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# Input data available for the North Pacific swordfish stock assessment in Stock Synthesis[1]

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## Abstract

The data provided to the ISC Billfish Working Group for the 2018 swordfish stock assessment in Stock Synthesis are summarized. An analysis of the Western Central North Pacific stock area standardized CPUE was performed to investigate potential conflict and correlations using the FLCore package. When there were multiple time periods of standardized CPUE indices for a fleet, they were combined into a single time series for this analysis. The results show moderate positive correlations between most indices. The highest positive correlation was between the US longline shallow set index and Taiwanese longline (0.76). There were five negative correlations, the largest of which was between the Taiwan longline and Japan longline area 1 indices (-0.33). Overall, there were not substantial conflicts in the CPUE time series, and all indices should be considered for inclusion in the Stock Synthesis base-case model.

## Introduction

Time series of swordfish catch, standardized catch per unit effort (CPUE), and length frequency from the North Pacific Ocean were compiled for input into a Stock Synthesis (SS) model (version 3.30.08, Methot and Wetzel, 2013). Data were compiled by region assuming a two region model of the North Pacific Ocean with boundaries based upon those detailed in Ichinokawa and Brodziak (2008) with the modification that the Eastern Pacific Ocean (EPO) region ends at the equator (Figure 1). Countries were asked to contribute catch, CPUE, and length frequency data partitioned by these two regions so that two SS models could potentially be developed: one of just the Western Central North Pacific Ocean (WCNPO) and one of the entire North Pacific Ocean with fleets as areas. Details on the standardization of the CPUE indices, catch statistics, and length frequency data are available in working papers from the 2018 ISC BILLWG swordfish data preparatory meeting (ISC REPORT, 2018). This document will provide summaries of these data and an analysis of the CPUE indices to evaluate them for conflicts.

### *Catch*

A total of 23 catch time series were provided for consideration in the 2018 SS assessment model; 18 in the WCNPO and 5 in the EPO (Tables 1 and 2). Annual catches were divided equally into each quarter in Table 2. Nine Japanese catch time series were provided from 1952-2016. The catch from longline fleets F1-5 were reported in numbers and reported quarterly. Fleets F6-9 reported biomass annually (Ijima, 2018). The Japanese off-shore distant water longline (OSDWLL, F1-4) fleets were also divided into four time series: early catch (1952-1993) and late catch (1994-2016), plus the WCNPO was divided into two sub-areas due to differences in targeting between the areas. The time series were divided at 1993 because of significant changes in the logbook reporting system which requires the CPUE data to be standardized in different time periods. The Japanese driftnet catch data were also divided into early and late time periods. F6, the early time series, encompasses catch from the off-shore driftnet fishery from 1960-1992. In 1993, driftnet fishing was restricted in international waters; therefore, F7 is the catch from the coastal driftnet fishery from 1993-2014. All other Japanese catch data from the WCNPO are aggregated into fleets 8 and 9 which are the early (1952-1993) and (1994-2016) late time periods. Japanese catch in the EPO was a single fleet representing the offshore-distant water longline catches from 1952-2016. Taiwanese catch data were provided from 1959-2016, and all

fleets reported annually in biomass (Chang *et al.*, 2018a). Five time series were provided. Taiwanese distant water longline catch data in both the WCNPO (1959-2016) and EPO (1967-2016) were divided in 1999 into early and late periods due to changes in targeting and fishing grounds. All other swordfish catch in the WCNPO by the Taiwanese fleets were combined into a single fleet from 1959-2016.

The US catch data were provided from 1970-2016 in biomass (Ito *et al.*, 2018). The longline fleet data were provided quarterly and the other fleets annually. The US longline catch were divided into three fleets. One fleet consisted of the deep set sector tuna-targeting catch where catch rates are much lower due to swordfish being bycatch and the length distribution of the catch being significantly different than the shallow set sector. The shallow set sector targeting swordfish was then further split into two time periods: early from 1990-2000 and late from 2004-2016. These time periods represent before and after a fishery closure during which the fishery regulations changed substantially and many vessels exited the fishery. All of the US catch was in the WCNPO. Delegates from Mexico provided a catch time series quarterly from 2011-2016 in biomass. The entire Mexico catch was also in the EPO. Other catch was included from countries which did not provide data or are not part of the ISC from the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC) as "other" fleets. WCPFC data were all in the WCNPO, reported quarterly in biomass from 1970-2016. IATTC data were split into EPO and WCNPO and were reported quarterly in numbers from 1975-2016.

### *Length Composition*

Ten length composition time series were provided for consideration in the 2018 SS assessment model; seven in the WCNPO region and three in the EPO region (Table 3). All length composition data were provided in 1 cm bin size and were then aggregated to 5 cm bin size as agreed in the data preparatory meeting (ISC REPORT, 2018). Japanese length composition data were provided for the swordfish-targeting offshore distant-water longline (OFDWLL) fleets in WNCPO area one from 1974-1993 and 1994-2016 and the EPO from 1970-2014 and for the offshore and coastal drift net fisheries from 1991-1992 and 1993-2016 (OSDF and CODF, Ijima, 2018). Taiwan length composition data were provided from 2000-2016 for the WCNPO and from 2004-2016 for the EPO offshore distant-water longline fleets (Chang *et al.*, 2018a). US length composition data were provided for the Hawaiian longline fleets from 1995-2016 (Sculley *et al.*, 2018a). Data were split into three fleets mirroring the catch data. Mexico provided length composition data from 2006-2016. The IATTC length composition data were provided only for the WCNPO region from 1998-1999 and 2009-2016.

### *Catch per Unit Effort Data*

Thirteen standardized CPUE indices were provided for consideration in the SS base-case assessment model; ten in the WCNPO and three in the EPO (Tables 4, 5, 6). All indices were for longline fleets and in numbers of fish except for the US gillnet fleet which was in biomass. In the WCNPO, indices are available from 1964 and in EPO from 1967. All indices were developed for the 2018 assessment except for the US gillnet index, which was calculated for the 2009 assessment and spans 1985-2006 (Courtney *et al*., 2009). This document will provide an evaluation of available CPUE indices for the WCNPO model for conflict and potential

convergence problems. The acronyms in the fleet names are defined as follows: WCNPO is Western and Central North Pacific Ocean; EPO is Eastern Pacific Ocean; OSDWLL is offshore distant water longline; OSDWCOLL is offshore distant water and coastal longline; early is the early time period; late is the late time period, Area1 and Area2 are the Japanese fishery areas in the WCNPO as defined in Ijima and Kanaiwa (2018); OSDF is offshore driftnet gear; CODF is coastal driftnet gear; JPN_WCNPO_Other is Japanese unreported longline (mainly coastal longline), bait, and net fishing gear; DWLL is distant water longline gear; TWN_WCNPO_Other is Taiwanese offshore longline, coastal longline, gillnet, harpoon, and other gears; LL is longline gear; shallow is the Hawaii shallow set sector; deep is the Hawaii deep set sector; GN is gillnet gear; US_WCNPO_Other is harpoon and other gears; Mex_LL_EPO is Mexican longline gear in the EPO; WCPFC_LL is longline gear in the WCNPO; IATTC_LL is longline gear in the EPO north of the equator; IATTC_LL_Overlap is longline gear in the overlap area of the IATTC convention area and the WCNPO areas.

## Methods

CPUE indices which were split into early and late time periods for the assessment model were combined for this analysis to allow for comparison across a single time-period. Therefore, six indices were compared for the WCNPO model. The analysis was performed using the diags component of the FLCore package (Version 2.6.6, Kell *et al.* 2007) in R (version 3.4.0, R Core Team, 2017). These packages provide a standardized method to plot and summarize CPUE data so that modelers can better evaluate their input data into assessment models. Each CPUE index was fit using a Loess smoother with only year as an explanatory variable, and the residuals from that smoother were examined graphically. A pairwise correlation analysis was used to evaluate similarities and discrepancies in the trends of each pair of indices. A hierarchical clustering analysis using a set of dissimilarities was conducted to identify significant clusters of indices. Finally, a cross-correlation analysis was performed to evaluate strong year class trends which may appear in fleets if they are targeting different age-classes.

## Results and Discussion

The CPUE time series are plotted in Figure 2 to compare trends by stock. Indices which were split into early and late periods were combined here to show the trend over the entire time period; however, these indices were split due to changes in the logbook reporting or changes in the fishery (regulations, etc.) which may explain some of the trends within an index. In general, the trends do not appear to be significantly in conflict. The overall trend for each index is increasing in the last 5-10 years with the exception of the Taiwanese LL CPUE, which is flat to slightly decreasing. The US indices all have a peak in the mid-2000s, followed by a slight decrease and subsequent increase in CPUE. Japan has a similar peak in the mid- 1980s followed by a dip and increase after 2004 in area 1, which is the swordfish targeted fleet. The trend in area 2 shows a general decrease in CPUE until 1995 and an increase in CPUE until present. The Taiwanese LL CPUE is relatively flat until the 2000s and peaks in around 2010.

To look at deviations from the overall trends, the residuals from the fits are compared in Figure 3. This allows for conflicts between indices to be highlighted by patterns in the residuals, autocorrelation within indices identified could be due to year-class effects, or the identification of other potentially important factors not included in the standardization of the CPUE. Other than

large residuals in the US Hawaiian LL shallow index, which were present because the data were standardized as two indices and combined for this analysis, there appears to be no significant patterns in the residuals. Evaluating the US Hawaiian LL shallow index as two indices does reduce the residuals in this figure but otherwise does not change the results of the analysis; therefore, this was left as a single index.

Figure 4 illustrates the correlation between indices; the lower left triangle displays the pairwise scatter plots of one index plotted against another with a linear smoother, the upper right triangle displays the correlation coefficients and the diagonal displays the range of observations. A single influential point may cause a strong spurious correlation. Therefore, it is important to look at the plots as well as the correlation coefficients. Most of the indices have moderate to strong positive correlations. The US Hawaiian LL shallow index has the highest correlations with Taiwan (0.762) and US gillnet (0.608). A few indices are negatively correlated, but none have very large negative correlations. The most negative correlation is -0.329 between the Japanese OSDWLL area 1 index and Taiwanese LL index.

If indices represent the same stock components, then it is reasonable to expect them to be correlated. If indices are not correlated or are negatively correlated, indicating conflicting trends, this may result in poor fits to the data and bias in the estimates. Therefore, the correlations can be used to select groups that represent a common hypothesis about the evolution of the stock (Kell *et al.*, 2007). This allows for multiple models to be proposed that may reflect different possible states of nature suggested by the CPUE indices. Figure 5 shows the results from a hierarchical cluster analysis using a set of dissimilarities. Blue indicates positive correlations and red indicates negative correlations. The width of the oval indicates the scale of the correlation. Most series appear to be similar, with the HI Shallow LL index and Taiwan DWLL index most similar. The Japan Area 1 index appears to be the least similar to the Taiwan LL index. The indices cluster into two groups, with the US Hawaiian LL deep index clustering with the Japanese OSDWLL area 1 index, and all the other indices clustering together.

Finally, the cross-correlations are plotted in Figure 6. These represent the correlations between series when they are lagged by -10 to 10 years. The diagonal from top left to bottom right shows the autocorrelations as an index is lagged against itself. For example, the HI LL Shallow index (2nd diagonal element) shows strong autocorrelation with a 1-3 year time lag which could be due to year-class effects. This could also be a reason for strong cross-correlations between series. A strong negative or positive cross-correlation could be due to series being dominated by different age-classes. For example, the strong correlations between the Japanese OSDWLL area 1 and area 2 fleets may be caused by the different targeting of the two fleets. Area 1 vessels primarily target swordfish, and area 2 vessels primarily catch swordfish as bycatch.

Overall, there does not appear to be substantial conflict between the candidate CPUE indices for the WCNPO region, and all should be considered for inclusion in the SS assessment model.

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## Tables

Table 1. ISC Report (2018) Table 8.1. Fishing fleet definitions for the North Pacific swordfish stock assessment with fleet code, flag (JPN is Japan, TWN is Taiwan, US is United States, MEX is Mexico, WCPFC is Western and Central Pacific Fisheries Commission, IATTC is Inter-American Tropical Tuna Commission), fleet name, time period, quarterly data availability, catch units, standardized CPUE and size composition data availability.

| Fleet Code | Flag | Fleet Name | Catch Time Period | Quarterly Data? | Catch Units | Standardized CPUE Available? | Size Composition Data Available? |
|---|---|---|---|---|---|---|---|
| F1 | JPN | JPN_WCNPO_OSDWLL_early_Area1 | 1952-1993 | Yes | Numbers | Yes, 1975-1993 | Yes, 1970-1993, 1cm |
| F2 | JPN | JPN_WCNPO_OSDWCOLL_late_Area1 | 1994-2016 | Yes | Numbers | Yes, 1994-2016 | Yes, 1994-2016, 1cm |
| F3 | JPN | JPN_WCNPO_OSDWLL_early_Area2 | 1952-1993 | Yes | Numbers | Yes, 1975-1993 | No, Mirror F15 |
| F4 | JPN | JPN_WCNPO_OSDWLL_late_Area2 | 1994-2016 | Yes | Numbers | Yes, 1994-2016 | No, Mirror F15 or F11 |
| F5 | JPN | JPN_EPO_OSDWLL | 1952-2016 | Yes | Numbers | EPO, 1952-2016 | Yes, Low coverage, 1cm |
| F6 | JPN | JPN_WCNPO_OSDF | 1960-1992 | No | Weight | No | Yes, 1991-1992, 1cm |
| F7 | JPN | JPN_WCNPO_CODF | 1993-2014 | No | Weight | No | Yes, Low coverage, 1cm |
| F8 | JPN | JPN_WCNPO_Other_early | 1952-1993 | No | Weight | No | No, Mirror F1 |
| F9 | JPN | JPN_WCNPO_Other_late | 1994-2014 | No | Weight | No | No, Mirror F2 |
| F10 | TWN | TWN_WCNPO_DWLL_early | 1959-1999 | No | Weight | Yes, 1975-1999 | No, Mirror F11 or F1 |
| F11 | TWN | TWN_WCNPO_DWLL_late | 2000-2016 | No | Weight | Yes, 2000-2016 | Yes, 2004-2016, 1cm |
| F12 | TWN | TWN_WCNPO_Other | 1959-2016 | No | Weight | No | No, Mirror F11 or F2 |
| F13 | TWN | TWN_EPO_OSDWLL_early | 1967-1999 | No | Weight | EPO, 1967-1999 | No, Mirror F14 |
| F14 | TWN | TWN_EPO_OSDWLL_late | 2000-2016 | No | Weight | EPO, 2000-2016 | Yes, 2004-2016, 1cm |
| F15 | US | US_WCNPO_LL_deep | 1995-2016 | Yes | Weight | Yes, 1995-2016 | Yes, 1995-2016, 1cm |
| F16 | US | US_WCNPO_LL_shallow_early | 1990-2000 | Yes | Weight | Yes, 1995-2000 | Yes, 1995-2000, 1cm |
| F17 | US | US_WCNPO_LL_shallow_late | 2005-2016 | Yes | Weight | Yes, 2005-2016 | Yes, 2005-2016, 1cm |
| F18 | US | US_WCNPO_GN | 1980-2016 | No | Weight | Yes, 1985-2006 | No, Mirror F15 or F16 |
| F19 | US | US_WCNPO_Other | 1970-2016 | No | Weight | No | No, Mirror F15 or F16 |
| F20 | MEX | MEX_LL_EPO | 2011-2016 | Yes | Weight | No | Yes, 2006-2016, 1 cm |
| F21 | WCPFC | WCPFC_LL | 1970-2016 | Yes | Weight | No | No, Mirror F11 or F15 |
| F22 | IATTC | IATTC_LL | 1975-2016 | Yes | Weight | No | Yes, Low coverage, 1 cm |
| F23 | IATTC | IATTC_LL_Overlap | 1975-2016 | Yes | Weight | No | No, Mirror F14 or F5 |

Table 2.Time series of catch by fleet submitted for the 2018 North Pacific swordfish stock assessment Fleets 1-5 and 22-23 are in numbers of fish, fleets 6-21 are in metric tons.

