

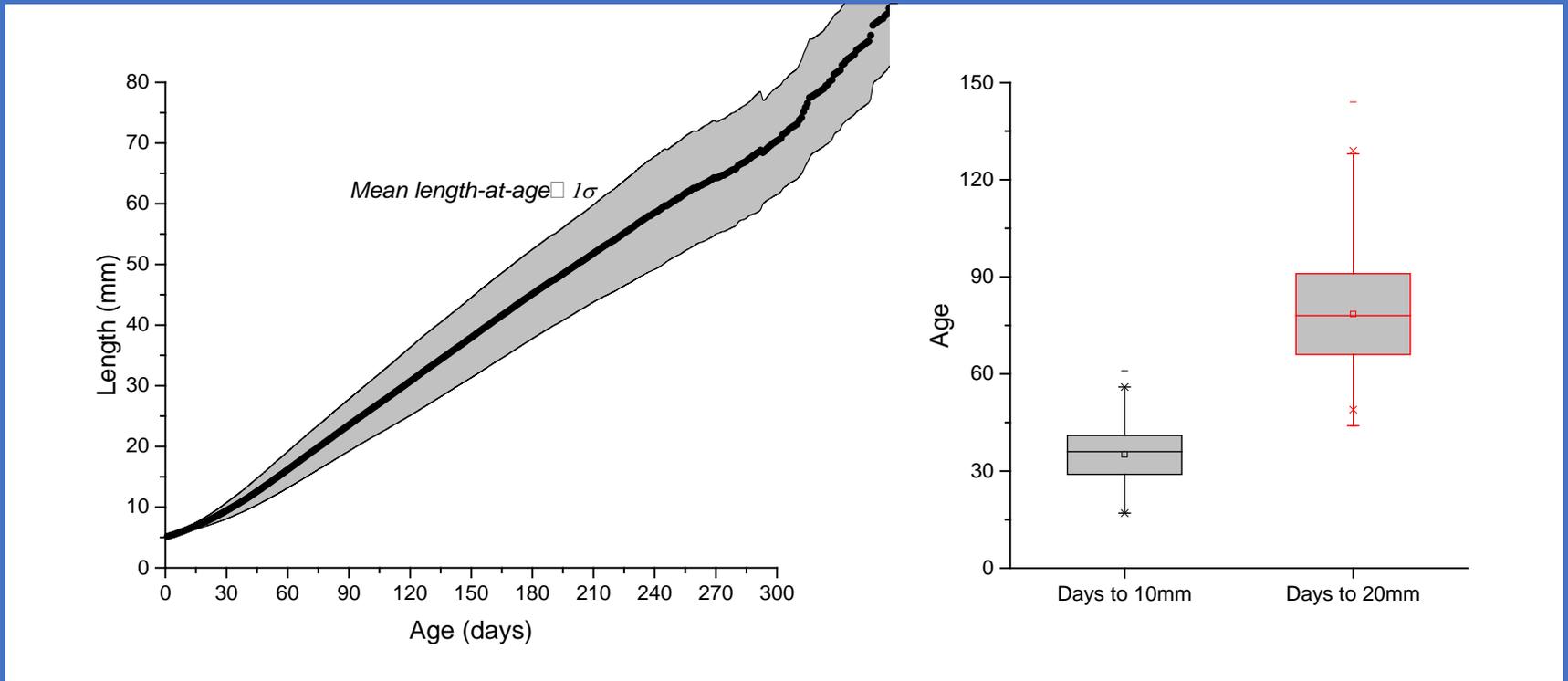
Longfin Smelt MAST Synthesis Meeting

October 21, 2016

UCD Data and Corresponding CDFW Data

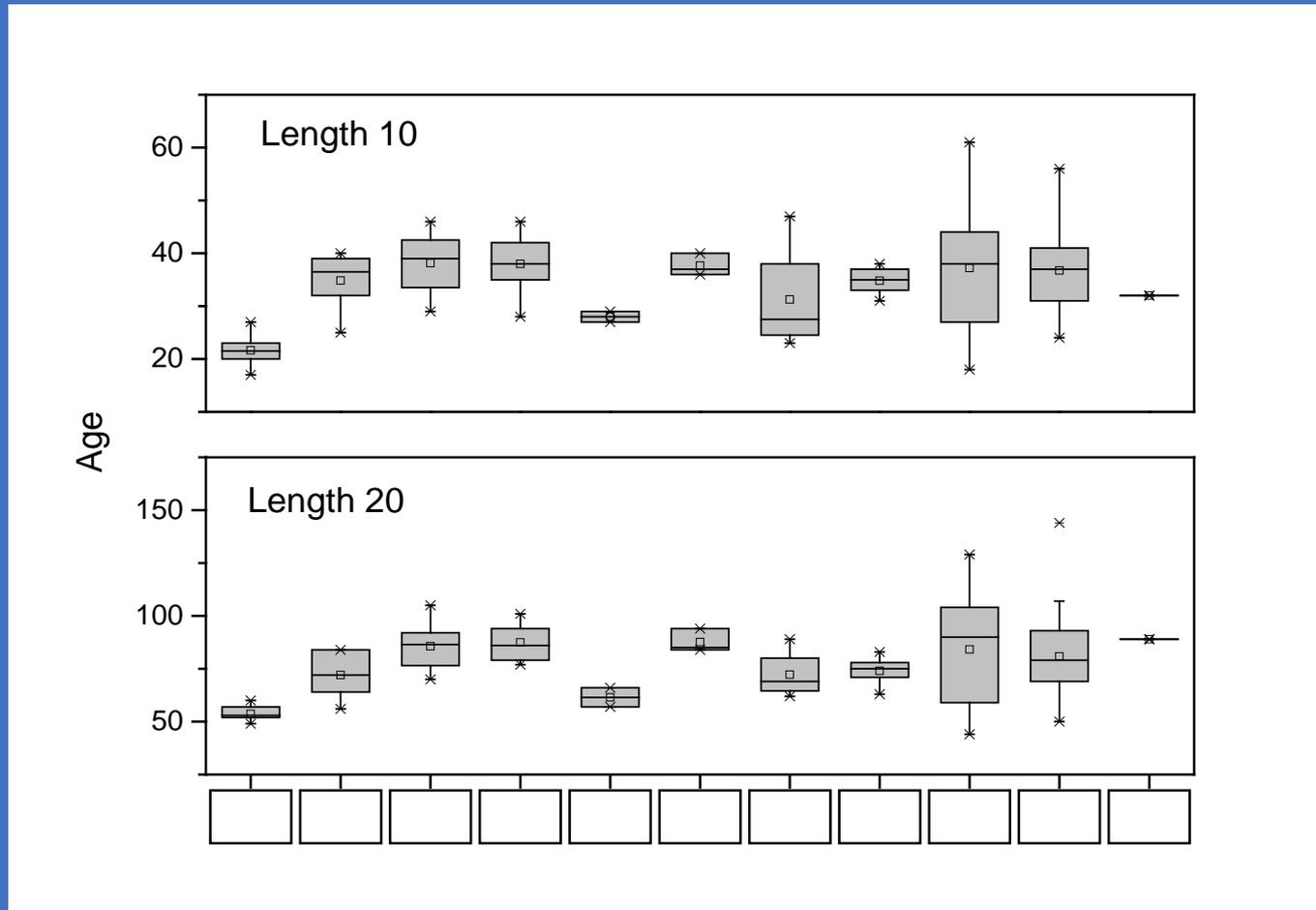
Early Life History Growth

Q1. How long does it take to reach 10mm, 20mm?

