A photograph of a white boat partially submerged in dark water, with a rocky shoreline in the foreground. The boat is tilted and appears to be abandoned. The water is dark and calm. The rocks are grey and jagged. The sky is not visible.

Abandoned and Derelict Vessels in the Delta: *Results of a Comprehensive Aerial Survey*

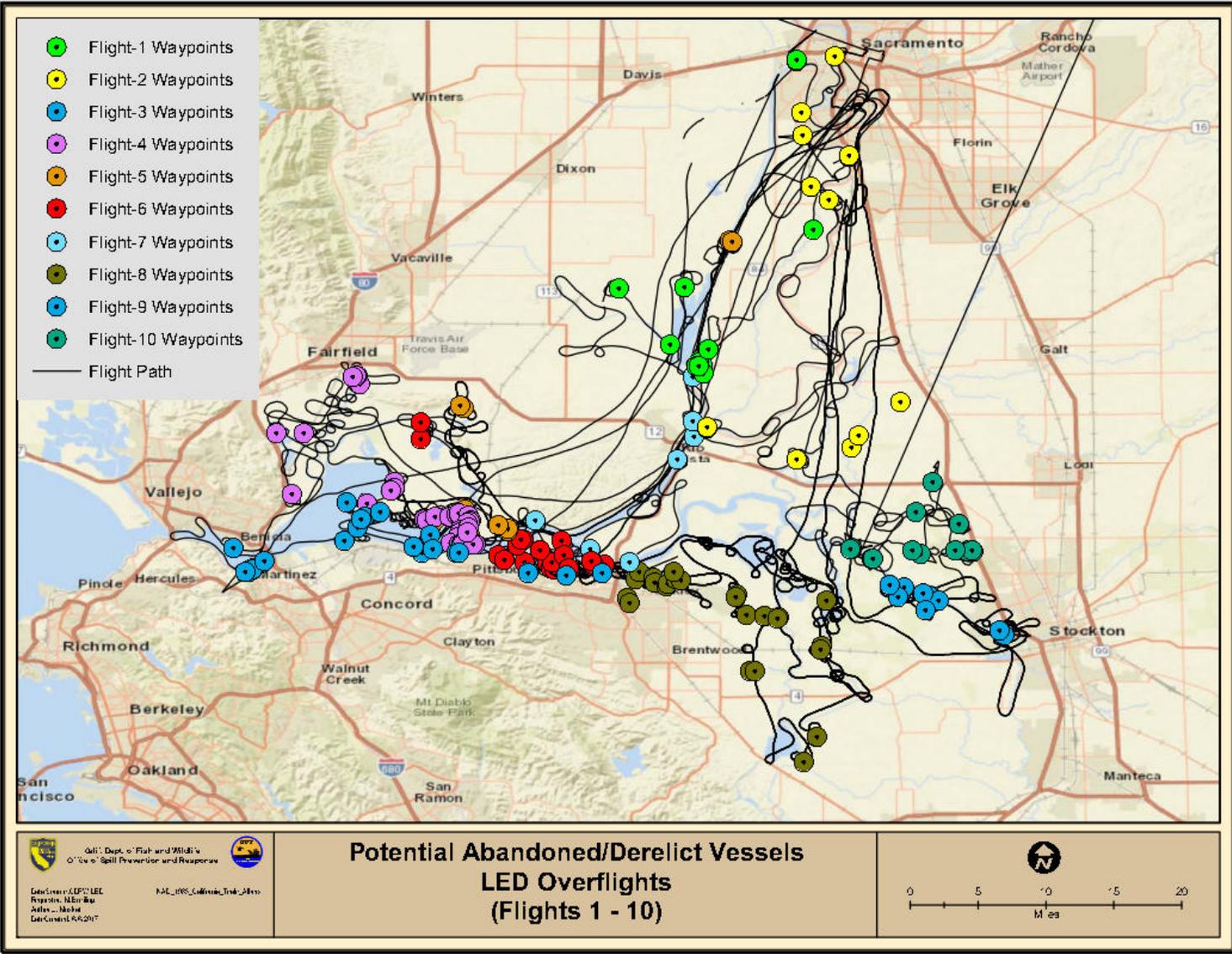
Annie Daly

Prevention First, California State Lands Commission

Tuesday, September 25, 2018

Where are the vessels?



