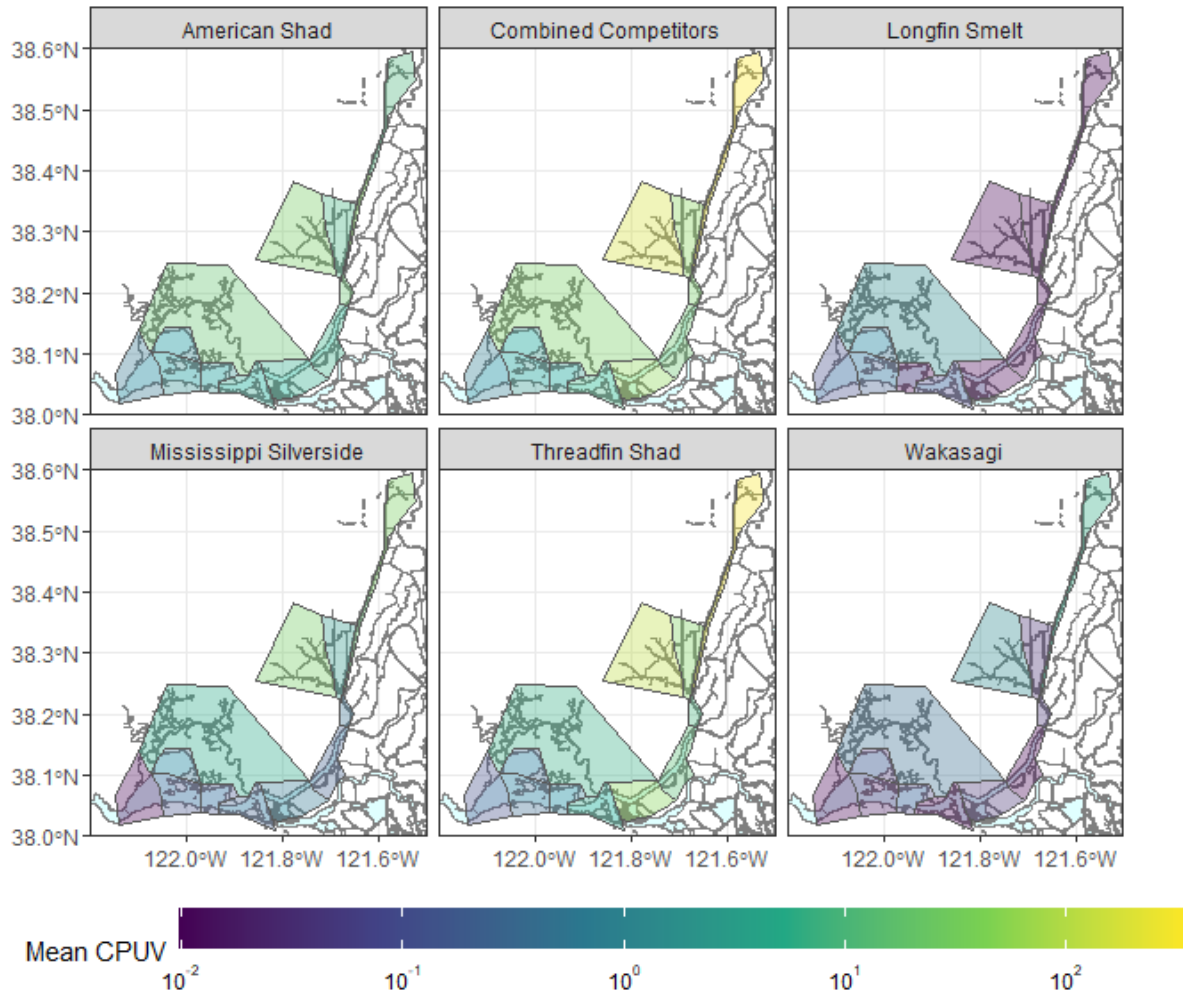