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1952 | 1 | 90494 | - | 333 | - | 0 | - | - | 700.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1952 | 2 | 20310 | - | 544 | - | 10 | - | - | 700.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1952 | 3 | 15498 | - | 143 | - | 0 | - | - | 700.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1952 | 4 | 48794 | - | 445 | - | 15 | - | - | 700.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1953 | 1 | 83749 | - | 2589 | - | 0 | - | - | 403.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1953 | 2 | 37093 | - | 333 | - | 6 | - | - | 403.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1953 | 3 | 10707 | - | 307 | - | 12 | - | - | 403.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1953 | 4 | 79050 | - | 587 | - | 32 | - | - | 403.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1954 | 1 | 118319 | - | 874 | - | 0 | - | - | 261.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1954 | 2 | 66616 | - | 261 | - | 18 | - | - | 261.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1954 | 3 | 15233 | - | 59 | - | 16 | - | - | 261.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1954 | 4 | 51442 | - | 926 | - | 317 | - | - | 261.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1955 | 1 | 103859 | - | 3130 | - | 23 | - | - | 261.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1955 | 2 | 68962 | - | 632 | - | 1 | - | - | 261.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1955 | 3 | 2982 | - | 185 | - | 20 | - | - | 261.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1955 | 4 | 81541 | - | 1468 | - | 180 | - | - | 261.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1956 | 1 | 145031 | - | 2392 | - | 0 | - | - | 222.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1956 | 2 | 57667 | - | 1853 | - | 4 | - | - | 222.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1956 | 3 | 1411 | - | 169 | - | 56 | - | - | 222.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1956 | 4 | 83341 | - | 652 | - | 46 | - | - | 222.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1957 | 1 | 145143 | - | 2567 | - | 6 | - | - | 245.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1957 | 2 | 54342 | - | 1015 | - | 166 | - | - | 245.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1957 | 3 | 1702 | - | 532 | - | 746 | - | - | 245.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1957 | 4 | 77685 | - | 1844 | - | 230 | - | - | 245.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1958 | 1 | 179317 | - | 2631 | - | 30 | - | - | 302.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1958 | 2 | 64187 | - | 2110 | - | 32 | - | - | 302.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1958 | 3 | 8468 | - | 1023 | - | 183 | - | - | 302.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1958 | 4 | 111146 | - | 1028 | - | 60 | - | - | 302.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1959 | 1 | 136471 | - | 2254 | - | 74 | - | - | 257.8 | - | 106.75 | - | 22.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1959 | 2 | 47736 | - | 3964 | - | 314 | - | - | 257.8 | - | 106.75 | - | 22.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1959 | 3 | 50421 | - | 446 | - | 297 | - | - | 257.8 | - | 106.75 | - | 22.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1959 | 4 | 98626 | - | 1779 | - | 329 | - | - | 257.8 | - | 106.75 | - | 22.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1960 | 1 | 182427 | - | 5635 | - | 10 | 0.35 | - | 335.0 | - | 130 | - | 31.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1960 | 2 | 49834 | - | 5331 | - | 324 | 0.35 | - | 335.0 | - | 130 | - | 31.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1960 | 3 | 28858 | - | 456 | - | 705 | 0.35 | - | 335.0 | - | 130 | - | 31.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1960 | 4 | 122952 | - | 1160 | - | 314 | 0.35 | - | 335.0 | - | - | - | 31.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1961 | 1 | 151311 | - | 7477 | - | 244 | 0.42 | - | 357.7 | - | 79.5 | - | 18.25 | - | - | - | - | - | - | - | - | - | - | - |
| 1961 | 2 | 45065 | - | 10257 | - | 2039 | 0.42 | - | 357.7 | - | 79.5 | - | 18.25 | - | - | - | - | - | - | - | - | - | - | - |
| 1961 | 3 | 35099 | - | 3113 | - | 2593 | 0.42 | - | 357.7 | - | 79.5 | - | 18.25 | - | - | - | - | - | - | - | - | - | - | - |
| 1961 | 4 | 125754 | - | 3717 | - | 953 | 0.42 | - | 357.7 | - | 130 | - | 18.25 | - | - | - | - | - | - | - | - | - | - | - |
| 1962 | 1 | 57544 | - | 21566 | - | 602 | 0 | - | 377.1 | - | 123.5 | - | 15.5 | - | - | - | - | - | - | - | - | - | - | - |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1962 | 2 | 12678 | - | 15863 | - | 6215 | 0 | - | 377.1 | - | 123.5 | - | 15.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1962 | 3 | 8474 | - | 1152 | - | 2887 | 0 | - | 377.1 | - | 123.5 | - | 15.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1962 | 4 | 61014 | - | 14956 | - | 1486 | 0 | - | 377.1 | - | 79.5 | - | 15.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1963 | 1 | 27431 | - | 36430 | - | 1634 | 0 | - | 230.4 | - | 85.75 | - | 4.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1963 | 2 | 8686 | - | 5104 | - | 4124 | 0 | - | 230.4 | - | 85.75 | - | 4.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1963 | 3 | 8460 | - | 2043 | - | 3896 | 0 | - | 230.4 | - | 85.75 | - | 4.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1963 | 4 | 66700 | - | 29414 | - | 2198 | 0 | - | 230.4 | - | 123.5 | - | 4.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1964 | 1 | 38594 | - | 6240 | - | 2876 | 1 | - | 294.75 | - | 89.5 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1964 | 2 | 13141 | - | 2162 | - | 5262 | 1 | - | 294.75 | - | 89.5 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1964 | 3 | 9056 | - | 917 | - | 4781 | 1 | - | 294.75 | - | 89.5 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1964 | 4 | 36933 | - | 2469 | - | 20254 | 1 | - | 294.75 | - | 85.75 | - | 2.5 | - | - | - | - | - | - | - | - | - | - | - |
| 1965 | 1 | 45909 | - | 4563 | - | 2196 | 0 | - | 562.25 | - | 82.75 | - | 6.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1965 | 2 | 12798 | - | 3896 | - | 2708 | 0 | - | 562.25 | - | 82.75 | - | 6.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1965 | 3 | 15858 | - | 1635 | - | 3378 | 0 | - | 562.25 | - | 82.75 | - | 6.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1965 | 4 | 60335 | - | 1438 | - | 11845 | 0 | - | 562.25 | - | 89.5 | - | 6.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1966 | 1 | 59819 | - | 3091 | - | 3289 | 0 | - | 474.25 | - | 122.25 | - | 7.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1966 | 2 | 16929 | - | 2714 | - | 3875 | 0 | - | 474.25 | - | 122.25 | - | 7.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1966 | 3 | 21020 | - | 535 | - | 2539 | 0 | - | 474.25 | - | 122.25 | - | 7.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1966 | 4 | 66868 | - | 1519 | - | 7257 | 0 | - | 474.25 | - | 205 | - | 7.75 | - | - | - | - | - | - | - | - | - | - | - |
| 1967 | 1 | 87043 | - | 3874 | - | 1165 | 0 | - | 281.25 | - | 161.5 | - | 8.75 | 5.25 | - | - | - | - | - | - | - | - | - | - |
| 1967 | 2 | 16528 | - | 4799 | - | 2673 | 0 | - | 281.25 | - | 161.5 | - | 8.75 | 5.25 | - | - | - | - | - | - | - | - | - | - |
| 1967 | 3 | 11717 | - | 1303 | - | 4369 | 0 | - | 281.25 | - | 161.5 | - | 8.75 | 5.25 | - | - | - | - | - | - | - | - | - | - |
| 1967 | 4 | 64978 | - | 1289 | - | 8695 | 0 | - | 281.25 | - | 161.5 | - | 8.75 | 5.25 | - | - | - | - | - | - | - | - | - | - |
| 1968 | 1 | 56379 | - | 7275 | - | 2943 | 0 | - | 459.75 | - | 190.75 | - | 3 | 3.75 | - | - | - | - | - | - | - | - | - | - |
| 1968 | 2 | 10519 | - | 3077 | - | 4651 | 0 | - | 459.75 | - | 190.75 | - | 3 | 3.75 | - | - | - | - | - | - | - | - | - | - |
| 1968 | 3 | 22762 | - | 708 | - | 8332 | 0 | - | 459.75 | - | 190.75 | - | 3 | 3.75 | - | - | - | - | - | - | - | - | - | - |
| 1968 | 4 | 53632 | - | 2414 | - | 12354 | 0 | - | 459.75 | - | 190.75 | - | 3 | 3.75 | - | - | - | - | - | - | - | - | - | - |
| 1969 | 1 | 67510 | - | 4579 | - | 2877 | 0 | - | 480 | - | 210.75 | - | 1.75 | 1.5 | - | - | - | - | - | - | - | - | - | - |
| 1969 | 2 | 9549 | - | 1597 | - | 10166 | 0 | - | 480 | - | 210.75 | - | 1.75 | 1.5 | - | - | - | - | - | - | - | - | - | - |
| 1969 | 3 | 16523 | - | 967 | - | 9685 | 0 | - | 480 | - | 210.75 | - | 1.75 | 1.5 | - | - | - | - | - | - | - | - | - | - |
| 1969 | 4 | 41571 | - | 3531 | - | 8774 | 0 | - | 480 | - | 210.75 | - | 1.75 | 1.5 | - | - | - | - | - | - | - | - | - | - |
| 1970 | 1 | 40007 | - | 5603 | - | 7217 | 0 | - | 555.75 | - | 226 | - | 1.25 | 6 | - | - | - | - | - | 155.5 | - | 7.5 | - | - |
| 1970 | 2 | 7927 | - | 3960 | - | 9540 | 0 | - | 555.75 | - | 226 | - | 1.25 | 6 | - | - | - | - | - | 155.5 | - | 7.5 | - | - |
| 1970 | 3 | 12427 | - | 1516 | - | 10853 | 0 | - | 555.75 | - | 226 | - | 1.25 | 6 | - | - | - | - | - | 155.5 | - | 7.5 | - | - |
| 1970 | 4 | 28713 | - | 3041 | - | 6381 | 0 | - | 555.75 | - | 226 | - | 1.25 | 6 | - | - | - | - | - | 155.5 | - | 7.5 | - | - |
| 1971 | 1 | 38940 | - | 6723 | - | 4908 | 0.25 | - | 227 | - | 248 | - | 0.75 | 3.5 | - | - | - | - | - | 25.5 | - | 8.25 | - | - |
| 1971 | 2 | 7281 | - | 2581 | - | 7873 | 0.25 | - | 227 | - | 248 | - | 0.75 | 3.5 | - | - | - | - | - | 25.5 | - | 8.25 | - | - |
| 1971 | 3 | 10421 | - | 2486 | - | 7742 | 0.25 | - | 227 | - | 248 | - | 0.75 | 3.5 | - | - | - | - | - | 25.5 | - | 8.25 | - | - |
| 1971 | 4 | 32500 | - | 3346 | - | 6462 | 0.25 | - | 227 | - | 248 | - | 0.75 | 3.5 | - | - | - | - | - | 25.5 | - | 8.25 | - | - |
| 1972 | 1 | 36894 | - | 9744 | - | 9404 | 13.75 | - | 209 | - | 215.5 | - | 2.75 | 5.5 | - | - | - | - | - | 43.75 | - | 8.5 | - | - |
| 1972 | 2 | 7666 | - | 4382 | - | 10808 | 13.75 | - | 209 | - | 215.5 | - | 2.75 | 5.5 | - | - | - | - | - | 43.75 | - | 8.5 | - | - |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
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| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1972 | 3 | 5541 | - | 1291 | - | 4799 | 13.75 | - | 209 | - | 215.5 | - | 2.75 | 5.5 | - | - | - | - | - | 43.75 | - | 8.5 | - | - |
| 1972 | 4 | 22771 | - | 4401 | - | 6968 | 13.75 | - | 209 | - | 215.5 | - | 2.75 | 5.5 | - | - | - | - | - | 43.75 | - | 8.5 | - | - |
| 1973 | 1 | 34532 | - | 10764 | - | 9606 | 180 | - | 146.75 | - | 215 | - | 29.75 | 4.75 | - | - | - | - | - | 100.75 | - | 10.25 | - | - |
| 1973 | 2 | 8965 | - | 3821 | - | 12292 | 180 | - | 146.75 | - | 215 | - | 29.75 | 4.75 | - | - | - | - | - | 100.75 | - | 10.25 | - | - |
| 1973 | 3 | 4900 | - | 3180 | - | 9036 | 180 | - | 146.75 | - | 215 | - | 29.75 | 4.75 | - | - | - | - | - | 100.75 | - | 10.25 | - | - |
| 1973 | 4 | 22081 | - | 4135 | - | 7496 | 180 | - | 146.75 | - | 215 | - | 29.75 | 4.75 | - | - | - | - | - | 100.75 | - | 10.25 | - | - |
| 1974 | 1 | 20358 | - | 9775 | - | 3571 | 326 | - | 222.25 | - | 220 | - | 34 | 5.5 | - | - | - | - | - | 107 | - | 12 | - | - |
| 1974 | 2 | 8753 | - | 5058 | - | 5476 | 326 | - | 222.25 | - | 220 | - | 34 | 5.5 | - | - | - | - | - | 107 | - | 12 | - | - |
| 1974 | 3 | 9884 | - | 2793 | - | 4442 | 326 | - | 222.25 | - | 220 | - | 34 | 5.5 | - | - | - | - | - | 107 | - | 12 | - | - |
| 1974 | 4 | 34990 | - | 3178 | - | 7908 | 326 | - | 222.25 | - | 220 | - | 34 | 5.5 | - | - | - | - | - | 107 | - | 12 | - | - |
| 1975 | 1 | 30770 | - | 7324 | - | 1548 | 668 | - | 225.75 | - | 227.5 | - | 38.25 | 2 | - | - | - | - | - | 142.5 | - | 14.25 | 4 | 0 |
| 1975 | 2 | 17705 | - | 2854 | - | 5342 | 668 | - | 225.75 | - | 227.5 | - | 38.25 | 2 | - | - | - | - | - | 142.5 | - | 14.25 | 0 | 0 |
| 1975 | 3 | 12619 | - | 1221 | - | 5793 | 668 | - | 225.75 | - | 227.5 | - | 38.25 | 2 | - | - | - | - | - | 142.5 | - | 14.25 | 14 | 0 |
| 1975 | 4 | 41163 | - | 1918 | - | 6911 | 668 | - | 225.75 | - | 227.5 | - | 38.25 | 2 | - | - | - | - | - | 142.5 | - | 14.25 | 39 | 5 |
| 1976 | 1 | 38251 | - | 10662 | - | 7853 | 872 | - | 314.75 | - | 155.75 | - | 48.5 | 7.75 | - | - | - | - | - | 13.75 | - | 38.25 | 24 | 0 |
| 1976 | 2 | 18186 | - | 5049 | - | 6637 | 872 | - | 314.75 | - | 155.75 | - | 48.5 | 7.75 | - | - | - | - | - | 13.75 | - | 38.25 | 75 | 0 |
| 1976 | 3 | 13094 | - | 2003 | - | 8508 | 872 | - | 314.75 | - | 155.75 | - | 48.5 | 7.75 | - | - | - | - | - | 13.75 | - | 38.25 | 48 | 5 |
| 1976 | 4 | 33783 | - | 4718 | - | 5659 | 872 | - | 314.75 | - | 155.75 | - | 48.5 | 7.75 | - | - | - | - | - | 13.75 | - | 38.25 | 13 | 0 |
| 1977 | 1 | 49038 | - | 6841 | - | 4914 | 586 | - | 290.25 | - | 136.25 | - | 35.25 | 6.75 | - | - | - | - | - | 84.25 | - | 27.25 | 28 | 11 |
| 1977 | 2 | 22981 | - | 3941 | - | 12620 | 586 | - | 290.25 | - | 136.25 | - | 35.25 | 6.75 | - | - | - | - | - | 84.25 | - | 27.25 | 76 | 7 |
| 1977 | 3 | 10027 | - | 1542 | - | 6373 | 586 | - | 290.25 | - | 136.25 | - | 35.25 | 6.75 | - | - | - | - | - | 84.25 | - | 27.25 | 90 | 0 |
| 1977 | 4 | 34195 | - | 3568 | - | 4588 | 586 | - | 290.25 | - | 136.25 | - | 35.25 | 6.75 | - | - | - | - | - | 84.25 | - | 27.25 | 9 | 0 |
| 1978 | 1 | 43277 | - | 12209 | - | 3167 | 618.75 | - | 323.5 | - | 136.5 | - | 3 | 1.5 | - | - | - | - | - | 428 | - | 19.75 | 28 | 0 |
| 1978 | 2 | 24013 | - | 4892 | - | 6383 | 618.75 | - | 323.5 | - | 136.5 | - | 3 | 1.5 | - | - | - | - | - | 428 | - | 19.75 | 19 | 0 |
| 1978 | 3 | 10488 | - | 1741 | - | 3928 | 618.75 | - | 323.5 | - | 136.5 | - | 3 | 1.5 | - | - | - | - | - | 428 | - | 19.75 | 9 | 5 |
| 1978 | 4 | 35618 | - | 2947 | - | 1922 | 618.75 | - | 323.5 | - | 136.5 | - | 3 | 1.5 | - | - | - | - | - | 428 | - | 19.75 | 10 | 1 |
| 1979 | 1 | 42977 | - | 17880 | - | 1187 | 245.75 | - | 315.75 | - | 167 | - | 8.25 | 4 | - | - | - | - | - | 96.5 | - | 26 | 5 | 1 |
| 1979 | 2 | 23783 | - | 5415 | - | 4291 | 245.75 | - | 315.75 | - | 167 | - | 8.25 | 4 | - | - | - | - | - | 96.5 | - | 26 | 11 | 0 |
| 1979 | 3 | 16868 | - | 2254 | - | 5239 | 245.75 | - | 315.75 | - | 167 | - | 8.25 | 4 | - | - | - | - | - | 96.5 | - | 26 | 37 | 0 |
| 1979 | 4 | 35079 | - | 3142 | - | 1501 | 245.75 | - | 315.75 | - | 167 | - | 8.25 | 4 | - | - | - | - | - | 96.5 | - | 26 | 6 | 0 |
| 1980 | 1 | 25886 | - | 21356 | - | 1542 | 436.5 | - | 323 | - | 153.5 | - | 19 | 1.75 | - | - | - | - | 40 | 157 | - | 25 | 17 | 8 |
| 1980 | 2 | 18370 | - | 5314 | - | 4972 | 436.5 | - | 323 | - | 153.5 | - | 19 | 1.75 | - | - | - | - | 40 | 157 | - | 25 | 15 | 2 |
| 1980 | 3 | 7342 | - | 2042 | - | 2245 | 436.5 | - | 323 | - | 153.5 | - | 19 | 1.75 | - | - | - | - | 40 | 157 | - | 25 | 29 | 0 |
| 1980 | 4 | 18055 | - | 11514 | - | 2163 | 436.5 | - | 323 | - | 153.5 | - | 19 | 1.75 | - | - | - | - | 40 | 157 | - | 25 | 334 | 5 |
| 1981 | 1 | 31977 | - | 31033 | - | 724 | 462 | - | 231.6 | - | 164.25 | - | 6.25 | 6.25 | - | - | - | - | 115.25 | 71.75 | - | 29 | 517 | 113 |
| 1981 | 2 | 26258 | - | 6244 | - | 2654 | 462 | - | 231.6 | - | 164.25 | - | 6.25 | 6.25 | - | - | - | - | 115.25 | 71.75 | - | 29 | 72 | 0 |
| 1981 | 3 | 7085 | - | 3975 | - | 3139 | 462 | - | 231.6 | - | 164.25 | - | 6.25 | 6.25 | - | - | - | - | 115.25 | 71.75 | - | 29 | 295 | 0 |
| 1981 | 4 | 19099 | - | 3143 | - | 3817 | 462 | - | 231.6 | - | 164.25 | - | 6.25 | 6.25 | - | - | - | - | 115.25 | 71.75 | - | 29 | 214 | 6 |
| 1982 | 1 | 24296 | - | 16750 | - | 3468 | 314.25 | - | 283.8 | - | 214 | - | 12.25 | 3.5 | - | - | - | - | 227.75 | 49.75 | - | 37 | 890 | 80 |
| 1982 | 2 | 18874 | - | 3863 | - | 4192 | 314.25 | - | 283.8 | - | 214 | - | 12.25 | 3.5 | - | - | - | - | 227.75 | 49.75 | - | 37 | 84 | 6 |
| 1982 | 3 | 5932 | - | 1328 | - | 3440 | 314.25 | - | 283.8 | - | 214 | - | 12.25 | 3.5 | - | - | - | - | 227.75 | 49.75 | - | 37 | 52 | 2 |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
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| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1982 | 4 | 26181 | - | 4326 | - | 6100 | 314.25 | - | 283.8 | - | 214 | - | 12.25 | 3.5 | - | - | - | - | 227.75 | 49.75 | - | 37 | 19 | 52 |
| 1983 | 1 | 45609 | - | 20459 | - | 3893 | 240.5 | - | 319.2 | - | 195.75 | - | 41.5 | 1.25 | - | - | - | - | 330.25 | 109 | - | 37.25 | 240 | 47 |
| 1983 | 2 | 28709 | - | 3029 | - | 3827 | 240.5 | - | 319.2 | - | 195.75 | - | 41.5 | 1.25 | - | - | - | - | 330.25 | 109 | - | 37.25 | 142 | 0 |
| 1983 | 3 | 8857 | - | 1108 | - | 1117 | 240.5 | - | 319.2 | - | 195.75 | - | 41.5 | 1.25 | - | - | - | - | 330.25 | 109 | - | 37.25 | 78 | 0 |
| 1983 | 4 | 25184 | - | 5681 | - | 1357 | 240.5 | - | 319.2 | - | 195.75 | - | 41.5 | 1.25 | - | - | - | - | 330.25 | 109 | - | 37.25 | 226 | 9 |
| 1984 | 1 | 29375 | - | 28640 | - | 1103 | 242.75 | - | 371.7 | - | 183.25 | - | 66 | 2.25 | - | - | - | - | 525.25 | 193.5 | - | 25.5 | 184 | 2 |
| 1984 | 2 | 20684 | - | 4133 | - | 1005 | 242.75 | - | 371.7 | - | 183.25 | - | 66 | 2.25 | - | - | - | - | 525.25 | 193.5 | - | 25.5 | 39 | 0 |
| 1984 | 3 | 14954 | - | 1830 | - | 1529 | 242.75 | - | 371.7 | - | 183.25 | - | 66 | 2.25 | - | - | - | - | 525.25 | 193.5 | - | 25.5 | 61 | 0 |