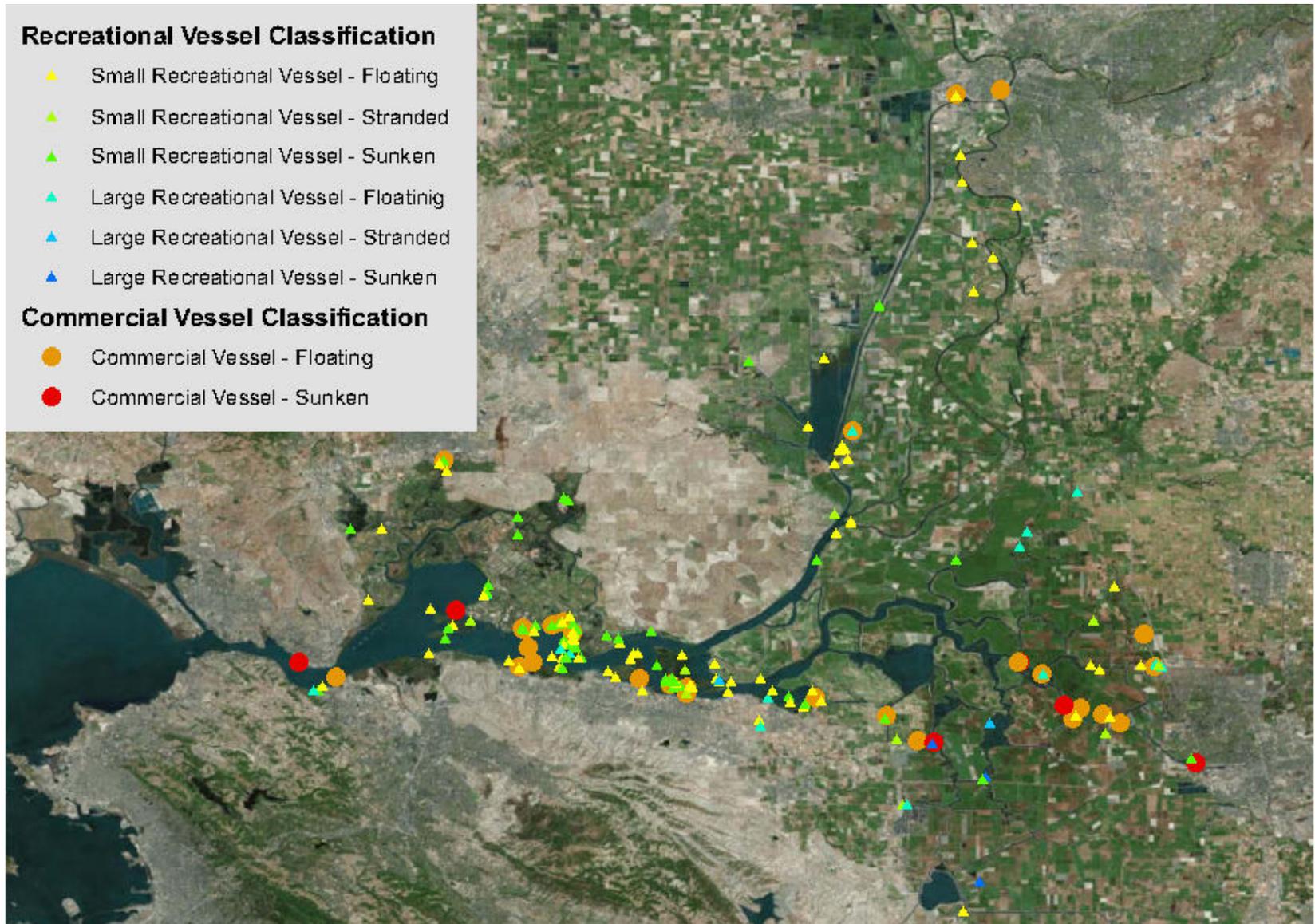


Recreational Vessel Classification

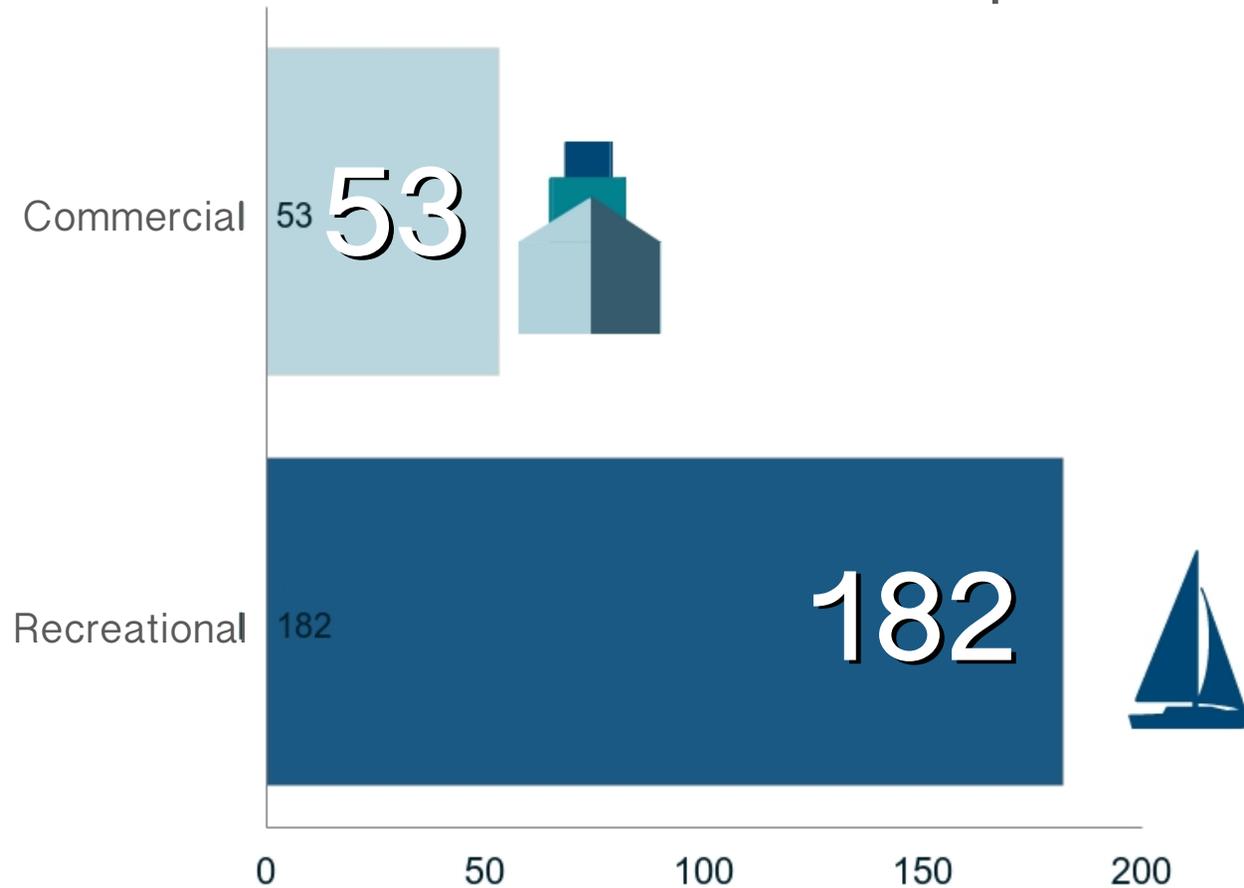
- ▲ Small Recreational Vessel - Floating
- ▲ Small Recreational Vessel - Stranded
- ▲ Small Recreational Vessel - Sunken
- ▲ Large Recreational Vessel - Floating
- ▲ Large Recreational Vessel - Stranded
- ▲ Large Recreational Vessel - Sunken