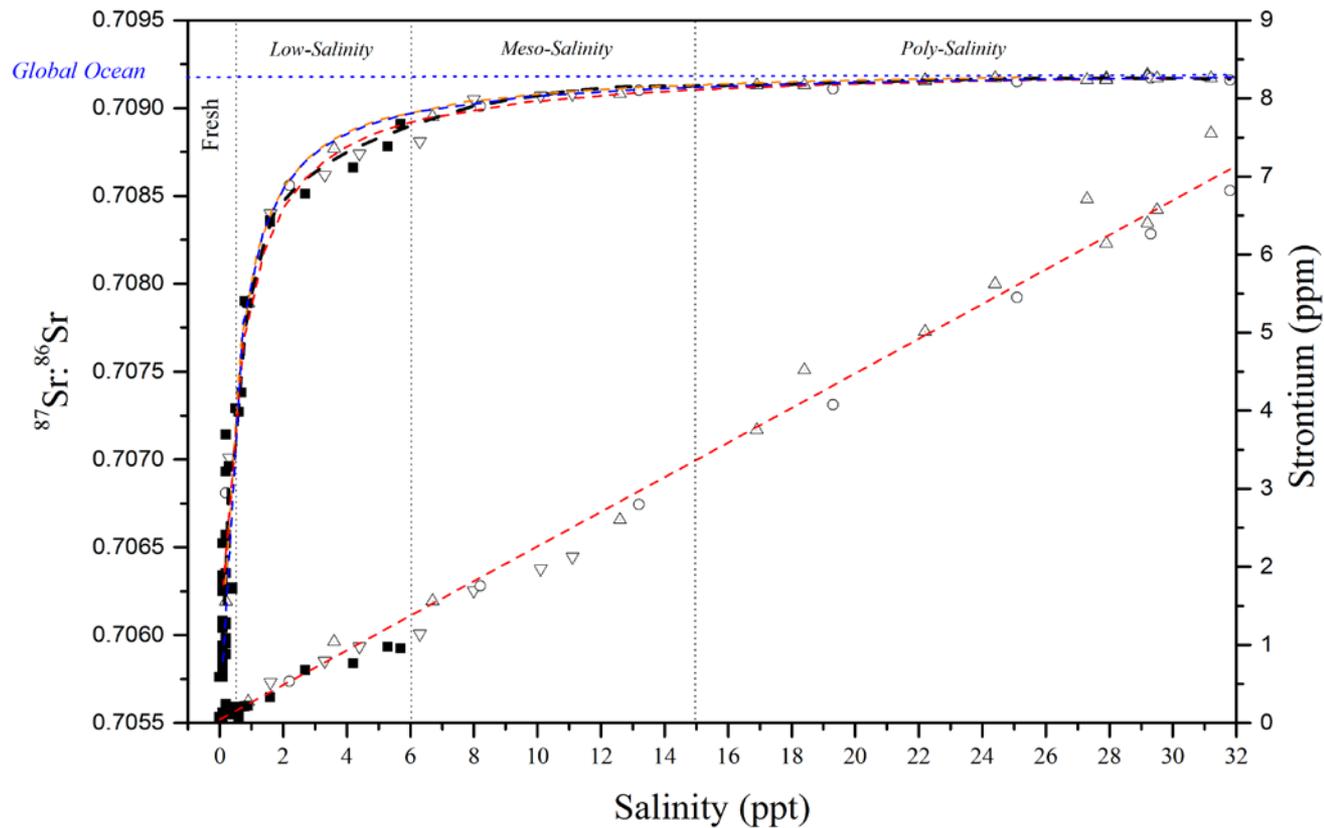


Early Life History Growth

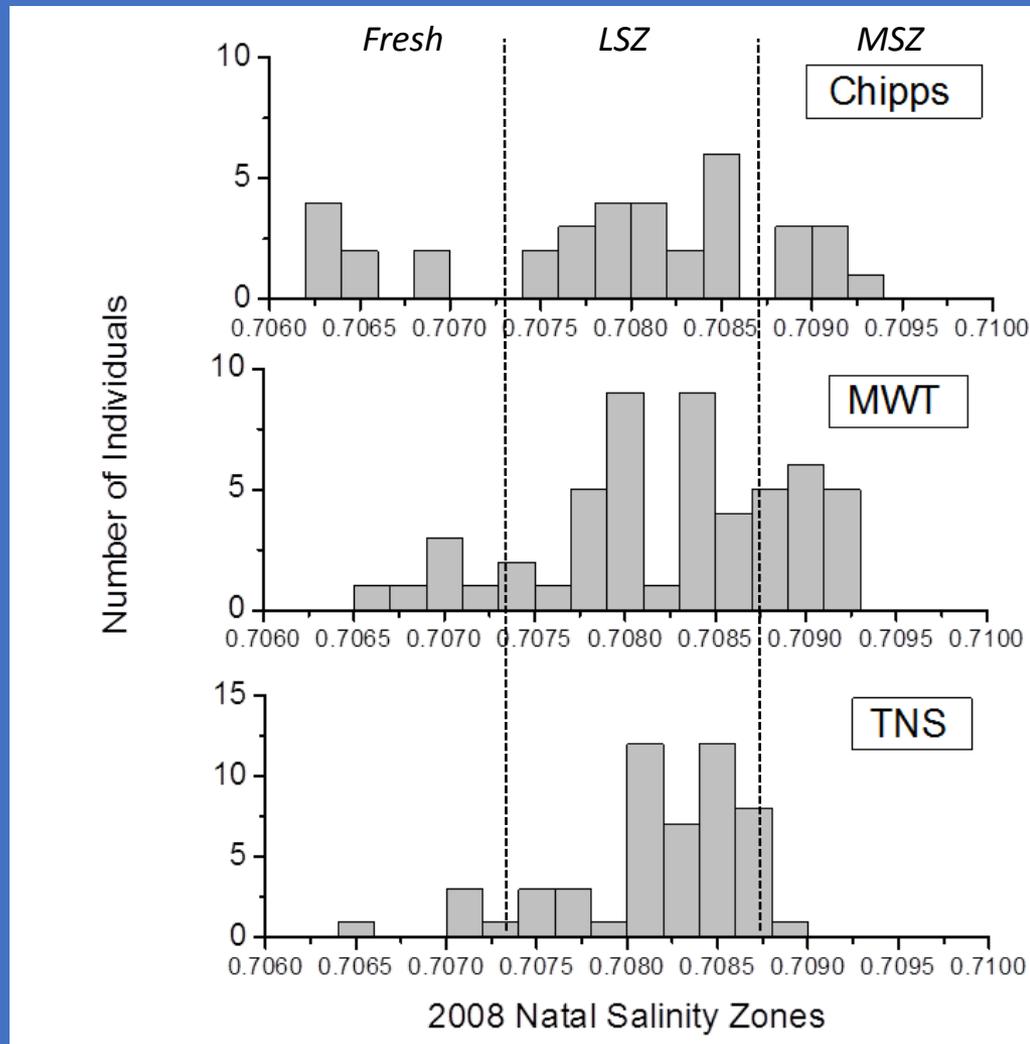
Q2. Is there evidence of a trend through time?