| 1984 | 4 | 28957 | - | 5222 | - | 1354 | 242.75 | - | 371.7 | - | 183.25 | - | 66 | 2.25 | - | - | - | - | 525.25 | 193.5 | - | 25.5 | 36 | 23 |
| 1985 | 1 | 40738 | - | 24261 | - | 874 | 256.5 | - | 344 | - | 141.5 | - | 64.75 | 2 | - | - | - | - | 747.5 | 274.25 | - | 31.75 | 0 | 29 |
| 1985 | 2 | 40438 | - | 4051 | - | 2151 | 256.5 | - | 344 | - | 141.5 | - | 64.75 | 2 | - | - | - | - | 747.5 | 274.25 | - | 31.75 | 11 | 0 |
| 1985 | 3 | 20984 | - | 1801 | - | 2663 | 256.5 | - | 344 | - | 141.5 | - | 64.75 | 2 | - | - | - | - | 747.5 | 274.25 | - | 31.75 | 4 | 0 |
| 1985 | 4 | 34442 | - | 6308 | - | 848 | 256.5 | - | 344 | - | 141.5 | - | 64.75 | 2 | - | - | - | - | 747.5 | 274.25 | - | 31.75 | 625 | 0 |
| 1986 | 1 | 48762 | - | 15217 | - | 2673 | 292.5 | - | 327.5 | - | 114 | - | 52.75 | 2.75 | - | - | - | - | 517.25 | 246.75 | - | 42.75 | 2520 | 22 |
| 1986 | 2 | 32783 | - | 3732 | - | 5048 | 292.5 | - | 327.5 | - | 114 | - | 52.75 | 2.75 | - | - | - | - | 517.25 | 246.75 | - | 42.75 | 2374 | 7 |
| 1986 | 3 | 15570 | - | 2062 | - | 3714 | 292.5 | - | 327.5 | - | 114 | - | 52.75 | 2.75 | - | - | - | - | 517.25 | 246.75 | - | 42.75 | 1350 | 0 |
| 1986 | 4 | 33316 | - | 4382 | - | 2450 | 292.5 | - | 327.5 | - | 114 | - | 52.75 | 2.75 | - | - | - | - | 517.25 | 246.75 | - | 42.75 | 2963 | 2 |
| 1987 | 1 | 57744 | - | 19627 | - | 4414 | 227.5 | - | 286.0 | - | 332.25 | - | 47.5 | 6.25 | - | - | - | - | 382.25 | 133.75 | - | 89.25 | 4402 | 10 |
| 1987 | 2 | 29781 | - | 4489 | - | 7034 | 227.5 | - | 286.0 | - | 332.25 | - | 47.5 | 6.25 | - | - | - | - | 382.25 | 133.75 | - | 89.25 | 2349 | 23 |
| 1987 | 3 | 13396 | - | 2297 | - | 3694 | 227.5 | - | 286.0 | - | 332.25 | - | 47.5 | 6.25 | - | - | - | - | 382.25 | 133.75 | - | 89.25 | 1867 | 0 |
| 1987 | 4 | 30346 | - | 10205 | - | 4643 | 227.5 | - | 286.0 | - | 332.25 | - | 47.5 | 6.25 | - | - | - | - | 382.25 | 133.75 | - | 89.25 | 3332 | 24 |
| 1988 | 1 | 56695 | - | 23635 | - | 1541 | 262 | - | 266.0 | - | 194.25 | - | 65.75 | 5.75 | - | - | - | - | 344 | 135 | - | 55.5 | 1908 | 8 |
| 1988 | 2 | 31357 | - | 3716 | - | 2212 | 262 | - | 266.0 | - | 194.25 | - | 65.75 | 5.75 | - | - | - | - | 344 | 135 | - | 55.5 | 2155 | 1 |
| 1988 | 3 | 10481 | - | 1789 | - | 2271 | 262 | - | 266.0 | - | 194.25 | - | 65.75 | 5.75 | - | - | - | - | 344 | 135 | - | 55.5 | 1588 | 1 |
| 1988 | 4 | 19719 | - | 11592 | - | 3690 | 262 | - | 266.0 | - | 194.25 | - | 65.75 | 5.75 | - | - | - | - | 344 | 135 | - | 55.5 | 2516 | 15 |
| 1989 | 1 | 33352 | - | 24261 | - | 2937 | 349.25 | - | 336.0 | - | 373.75 | - | 9.5 | 25.75 | - | - | - | - | 310.75 | 71.5 | - | 75.25 | 521 | 2 |
| 1989 | 2 | 23892 | - | 4689 | - | 4347 | 349.25 | - | 336.0 | - | 373.75 | - | 9.5 | 25.75 | - | - | - | - | 310.75 | 71.5 | - | 75.25 | 155 | 4 |
| 1989 | 3 | 8249 | - | 1278 | - | 7258 | 349.25 | - | 336.0 | - | 373.75 | - | 9.5 | 25.75 | - | - | - | - | 310.75 | 71.5 | - | 75.25 | 437 | 1 |
| 1989 | 4 | 18244 | - | 4509 | - | 5595 | 349.25 | - | 336.0 | - | 373.75 | - | 9.5 | 25.75 | - | - | - | - | 310.75 | 71.5 | - | 75.25 | 1111 | 15 |
| 1990 | 1 | 36962 | - | 20968 | - | 2282 | 256.5 | - | 220.75 | - | 328.5 | - | 38.5 | 7.25 | - | - | 0 | - | 282.75 | 50.25 | - | 52 | 376 | 7 |
| 1990 | 2 | 23450 | - | 3179 | - | 4158 | 256.5 | - | 220.75 | - | 328.5 | - | 38.5 | 7.25 | - | - | 0 | - | 282.75 | 50.25 | - | 52 | 606 | 7 |
| 1990 | 3 | 6777 | - | 1336 | - | 2421 | 256.5 | - | 220.75 | - | 328.5 | - | 38.5 | 7.25 | - | - | 0 | - | 282.75 | 50.25 | - | 52 | 1273 | 0 |
| 1990 | 4 | 12224 | - | 3360 | - | 3851 | 256.5 | - | 220.75 | - | 328.5 | - | 38.5 | 7.25 | - | - | 72.8 | - | 282.75 | 50.25 | - | 52 | 2458 | 2 |
| 1991 | 1 | 22310 | - | 11481 | - | 1708 | 106 | - | 264.75 | - | 350 | - | 45 | 11 | - | - | 866.2 | - | 236 | 39.25 | - | 39.75 | 949 | 14 |
| 1991 | 2 | 19652 | - | 2895 | - | 5013 | 106 | - | 264.75 | - | 350 | - | 45 | 11 | - | - | 1466.8 | - | 236 | 39.25 | - | 39.75 | 1437 | 0 |
| 1991 | 3 | 7672 | - | 1291 | - | 2519 | 106 | - | 264.75 | - | 350 | - | 45 | 11 | - | - | 460.5 | - | 236 | 39.25 | - | 39.75 | 498 | 0 |
| 1991 | 4 | 17279 | - | 3664 | - | 1082 | 106 | - | 264.75 | - | 350 | - | 45 | 11 | - | - | 383.1 | - | 236 | 39.25 | - | 39.75 | 287 | 0 |
| 1992 | 1 | 27527 | - | 8928 | - | 890 | 210 | - | 407.75 | - | 368.75 | - | 60.75 | 4 | - | - | 1153.8 | - | 339 | 29.75 | - | 97.2 | 692 | 35 |
| 1992 | 2 | 24231 | - | 2846 | - | 3322 | 210 | - | 407.75 | - | 368.75 | - | 60.75 | 4 | - | - | 1235.9 | - | 339 | 29.75 | - | 97.2 | 813 | 10 |
| 1992 | 3 | 9727 | - | 1528 | - | 1025 | 210 | - | 407.75 | - | 368.75 | - | 60.75 | 4 | - | - | 608.3 | - | 339 | 29.75 | - | 97.2 | 166 | 3 |
| 1992 | 4 | 12483 | - | 2571 | - | 680 | 210 | - | 407.75 | - | 368.75 | - | 60.75 | 4 | - | - | 768.1 | - | 339 | 29.75 | - | 97.2 | 282 | 28 |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1993 | 1 | 29415 | - | 6608 | - | 1631 | - | 73 | 437.75 | - | 308 | - | 77.5 | 3.25 | - | - | 1335.8 | - | 353 | 51 | - | 144.5 | 1075 | 96 |
| 1993 | 2 | 29960 | - | 2538 | - | 3212 | - | 73 | 437.75 | - | 308 | - | 77.5 | 3.25 | - | - | 1177.4 | - | 353 | 51 | - | 144.5 | 989 | 141 |
| 1993 | 3 | 11229 | - | 1452 | - | 1081 | - | 73 | 437.75 | - | 308 | - | 77.5 | 3.25 | - | - | 716.7 | - | 353 | 51 | - | 144.5 | 317 | 12 |
| 1993 | 4 | 19258 | - | 2840 | - | 928 | - | 73 | 437.75 | - | 308 | - | 77.5 | 3.25 | - | - | 571.2 | - | 353 | 51 | - | 144.5 | 107 | 9 |
| 1994 | 1 | - | 34547 | - | 5118 | 937 | - | 105.25 | - | 87.25 | 288.75 | - | 54.75 | 4.5 | - | - | 861.9 | - | 197.75 | 41.25 | - | 262.25 | 2272 | 155 |
| 1994 | 2 | - | 26453 | - | 2467 | 1984 | - | 105.25 | - | 87.25 | 288.75 | - | 54.75 | 4.5 | - | - | 602.2 | - | 197.75 | 41.25 | - | 262.25 | 1077 | 3 |
| 1994 | 3 | - | 8556 | - | 1292 | 2272 | - | 105.25 | - | 87.25 | 288.75 | - | 54.75 | 4.5 | - | - | 146.7 | - | 197.75 | 41.25 | - | 262.25 | 265 | 14 |
| 1994 | 4 | - | 23342 | - | 1491 | 612 | - | 105.25 | - | 87.25 | 288.75 | - | 54.75 | 4.5 | - | - | 239.5 | - | 197.75 | 41.25 | - | 262.25 | 177 | 0 |
| 1995 | 1 | - | 27886 | - | 3728 | 844 | - | 140.25 | - | 116.25 | 301.5 | - | 56.25 | 0.5 | - | 0.0 | 271.9 | - | 192.75 | 32 | - | 256.6 | 254 | 38 |
| 1995 | 2 | - | 21059 | - | 2136 | 2261 | - | 140.25 | - | 116.25 | 301.5 | - | 56.25 | 0.5 | - | 0.7 | 707.1 | - | 192.75 | 32 | - | 256.6 | 560 | 12 |
| 1995 | 3 | - | 7541 | - | 1031 | 2490 | - | 140.25 | - | 116.25 | 301.5 | - | 56.25 | 0.5 | - | 11 | 206.6 | - | 192.75 | 32 | - | 256.6 | 91 | 8 |
| 1995 | 4 | - | 21734 | - | 1591 | 731 | - | 140.25 | - | 116.25 | 301.5 | - | 56.25 | 0.5 | - | 12.1 | 140.4 | - | 192.75 | 32 | - | 256.6 | 82 | 25 |
| 1996 | 1 | - | 30962 | - | 3912 | 1980 | - | 107 | - | 162.5 | 177.75 | - | 8 | 6 | - | 5.4 | 467.6 | - | 190.25 | 22.75 | - | 154.2 | 190 | 32 |
| 1996 | 2 | - | 23750 | - | 1977 | 5080 | - | 107 | - | 162.5 | 177.75 | - | 8 | 6 | - | 11.1 | 596.7 | - | 190.25 | 22.75 | - | 154.2 | 174 | 17 |
| 1996 | 3 | - | 7590 | - | 881 | 380 | - | 107 | - | 162.5 | 177.75 | - | 8 | 6 | - | 3.8 | 123.4 | - | 190.25 | 22.75 | - | 154.2 | 52 | 0 |
| 1996 | 4 | - | 15239 | - | 2594 | 680 | - | 107 | - | 162.5 | 177.75 | - | 8 | 6 | - | 4.1 | 294.6 | - | 190.25 | 22.75 | - | 154.2 | 255 | 2 |
| 1997 | 1 | - | 31260 | - | 2433 | 1994 | - | 91.25 | - | 103.5 | 344.5 | - | 15.25 | 6.5 | - | 2.6 | 654.4 | - | 177 | 21 | - | 98.75 | 316 | 0 |
| 1997 | 2 | - | 17006 | - | 1780 | 2650 | - | 91.25 | - | 103.5 | 344.5 | - | 15.25 | 6.5 | - | 10 | 782.2 | - | 177 | 21 | - | 98.75 | 388 | 8 |
| 1997 | 3 | - | 5509 | - | 792 | 4939 | - | 91.25 | - | 103.5 | 344.5 | - | 15.25 | 6.5 | - | 4 | 111.7 | - | 177 | 21 | - | 98.75 | 560 | 0 |
| 1997 | 4 | - | 19071 | - | 1331 | 998 | - | 91.25 | - | 103.5 | 344.5 | - | 15.25 | 6.5 | - | 3.6 | 66.4 | - | 177 | 21 | - | 98.75 | 1672 | 2 |
| 1998 | 1 | - | 28378 | - | 2006 | 2184 | - | 117.75 | - | 137.5 | 300 | - | 10.25 | 20 | - | 6.7 | 458.7 | - | 232.75 | 15.25 | - | 137.5 | 856 | 13 |
| 1998 | 2 | - | 16626 | - | 1851 | 7903 | - | 117.75 | - | 137.5 | 300 | - | 10.25 | 20 | - | 17.4 | 888.2 | - | 232.75 | 15.25 | - | 137.5 | 785 | 52 |
| 1998 | 3 | - | 4813 | - | 894 | 445 | - | 117.75 | - | 137.5 | 300 | - | 10.25 | 20 | - | 7.6 | 204 | - | 232.75 | 15.25 | - | 137.5 | 106 | 1 |
| 1998 | 4 | - | 15686 | - | 1453 | 112 | - | 117.75 | - | 137.5 | 300 | - | 10.25 | 20 | - | 9.9 | 138 | - | 232.75 | 15.25 | - | 137.5 | 1653 | 2 |
| 1999 | 1 | - | 22310 | - | 3388 | 484 | - | 181 | - | 117.5 | 362 | - | 15.25 | 17.25 | - | 10.8 | 687.7 | - | 151.5 | 20.75 | - | 207.3 | 821 | 29 |
| 1999 | 2 | - | 15843 | - | 1929 | 2257 | - | 181 | - | 117.5 | 362 | - | 15.25 | 17.25 | - | 21.2 | 673.9 | - | 151.5 | 20.75 | - | 207.3 | 294 | 1 |
| 1999 | 3 | - | 6029 | - | 1401 | 1426 | - | 181 | - | 117.5 | 362 | - | 15.25 | 17.25 | - | 11.4 | 155.1 | - | 151.5 | 20.75 | - | 207.3 | 213 | 33 |
| 1999 | 4 | - | 18573 | - | 2584 | 788 | - | 181 | - | 117.5 | 362 | - | 15.25 | 17.25 | - | 10.9 | 49.2 | - | 151.5 | 20.75 | - | 207.3 | 198 | 35 |
| 2000 | 1 | - | 27538 | - | 3462 | 1019 | - | 202 | - | 140 | - | 863.5 | 21.5 | - | 70.75 | 4.3 | 534.2 | - | 162.25 | 24.75 | - | 252.4 | 135 | 3 |
| 2000 | 2 | - | 14112 | - | 2620 | 4162 | - | 202 | - | 140 | - | 863.5 | 21.5 | - | 70.75 | 25.3 | 1098.2 | - | 162.25 | 24.75 | - | 252.4 | 788 | 1 |
| 2000 | 3 | - | 7651 | - | 1081 | 5829 | - | 202 | - | 140 | - | 863.5 | 21.5 | - | 70.75 | 11 | 143.3 | - | 162.25 | 24.75 | - | 252.4 | 489 | 120 |
| 2000 | 4 | - | 21135 | - | 2219 | 2418 | - | 202 | - | 140 | - | 863.5 | 21.5 | - | 70.75 | 9.8 | 18.7 | - | 162.25 | 24.75 | - | 252.4 | 230 | 22 |
| 2001 | 1 | - | 24407 | - | 2981 | 8028 | - | 183 | - | 71 | - | 983.3 | 22.75 | - | 523.75 | 5.9 | - | 20.7 | 93.75 | 14.25 | - | 282.25 | 1753 | 21 |
| 2001 | 2 | - | 10468 | - | 2522 | 8468 | - | 183 | - | 71 | - | 983.3 | 22.75 | - | 523.75 | 33.1 | - | 31.6 | 93.75 | 14.25 | - | 282.25 | 1995 | 167 |
| 2001 | 3 | - | 9113 | - | 1459 | 5642 | - | 183 | - | 71 | - | 983.3 | 22.75 | - | 523.75 | 20.9 | - | 0 | 93.75 | 14.25 | - | 282.25 | 1503 | 136 |
| 2001 | 4 | - | 16518 | - | 2185 | 3863 | - | 183 | - | 71 | - | 983.3 | 22.75 | - | 523.75 | 26.7 | - | 0 | 93.75 | 14.25 | - | 282.25 | 709 | 253 |
| 2002 | 1 | - | 22057 | - | 3406 | 3261 | - | 291 | - | 62.75 | - | 980.3 | 6.75 | - | 772 | 81 | - | 217.3 | 75.5 | 23.25 | - | 314 | 1429 | 81 |
| 2002 | 2 | - | 9737 | - | 2970 | 5088 | - | 291 | - | 62.75 | - | 980.3 | 6.75 | - | 772 | 52.2 | - | 144.1 | 75.5 | 23.25 | - | 314 | 282 | 32 |
| 2002 | 3 | - | 9579 | - | 1003 | 4385 | - | 291 | - | 62.75 | - | 980.3 | 6.75 | - | 772 | 19.2 | - | 0 | 75.5 | 23.25 | - | 314 | 40 | 0 |
| 2002 | 4 | - | 18673 | - | 1564 | 2089 | - | 291 | - | 62.75 | - | 980.3 | 6.75 | - | 772 | 14.5 | - | 0 | 75.5 | 23.25 | - | 314 | 146 | 3 |
| 2003 | 1 | - | 18649 | - | 2466 | 1968 | - | 299.5 | - | 46.5 | - | 921.8 | 2.75 | - | 430 | 14.7 | - | 247.6 | 54 | 26.75 | - | 434.3 | 0 | 0 |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 2003 | 2 | - | 7495 | - | 3700 | 2623 | - | 299.5 | - | 46.5 | - | 921.8 | 2.75 | - | 430 | 71.7 | - | 208 | 54 | 26.75 | - | 434.3 | 0 | 0 |
| 2003 | 3 | - | 5907 | - | 1161 | 2466 | - | 299.5 | - | 46.5 | - | 921.8 | 2.75 | - | 430 | 26.1 | - | 0 | 54 | 26.75 | - | 434.3 | 0 | 0 |
| 2003 | 4 | - | 21308 | - | 1498 | 590 | - | 299.5 | - | 46.5 | - | 921.8 | 2.75 | - | 430 | 16.9 | - | 49.4 | 54 | 26.75 | - | 434.3 | 0 | 0 |
| 2004 | 1 | - | 20930 | - | 5840 | 1876 | - | 265.5 | - | 66.75 | - | 953.3 | 4 | - | 357.25 | 23 | - | 643.6 | 45.5 | 26.5 | - | 375.25 | 0 | 0 |
| 2004 | 2 | - | 4682 | - | 5196 | 2274 | - | 265.5 | - | 66.75 | - | 953.3 | 4 | - | 357.25 | 80.2 | - | 59.2 | 45.5 | 26.5 | - | 375.25 | 0 | 0 |
| 2004 | 3 | - | 6765 | - | 1113 | 1793 | - | 265.5 | - | 66.75 | - | 953.3 | 4 | - | 357.25 | 28.0 | - | 0 | 45.5 | 26.5 | - | 375.25 | 0 | 0 |
| 2004 | 4 | - | 25366 | - | 916 | 304 | - | 265.5 | - | 66.75 | - | 953.3 | 4 | - | 357.25 | 19.9 | - | 15.3 | 45.5 | 26.5 | - | 375.25 | 0 | 0 |
| 2005 | 1 | - | 27767 | - | 3472 | 1345 | - | 239 | - | 133.25 | - | 947 | 6.5 | - | 202.5 | 17.2 | - | 576.1 | 55 | 19.25 | - | 293.75 | 0 | 0 |
| 2005 | 2 | - | 7049 | - | 1686 | 2727 | - | 239 | - | 133.25 | - | 947 | 6.5 | - | 202.5 | 99.3 | - | 619 | 55 | 19.25 | - | 293.75 | 0 | 0 |
| 2005 | 3 | - | 5149 | - | 1445 | 540 | - | 239 | - | 133.25 | - | 947 | 6.5 | - | 202.5 | 21.1 | - | 0 | 55 | 19.25 | - | 293.75 | 0 | 0 |
| 2005 | 4 | - | 24261 | - | 1661 | 309 | - | 239 | - | 133.25 | - | 947 | 6.5 | - | 202.5 | 20.7 | - | 0 | 55 | 19.25 | - | 293.75 | 0 | 0 |
| 2006 | 1 | - | 20221 | - | 5069 | 880 | - | 199 | - | 148.75 | - | 1020 | 15.25 | - | 284.5 | 21.1 | - | 929.1 | 110.75 | 17.75 | - | 266.5 | 525 | 31 |
| 2006 | 2 | - | 8960 | - | 2814 | 2541 | - | 199 | - | 148.75 | - | 1020 | 15.25 | - | 284.5 | 96.3 | - | 0 | 110.75 | 17.75 | - | 266.5 | 2359 | 18 |
| 2006 | 3 | - | 8540 | - | 1345 | 1959 | - | 199 | - | 148.75 | - | 1020 | 15.25 | - | 284.5 | 29.5 | - | 0 | 110.75 | 17.75 | - | 266.5 | 1291 | 5 |
| 2006 | 4 | - | 32613 | - | 845 | 1031 | - | 199 | - | 148.75 | - | 1020 | 15.25 | - | 284.5 | 27.8 | - | 0 | 110.75 | 17.75 | - | 266.5 | 47 | 0 |
| 2007 | 1 | - | 30939 | - | 2814 | 1247 | - | 207.25 | - | 123.5 | - | 991.5 | 6.5 | - | 192.5 | 17.4 | - | 758 | 122.5 | 14.75 | - | 253.3 | 113 | 556 |
| 2007 | 2 | - | 10286 | - | 2973 | 1633 | - | 207.25 | - | 123.5 | - | 991.5 | 6.5 | - | 192.5 | 112.2 | - | 269.8 | 122.5 | 14.75 | - | 253.3 | 1397 | 89 |
| 2007 | 3 | - | 5693 | - | 1007 | 537 | - | 207.25 | - | 123.5 | - | 991.5 | 6.5 | - | 192.5 | 36 | - | 10.3 | 122.5 | 14.75 | - | 253.3 | 357 | 7 |
| 2007 | 4 | - | 25850 | - | 1295 | 11 | - | 207.25 | - | 123.5 | - | 991.5 | 6.5 | - | 192.5 | 28.6 | - | 24.5 | 122.5 | 14.75 | - | 253.3 | 30 | 0 |
| 2008 | 1 | - | 19598 | - | 4304 | 1372 | - | 162 | - | 131.75 | - | 918.5 | 12 | - | 90.25 | 22.1 | - | 574.6 | 101.25 | 12.25 | - | 279.2 | 163 | 10 |
| 2008 | 2 | - | 6216 | - | 2128 | 3060 | - | 162 | - | 131.75 | - | 918.5 | 12 | - | 90.25 | 179.8 | - | 305.4 | 101.25 | 12.25 | - | 279.2 | 626 | 84 |
| 2008 | 3 | - | 4906 | - | 727 | 2325 | - | 162 | - | 131.75 | - | 918.5 | 12 | - | 90.25 | 16.9 | - | 30.2 | 101.25 | 12.25 | - | 279.2 | 318 | 1 |
| 2008 | 4 | - | 18967 | - | 556 | 33 | - | 162 | - | 131.75 | - | 918.5 | 12 | - | 90.25 | 18.4 | - | 39.3 | 101.25 | 12.25 | - | 279.2 | 0 | 7 |
| 2009 | 1 | - | 17277 | - | 999 | 2083 | - | 170.5 | - | 123 | - | 846.8 | 30.25 | - | 156.25 | 25.6 | - | 346.7 | 62.75 | 12.5 | - | 295.6 | 1242 | 13 |
| 2009 | 2 | - | 5335 | - | 1371 | 5599 | - | 170.5 | - | 123 | - | 846.8 | 30.25 | - | 156.25 | 101.3 | - | 624.5 | 62.75 | 12.5 | - | 295.6 | 4849 | 77 |
| 2009 | 3 | - | 6996 | - | 424 | 2287 | - | 170.5 | - | 123 | - | 846.8 | 30.25 | - | 156.25 | 35.9 | - | 51.8 | 62.75 | 12.5 | - | 295.6 | 3826 | 60 |
| 2009 | 4 | - | 20061 | - | 478 | 128 | - | 170.5 | - | 123 | - | 846.8 | 30.25 | - | 156.25 | 16.5 | - | 0 | 62.75 | 12.5 | - | 295.6 | 1125 | 18 |
| 2010 | 1 | - | 12442 | - | 3017 | 3089 | - | 123.5 | - | 87.5 | - | 649.3 | 13 | - | 269.25 | 34.8 | - | 397.5 | 15.25 | 9.25 | - | 411.6 | 2970 | 38 |
| 2010 | 2 | - | 3936 | - | 2196 | 5298 | - | 123.5 | - | 87.5 | - | 649.3 | 13 | - | 269.25 | 82.4 | - | 322.2 | 15.25 | 9.25 | - | 411.6 | 7946 | 516 |
| 2010 | 3 | - | 6817 | - | 660 | 129 | - | 123.5 | - | 87.5 | - | 649.3 | 13 | - | 269.25 | 31 | - | 25.6 | 15.25 | 9.25 | - | 411.6 | 3949 | 1088 |
| 2010 | 4 | - | 18219 | - | 446 | 277 | - | 123.5 | - | 87.5 | - | 649.3 | 13 | - | 269.25 | 10.8 | - | 0 | 15.25 | 9.25 | - | 411.6 | 2293 | 114 |
| 2011 | 1 | - | 9176 | - | 997 | 1275 | - | 48.25 | - | 61.75 | - | 841.5 | 19.5 | - | 266.25 | 21.9 | - | 291.3 | 29.5 | 6 | 1056 | 374.3 | 5818 | 87 |
| 2011 | 2 | - | 3360 | - | 1165 | 5853 | - | 48.25 | - | 61.75 | - | 841.5 | 19.5 | - | 266.25 | 98.1 | - | 283.1 | 29.5 | 6 | 4723 | 374.3 | 7617 | 65 |
| 2011 | 3 | - | 4574 | - | 761 | 885 | - | 48.25 | - | 61.75 | - | 841.5 | 19.5 | - | 266.25 | 20.8 | - | 0 | 29.5 | 6 | 13889 | 374.3 | 5206 | 165 |
| 2011 | 4 | - | 15902 | - | 428 | 56 | - | 48.25 | - | 61.75 | - | 841.5 | 19.5 | - | 266.25 | 11.9 | - | 0 | 29.5 | 6 | 128747 | 374.3 | 1650 | 0 |
| 2012 | 1 | - | 11833 | - | 1000 | 183 | - | 97.5 | - | 90 | - | 819.8 | 12 | - | 440 | 25.8 | - | 344.1 | 24.25 | 3.25 | 93204 | 370.3 | 4552 | 131 |
| 2012 | 2 | - | 4460 | - | 1215 | 2546 | - | 97.5 | - | 90 | - | 819.8 | 12 | - | 440 | 118.4 | - | 285.6 | 24.25 | 3.25 | 11180 | 370.3 | 4758 | 171 |
| 2012 | 3 | - | 3955 | - | 436 | 1957 | - | 97.5 | - | 90 | - | 819.8 | 12 | - | 440 | 40.3 | - | 0 | 24.25 | 3.25 | 7005 | 370.3 | 7436 | 96 |
| 2012 | 4 | - | 14580 | - | 380 | 159 | - | 97.5 | - | 90 | - | 819.8 | 12 | - | 440 | 17.7 | - | 0 | 24.25 | 3.25 | 66151 | 370.3 | 3400 | 51 |
| 2013 | 1 | - | 12131 | - | 660 | 339 | - | 77.25 | - | 118 | - | 673.3 | 2.75 | - | 419.25 | 24.5 | - | 149.3 | 23.75 | 5 | 91753 | 262.4 | 6062 | 24 |
| 2013 | 2 | - | 6882 | - | 1155 | 2776 | - | 77.25 | - | 118 | - | 673.3 | 2.75 | - | 419.25 | 126.1 | - | 116.3 | 23.75 | 5 | 10666 | 262.4 | 10139 | 173 |