**Table S1.** Model variables with mean values; ranges shown parenthetically.

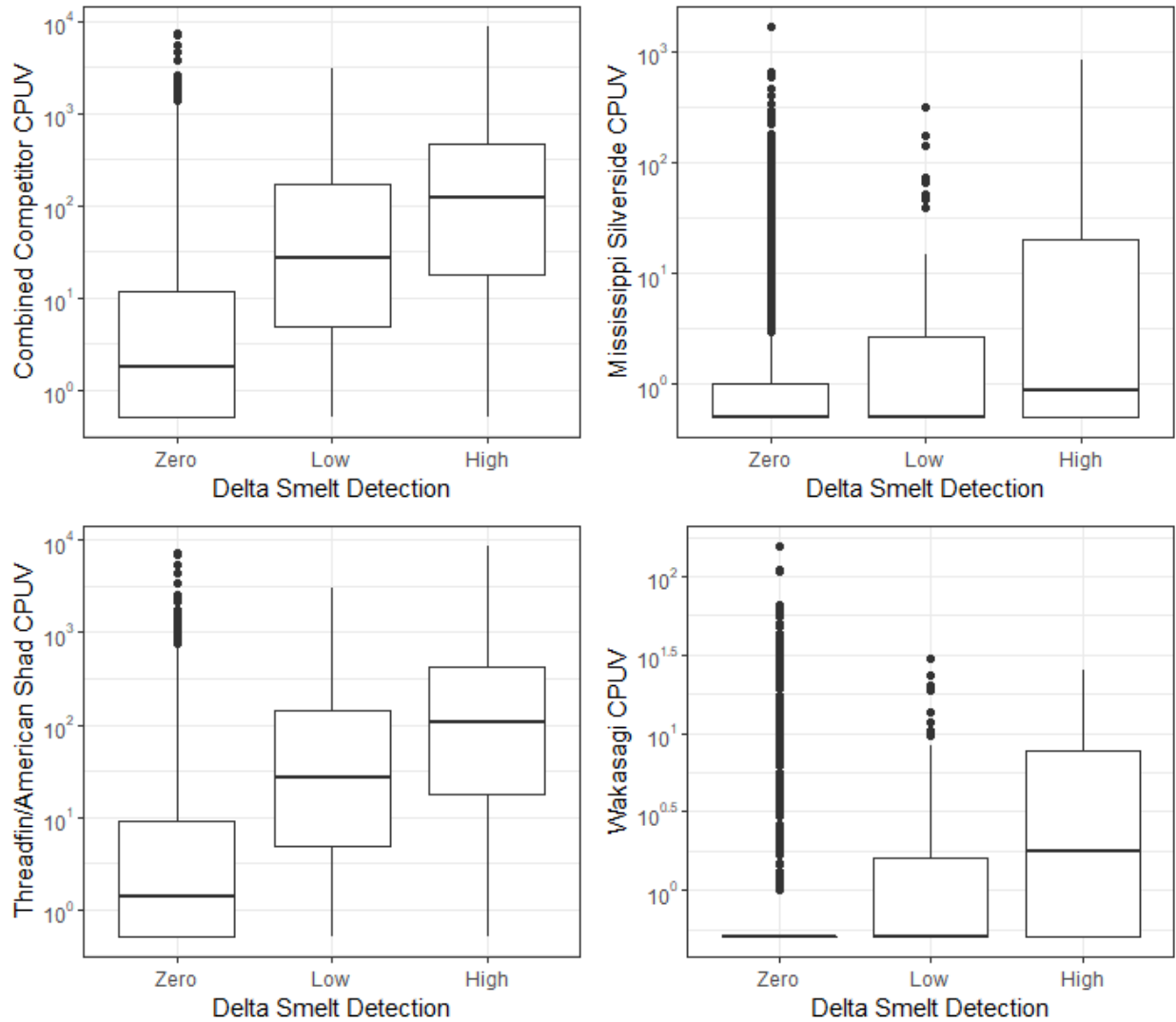
Variable Code	Unit and Source	Far West	West	North
Delta Smelt	Catch-10,000 m <sup>3,a</sup>	0 (0-0)	0 (0-0)	0 (0-0.61)
Combined_CPU V	Catch-10,000 m <sup>3,a</sup>	0 (0-0)	0 (0-1.3)	0 (0-13)
Small Pelagics	Catch-10,000 m <sup>3,a</sup>	0 (0-4.38)	1.2 (0-83.15)	3.3 (0-880)
Chl a	Chlorophyl a <sup>a</sup>	2.1 (0.62-4.3)	2.25 (0.84-5)	1.5 (0.6-3.3)
Salinity	Salinity (PPT) <sup>a</sup>	12 (5.375-16)	5.05 (0.08455-12)	0.065 (0.01-0.57)
TemperatureTop	°C <sup>a</sup>	19 (14-22)	20 (13-23)	21 (12-24)
Turbidity	NTU <sup>a</sup>	18 (5.9-42)	17 (5.1-46)	5.2 (1.3-27)
Outflow_14	Daily Mean Delta Outflow (CFS) <sup>b</sup>	14,000 (8,100-24,750)	14,000 (8,000-24,000)	13,000 (8,000-25,000)
LH Week	Weeks since April 15	14.5 (3-23)	15 (3-24)	14 (3-23.85)
Competitors_No Wak	Catch-10,000 m <sup>3,a</sup>	0 (0-3.85)	1.2 (0-83.15)	3.3 (0-868.50)
Competitors_All	Catch-10,000 m <sup>3,a</sup>	0 (0-3.85)	1.2 (0-83.15)	3.3 (0-880)
Amphipods_Food	Catch-m <sup>3,c</sup>	0.0064 (0-0.07)	0.091 (0-3.48)	0.36 (0.0133-2)
Amphipods_Total	Catch-m <sup>3,c</sup>	0.075 (0.0067-0.2625)	0.18 (0.006355-3.73)	0.36 (0.0133-2)
