

Fig 1: San Luis Rey, Carlsbad HU and San Dieguito Watersheds MSP Priorities and Sensitive Species

- | | |
|--------------------------------|----------------------------------|
| ● Arroyo toad | ● Northern harrier |
| ● California least tern | ● Quino checkerspot butterfly |
| ● Coastal cactus wren | ● San Diego Ambrosia |
| ▲ Encinitas baccharis | ● Southwestern pond turtle |
| ● Hermes copper | ● Southwestern willow flycatcher |
| ● Least Bell's vireo | ▲ Sticky dudleya |
| ● Light-footed Ridgeway's rail | ● Western burrowing owl |

0 0.5 1 2 3 4 5 6 Miles

Management units Watershed





Santa Margarita Watershed

No treatment
Riverside County

No treatment
Camp Pendleton

Santa Margarita River

San Luis Rey Watershed

San Luis Rey River

MU 8

Keys Creek

MU 6

Carlsbad Hydrologic Unit
(Six Watersheds)

San Dieguito Watershed

Escondido Creek

San Dieguito River

MU 5

MU 7

MU 4

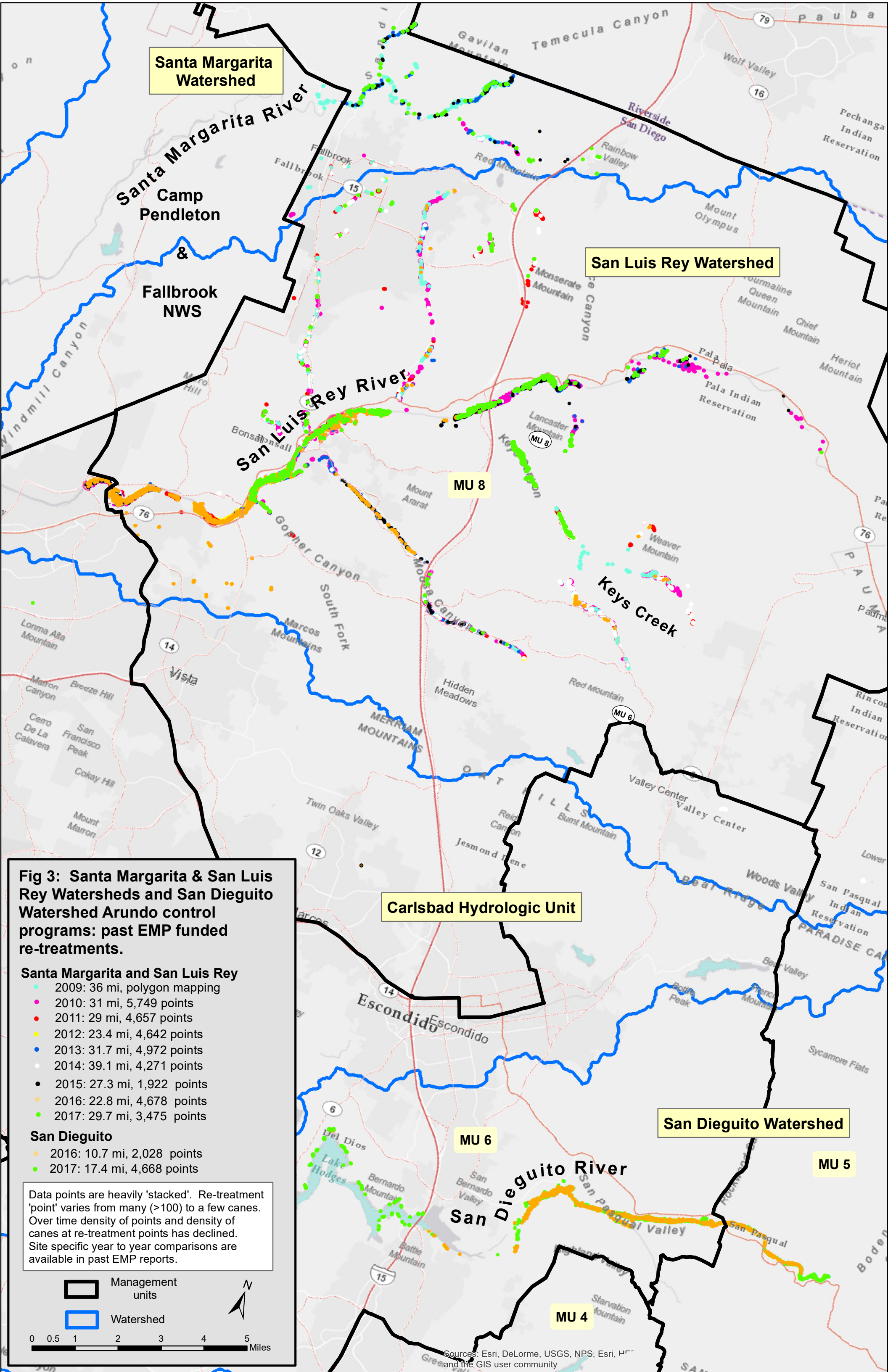
Fig 2: Santa Margarita, San Luis Rey, Carlsbad HU and San Dieguito Watersheds Arundo treated- (re-treatment areas)

- Santa Margarita Arundo treated: 691 acres
- San Luis Rey Arundo treated: 700 acres
- San Dieguito Arundo treated: 98 acres
- Carlsbad HU Arundo treated: 93 acres

- Management units
- Conserved Lands



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Santa Margarita Watershed

San Luis Rey Watershed

Carlsbad Hydrologic Unit

San Dieguito Watershed

Fig 3: Santa Margarita & San Luis Rey Watersheds and San Dieguito Watershed Arundo control programs: past EMP funded re-treatments.

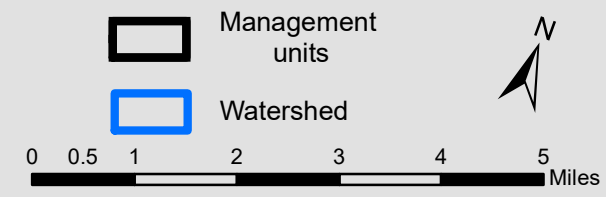
Santa Margarita and San Luis Rey

- 2009: 36 mi, polygon mapping
- 2010: 31 mi, 5,749 points
- 2011: 29 mi, 4,657 points
- 2012: 23.4 mi, 4,642 points
- 2013: 31.7 mi, 4,972 points
- 2014: 39.1 mi, 4,271 points
- 2015: 27.3 mi, 1,922 points
- 2016: 22.8 mi, 4,678 points
- 2017: 29.7 mi, 3,475 points

San Dieguito

- 2016: 10.7 mi, 2,028 points
- 2017: 17.4 mi, 4,668 points

Data points are heavily 'stacked'. Re-treatment 'point' varies from many (>100) to a few canes. Over time density of points and density of canes at re-treatment points has declined. Site specific year to year comparisons are available in past EMP reports.



Sources: Esri, DeLorme, USGS, NPS, Esri, HP and the GIS user community