| | | Fleet | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 2013 | 3 | - | 3821 | - | 304 | 1590 | - | 77.25 | - | 118 | - | 673.3 | 2.75 | - | 419.25 | 26.4 | - | 0 | 23.75 | 5 | 206917 | 262.4 | 2267 | 81 |
| 2013 | 4 | - | 13649 | - | 454 | 1076 | - | 77.25 | - | 118 | - | 673.3 | 2.75 | - | 419.25 | 17.6 | - | 0 | 23.75 | 5 | 217081 | 262.4 | 1983 | 36 |
| 2014 | 1 | - | 11176 | - | 891 | 321 | - | 67.25 | - | 75.25 | - | 514.3 | 2 | - | 536.25 | 27 | - | 247 | 31 | 3.25 | 185993 | 312.4 | 6524 | 280 |
| 2014 | 2 | - | 5648 | - | 1019 | 4259 | - | 67.25 | - | 75.25 | - | 514.3 | 2 | - | 536.25 | 106.8 | - | 252.9 | 31 | 3.25 | 20729 | 312.4 | 8416 | 129 |
| 2014 | 3 | - | 3622 | - | 637 | 1072 | - | 67.25 | - | 75.25 | - | 514.3 | 2 | - | 536.25 | 36.6 | - | 42.1 | 31 | 3.25 | 161297 | 312.4 | 6003 | 53 |
| 2014 | 4 | - | 15427 | - | 537 | 15 | - | 67.25 | - | 75.25 | - | 514.3 | 2 | - | 536.25 | 26.6 | - | 0 | 31 | 3.25 | 193424 | 312.4 | 4612 | 48 |
| 2015 | 1 | - | 15277 | - | 994 | 265 | - | 69.25 | - | 122.25 | - | 709.8 | 2 | - | 455.25 | 41.1 | - | 169.7 | 24.25 | 6.5 | 131493 | 580.1 | 4941 | 287 |
| 2015 | 2 | - | 5298 | - | 1509 | 5370 | - | 69.25 | - | 122.25 | - | 709.8 | 2 | - | 455.25 | 157 | - | 186.6 | 24.25 | 6.5 | 24301 | 580.1 | 7025 | 197 |
| 2015 | 3 | - | 4883 | - | 425 | 1246 | - | 69.25 | - | 122.25 | - | 709.8 | 2 | - | 455.25 | 25 | - | 0 | 24.25 | 6.5 | 89377 | 580.1 | 3332 | 18 |
| 2015 | 4 | - | 16073 | - | 437 | 417 | - | 69.25 | - | 122.25 | - | 709.8 | 2 | - | 455.25 | 31 | - | 0 | 24.25 | 6.5 | 175266 | 580.1 | 433 | 5 |
| 2016 | 1 | - | 18236 | - | 620 | 913 | - | 75.75 | - | 107.5 | - | 466.8 | 1.25 | - | 520.25 | 54.7 | - | 48.4 | 44 | 17.75 | 96844 | 237.7 | 5519.8 | 227.8 |
| 2016 | 2 | - | 7258 | - | 1734 | 1888 | - | 75.75 | - | 107.5 | - | 466.8 | 1.25 | - | 520.25 | 174.5 | - | 155.2 | 44 | 17.75 | 15504 | 237.7 | 7584.5 | 125.8 |
| 2016 | 3 | - | 6868 | - | 201 | 165 | - | 75.75 | - | 107.5 | - | 466.8 | 1.25 | - | 520.25 | 27.4 | - | 19.9 | 44 | 17.75 | 57718 | 237.7 | 4759.5 | 39.5 |
| 2016 | 4 | - | 20272 | - | 163 | 27 | - | 75.75 | - | 107.5 | - | 466.8 | 1.25 | - | 520.25 | 28.7 | - | 0 | 44 | 17.75 | 116406 | 237.7 | 2607 | 89.25 |

