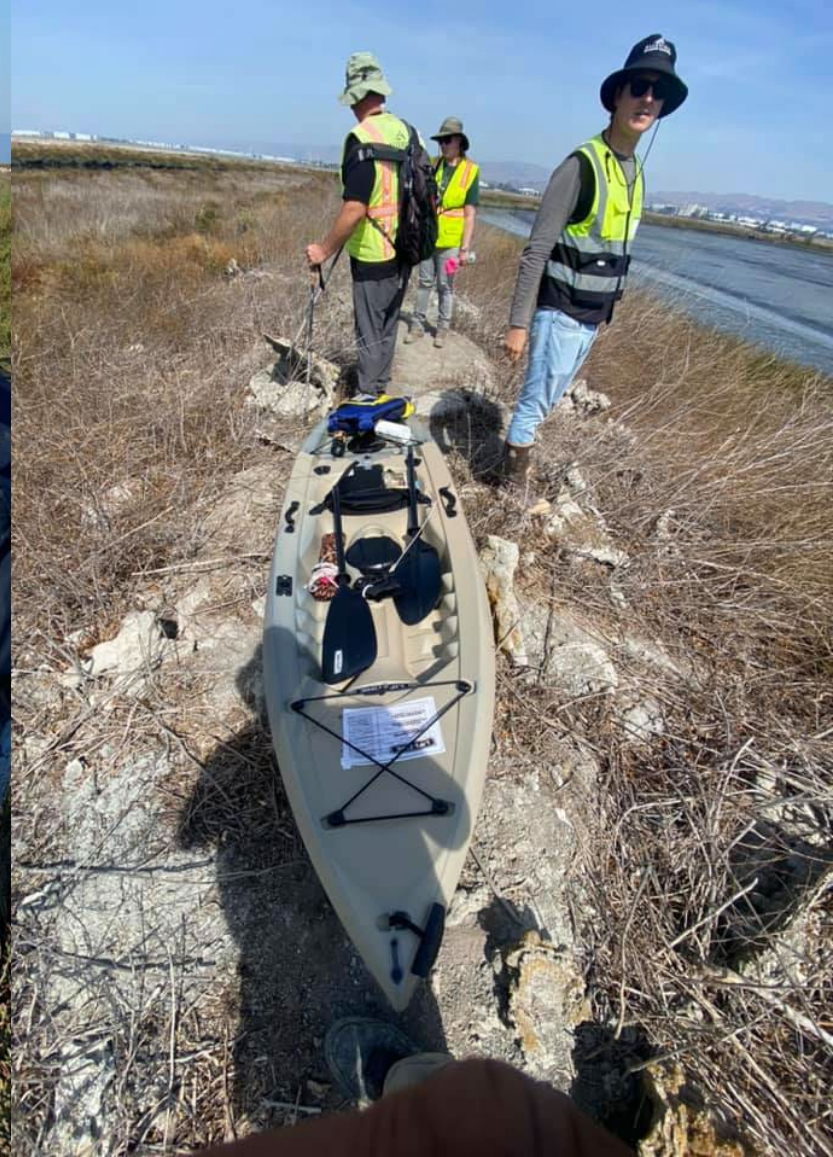
A19 in  
2021



R. Tertes



# Pre-Construction Surveys





# Dwarf Spikerush (*Eleocharis parvula*) survey







Vegetation Removal







# Nests Found During Veg Removal





# Biologists Hand Searched for Rodent Nests



Photo: Laura Coatney