Mysids_Food	Catch-m <sup>3,c</sup>	0.565 (0.04-6.2)	1.2 (0.014-29)	0.022 (0-14)
Mysids_Total	Catch-m <sup>3,c</sup>	0.78 (0.06925-6.6)	1.2 (0.017-29)	0.025 (0-14)
Zooplankton_Food	Catch-m <sup>3,c</sup>	620 (140-2,400)	1,300 (440-4,515)	3,300 (540-23,000)
Zooplankton_Total	Catch-m <sup>3,c</sup>	1,900 (492.5-7,700)	1,800 (677-6,415)	3,900 (777.5-29,000)
A sinensis	Catch-m <sup>3,c</sup>	280 (25-1,400)	580 (130-2,200)	0.96 (0-350)
A sinensis adult	Catch-m <sup>3,c</sup>	60 (8.6-460)	320 (56-1,100)	0.67 (0-310)
A sinensis cope	Catch-m <sup>3,c</sup>	180 (18-927.5)	220 (1.9-1,100)	0 (0-29.85)
B longirostris	Catch-m <sup>3,c</sup>	0 (0-0.27)	0 (0-16)	18 (2.8-3,024)
Calanoids_Food	Catch-m <sup>3,c</sup>	520 (140-1,600)	1,200 (408.5-3,700)	3,100 (490-10,000)
Cladocerans_Food	Catch-m <sup>3,c</sup>	0 (0-2.8)	0.48 (0-55.15)	150 (16-8,500)
Cyclopoids_Food	Catch-m <sup>3,c</sup>	7.65 (0.1725-740)	21.5 (0.25-1400)	0 (0-31)
Daphniidae spp	Catch-m <sup>3,c</sup>	0 (0-0.17)	0.033 (0-8.95)	23 (1.6-3,100)
E affinis	Catch-m <sup>3,c</sup>	0.535 (0-17.75)	2.2 (0-380)	6.2 (0-580)
E affinis adult	Catch-m <sup>3,c</sup>	0 (0-0.97)	0.29 (0-59)	0.9 (0-66)
