
Pacific Fisheries Information Network

APEX REPORTING SYSTEM V2.0

User Documentation



Date	Author	Change Comments	Version
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1. Introduction

Following the successful redevelopment of the PacFIN database in 2014, PacFIN reports have been recreated from the new data warehouse with the ultimate goal of providing more flexibility to customize and export PacFIN data. The new reporting system uses Oracle Application Express (APEX) as the platform for developing and deploying reports. APEX was selected because it is a free, easy-to-use, rapid web application development tool for Oracle databases.

Highlights of the new PacFIN APEX reporting system include:

1. Navigable – the APEX report website uses a navigable tree to organize reports so that users can find a report easily and quickly.
2. Interactive – users can customize reports using a set of parameters. For example, the user can extract data by year range, agency, gear code, etc.
3. Secure – all reports display aggregated catch information (i.e., weight, revenue, price, number of trips) summed at an annual and/or state level. The APEX reporting system has a public site for all users and a secure site for users authorized to access confidential data. On the public site, confidentiality rules are applied (i.e., non-confidential catch summaries will include a minimum of 3 vessels and 3 dealers in the aggregation) to filter confidential catch values in order to protect the privacy of fishermen and seafood dealers as required by the Magnuson-Stevens Act. The secure site is password protected to restrict access to authorized users.
4. Low maintenance – APEX reports pull data from the PacFIN comprehensive fish tickets database. The comprehensive fish ticket database is updated systematically on a daily basis. Updates of APEX reports are scheduled to be in sync with the comprehensive fish ticket database.
5. Exportable – users can download reports in Excel or CSV format and then import the data into other applications such as Excel, R, Matlab, etc. for further analysis.