185  
Total  
Nests!





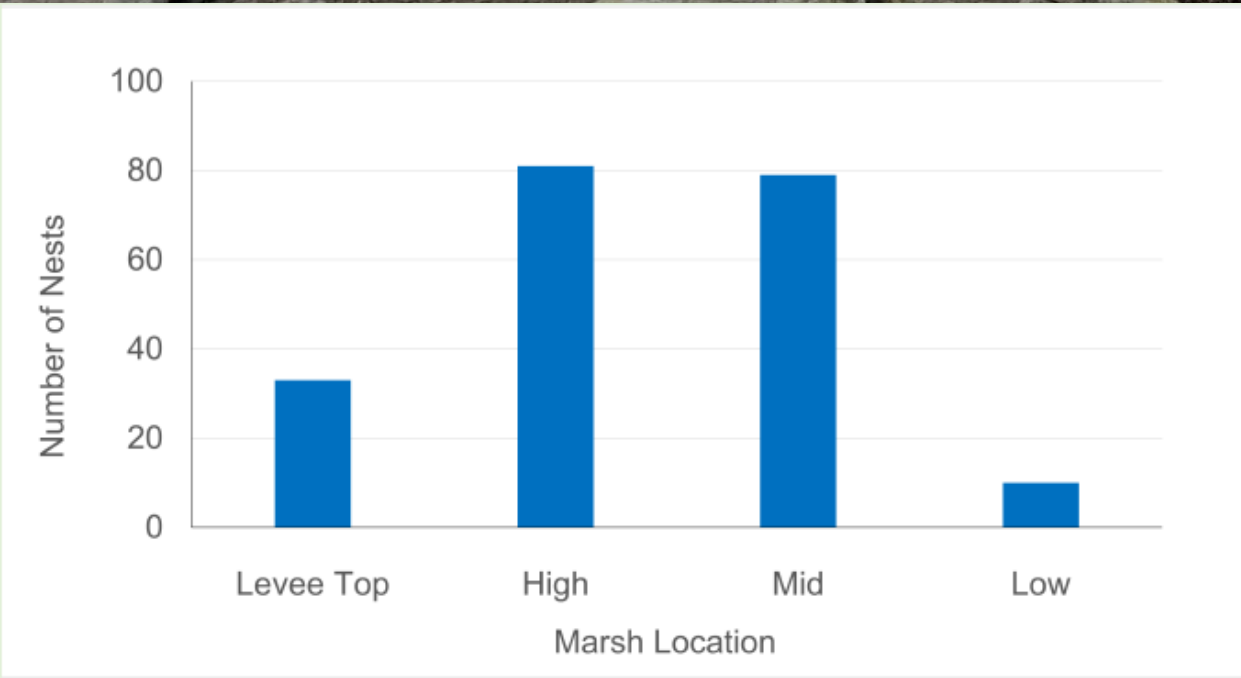


Levee top

High marsh

Mid marsh

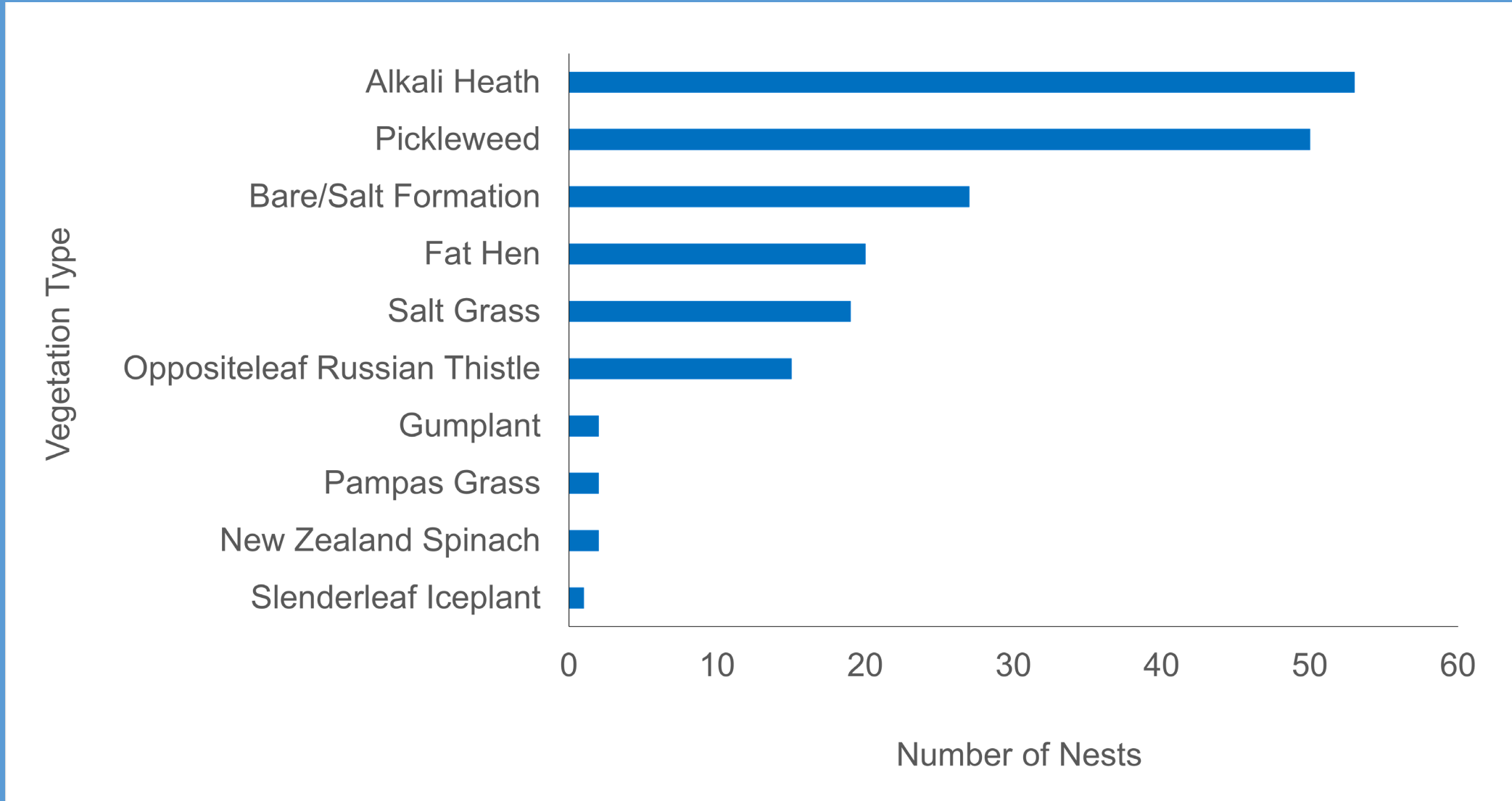
Low marsh



Rodent Nest Placement in Project Area



# Vegetation Type Surrounding Rodent Nests







SMHM nest  
Alluvion Biological Consulting



SMHM nest  
Alluvion Biological Consulting

Salt Ponds  
18 Nov 2021, 15:02:37

# Alkalai Heath (*Frankenia salina*)



# Alkalai Heath (*Frankenia salina*)







Pickleweed  
(*Salicornia pacifica*)