E affinis cope	Catch-m <sup>3,c</sup>	0.485 (0-17)	1.8 (0-341.5)	5.15 (0-520)
L tetraspina	Catch-m <sup>3,c</sup>	7.65 (0.1725-740)	21.5 (0.25-1,400)	0 (0-31)
P forbesi	Catch-m <sup>3,c</sup>	9.4 (1.7-115)	96 (3.9-3,100)	2,600 (290-8,600)
P forbesi adult	Catch-m <sup>3,c</sup>	5.1 (1.6-79)	55 (2.485-1,330)	510 (38.3-1,884)

P forbesi cope	Catch-m <sup>3,c</sup>	2.3 (0-35)	40 (0.31-1,600)	1,800 (120-7,700)
S doerrii	Catch-m <sup>3,c</sup>	0 (0-0.096)	0 (0-4.98)	5.5 (0.14-3,000)
S doerrii adult	Catch-m <sup>3,c</sup>	0 (0-0.072)	0 (0-3.7)	2 (0-1,300)
S doerrii cope	Catch-m <sup>3,c</sup>	0 (0-0.072)	0 (0-1.6)	2.3 (0-1,500)
Sididae spp	Catch-m <sup>3,c</sup>	0 (0-1.4)	0.0545 (0-25.15)	61 (1.3-3,385)
Tortanus adult	Catch-m <sup>3,c</sup>	32 (0.54-97.75)	6.3 (0-68)	0 (0-0.097)
Tortanus cope	Catch-m <sup>3,c</sup>	155 (8.5-530)	16 (0-461.5)	0 (0-0.016)
Tortanus spp	Catch-m <sup>3,c</sup>	190 (9.35-595)	24 (0-520)	0 (0-0.16)

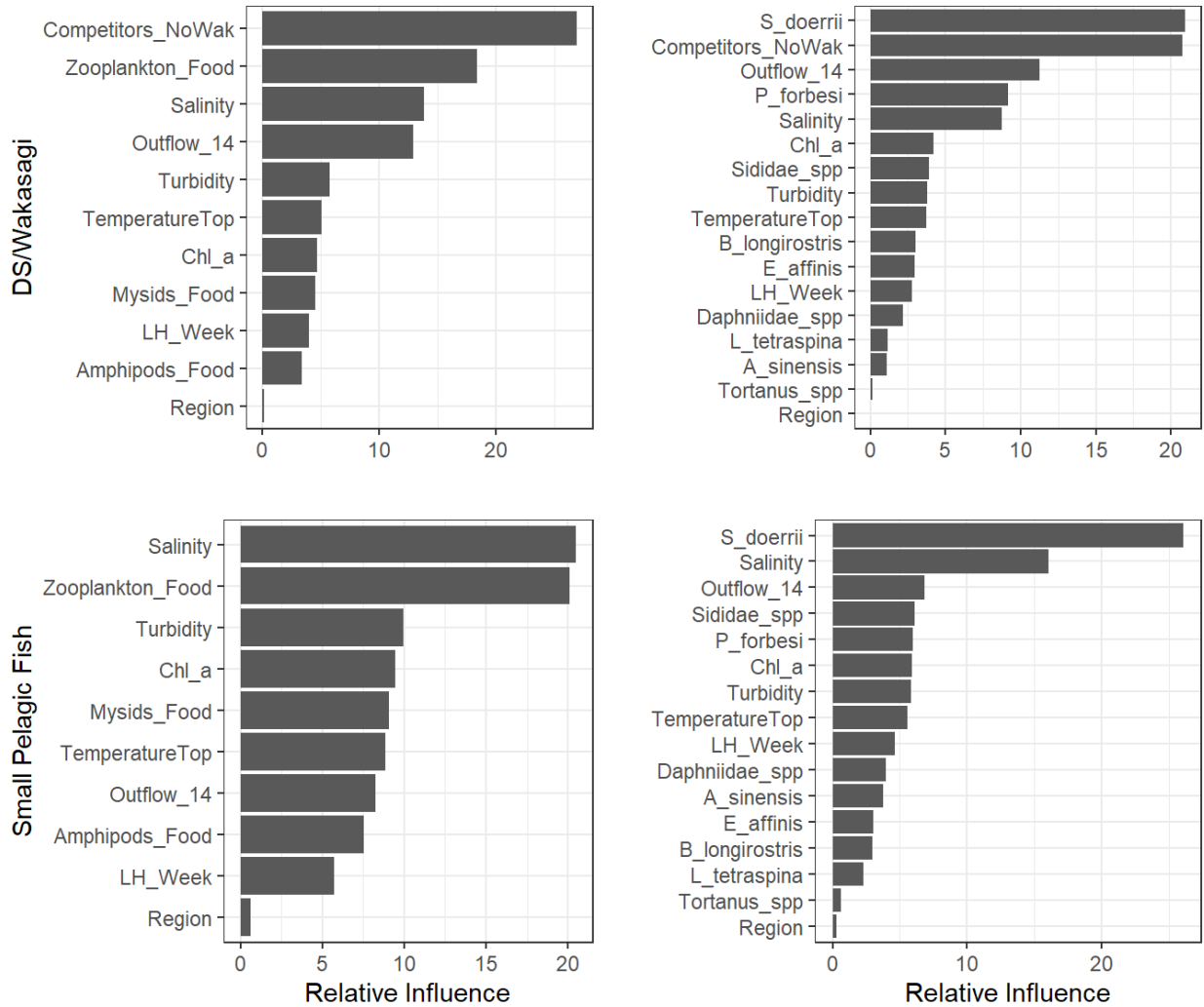
Notes: <sup>a</sup> Collected by fish survey, averaged to station level, <sup>b</sup> Obtained from DAYFLOW report (<https://data.cnra.ca.gov-dataset-dayflow>), <sup>c</sup> Collected by invertebrate survey, averaged by subregion and period.