Natal Origins-Salinity History

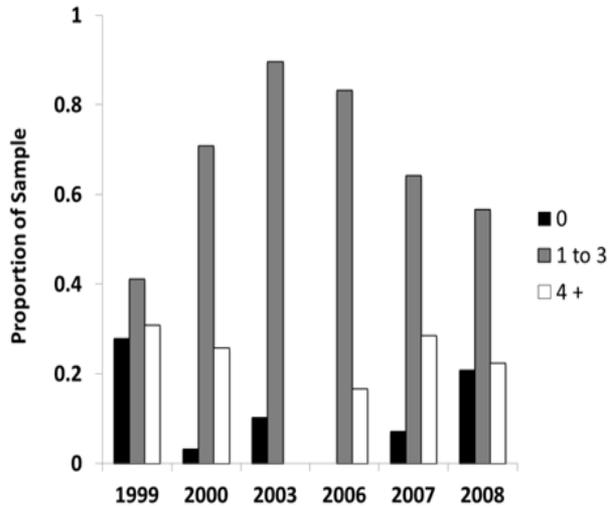


Natal Origins -2008

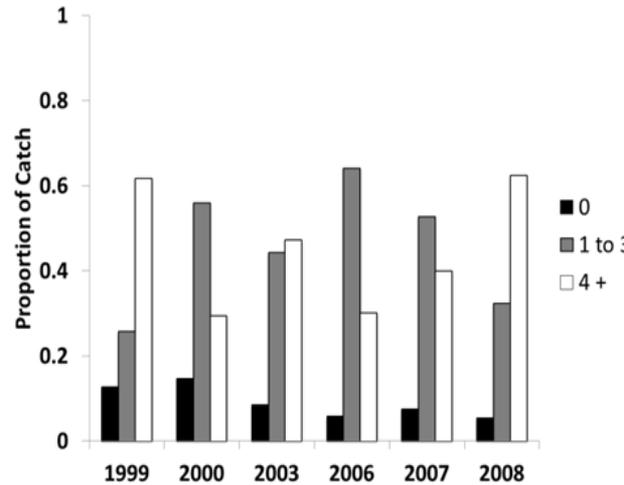


Longfin Recruit from LSZ <4ppt

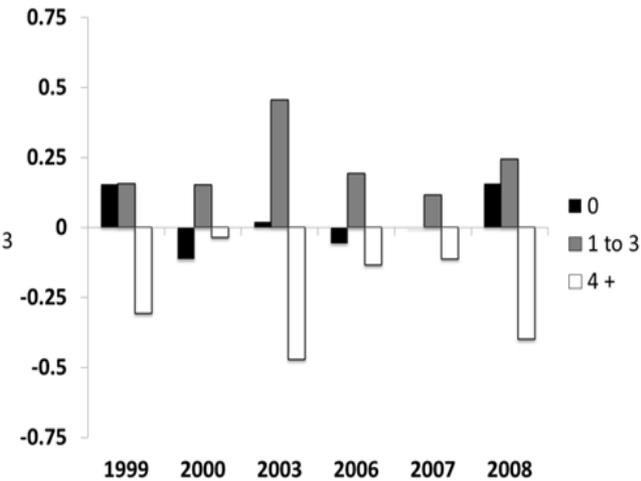
Natal ⁸⁷Sr:⁸⁷Sr



Catch in 20mm Survey



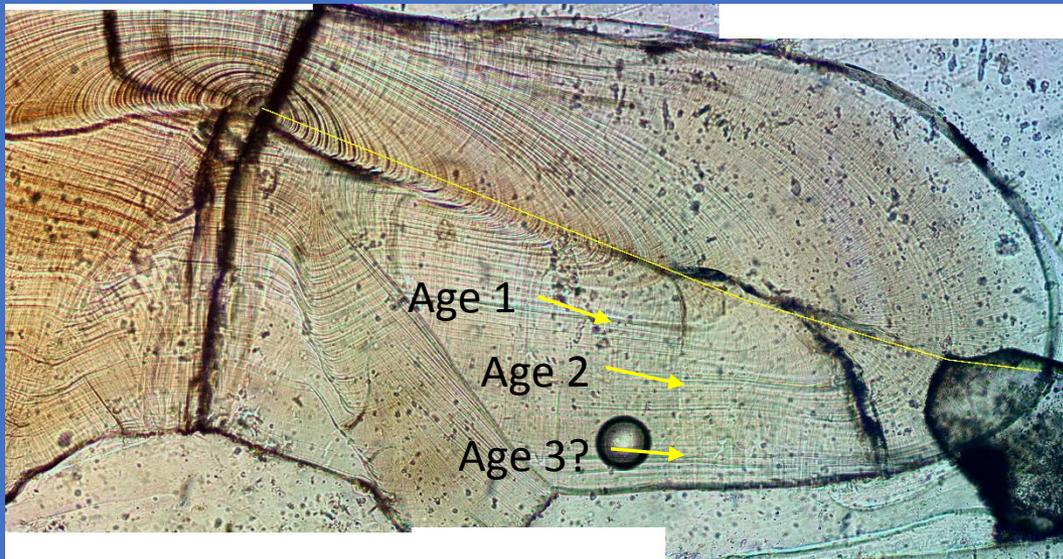
Survival Index



Longevity

Q2. Can they live to reproduce 2-3 years?