Commercial Vessel Classification

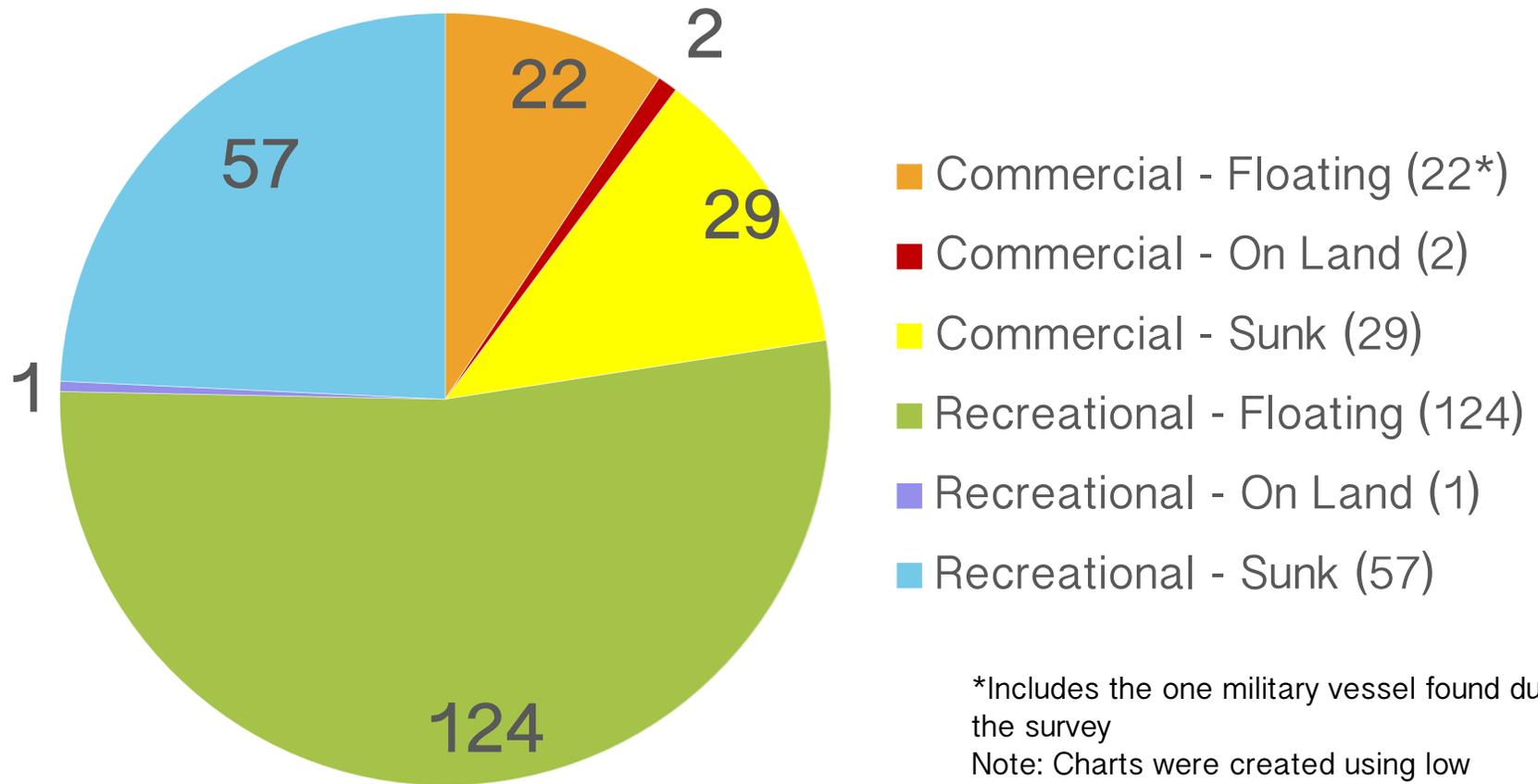
- Commercial Vessel - Floating
- Commercial Vessel - Sunken