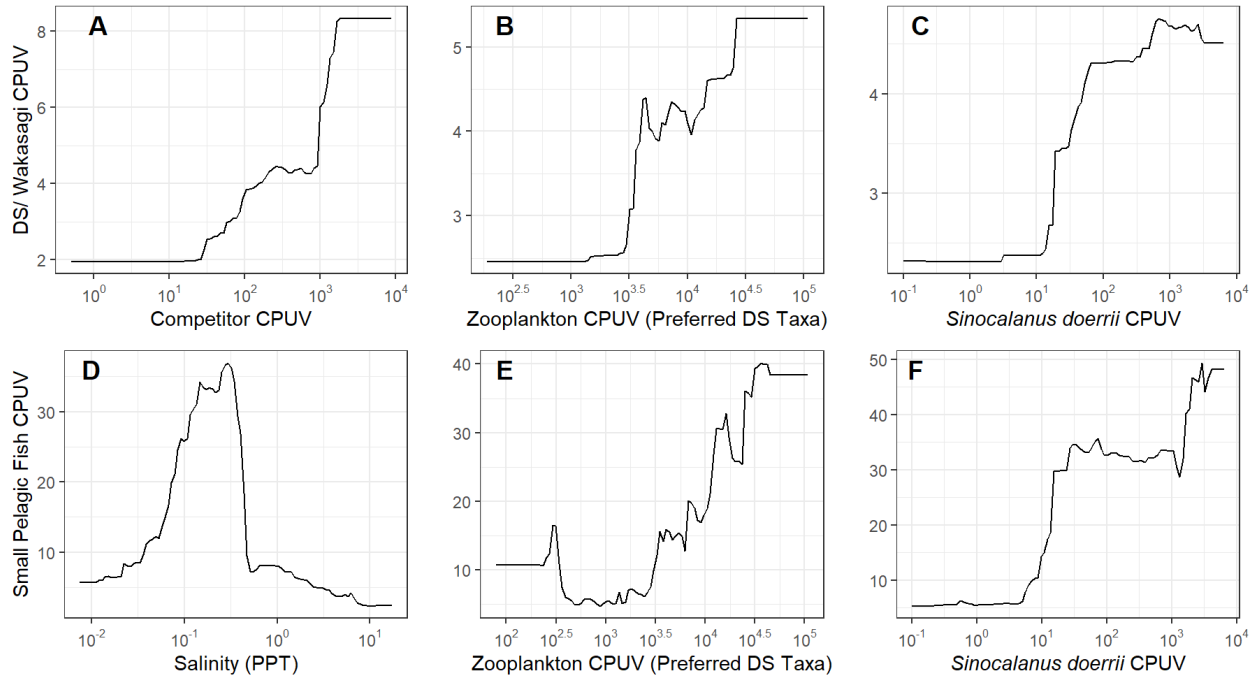
**Figure S1.** Comparison of mean CPUV (catch-10,000 m<sup>3</sup>) for individual potential competitor species and all small pelagic fish combined.



**Figure S2.** Boxplots of potential competitor catch density relative to binned *Hypomesus transpacificus* catch. Low = *H. transpacificus* CPUV > 0 and < 2 fish-10,000 m<sup>3</sup>, High = *H. transpacificus* CPUV ≥ 2 fish-10,000m<sup>3</sup>. Bold lines show medians, boxes enclose a range from the 25<sup>th</sup> to 75<sup>th</sup> quantiles, points show outliers.



**Figure S3.** Variable importance rankings for selected CPUV models. For each response variable, the first column shows rankings from models with relatively coarse aggregation of food items (Model 2) while the second column shows rankings from models with finer separation of food items (Model 4).



**Figure S4.** Conditional effect of important covariates on A-C) combined *Hypomesus transpacificus* and *Hypomesus nipponensis* CPUV, and D-F) small pelagic fish CPUV.