## RTD-229

# Methodology for Estimating Population of Delta Region Subsistence Fishing From Fishing License Data

## **Assumptions:**

- Each Delta sportfishing licensee fished just once during the year, equal to 1 "person-angler." (It is likely, however, that resident licensed anglers will fish more than once a year; that means the daily estimate of person-anglers in Table 2, is in actuality higher on any given day for fishing.)
- Each Delta person-angler represents one household, and that fish caught and kept by that person-angler feeds a single household.
- The population of Delta counties' licensees mirrors the Delta counties' population and income distribution, poverty rate, etc.
- All Delta licensees living in distressed communities are members of environmental justice communities.
- All person-anglers living in distressed communities in Delta counties are licensed to fish.

Table 1
Delta Counties' Fishing Licenses, 2014

County	Total, All 2014 Fishing Licenses	Total Sportfishing Licenses (Res)
Contra Costa	77,669	36,085
Sacramento	124,692	60,161
San Joaquin	64,863	30,571
Solano	42,203	17,893
Yolo	18,388	8,694
Total Delta Counties' Licenses	327,815	153,404
State Total, 2014	2,537,097	990,477
Delta Counties, Percent of State Total	12.9%	15.5%

Source: RTD-234; Restore the Delta.

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Table 2
Estimate of Delta Counties' Licensees Living in Distressed Communities

County	Total Sportfishing Licenses (Res)	Percent of Population in Distressed Zip Codes	Estimated Delta Counties' Licensees Living in Distressed Communities	
Contra Costa	36,085	11%	3,969	
Sacramento	60,161	8%	4,813	
San Joaquin	30,571	43%	13,146	
Solano	17,893	8%	1,431	
Yolo	8,694	8%	696	
<b>Total Delta Counties</b>	153,404	NA	24,055	
Estimated Daily Delta Counties' Daily person-anglers from 66 Distressed Communities				

Source: California Department of Fish and Wildlife, License Statistics, Sales by County, accessible July 21, 2016; Economic Innovations Group; Restore the Delta.

Note: Contra Costa County's percent of population in distressed zip codes was reported by EIG as 0 percent, with an overall distress score of 8.1, indicative of a well-off county. However, Antioch (Distress score = 77.0) and Pittsburg (Distress score 67.6) both have relatively high distress scores for Contra Costa communities, implying that the Contra Costa population in distressed zip codes is not zero. (Richmond zip codes also have high distress scores.) It seemed reasonable to at least assume for this analysis that Contra Costa County's population in distressed communities was at least the same as that for California, 11 percent.

<sup>&</sup>quot;NA" means "not available."