Types of Abandoned Vessels in the Sacramento-San Joaquin Delta

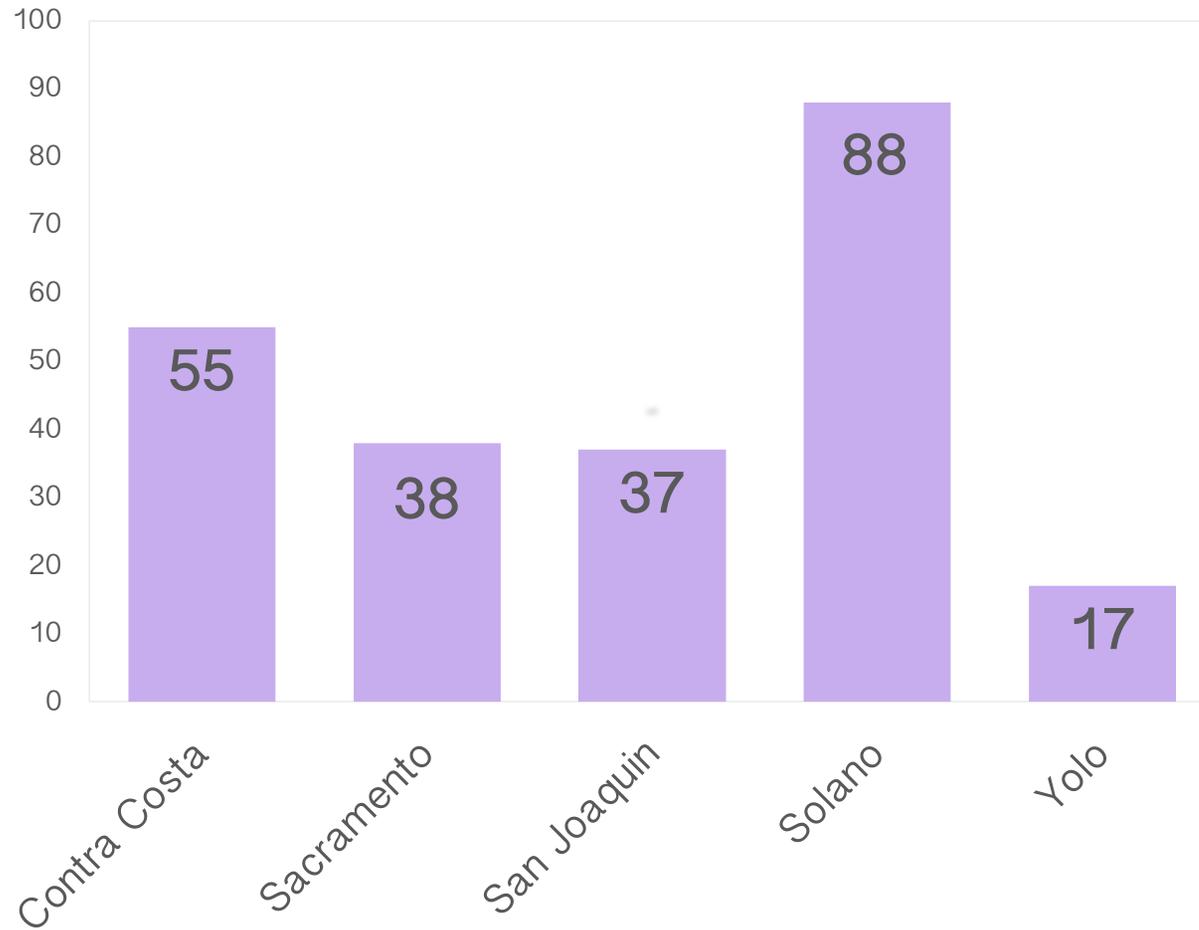


Survey Vessel Status and Type