# Fat Hen (*Atriplex patula*)





# Salt Grass (*Distichlis spicata*)





# Salt Grass & Salt Formation



SMHM nest  
Alluvion Biological Consulting



# More Nests Under Salt Formations



Smhm nest  
Alluvion Biological Consulting

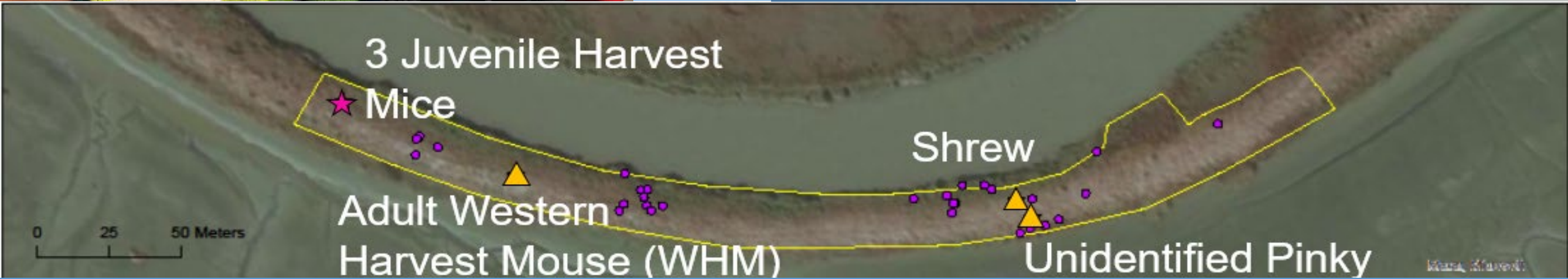
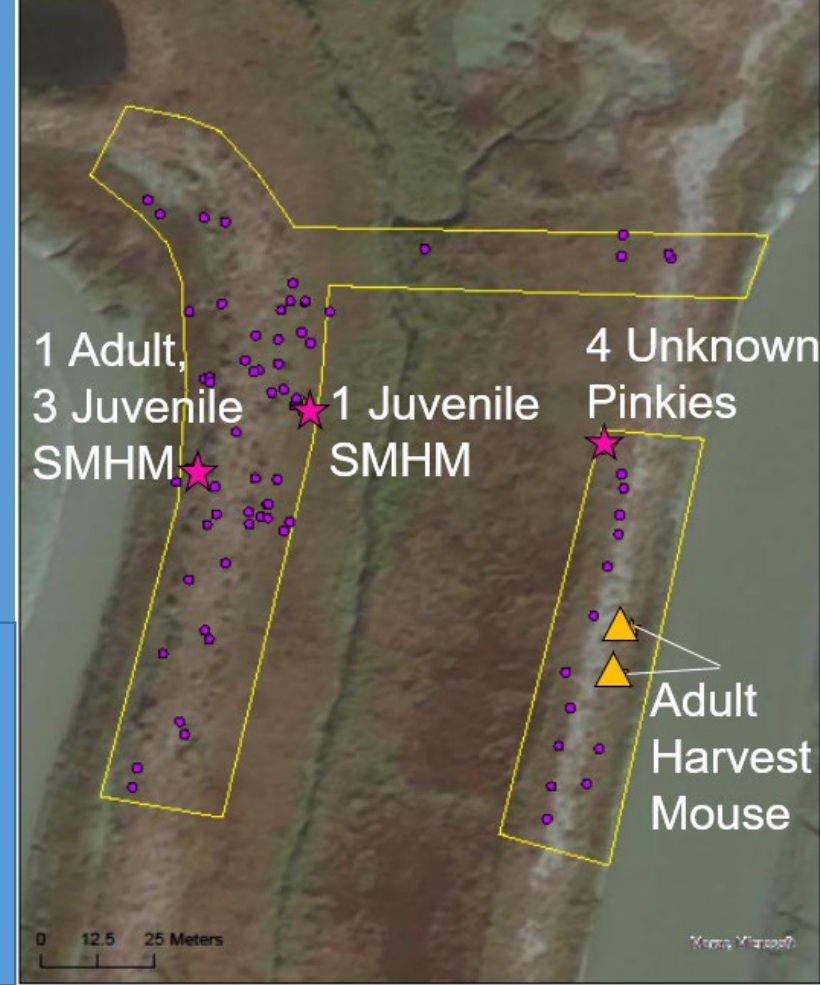
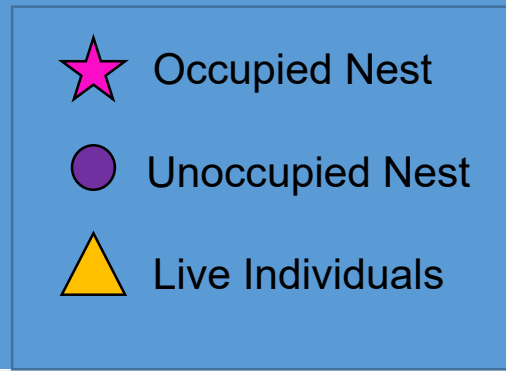
Salt Por  
20 Nov 2021, 12:48