2. Getting Started

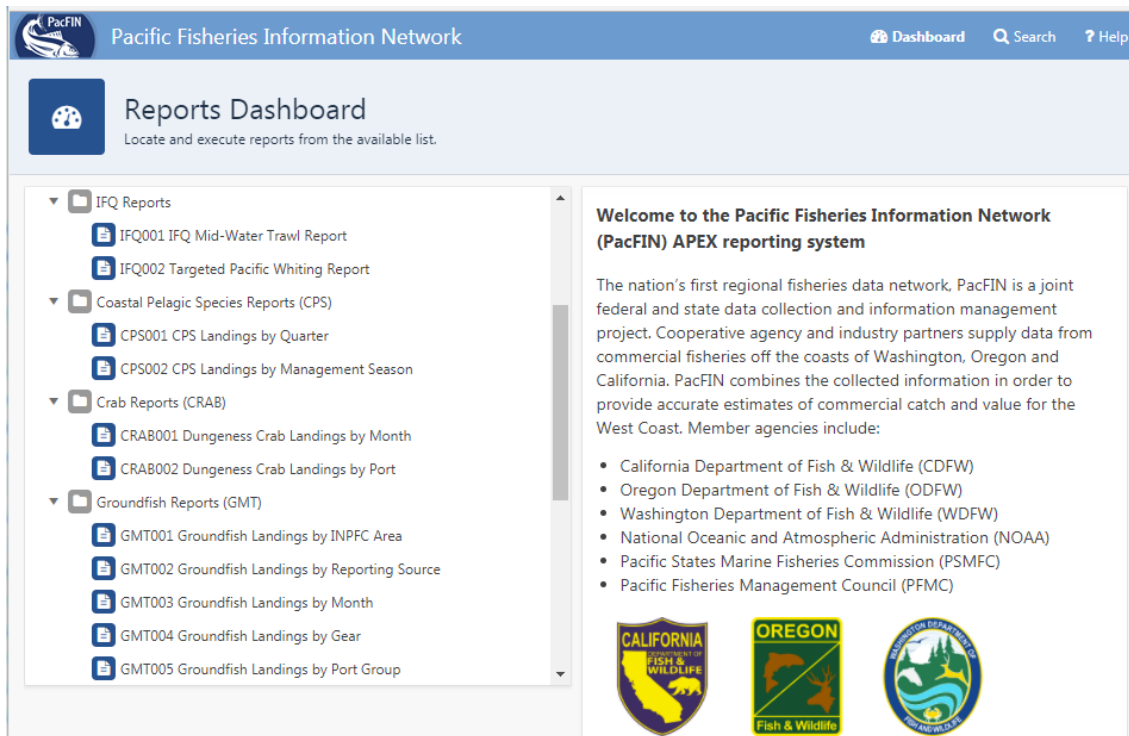
2.1 Access report website

Click the link <http://reports.psmfc.org/pacfin> to go to the PacFIN APEX report website. Or from the PacFIN website, click the **DATA** drop down menu and then click the **APEX Reporting System** tab.



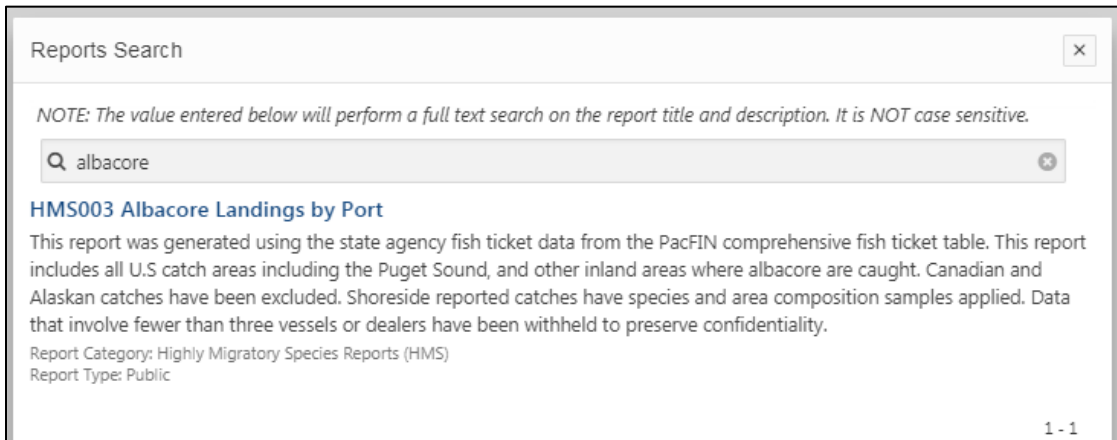
2.2 Browse available reports

From the **Reports Dashboard** panel on the left side, each PacFIN report can be found under its respective report category: All Species Reports, IFQ Reports, Coastal Pelagic Species Reports, Crab Reports, Groundfish Reports, Highly Migratory Species Reports, Code Listings, or Metadata and Documentation.



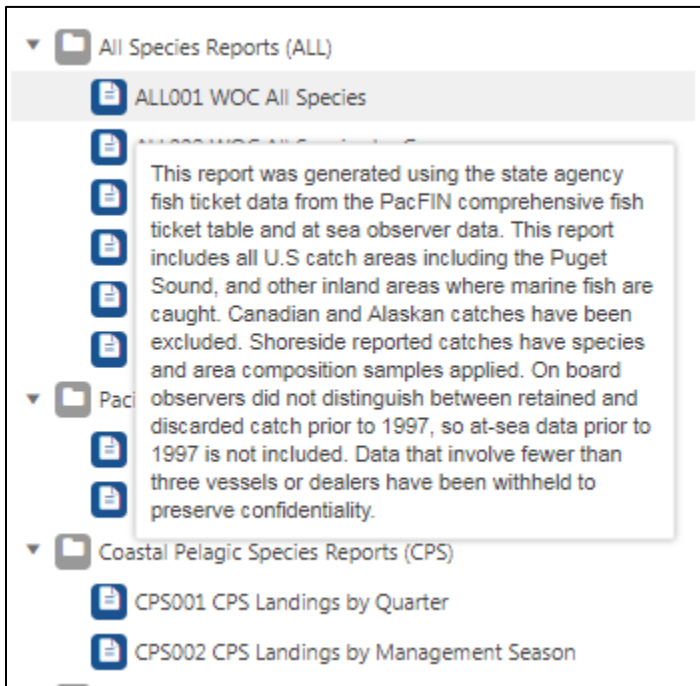
2.3 Search report(s)

You can also use the **Search** function from the top right menu bar (see the screenshot above) to search for key words or phrases within the report title and description to help identify the report you are looking for. For example, if you want to find a catch report for albacore, just type 'albacore' and then click the **Enter** key on your keyboard. The report app will return the reports that match your search.