Chippis Isl. 12/19/2008 122 mm SL, 13.63g



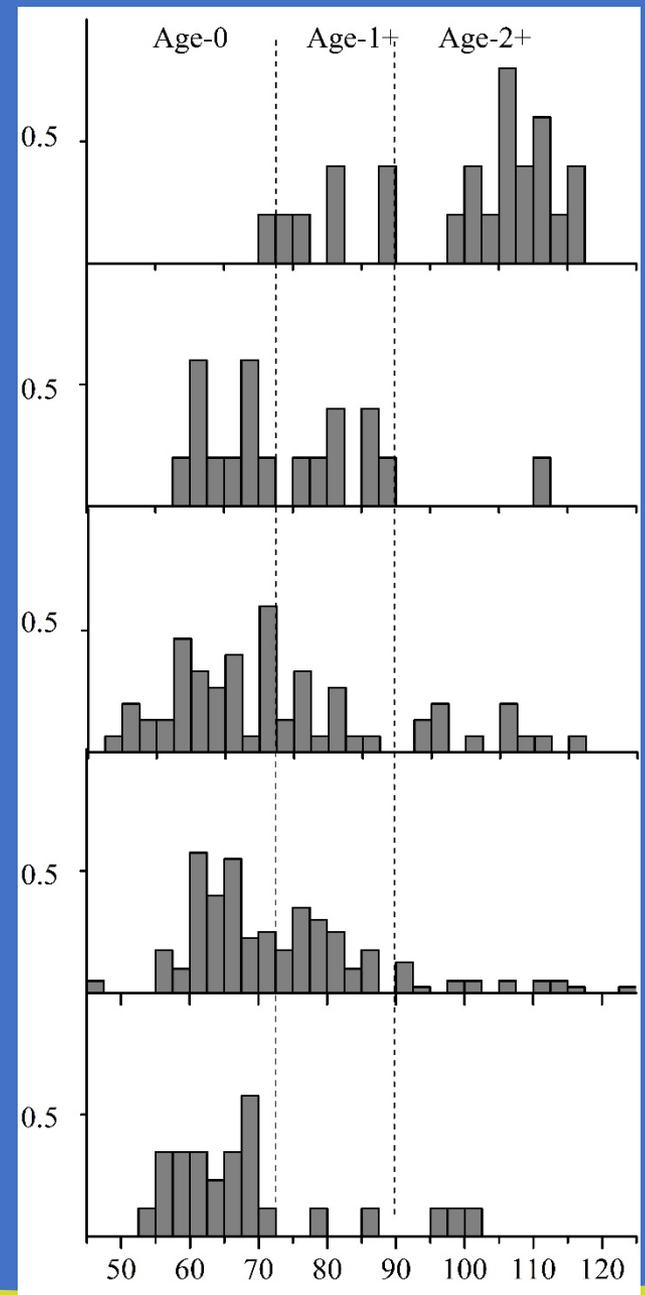
2014

2013

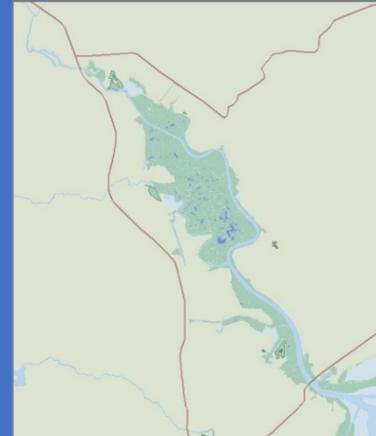
2012

2011

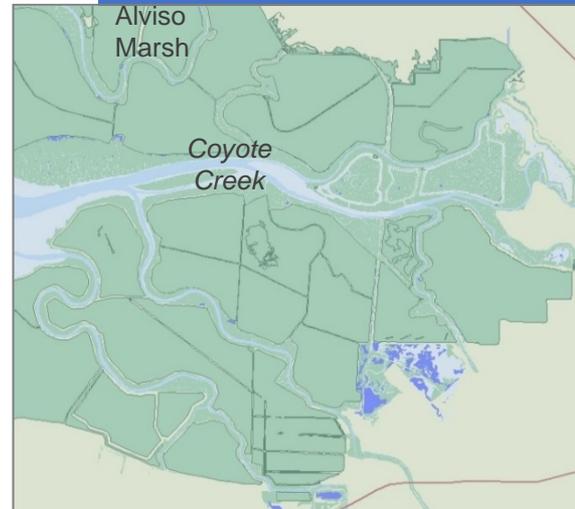
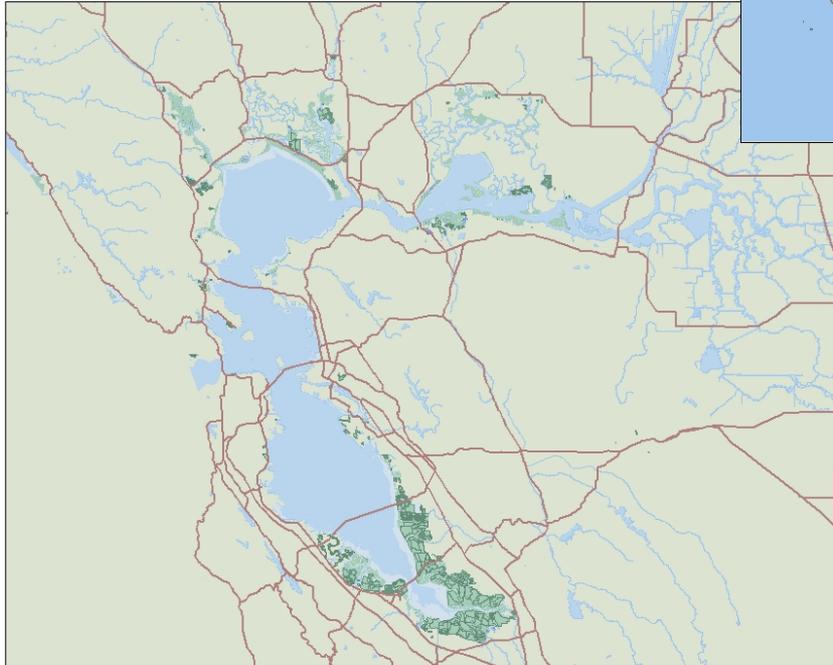
2010



Longfin Smelt Bay Tributaries



San Francisco Bay Estuary



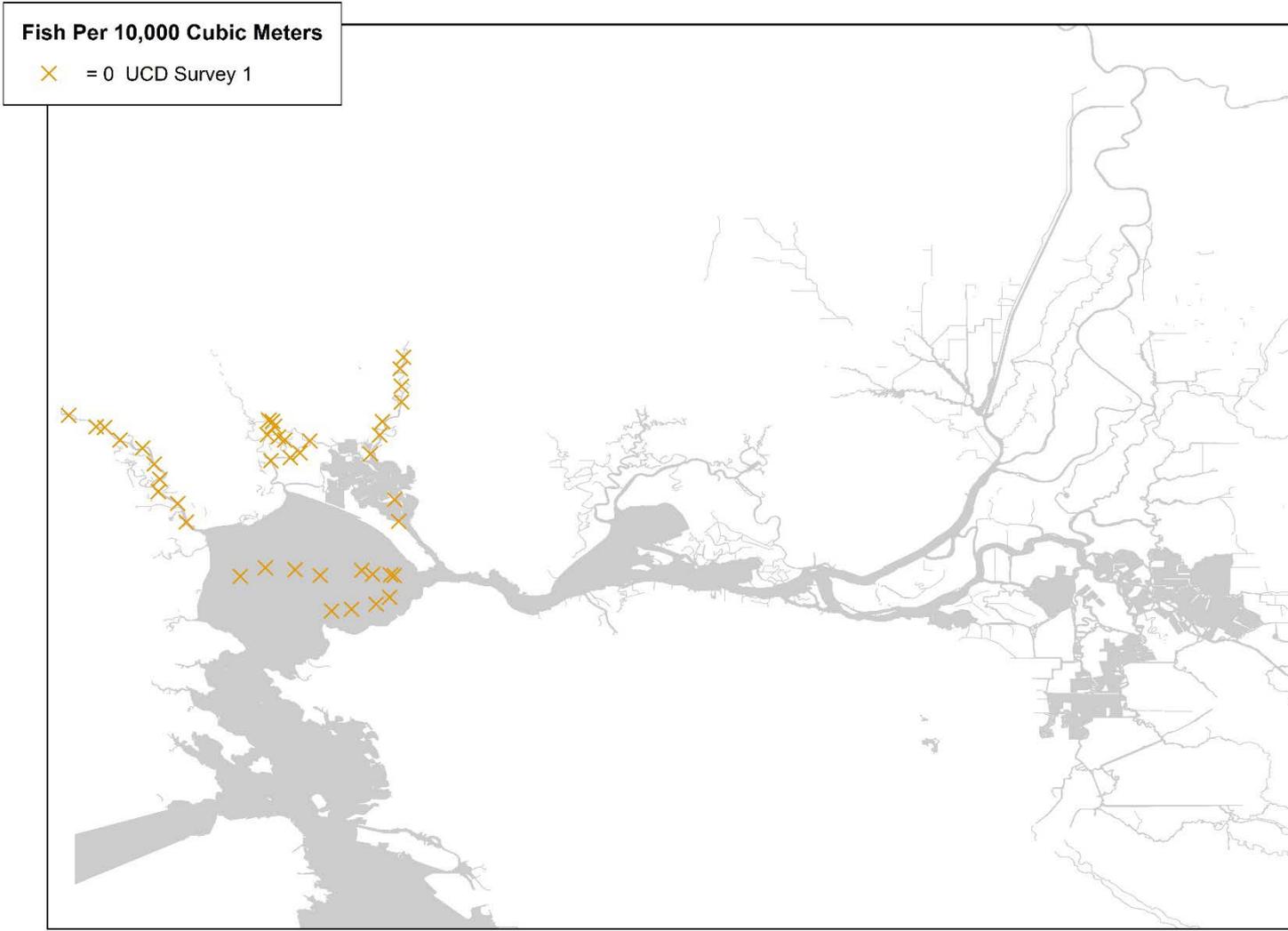
Species sum and percentage of catch for UCD SLS and 20mm nets

Species	Catch Sum	%of Catch
Pacific herring	138545	68.37%
yellowfin goby	50658	25.00%
Northern anchovy	5968	2.94%
prickly sculpin	4152	2.05%
unidentified Larval Fish	2457	1.21%
longjaw mudsucker	382	0.19%
threespine stickleback	279	0.14%
jacksmelt	86	0.04%
longfin smelt	54	0.03%
splittail	25	0.01%
arrow goby	20	0.01%
shimofuri goby	2	0.00%
topsmelt	6	0.00%
Sacramento sucker	4	0.00%
white croaker	3	0.00%
bay pipefish	2	0.00%
delta smelt	2	0.00%
Pacific staghorn sculpin	2	0.00%
longfin smelt/delta smelt hybrid	1	0.00%
Centrarchidae spp.	1	0.00%
Total:	202649	100.00%

Note: Not all catch from SLS and 20mm are larval. This includes some juvenile and adult sizes of fish caught in the SLS and 20mm net.

3/1-4/2016

Note: UCD tows 1 time per location compared to CDFW's 3 tows. CPUE values are per location.