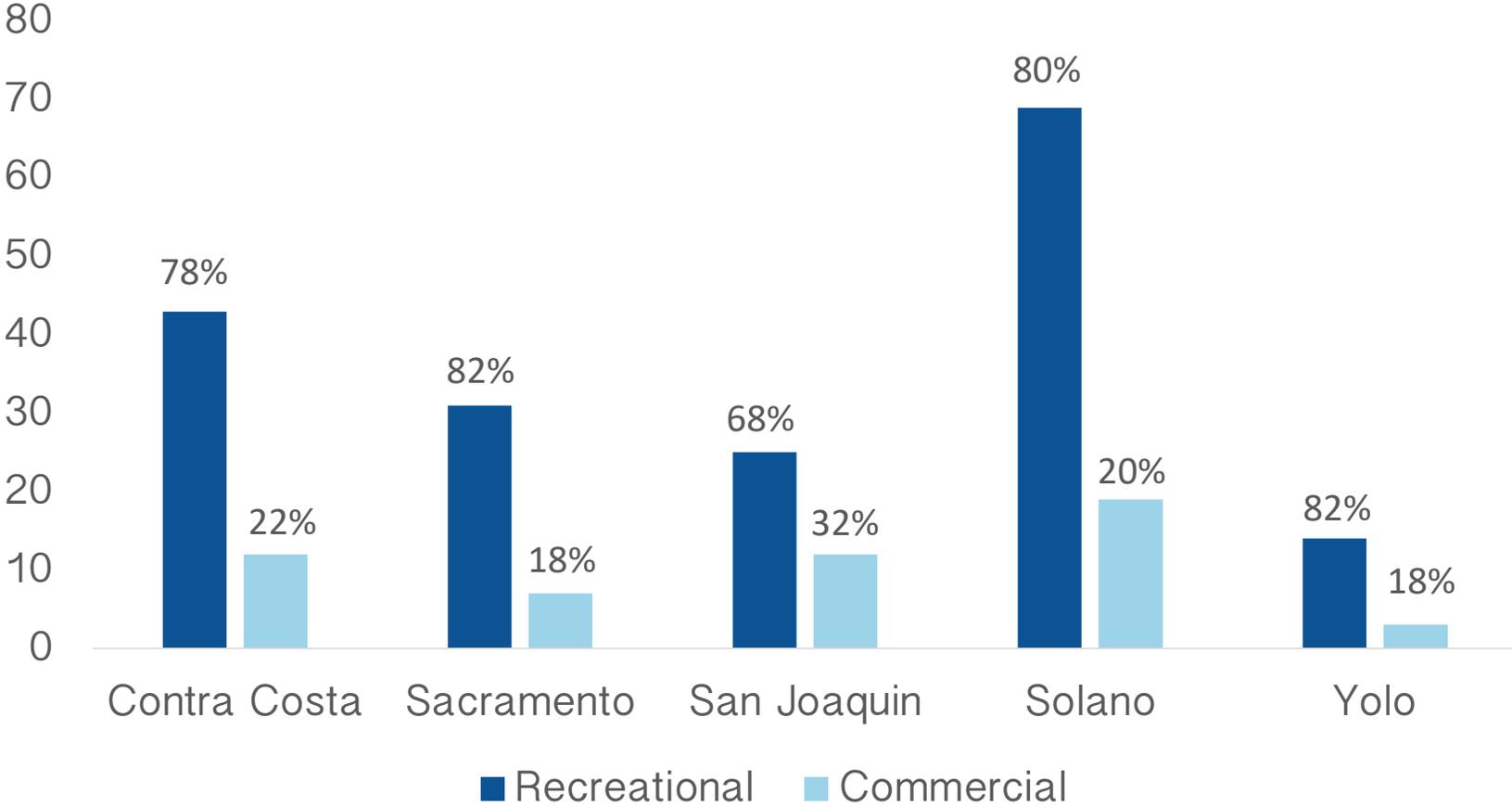


*Includes the one military vessel found during the survey
Note: Charts were created using low estimate aerial data