Table 3. Number of swordfish lengths available in each year and quarter. Fleets are numbered as in Table 1 definitions: F1is JPN_WCNPO_OSDWLL_early_Area1; F2 is JPN_WCNPO_OSDWLL_late_Area1; F6 is JPN_WCNPO_CODF; F10 is TWN_WCNPO_DWLL_late; F12 is WCNPO_LL_ deep; F13 is US_WCNPO_LL_shallow_early; F14 is US_WCNPO_LL_shallow_late; F18 is IATTC_LL_Overlap.

| | | Fleet | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **F1** | **F2** | **F6** | **F10** | **F12** | **F13** | **F14** | **F18** |
| 1970 | 3 | 28 | - | - | - | - | - | - | - |
| 1970 | 4 | 218 | - | - | - | - | - | - | - |
| 1971 | 1 | 262 | - | - | - | - | - | - | - |
| 1971 | 2 | 113 | - | - | - | - | - | - | - |
| 1971 | 3 | 15 | - | - | - | - | - | - | - |
| 1971 | 4 | 437 | - | - | - | - | - | - | - |
| 1972 | 1 | 36 | - | - | - | - | - | - | - |
| 1972 | 3 | 688 | - | - | - | - | - | - | - |
| 1972 | 4 | 1023 | - | - | - | - | - | - | - |
| 1973 | 1 | 99 | - | - | - | - | - | - | - |
| 1973 | 2 | 162 | - | - | - | - | - | - | - |
| 1973 | 3 | 217 | - | - | - | - | - | - | - |
| 1973 | 4 | 66 | - | - | - | - | - | - | - |
| 1974 | 1 | 363 | - | - | - | - | - | - | - |
| 1974 | 2 | 518 | - | - | - | - | - | - | - |
| 1974 | 3 | 1033 | - | - | - | - | - | - | - |
| 1974 | 4 | 876 | - | - | - | - | - | - | - |
| 1975 | 2 | 665 | - | - | - | - | - | - | - |
| 1975 | 3 | 2291 | - | - | - | - | - | - | - |
| 1975 | 4 | 2852 | - | - | - | - | - | - | - |
| 1976 | 1 | 326 | - | - | - | - | - | - | - |
| 1976 | 2 | 835 | - | - | - | - | - | - | - |
| 1976 | 3 | 1876 | - | - | - | - | - | - | - |
| 1976 | 4 | 844 | - | - | - | - | - | - | - |
| 1977 | 1 | 1191 | - | - | - | - | - | - | - |
| 1977 | 2 | 942 | - | - | - | - | - | - | - |
| 1977 | 3 | 1511 | - | - | - | - | - | - | - |
| 1977 | 4 | 1058 | - | - | - | - | - | - | - |
| 1978 | 1 | 1010 | - | - | - | - | - | - | - |
| 1978 | 2 | 587 | - | - | - | - | - | - | - |
| 1978 | 3 | 1606 | - | - | - | - | - | - | - |
| 1978 | 4 | 2300 | - | - | - | - | - | - | - |
| 1979 | 1 | 989 | - | - | - | - | - | - | - |
| 1979 | 2 | 1564 | - | - | - | - | - | - | - |
| 1979 | 3 | 2964 | - | - | - | - | - | - | - |
| 1979 | 4 | 2058 | - | - | - | - | - | - | - |
| 1980 | 1 | 360 | - | - | - | - | - | - | - |
| 1980 | 2 | 2288 | - | - | - | - | - | - | - |
| 1980 | 3 | 608 | - | - | - | - | - | - | - |
| 1980 | 4 | 1847 | - | - | - | - | - | - | - |
| 1981 | 1 | 1818 | - | - | - | - | - | - | - |
| 1981 | 2 | 2672 | - | - | - | - | - | - | - |
| 1981 | 3 | 1635 | - | - | - | - | - | - | - |
| 1981 | 4 | 1030 | - | - | - | - | - | - | - |
| 1982 | 1 | 1767 | - | - | - | - | - | - | - |
| 1982 | 2 | 4196 | - | - | - | - | - | - | - |
| 1982 | 3 | 2601 | - | - | - | - | - | - | - |