2.4 Read report metadata

When users hover the cursor over the title of each report, a dialog box will appear with a description of the report, the data source, and other important information.



3. View Reports Online

3.1 Select a report

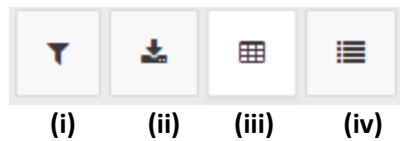
On the **Reports Dashboard** panel, click on a report. When a report is selected, the user will be taken to a new screen displaying the report title and description along with the data fields. If the report has many fields, the user may need to use the scroll bar, located at the bottom of the page, to view the entire report. Similarly, if the selected report has more than 1,000 records (rows), a message will appear at the bottom of the page:

The requested data set exceeds the number of allowable rows (1000) to display. Please download the data set to CSV or Excel to view all rows.

To view the entire report, the user will have to download the data set (described below).

The layout of a sample PacFIN report **ALL001 – WOC all species** is shown on page 7. PacFIN report outputs contain:

- a. Report title – provides a brief description of the report.
- b. Report description – provides a detailed description of the report including data sources, data elements, caveats, and other relevant information about the data.
- c. Reports table – displays the data records and fields.
- d. Option buttons – allow the user to filter the data, download the data report, change report attributes, or access other reports.



- i. Filter button – clicking on this button will open a new dialog window where users can filter the data by one or multiple parameters, e.g., year, agency, species, or fisheries.
- ii. Download button – clicking on this button will open a new dialog window where users can choose to download the report in CSV, Excel, or PDF format.
- iii. Report attribute button – clicking on this button will open a new Report Options window where the user can change the report attributes. The display by year option allows users to display data by individual years or aggregate data across years for the specified year range. The measurement option allows users to view the report output in either round weight or landed weight.

Report Options

Display by Year?

Yes

No

Select a Measure Set

Round Weight (mt); Round Price/lbs

Landed Weight (mt); Landed Price/lbs

- iv. Reports button – clicking this button will pop up the **Report Tree** in a new window so that users can browse all available reports and/or switch to another report.
- e. Report run time – displays the date and time when the report was generated.
- f. Filters applied – provides a list of the filters that have been applied to the report.
- g. Report Footer – additional notes placed under report table to comment on a designated part of the data.
- h. Hide/Show tab button - clicking on this button will allow user to hide or show the right-hand side tab (containing d, e, f, g). By default, the tab shows as the page is loaded. When users choose to hide the right-hand tab, the main report region will expand to the full width of the browser window.

Sample Report Layout

a Pacific Fisheries Information Network
Dashboard [? Help](#)

b **Species Report: Commercial Landed Catch: Metric-Tons (mt), Revenue, and Price-per-pound (Price/lbs)**

This report was generated using the state agency fish ticket data from the PacFIN comprehensive fish ticket table and at sea observer data. This report includes all U.S. catch areas including the Puget Sound, and other inland areas where marine fish are caught. Canadian and Alaskan catches have been excluded. Shoreside reported catches have species and area composition samples applied. On board observers did not distinguish between retained and discarded catch prior to 1997, so at-sea data prior to 1997 is not included. Data that involve fewer than three vessels or dealers have been withheld to preserve confidentiality.