Distribution of Vessels by County



Distribution of Vessel Types Across Counties









ADV
August 2012
Contra Costa County

Legend
📍 37.9732722, -121.5787197

37.9732722, -121.5787197
X

Google Earth

300 ft





ADV
June 2013
Contra Costa County

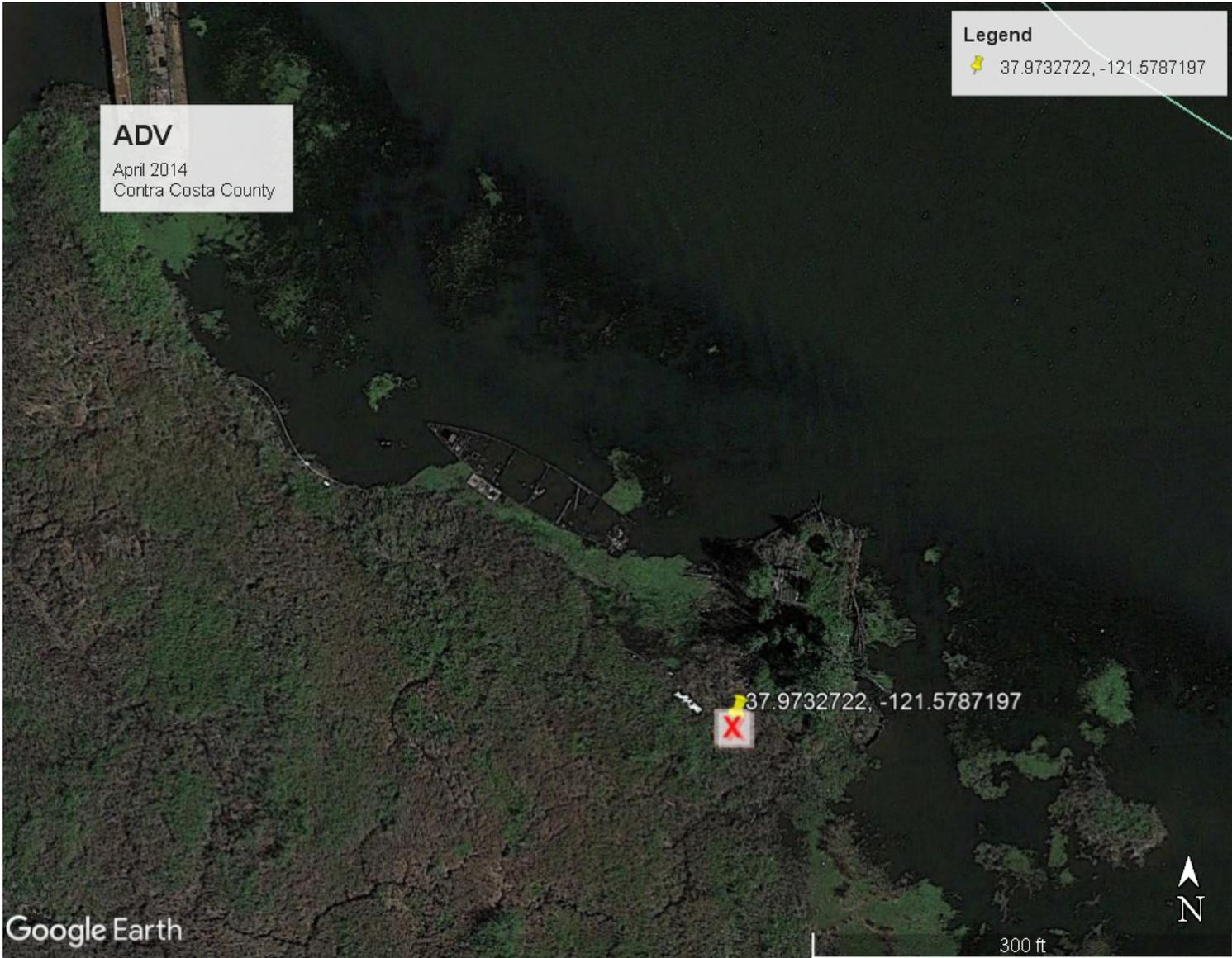
Legend
📍 37.9732722, -121.5787197

37.9732722, -121.5787197
X

Google Earth

300 ft





ADV
April 2014
Contra Costa County

Legend
📍 37.9732722, -121.5787197

📍 37.9732722, -121.5787197
X

Google Earth

300 ft





ADV
August 2015
Contra Costa County

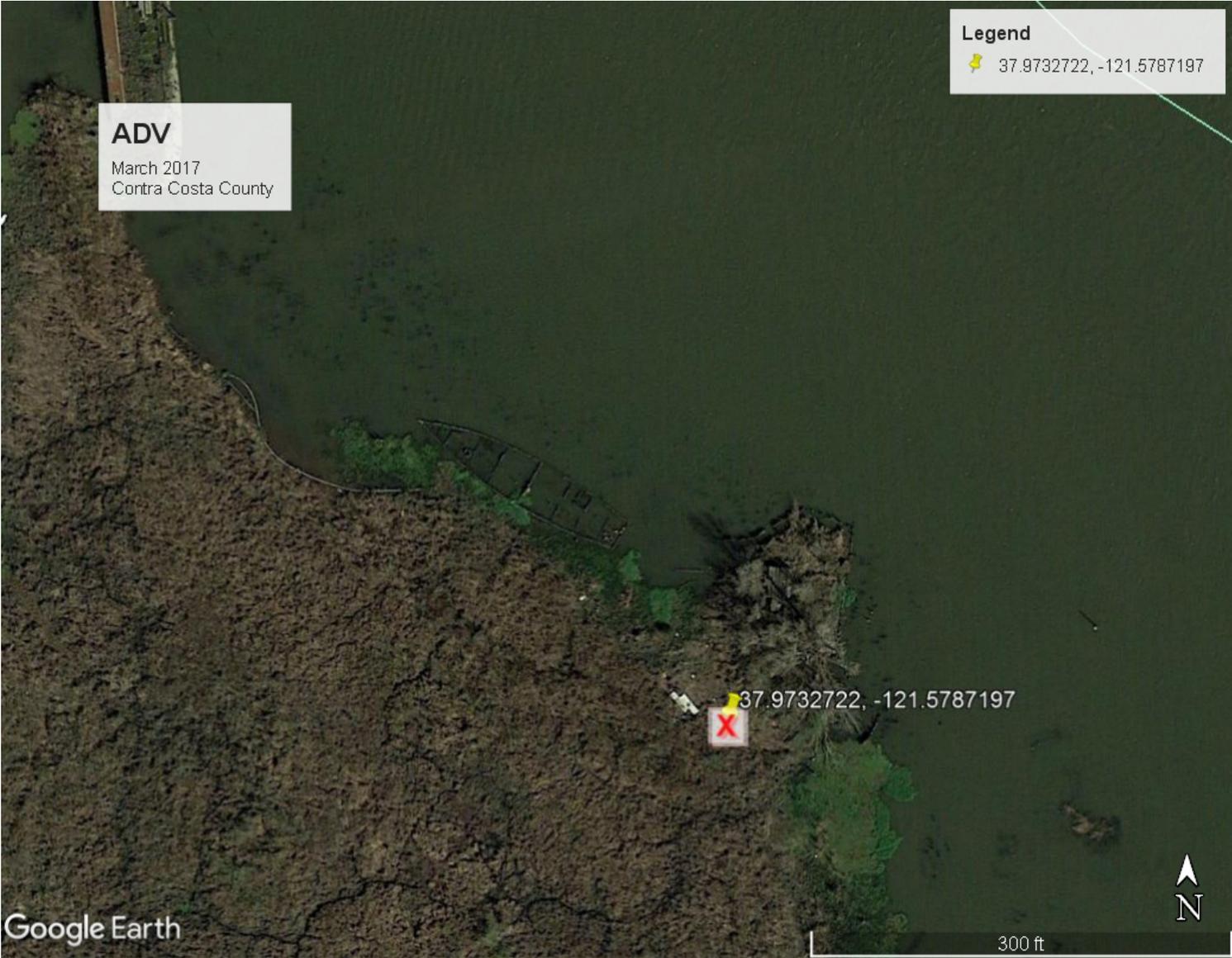
Legend
37.9732722, -121.5787197

37.9732722, -121.5787197

Google Earth

300 ft





ADV
March 2017
Contra Costa County

Legend
📍 37.9732722, -121.5787197

37.9732722, -121.5787197
X

Google Earth

300 ft



Cost Estimate

Factors that influence cost of removal

- Accessible by land vs. water
- Sunk/Floating
- Hull material
- HazMat
- Sheen
- Depth of water
- Distance to nearest landfill
- Height restrictions

Length Category	Number of vessels	Average cost of vessel removal by category	Cost for vessel category
<i>Vessels under 25 ft.</i>	181	\$4,000	\$724,000
<i>Vessels between 25 ft. and 65 ft.</i>	19	\$145,699	\$2,768,275.00
<i>Vessels larger than 65 ft.</i>	35	\$857,143	\$30,000,000.00
Total	235	\$142,520.32	\$33,492,275

Example Funding Scenarios

- If had a budget of **\$6 million/year** for **10** years, could remove all legacy vessels from Delta in about 7 years and have influx under control in about 9
- If ramped down to \$1.5 million after the first 10 years, could continue to keep influx under control for life of program (assuming influx reduces to 1 vessel a year after 5 years and stays constant)

Questions?



Thank you



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