SMHM nest  
Alluvion Biological Consulting

Salt Ponds  
18 Nov 2021, 14:21:25



# Locations of Nests and Individuals





# Live Rodents!



Salt Marsh Harvest Mouse



Western Harvest Mouse



Juvenile Salt Marsh Harvest Mouse



Western Harvest Mouse





Juvenile California Vole



WRA Inc. and Alluvion Biologists



Shrew by Vanessa Danielson



# Galleys



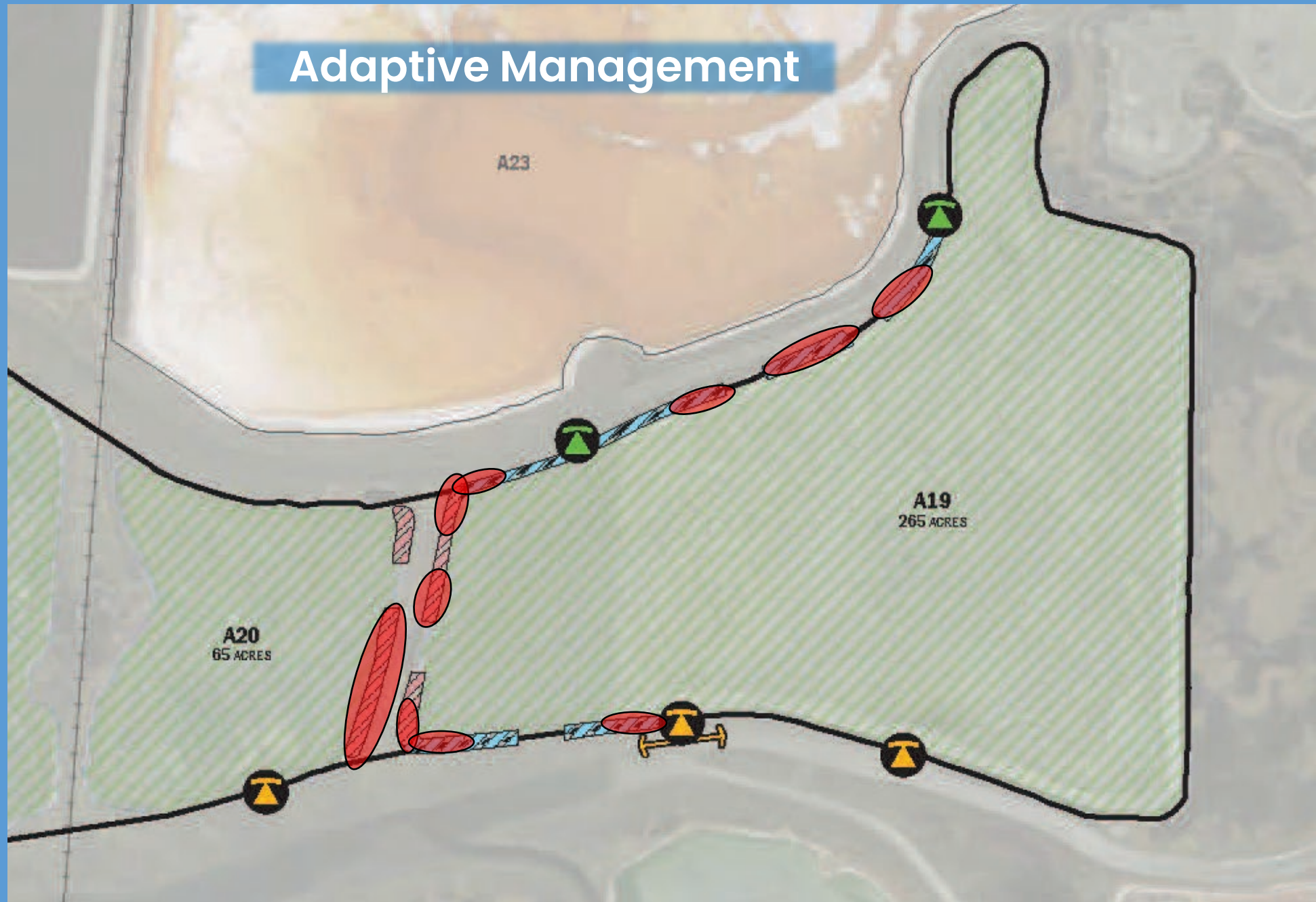




Photos:  
R. Tertes



# Adaptive Management





Construction was completed  
in January 2022!



Photos: C. Benton KAP



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Photo: R. Tertes