3/14-17/2016

Fish Per 10,000 Cubic Meters

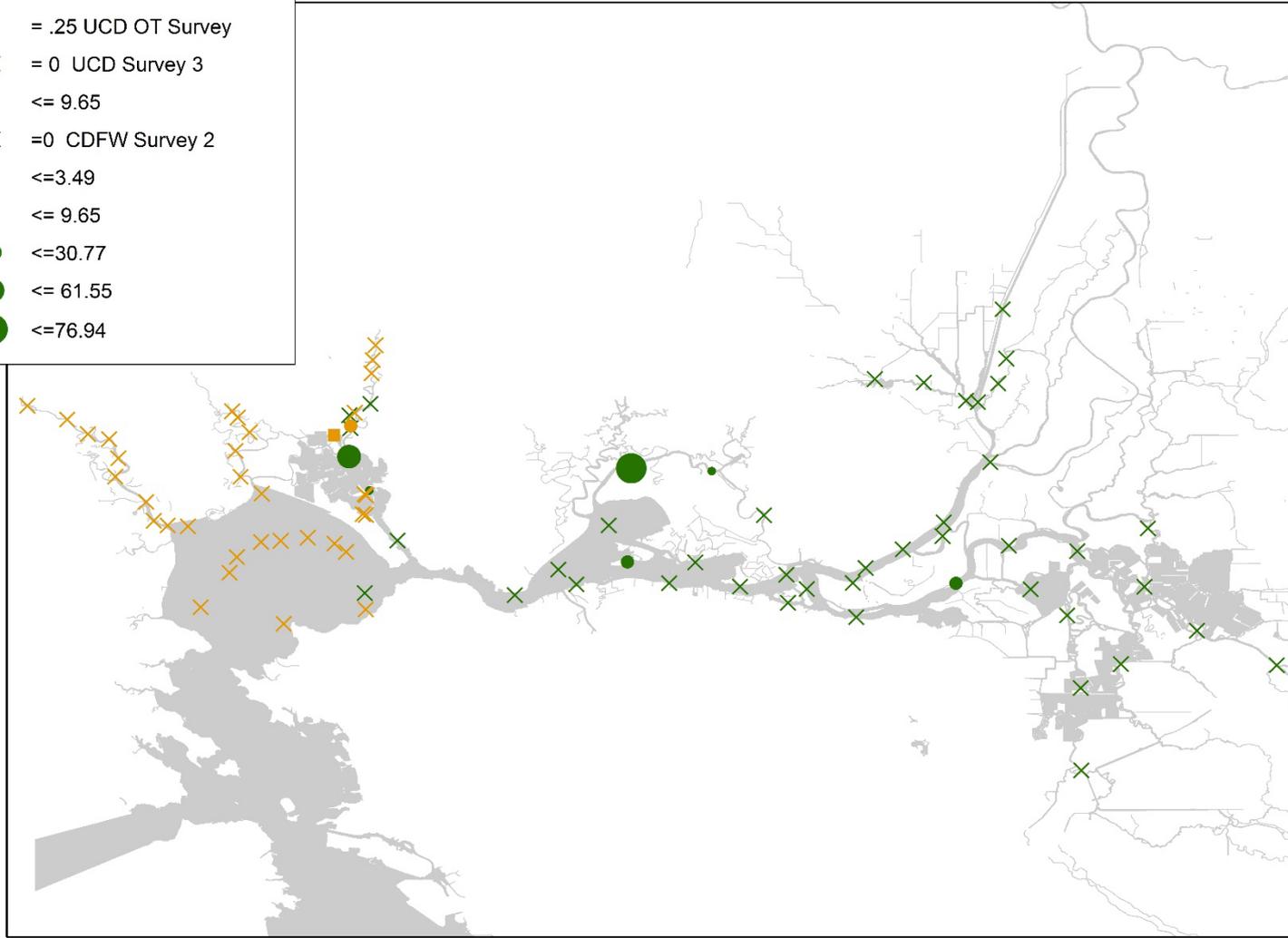
- ✕ = 0 UCD Survey 2
- ✕ = 0 CDFW Survey 1
- ≤ 29.95
- ≤ 59.92
- ≤ 89.89
- ≤ 119.86
- ≤ 149.83



3/28-4/1/2016

Fish Per 10,000 Cubic Meters

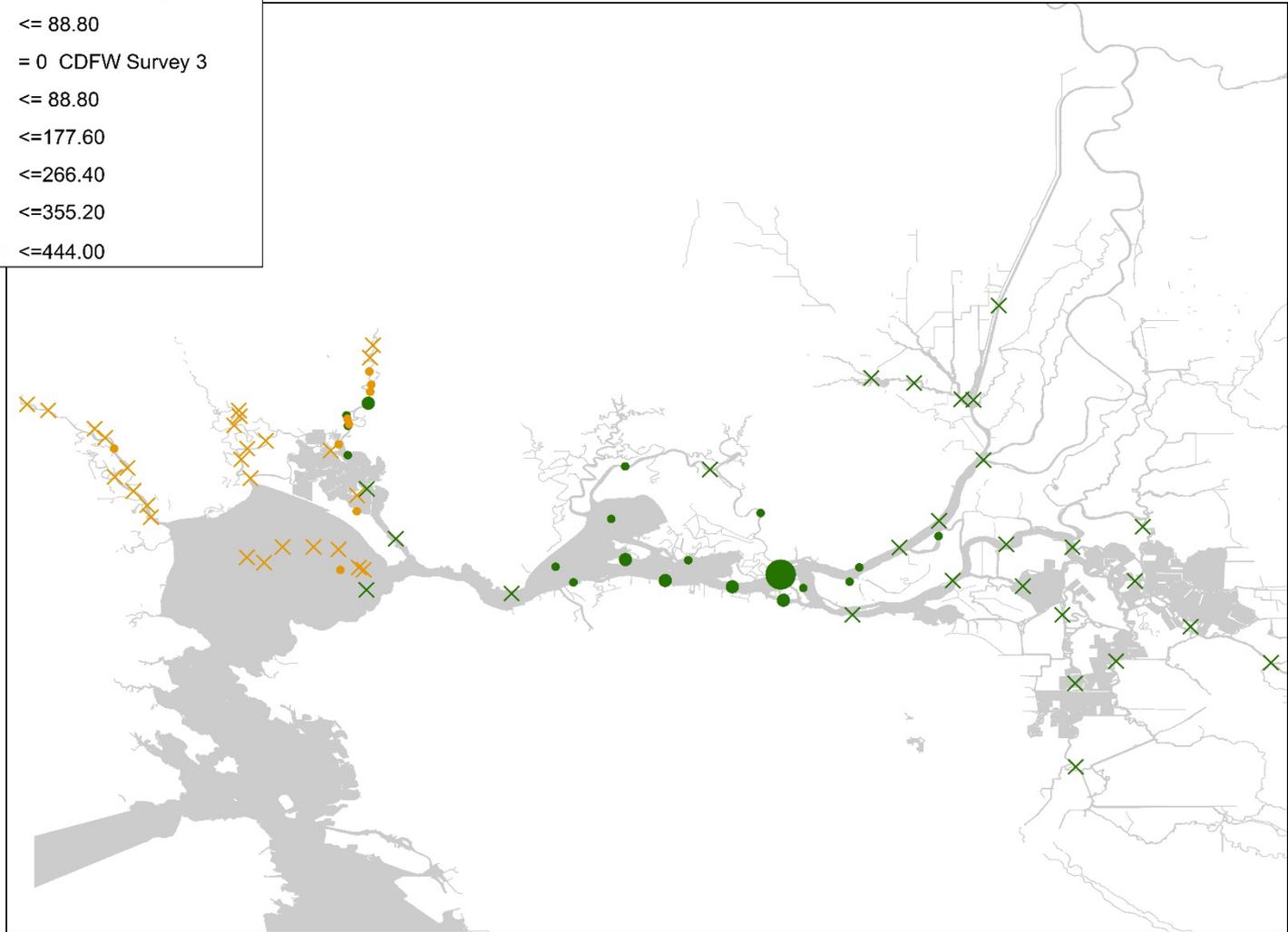
- = .25 UCD OT Survey
- × = 0 UCD Survey 3
- ≤ 9.65
- × = 0 CDFW Survey 2
- ≤ 3.49
- ≤ 9.65
- ≤ 30.77
- ≤ 61.55
- ≤ 76.94