Year	Agency	Management Group	Complex	Common Name	Species Code	Round Weight (mt)	Round Price/lbs	Revenue (\$)	Confidential
2018	C	CPEL	....	PACIFIC HERRING	PHRG	-	-	-	*
2018	C	CPEL	.... SUBTOTAL	__NO COMPLEX	-	0.0	-	\$0	*
2018	C	CPEL	WETF	CHUB MACKEREL	CMCK	113.2	\$0.17	\$42,503	-
2018	C	CPEL	WETF	JACK MACKEREL	JMCK	15.9	\$0.11	\$3,874	-
2018	C	CPEL	WETF	MARKET SQUID	MSQD	5,517.4	\$0.49	\$5,949,298	-
2018	C	CPEL	WETF	NORTHERN ANCHOVY	NANC	-	-	-	*
2018	C	CPEL	WETF	PACIFIC BONITO	PBNT	-	-	-	*
2018	C	CPEL	WETF	PACIFIC SARDINE	PSDN	12.8	\$0.05	\$1,443	-
2018	C	CPEL	WETF	UNSP. MACKEREL	UMCK	0.2	\$2.56	\$1,346	-
2018	C	CPEL	WETF SUBTOTAL	__ALL WET FISH	-	5,659.5	-	\$5,998,464	*
2018	C	CPEL SUBTOTAL	-	__ALL COASTAL PELAGIC	-	5,659.5	-	\$5,998,464	*
2018	C	CRAB	....	DUNGENESS CRAB	DCRB	2,284.4	\$3.14	\$15,791,801	-
2018	C	CRAB	....	OTHER CRAB	OCRB	6.2	\$1.79	\$24,667	-
2018	C	CRAB	....	ROCK CRAB	RCRB	30.1	\$1.80	\$119,546	-
2018	C	CRAB	....	UNSP. CRAB	UCRB	-	-	-	*
2018	C	CRAB	.... SUBTOTAL	__NO COMPLEX	-	2,320.7	-	\$15,936,014	*
2018	C	CRAB	KCRB	UNSP. KING CRAB	UKCR	0.4	\$6.65	\$5,660	-
2018	C	CRAB	KCRB SUBTOTAL	__ALL KING CRAB	-	0.4	-	\$5,660	-
2018	C	CRAB	TCRB	BAIRDI TANNER CRAB	BTCR	-	-	-	*

c **h**


d

e Report run time:
April 17th, 2018 5:44pm

f Filters applied:
Year(s)
• 2018
Agency(ies)
• All Agencies

g * Data has been withheld from this row for confidentiality purposes.
** WITHHELD FOR CONFIDENTIALITY includes species not displayable in this report due to confidentiality restrictions.

3.2 Filter a report

To customize a report, the user can filter the data by modifying the report parameters. Each report will have a default set of parameters available to filter the data. Click the filter button  to bring up the **Filters** window with available filter options. There are 3 main types of filters: *drop down menu*, *check box*, and *shuffle selector*. When there are multiple filter options in a report, some filters might be interdependent. This is referred to as ‘**Cascading**’ which allows for more efficient data querying by using each filter as a filter into the next.

3.2.1 Using drop-down menu

Drop-down menus are used in PacFIN to select single values to filter data. Multiple data parameters in PacFIN such as year, month, week, date, location, complex, and species group are filtered using drop-down menus. For example, year ranges are selected in PacFIN reports using two drop-down menus to obtain data between the selected years.

Year Range
Between and

3.2.2 Using check boxes

To filter using check boxes, simply click on each box next to the selections to be included in the results. By default, for each field heading, all checkboxes are unchecked. If no checkboxes are selected, the report output will include data from all variables within that field heading. Checking individual boxes will filter the output to include only those specific variables that are checked. For instance, in the example below, because no selections have been made in the Agency field, the resulting output will include data from all agencies.

Agency
 (W)ashington (O)regon (C)alifornia

3.2.3 Using search and shuttle selector

The Search and Shuttle filter option allows the user to either type in the search box or scroll through the list of available options to select data variables to include in the report output.