| | | Fleet | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **F1** | **F2** | **F6** | **F10** | **F12** | **F13** | **F14** | **F18** |
| 1982 | 4 | 1343 | - | - | - | - | - | - | - |
| 1983 | 1 | 3171 | - | - | - | - | - | - | - |
| 1983 | 2 | 2134 | - | - | - | - | - | - | - |
| 1983 | 3 | 1967 | - | - | - | - | - | - | - |
| 1983 | 4 | 1002 | - | - | - | - | - | - | - |
| 1984 | 1 | 3304 | - | - | - | - | - | - | - |
| 1984 | 2 | 4195 | - | - | - | - | - | - | - |
| 1984 | 3 | 3889 | - | - | - | - | - | - | - |
| 1984 | 4 | 4604 | - | - | - | - | - | - | - |
| 1985 | 1 | 4651 | - | - | - | - | - | - | - |
| 1985 | 2 | 9528 | - | - | - | - | - | - | - |
| 1985 | 3 | 5820 | - | - | - | - | - | - | - |
| 1985 | 4 | 5267 | - | - | - | - | - | - | - |
| 1986 | 1 | 8049 | - | - | - | - | - | - | - |
| 1986 | 2 | 14149 | - | - | - | - | - | - | - |
| 1986 | 3 | 7937 | - | - | - | - | - | - | - |
| 1986 | 4 | 13652 | - | - | - | - | - | - | - |
| 1987 | 1 | 15316 | - | - | - | - | - | - | - |
| 1987 | 2 | 12407 | - | - | - | - | - | - | - |
| 1987 | 3 | 5906 | - | - | - | - | - | - | - |
| 1987 | 4 | 15255 | - | - | - | - | - | - | - |
| 1988 | 1 | 19853 | - | - | - | - | - | - | - |
| 1988 | 2 | 13785 | - | - | - | - | - | - | - |
| 1988 | 3 | 6637 | - | - | - | - | - | - | - |
| 1988 | 4 | 13514 | - | - | - | - | - | - | - |
| 1989 | 1 | 15627 | - | - | - | - | - | - | - |
| 1989 | 2 | 12508 | - | - | - | - | - | - | - |
| 1989 | 3 | 6292 | - | - | - | - | - | - | - |
| 1989 | 4 | 11176 | - | - | - | - | - | - | - |
| 1990 | 1 | 16751 | - | - | - | - | - | - | - |
| 1990 | 2 | 11350 | - | - | - | - | - | - | - |
| 1990 | 3 | 5356 | - | - | - | - | - | - | - |
| 1990 | 4 | 7917 | - | - | - | - | - | - | - |
| 1991 | 1 | 12578 | - | - | - | - | - | - | - |
| 1991 | 2 | 11713 | - | - | - | - | - | - | - |
| 1991 | 3 | 5337 | - | - | - | - | - | - | - |
| 1991 | 4 | 10184 | - | - | - | - | - | - | - |
| 1992 | 1 | 17228 | - | - | - | - | - | - | - |
| 1992 | 2 | 15280 | - | - | - | - | - | - | - |
| 1992 | 3 | 7858 | - | - | - | - | - | - | - |
| 1992 | 4 | 12188 | - | - | - | - | - | - | - |
| 1993 | 1 | 18461 | - | - | - | - | - | - | - |
| 1993 | 2 | 16770 | - | - | - | - | - | - | - |
| 1993 | 3 | 8418 | - | - | - | - | - | - | - |
| 1993 | 4 | 12242 | - | - | - | - | - | - | - |
| 1994 | 1 | - | 18282 | - | - | - | 7491 | - | - |
| 1994 | 2 | - | 14851 | - | - | - | 6497 | - | - |

| | | Fleet | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **F1** | **F2** | **F6** | **F10** | **F12** | **F13** | **F14** | **F18** |
| 1994 | 3 | - | 4460 | - | - | - | 126 | - | - |
| 1994 | 4 | - | 10597 | - | - | - | 1193 | - | - |
| 1995 | 1 | - | 16282 | - | - | - | 7289 | - | - |
| 1995 | 2 | - | 11935 | - | - | - | 3229 | - | - |
| 1995 | 3 | - | 4830 | - | - | 17 | 1084 | - | - |
| 1995 | 4 | - | 10153 | - | - | - | - | - | - |
| 1996 | 1 | - | 15438 | - | - | - | 576 | - | - |
| 1996 | 2 | - | 13219 | - | - | - | 812 | - | - |
| 1996 | 3 | - | 4280 | - | - | - | 1908 | - | - |
| 1996 | 4 | - | 7631 | - | - | - | 1620 | - | - |
| 1997 | 1 | - | 14152 | - | - | - | 936 | - | - |
| 1997 | 2 | - | 9197 | - | - | - | 1222 | - | - |
| 1997 | 3 | - | 3341 | - | - | - | 1564 | - | - |
| 1997 | 4 | - | 9485 | - | - | - | 1462 | - | - |
| 1998 | 1 | - | 22513 | - | - | - | 496 | - | - |
| 1998 | 2 | - | 15788 | - | - | - | 1123 | - | - |
| 1998 | 3 | - | 3724 | - | - | 16 | 605 | - | - |
| 1998 | 4 | - | 11572 | - | - | 40 | 719 | - | 1572 |
| 1999 | 1 | - | 4823 | - | - | - | 585 | - | 746 |
| 1999 | 2 | - | 3577 | - | - | - | 951 | - | - |
| 1999 | 3 | - | 1589 | - | - | 19 | 411 | - | - |
| 1999 | 4 | - | 3657 | - | - | 16 | 299 | - | - |
| 2000 | 1 | - | 11600 | - | - | - | 813 | - | - |
| 2000 | 2 | - | 4234 | - | - | - | 1452 | - | - |
| 2000 | 3 | - | 3397 | - | - | 40 | 1853 | - | - |
| 2000 | 4 | - | 4321 | - | - | 134 | 653 | - | - |
| 2001 | 1 | - | 9879 | - | - | 41 | - | - | - |
| 2001 | 2 | - | 1666 | - | - | 36 | - | - | - |
| 2001 | 3 | - | 2427 | - | - | 122 | - | - | - |
| 2001 | 4 | - | 3913 | - | - | 208 | - | - | - |
| 2002 | 1 | - | 6143 | - | - | 320 | - | - | - |
| 2002 | 2 | - | 4811 | - | - | 260 | - | - | - |
| 2002 | 3 | - | 5303 | - | - | 184 | - | - | - |
| 2002 | 4 | - | 4554 | - | - | 265 | - | - | - |
| 2003 | 1 | - | 8524 | - | - | 72 | - | - | - |
| 2003 | 2 | - | 3139 | - | - | 150 | - | - | - |
| 2003 | 3 | - | 1012 | - | - | 671 | - | - | - |
| 2003 | 4 | - | 4761 | - | - | 434 | - | - | - |
| 2004 | 1 | - | 7897 | - | 949 | 185 | - | - | - |
| 2004 | 2 | - | 1330 | - | 720 | 449 | - | - | - |
| 2004 | 3 | - | 3141 | - | 464 | 259 | - | - | - |
| 2004 | 4 | - | 9345 | - | 254 | 370 | - | - | - |
| 2005 | 1 | - | 9718 | - | 735 | 66 | - | 7524 | - |
| 2005 | 2 | - | 1727 | - | 361 | 203 | - | 9998 | - |
| 2005 | 3 | - | 802 | - | 157 | 524 | - | 458 | - |
| 2005 | 4 | - | 6020 | - | 112 | 448 | - | 1538 | - |
| 2006 | 1 | - | 7145 | - | 332 | 87 | - | 11161 | - |

| | | Fleet | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Quarter** | **F1** | **F2** | **F6** | **F10** | **F12** | **F13** | **F14** | **F18** |
| 2006 | 2 | - | 1473 | - | 285 | 144 | - | - | - |
| 2006 | 3 | - | 2347 | - | 69 | 85 | - | - | - |
| 2006 | 4 | - | 7195 | - | 55 | 91 | - | - | - |
| 2007 | 1 | - | 4732 | - | 254 | - | - | 4400 | - |
| 2007 | 2 | - | 2335 | - | 539 | 108 | - | 1945 | - |
| 2007 | 3 | - | 1310 | - | 15 | 85 | - | 232 | - |
| 2007 | 4 | - | 6476 | - | 31 | 199 | - | 332 | - |
| 2008 | 1 | - | 2937 | - | 166 | 39 | - | 3486 | - |
| 2008 | 2 | - | 1220 | 128 | 752 | 216 | - | 1639 | - |
| 2008 | 3 | - | 364 | 1129 | 336 | 72 | - | 298 | - |
| 2008 | 4 | - | 4141 | 264 | 37 | 51 | - | 1277 | - |
| 2009 | 1 | - | 2969 | - | 316 | 31 | - | 2682 | - |
| 2009 | 2 | - | 258 | 35 | 565 | 118 | - | 2754 | 38 |
| 2009 | 3 | - | 1880 | 563 | 187 | 113 | - | 271 | 26 |
| 2009 | 4 | - | 6816 | 237 | 18 | 27 | - | - | - |
| 2010 | 1 | - | 3402 | - | 597 | 41 | - | 2821 | - |
| 2010 | 2 | - | 396 | 60 | 1284 | 90 | - | 1602 | - |
| 2010 | 3 | - | 653 | 515 | 267 | 110 | - | 292 | 35 |
| 2010 | 4 | - | 6649 | 157 | 63 | 68 | - | 388 | - |
| 2011 | 1 | - | 2473 | - | 240 | 23 | - | 3119 | 55 |
| 2011 | 2 | - | 53 | - | 1347 | 65 | - | 1447 | 41 |
| 2011 | 3 | - | 234 | 51 | 879 | 181 | - | 164 | 53 |
| 2011 | 4 | - | 2793 | 441 | 55 | 93 | - | 678 | - |
| 2012 | 1 | - | 4147 | - | 424 | 23 | - | 2649 | - |
| 2012 | 2 | - | 864 | 76 | 1247 | 19 | - | 705 | 31 |
| 2012 | 3 | - | 941 | 675 | 513 | - | - | - | 28 |
| 2012 | 4 | - | 2027 | 128 | 31 | - | - | 366 | - |
| 2013 | 1 | - | 5685 | - | 492 | 15 | - | 1733 | 84 |
| 2013 | 2 | - | 1343 | - | 801 | 121 | - | 850 | 127 |
| 2013 | 3 | - | 775 | 223 | 53 | 318 | - | - | 21 |
| 2013 | 4 | - | 4039 | 74 | 23 | 114 | - | 923 | - |
| 2014 | 1 | - | 3845 | - | 86 | 39 | - | 2629 | - |
| 2014 | 2 | - | 2255 | - | 633 | 87 | - | 1545 | 68 |
| 2014 | 3 | - | 1187 | 224 | 136 | 169 | - | 262 | 38 |
| 2014 | 4 | - | 4841 | 52 | - | 99 | - | 753 | 57 |
| 2015 | 1 | - | 10132 | - | 276 | 67 | - | 3273 | 153 |
| 2015 | 2 | - | 1205 | 26 | 424 | 164 | - | 1112 | 295 |
| 2015 | 3 | - | 1318 | 266 | 632 | 146 | - | 142 | 135 |
| 2015 | 4 | - | 5981 | 76 | 25 | 129 | - | 324 | - |
| 2016 | 1 | - | 10176 | - | 545 | 132 | - | 1366 | 187 |
| 2016 | 2 | - | 2451 | 60 | 1301 | 145 | - | 960 | 161 |
| 2016 | 3 | - | 1994 | 59 | 167 | 140 | - | 432 | 75 |
| 2016 | 4 | - | 10423 | 64 | 50 | 91 | - | 121 | - |

Table 4. List of CPUE indices provided for the 2018 Swordfish Stock Assessment and the source for more information about the standardization of the CPUE series.

| Abundance Index | Fleet Name | Time Series | Source |
|---|---|---|---|
| S1 | JPN_WCNPO_OSDWLL_early_Area 1 | 1975-1993 | Kanaiwa and Ijima 2018 |
| S2 | JPN_WCNPO_OSDWLL_late_Area1 | 1994-2016 | Kanaiwa and Ijima 2018 |
| S3 | JPN_WCNPO_OSDWLL_early_Area 2 | 1975-1993 | Kanaiwa and Ijima 2018 |
| S4 | JPN_WCNPO_OSDWLL_late_Area2 | 1994-2016 | Kanaiwa and Ijima 2018 |
| S5 | TWN_WCNPO_DWLL _early | 1975-1999 | Chang et al. 2018b |
| S6 | TWN_WCNPO_DWLL _late | 2000-2016 | Chang et al. 2018b |
| S7 | US_WCNPO_LL_deep | 1995-2016 | Sculley et al. 2018b |
| S8 | US_WCNPO_LL_shallow_early | 1995-2000 | Sculley et al. 2018b |
| S9 | US_WCNPO_LL_shallow_late | 2005-2016 | Sculley et al. 2018b |
| S10 | US_WCNPO_GN | 1985-2006 | Courtney et al. 2009 |
| S11 | TWN_EPO_OSDWLL_Early | 1967-1999 | Chang et al. 2018b |
| S12 | TWN_EPO_OSDWLL_Late | 2000-2016 | Chang et al. 2018b |

Table 5. Time series of CPUE and log-scale CV for each WCNPO Fleet. Fleets S1-S5 CPUE are in fish per 1000 hooks.

| Fleet | S1 | | S2 | | S3 | | S4 | | S5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** |
| 1975 | 1.82 | 0.01 | - | - | 0.13 | 0.019 | - | - | 0.2 | 0.04 |
| 1976 | 1.77 | 0.008 | - | - | 0.14 | 0.016 | - | - | 0.36 | 0.04 |
| 1977 | 1.7 | 0.008 | - | - | 0.17 | 0.017 | - | - | 0.02 | 0.03 |
| 1978 | 1.45 | 0.008 | - | - | 0.13 | 0.018 | - | - | - | - |
| 1979 | 1.58 | 0.008 | - | - | 0.11 | 0.017 | - | - | 0.1 | 0.09 |
| 1980 | 1.46 | 0.009 | - | - | 0.14 | 0.016 | - | - | 0.05 | 0.14 |
| 1981 | 1.45 | 0.008 | - | - | 0.14 | 0.016 | - | - | 0.03 | 0.15 |
| 1982 | 1.44 | 0.009 | - | - | 0.1 | 0.017 | - | - | - | - |
| 1983 | 1.71 | 0.009 | - | - | 0.1 | 0.019 | - | - | - | - |
| 1984 | 1.68 | 0.008 | - | - | 0.11 | 0.017 | - | - | - | - |
| 1985 | 2.13 | 0.009 | - | - | 0.14 | 0.017 | - | - | - | - |
| 1986 | 1.9 | 0.009 | - | - | 0.14 | 0.018 | - | - | - | - |
| 1987 | 2.04 | 0.009 | - | - | 0.12 | 0.018 | - | - | 0.02 | 0.7 |
| 1988 | 1.73 | 0.009 | - | - | 0.11 | 0.019 | - | - | - | - |
| 1989 | 1.6 | 0.009 | - | - | 0.1 | 0.019 | - | - | 0.11 | 0.22 |
| 1990 | 1.75 | 0.009 | - | - | 0.11 | 0.019 | - | - | 0.2 | 0.27 |
| 1991 | 1.57 | 0.01 | - | - | 0.1 | 0.021 | - | - | 0.18 | 0.09 |
| 1992 | 1.4 | 0.01 | - | - | 0.09 | 0.022 | - | - | 0.44 | 0.38 |
| 1993 | 1.47 | 0.01 | - | - | 0.11 | 0.02 | - | - | 0.7 | 0.14 |
| 1994 | - | - | 1.69 | 0.031 | - | - | 0.09 | 0.033 | - | - |
| 1995 | - | - | 1.7 | 0.028 | - | - | 0.09 | 0.03 | 0.23 | 0.26 |
| 1996 | - | - | 1.44 | 0.027 | - | - | 0.11 | 0.03 | 0.05 | 0.36 |
| 1997 | - | - | 1.44 | 0.028 | - | - | 0.08 | 0.032 | 0.04 | 0.2 |
| 1998 | - | - | 1.4 | 0.029 | - | - | 0.08 | 0.032 | 0.01 | 0.24 |
| 1999 | - | - | 1.42 | 0.03 | - | - | 0.11 | 0.031 | 0.05 | 0.27 |
| 2000 | - | - | 1.36 | 0.029 | - | - | 0.13 | 0.03 | - | - |
| 2001 | - | - | 1.59 | 0.029 | - | - | 0.14 | 0.031 | - | - |
| 2002 | - | - | 1.22 | 0.03 | - | - | 0.12 | 0.032 | - | - |
| 2003 | - | - | 1.3 | 0.03 | - | - | 0.11 | 0.034 | - | - |
| 2004 | - | - | 1.25 | 0.029 | - | - | 0.1 | 0.035 | - | - |
| 2005 | - | - | 1.33 | 0.029 | - | - | 0.09 | 0.037 | - | - |
| 2006 | - | - | 1.4 | 0.028 | - | - | 0.11 | 0.037 | - | - |
| 2007 | - | - | 1.33 | 0.029 | - | - | 0.1 | 0.038 | - | - |
| 2008 | - | - | 1.1 | 0.031 | - | - | 0.13 | 0.038 | - | - |
| 2009 | - | - | 1.42 | 0.034 | - | - | 0.13 | 0.04 | - | - |
| 2010 | - | - | 1.23 | 0.035 | - | - | 0.11 | 0.042 | - | - |
| 2011 | - | - | 1.14 | 0.037 | - | - | 0.12 | 0.044 | - | - |
| 2012 | - | - | 1.35 | 0.037 | - | - | 0.12 | 0.045 | - | - |
| 2013 | - | - | 1.33 | 0.037 | - | - | 0.12 | 0.048 | - | - |
| 2014 | - | - | 1.66 | 0.037 | - | - | 0.11 | 0.052 | - | - |
| 2015 | - | - | 1.95 | 0.038 | - | - | 0.13 | 0.059 | - | - |
| 2016 | - | - | 1.49 | 0.044 | - | - | 0.13 | 0.07 | - | - |