4/11-15/2016

Fish Per 10,000 Cubic Meters

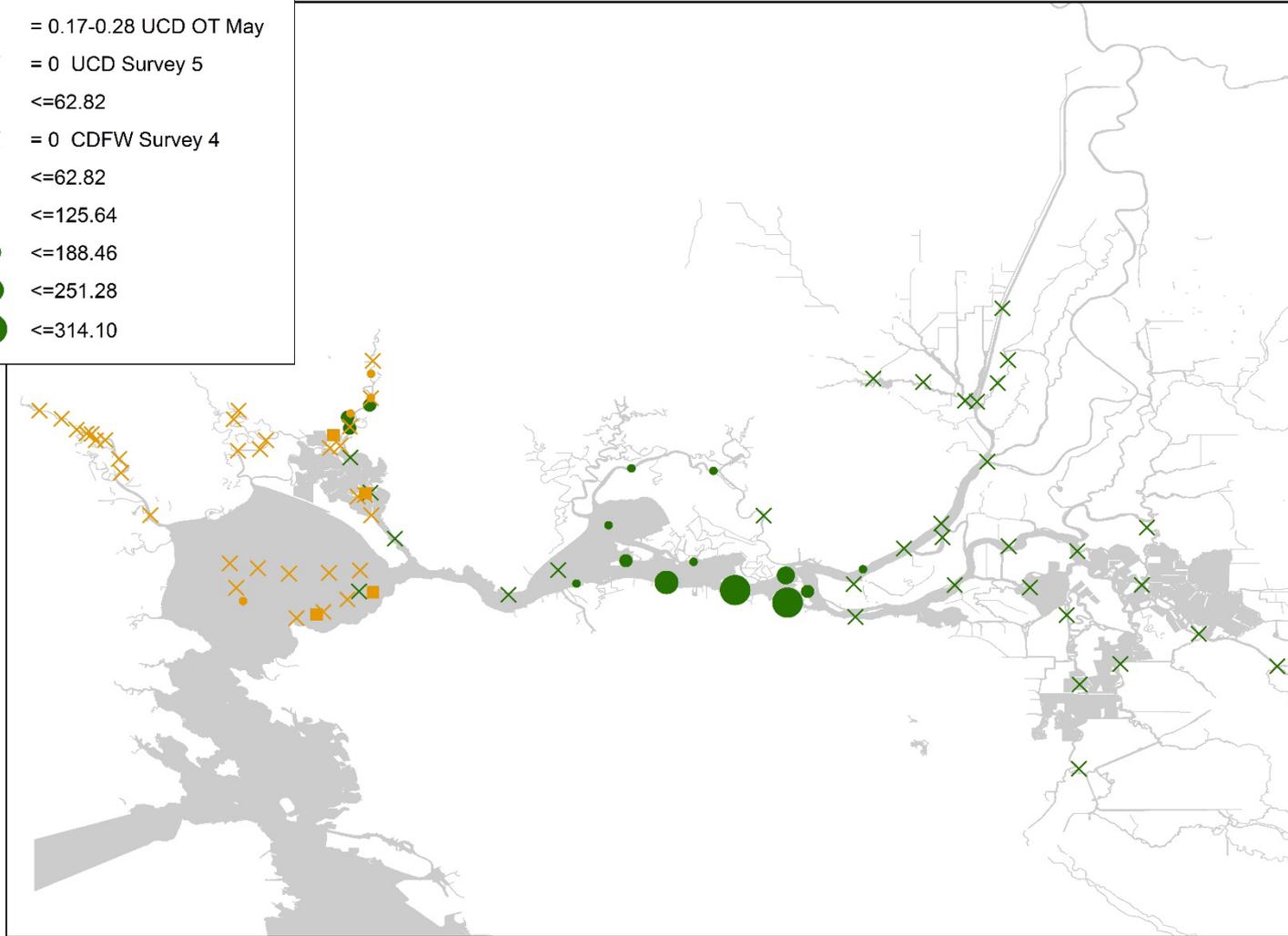
- × = 0 UCD Survey 4
- ≤ 88.80
- × = 0 CDFW Survey 3
- ≤ 88.80
- ≤ 177.60
- ≤ 266.40
- ≤ 355.20
- ≤ 444.00



4/25-5/2/2016

Fish Per 10,000 Cubic Meters

- = 0.17-0.28 UCD OT May
- × = 0 UCD Survey 5
- = <=62.82
- × = 0 CDFW Survey 4
- = <=62.82
- = <=125.64
- = <=188.46
- = <=251.28
- = <=314.10



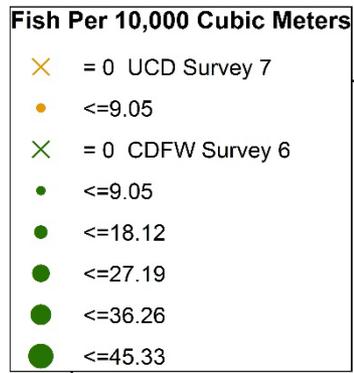
5/9-13/2016

Fish Per 10,000 Cubic Meters

- ✕ = 0 UCD Survey 6
- ≤14.23
- ✕ = 0 CDFW Survey 5
- ≤14.23
- ≤28.45
- ≤42.67
- ≤56.89
- ≤71.11



5/23-27/2016



6/6-9/2016

Fish Per 10,000 Cubic Meters

- ✕ = 0 UCD Survey 8
- ✕ = 0 CDFW Survey 7
- ≤0.68
- ≤1.38
- ≤2.08
- ≤2.78
- ≤3.48



6/20-23/2016

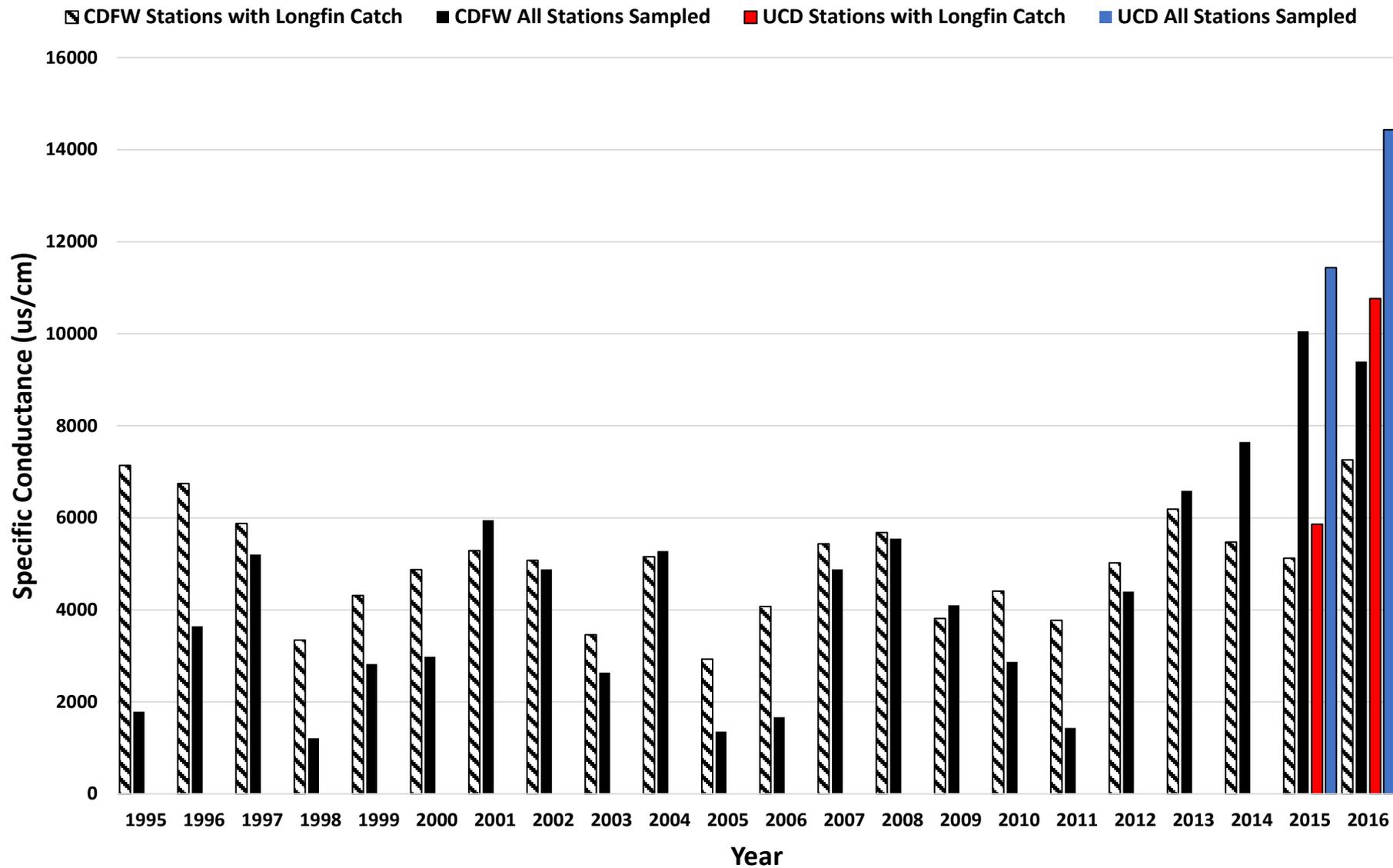


7/5-7/2016

Fish Per 10,000 Cubic Meters

× = 0 CDFW Survey 9

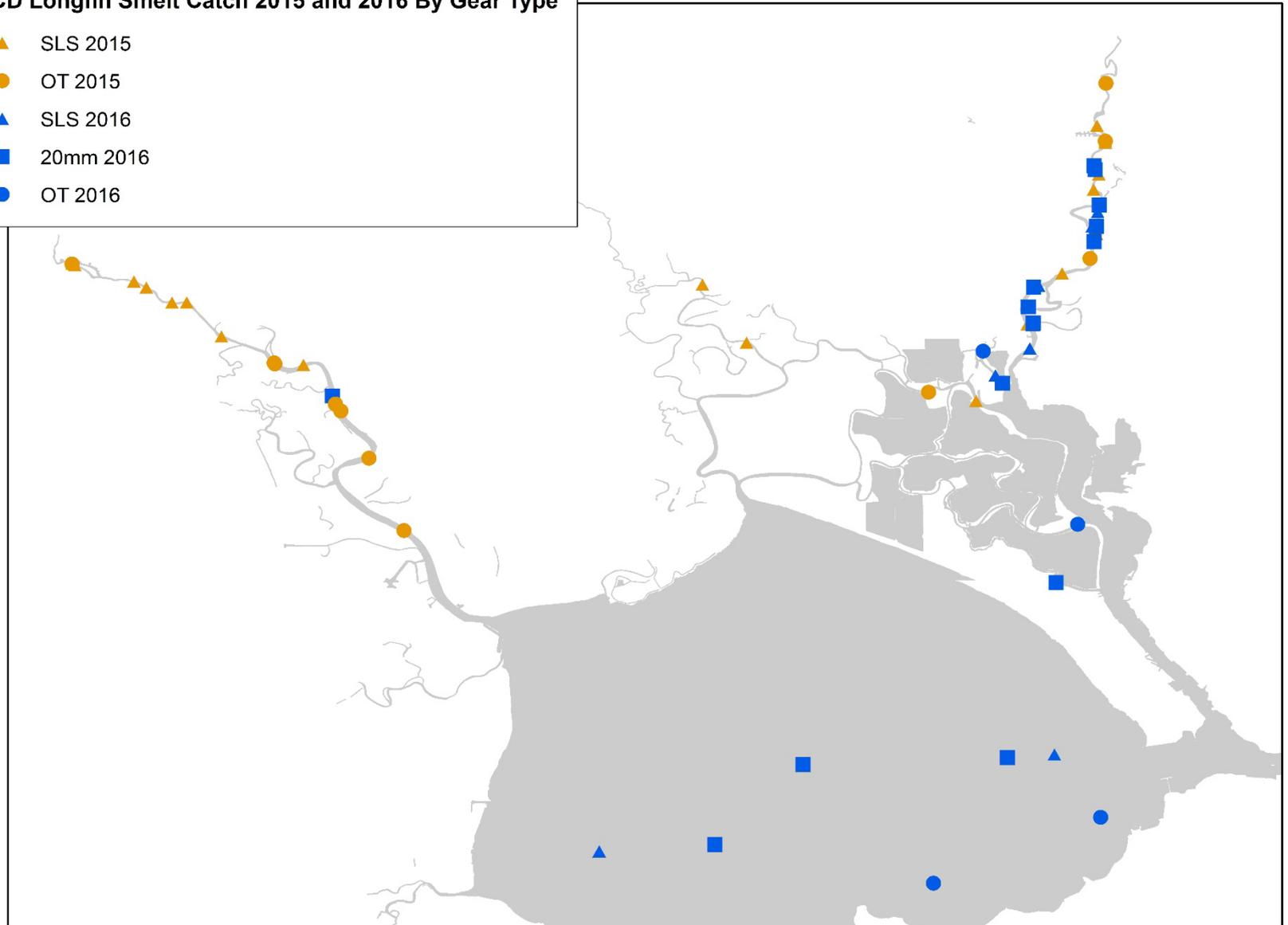




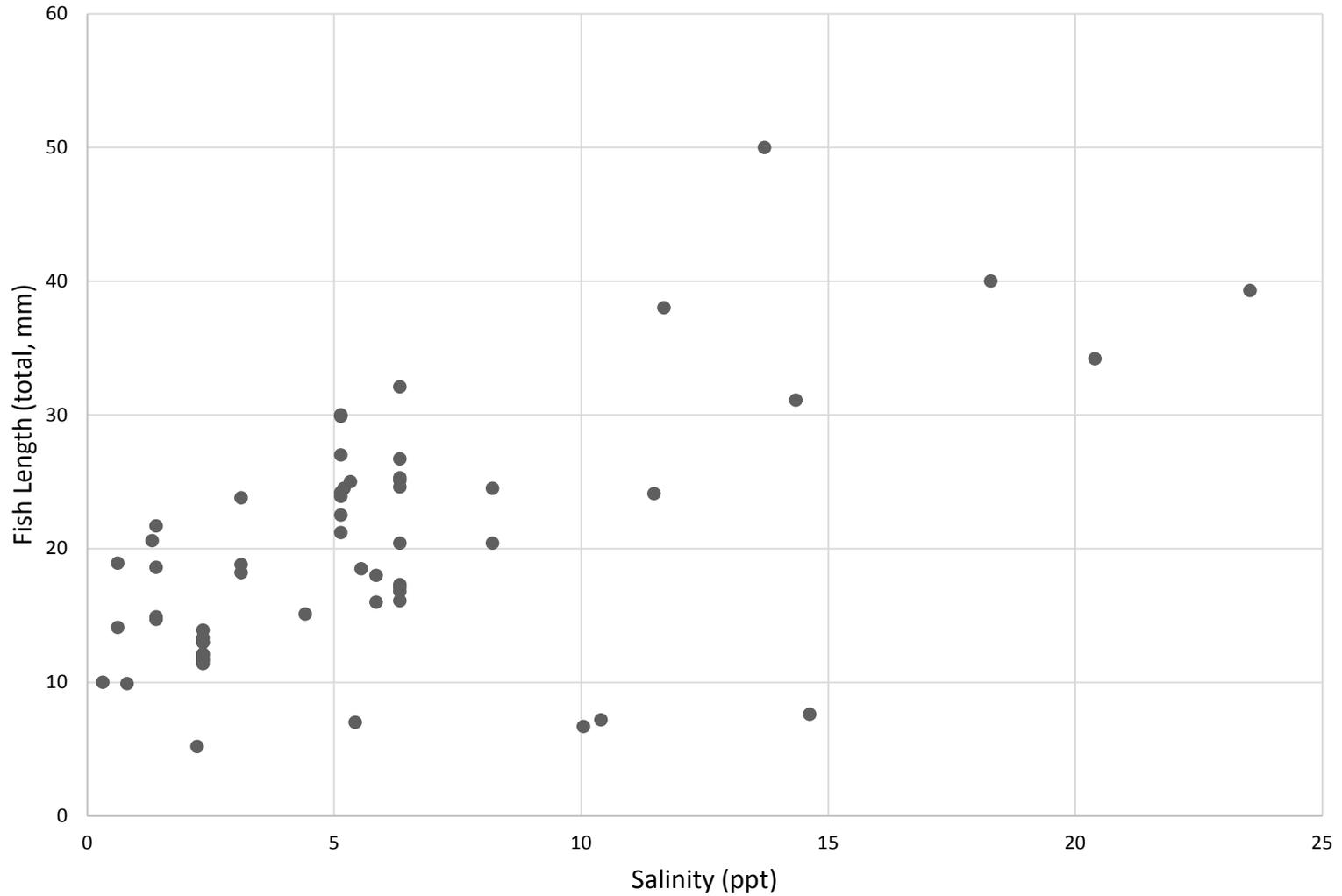
UCD Longfin Catch 2015 and 2016

UCD Longfin Smelt Catch 2015 and 2016 By Gear Type