Table 6. Time series of CPUE and log-scale CV for each WCNPO Fleet. Fleets S6-S9 CPUE are in fish per 1000 hooks and S10 CPUE are in fish caught per 1000 hours fished

| Fleet | S6 | | S7 | | S8 | | S9 | | S10 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** | **CPUE** | **CV** |
| 1975 | - | - | - | - | - | - | - | - | - | - |
| 1976 | - | - | - | - | - | - | - | - | - | - |
| 1977 | - | - | - | - | - | - | - | - | - | - |
| 1978 | - | - | - | - | - | - | - | - | - | - |
| 1979 | - | - | - | - | - | - | - | - | - | - |
| 1980 | - | - | - | - | - | - | - | - | - | - |
| 1981 | - | - | - | - | - | - | - | - | - | - |
| 1982 | - | - | - | - | - | - | - | - | - | - |
| 1983 | - | - | - | - | - | - | - | - | - | - |
| 1984 | - | - | - | - | - | - | - | - | - | - |
| 1985 | - | - | - | - | - | - | - | - | - | - |
| 1986 | - | - | - | - | - | - | - | - | - | - |
| 1987 | - | - | - | - | - | - | - | - | - | - |
| 1988 | - | - | - | - | - | - | - | - | - | - |
| 1989 | - | - | - | - | - | - | - | - | - | - |
| 1990 | - | - | - | - | - | - | - | - | 0.137 | 0.022 |
| 1991 | - | - | - | - | - | - | - | - | 0.052 | 0.012 |
| 1992 | - | - | - | - | - | - | - | - | 0.097 | 0.020 |
| 1993 | - | - | - | - | - | - | - | - | 0.090 | 0.017 |
| 1994 | - | - | - | - | - | - | - | - | 0.063 | 0.013 |
| 1995 | - | - | 0.37 | 0.60 | 2.82 | 1.49 | - | - | 0.106 | 0.018 |
| 1996 | - | - | 0.22 | 0.50 | 2.97 | 1.55 | - | - | 0.085 | 0.019 |
| 1997 | - | - | 0.17 | 0.44 | 3.24 | 1.63 | - | - | 0.141 | 0.045 |
| 1998 | - | - | 0.26 | 0.50 | 3.55 | 1.69 | - | - | 0.025 | 0.200 |
| 1999 | - | - | 0.26 | 0.50 | 3.68 | 1.67 | - | - | 0.105 | 0.034 |
| 2000 | 0.19 | 0.35 | 0.23 | 0.48 | 4.09 | 1.75 | - | - | 0.040 | 0.017 |
| 2001 | 0.36 | 0.30 | 0.22 | 0.48 | - | - | - | - | 0.272 | 0.296 |
| 2002 | 0.39 | 0.34 | 0.28 | 0.51 | - | - | - | - | 0.008 | 0.001 |
| 2003 | 0.36 | 0.36 | 0.26 | 0.49 | - | - | - | - | - | - |
| 2004 | 0.34 | 0.37 | 0.30 | 0.52 | - | - | - | - | - | - |
| 2005 | 0.23 | 0.42 | 0.25 | 0.49 | - | - | 11.92 | 0.37 | 0.106 | 0.200 |
| 2006 | 0.44 | 0.22 | 0.26 | 0.50 | - | - | 12.59 | 0.37 | 0.359 | 0.043 |
| 2007 | 0.46 | 0.19 | 0.25 | 0.49 | - | - | 10.57 | 0.37 | 0.207 | 0.038 |
| 2008 | 0.52 | 0.17 | 0.24 | 0.48 | - | - | 10.20 | 0.37 | 0.078 | 0.039 |
| 2009 | 0.48 | 0.20 | 0.25 | 0.49 | - | - | 8.33 | 0.37 | - | - |
| 2010 | 0.49 | 0.21 | 0.24 | 0.48 | - | - | 7.25 | 0.37 | - | - |
| 2011 | 0.45 | 0.22 | 0.20 | 0.45 | - | - | 8.40 | 0.37 | - | - |
| 2012 | 0.46 | 0.27 | 0.24 | 0.48 | - | - | 8.07 | 0.37 | - | - |
| 2013 | 0.40 | 0.25 | 0.23 | 0.47 | - | - | 7.44 | 0.37 | - | - |
| 2014 | 0.45 | 0.22 | 0.26 | 0.49 | - | - | 8.62 | 0.37 | - | - |
| 2015 | 0.45 | 0.27 | 0.28 | 0.50 | - | - | 8.70 | 0.37 | - | - |
| 2016 | 0.45 | 0.35 | 0.26 | 0.48 | - | - | 10.19 | 0.38 | - | - |

Table 7. Time series of CPUE and log-scale CV available for the EPO region. CPUE are in fish per 1000 hooks.1

| | S11 | | S12 | |
|---|---|---|---|---|
| **Year** | **CPUE** | **CV** | **CPUE** | **CV** |
| 1967 | 0.07 | 0.20 | - | - |
| 1968 | 0.05 | 0.13 | - | - |
| 1969 | 0.05 | 0.12 | - | - |
| 1970 | 0.06 | 0.21 | - | - |
| 1971 | 0.04 | 0.24 | - | - |
| 1972 | 0.05 | 0.18 | - | - |
| 1973 | 0.03 | 0.20 | - | - |
| 1974 | 0.04 | 0.16 | - | - |
| 1975 | 0.02 | 0.12 | - | - |
| 1976 | 0.20 | 0.03 | - | - |
| 1977 | 0.03 | 0.17 | - | - |
| 1978 | 0.02 | 0.20 | - | - |
| 1979 | 0.13 | 0.26 | - | - |
| 1980 | 0.08 | 0.21 | - | - |
| 1981 | 0.09 | 0.31 | - | - |
| 1982 | 0.05 | 0.27 | - | - |
| 1983 | 0.03 | 0.20 | - | - |
| 1984 | 0.04 | 0.16 | - | - |
| 1985 | 0.04 | 0.17 | - | - |
| 1986 | 0.04 | 0.21 | - | - |
| 1987 | 0.05 | 0.30 | - | - |
| 1988 | 0.05 | 0.29 | - | - |
| 1989 | 0.12 | 0.30 | - | - |
| 1990 | 0.06 | 0.20 | - | - |
| 1991 | 0.04 | 0.32 | - | - |
| 1992 | 0.07 | 0.21 | - | - |
| 1993 | 0.05 | 0.17 | - | - |
| 1994 | 0.06 | 0.25 | - | - |
| 1995 | 0.06 | 0.21 | - | - |
| 1996 | 0.29 | 0.78 | - | - |
| 1997 | 0.08 | 0.20 | - | - |
| 1998 | 0.10 | 0.40 | - | - |
| 1999 | 0.21 | 0.33 | - | - |
| 2000 | - | - | 0.45 | 0.20 |
| 2001 | - | - | 1.00 | 0.38 |
| 2002 | - | - | 0.78 | 0.27 |
| 2003 | - | - | 0.69 | 0.27 |
| 2004 | - | - | 0.66 | 0.29 |
| 2005 | - | - | 0.41 | 0.28 |
| 2006 | - | - | 0.48 | 0.28 |
| 2007 | - | - | 0.53 | 0.31 |
| 2008 | - | - | 0.52 | 0.27 |
| 2009 | - | - | 0.69 | 0.25 |
| 2010 | - | - | 0.59 | 0.26 |
| 2011 | - | - | 0.64 | 0.25 |
| 2012 | - | - | 0.59 | 0.28 |
| 2013 | - | - | 0.62 | 0.25 |
| 2014 | - | - | 0.79 | 0.26 |
| 2015 | - | - | 1.22 | 0.32 |
| 2016 | - | - | 1.09 | 0.22 |

## Figures

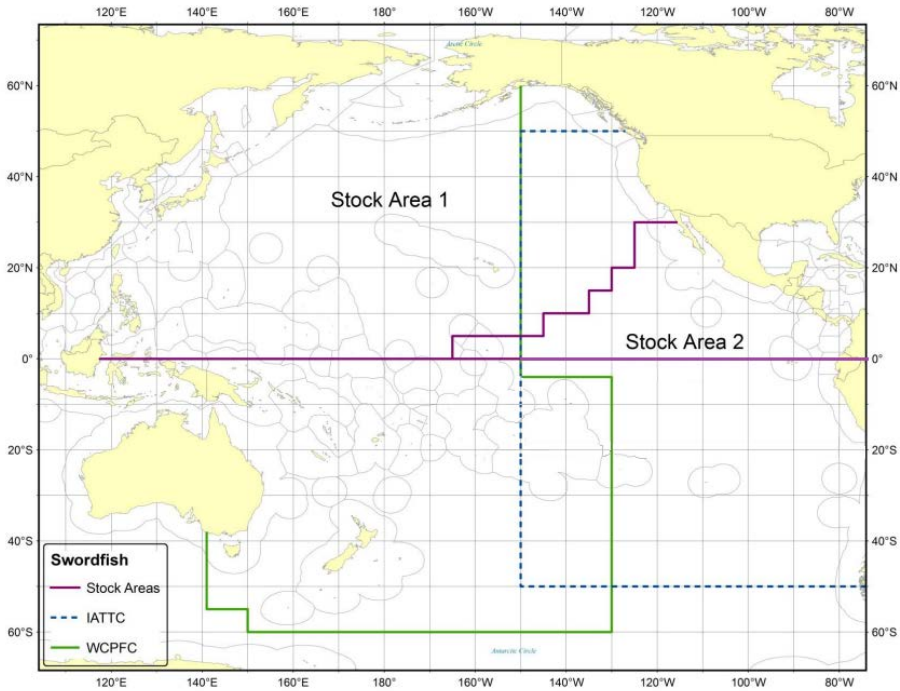


Figure 1. Stock boundaries for the 2018 North Pacific swordfish stock assessment. Stock area 1 is the Western Central Pacific Ocean (WCNPO) and stock area 2 is the Eastern Pacific Ocean (EPO). Purple lines indicate the stock boundaries. The green line indicates the Western and Central Pacific Fisheries Commission boundary and the blue dashed line indicates the Inter-American Tropical Tuna Commission boundary.

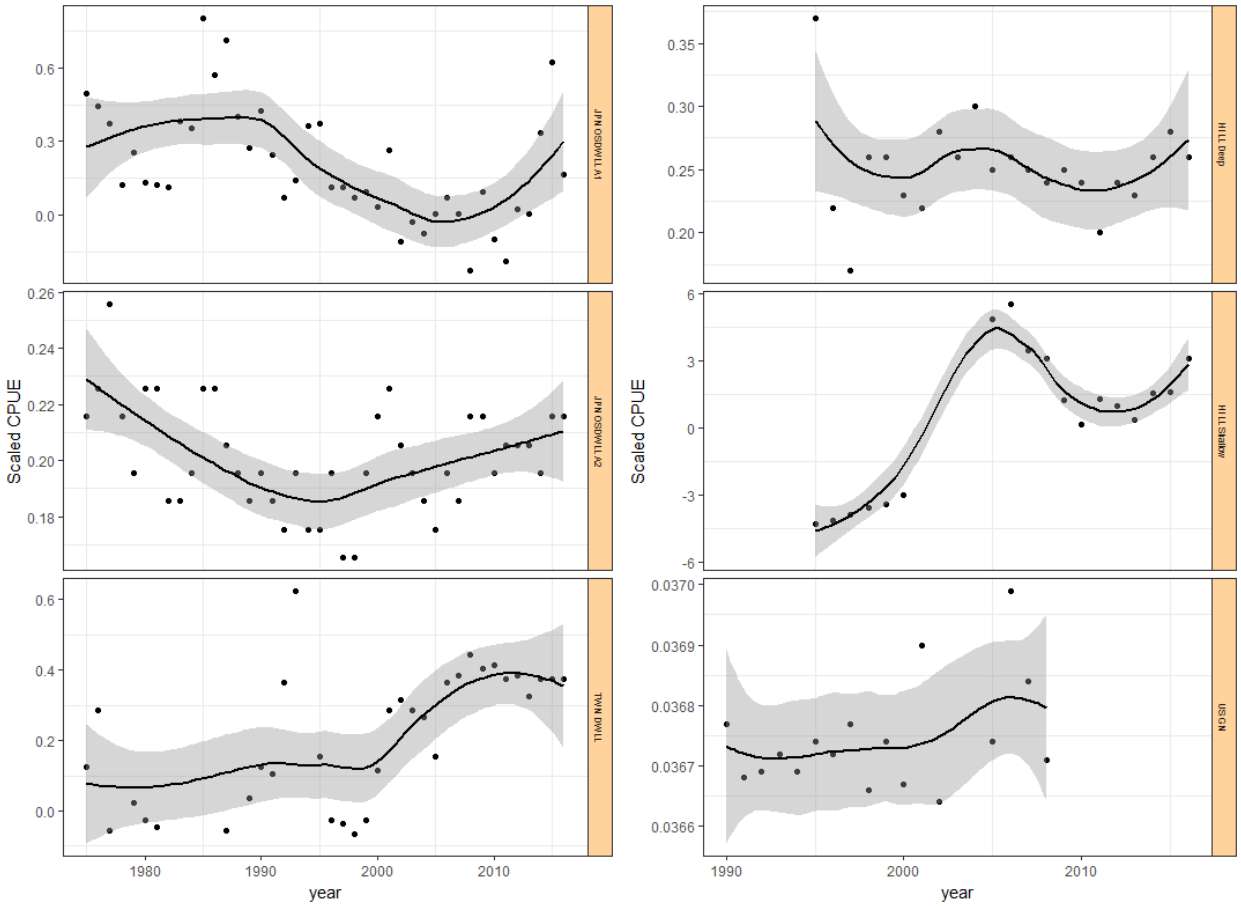


Figure 2. Time series of CPUE indices; continuous black line is a loess smoother showing the average trend by area (i.e. fitted to year for each area with series as a factor).