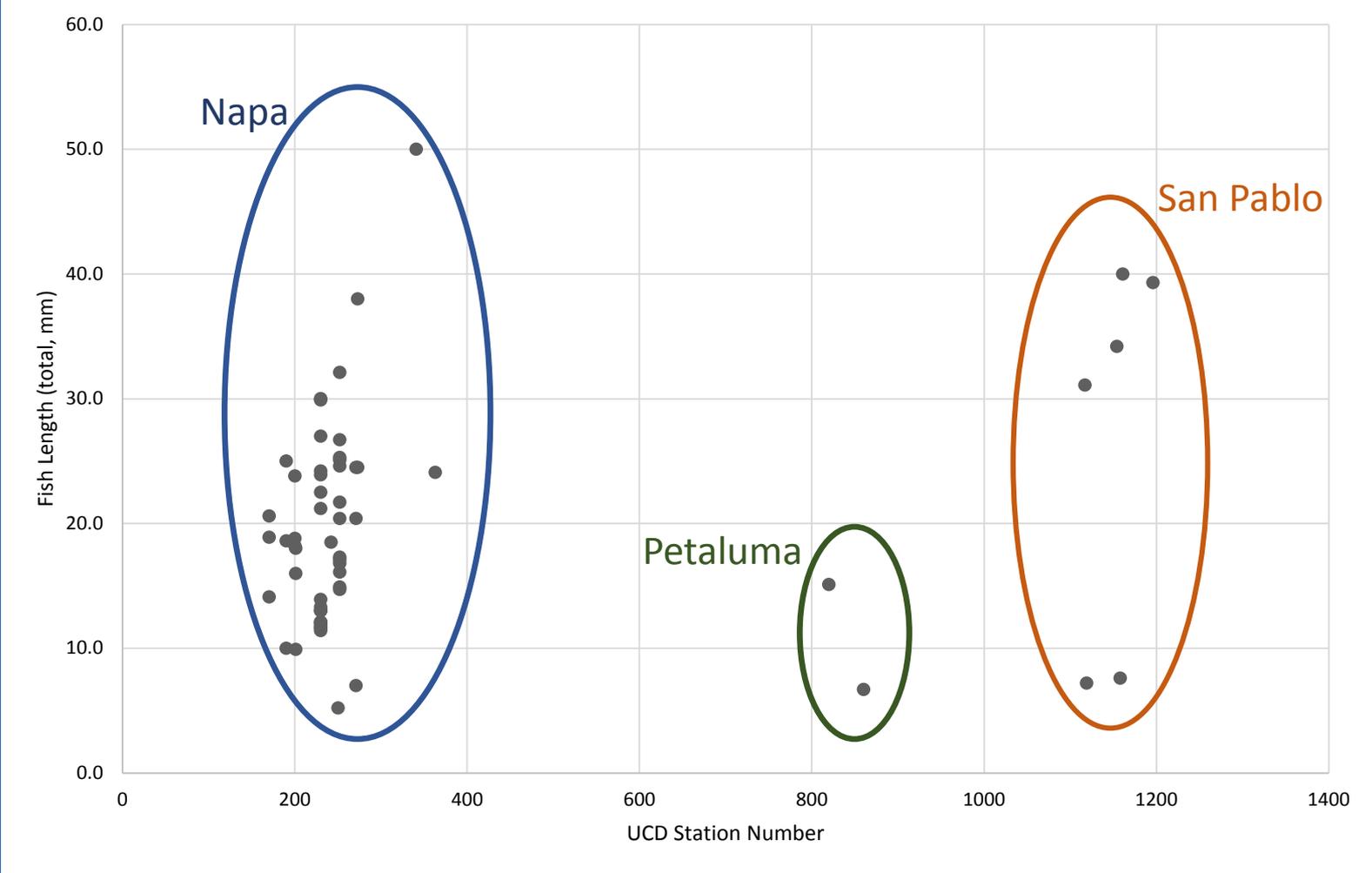
- ▲ SLS 2015
- OT 2015
- ▲ SLS 2016
- 20mm 2016
- OT 2016



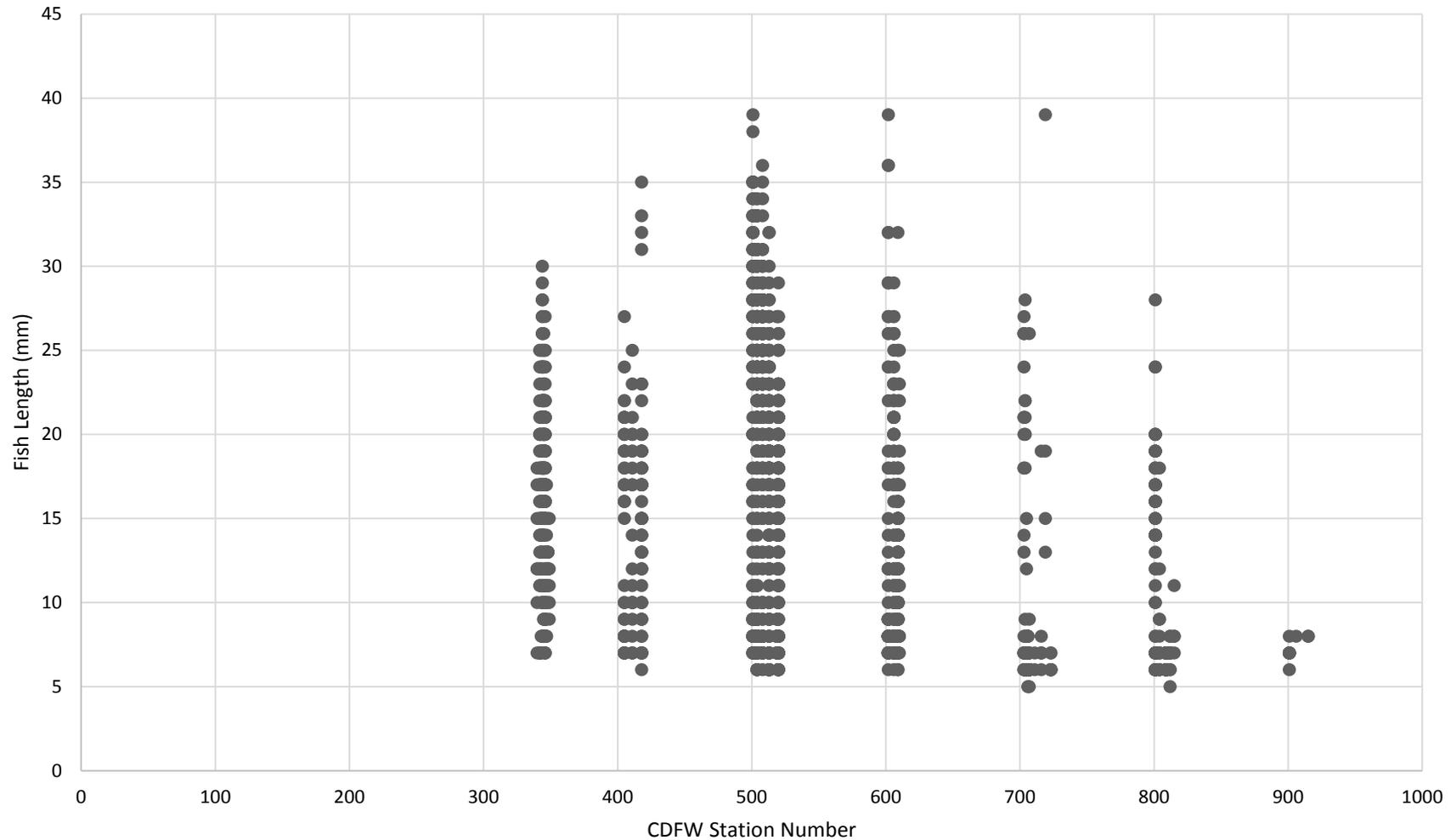
UCD Fish Length By Salinity Level



UCD Fish Length By Station (2016 all gear types)



CDFW Fish Length By Station (2016 SLS and 20mm)



CDFW Fish Length Over Time (2016 SLS and 20mm)