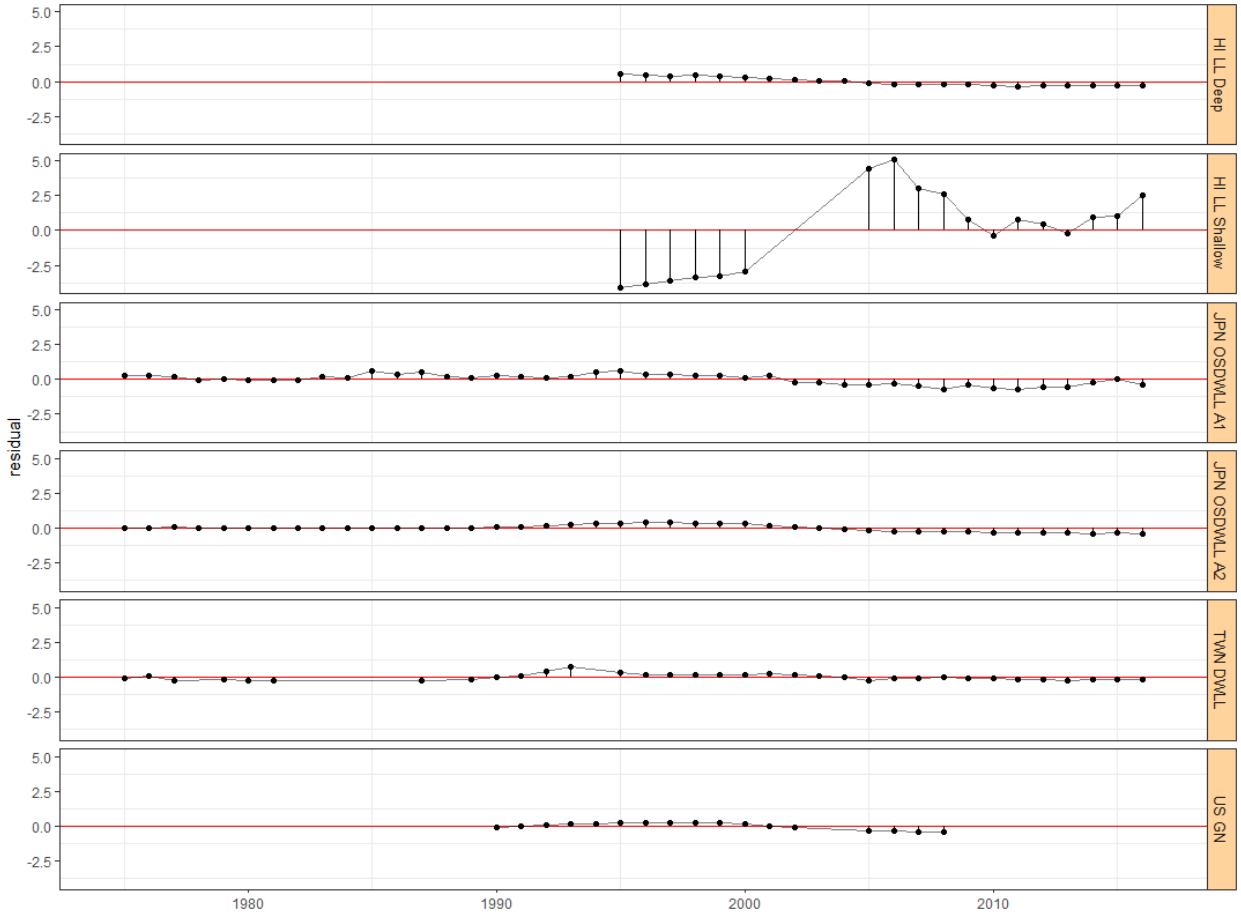


Figure 3. Time series of residuals from the Loess fit.

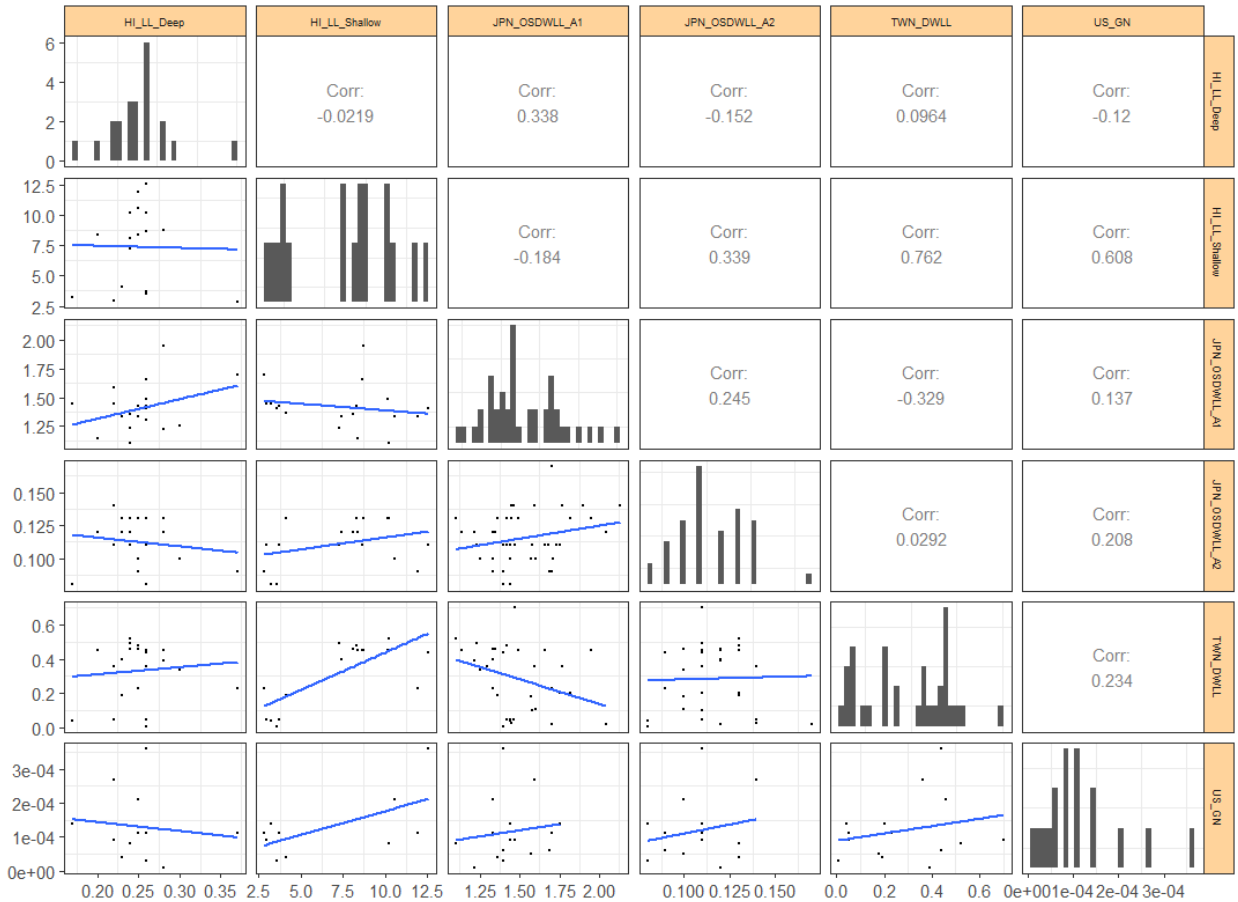


Figure 4. Pairwise scatterplots with blue regression lines (lower left), correlation coefficients (top right), and range of observations to illustrate correlations among all CPUE indices.

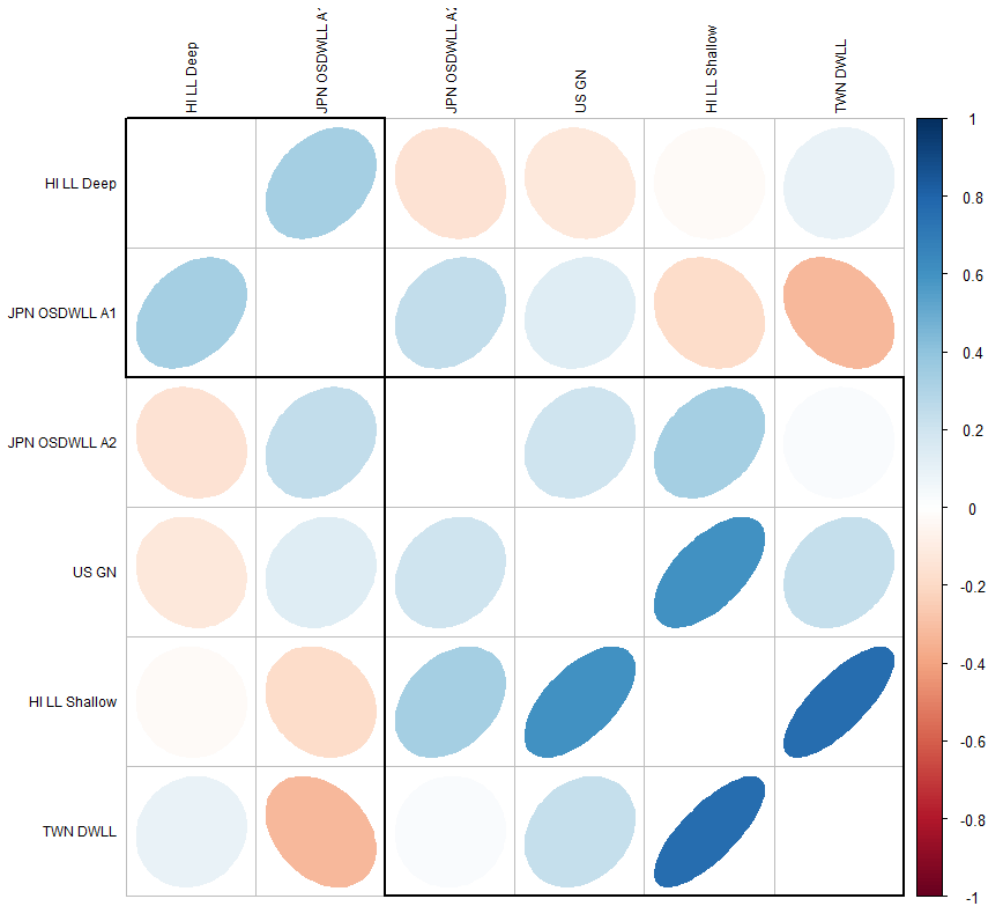


Figure 5. Plot of the correlation matrix for CPUE indices. Blue indicates a positive correlation, and red negative. The order of the indices and the rectangular boxes are chosen based on a hierarchical cluster analysis using a set of dissimilarities for the indices being clustered.

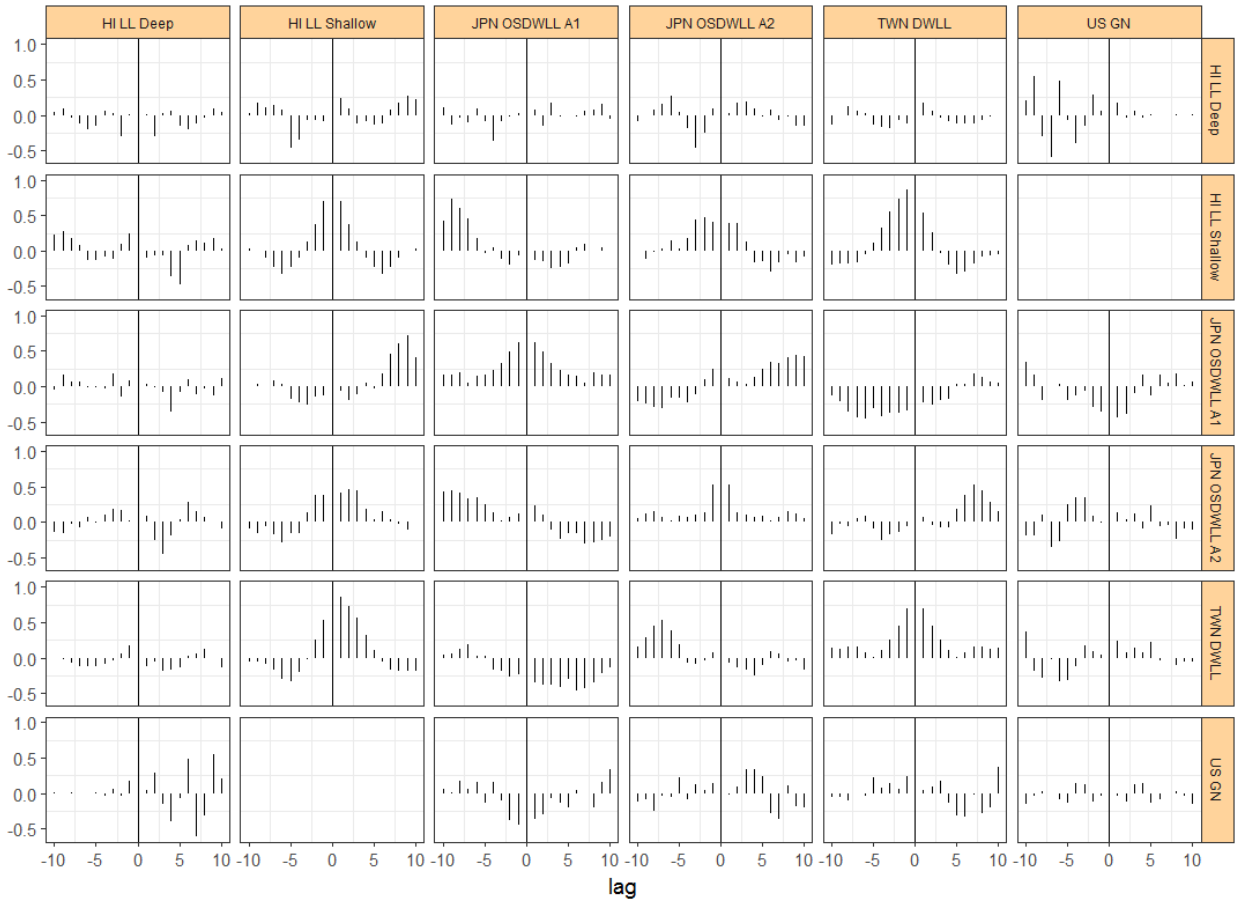


Figure 6. Cross correlations between CPUE indices to identify potential lags.