Species

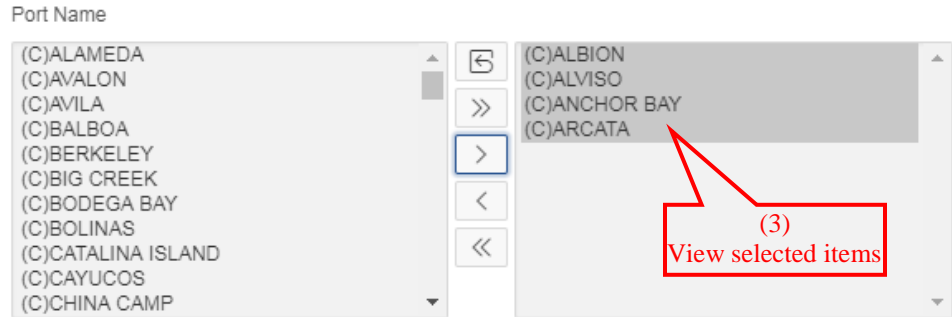
Species Name contains...


- (i) If a search box is not present, simply scroll through the list of available variables and select items. Selected variables will be included in the report output. If no items are selected, then data from all variables will be included in the output table.

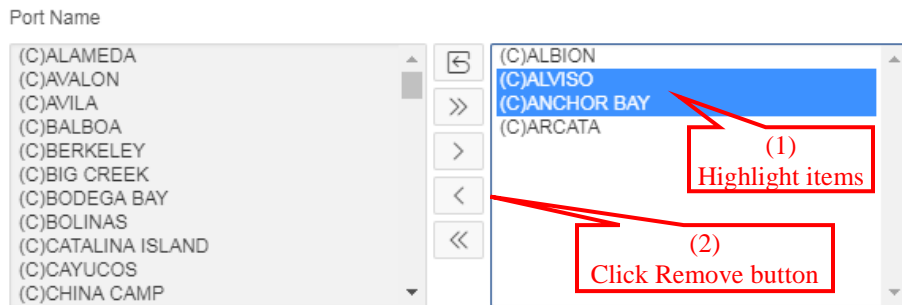
Port Name

To select a variable(s) to include in the report output, the user can first highlight the item name(s) (1) and then click on the Move arrow button (2) to move the item(s) to the selection box on the right (3). Items can be highlighted one at a time or multiple items can be highlighted at the same time by holding down the **CTRL** key while making selections.






Port Name



Similarly, to remove an item from the selection box, the user can highlight the item(s) to be removed (1) and click the Remove arrow button  (2) to move the items to the box on the left.




Here are descriptions of all available buttons in a shuttle filter:

-  **Move** button - move the selected items to the selection box on the right.
 -  **Remove** button - remove the selected items to the selection box on the left.
 -  **Move All** button - move all items to the box on the right.
 -  **Remove All** button - remove all selected items.
 -  **Reset** button - clear all previous selections.
- (ii) If the shuttle filter option has a search box, the user can begin searching by typing any part of the name of the variable. Click on the Search button to bring up a list of variables containing those terms. For example, typing “yellow” in the search box will return a list of species names containing the term “yellow.”

3.2.4 Using cascading filters

When there are multiple filter options in a PacFIN report, some filters might be interdependent. This is referred to as ‘**Cascading**’, with each selected filter limiting the items displayed in subsequent filters to only those that are available. In the following example, the Agency check box is interconnected to the Port shuttle to create a cascade filter. When Oregon is checked, only Oregon ports will be available in the Shuttle while the California and Washington ports are excluded.

3.3 View another report

To view another report, the user can click on the Reports button  to open the Available Reports window. From here, select another report and follow the steps described above. Additionally, you can click on **Dashboard** in the top right menu bar to return to the PacFIN Reports Dashboard page at any time.

Pacific Fisheries Information Network

Commercial At-Sea Pacific Whiting Fishery and Shoreside
Mid-Water Trawl Fishery Summary Data - 2017

This report was generated using the at-Sea observer data that were exported from the NORPAC database, and the shoreside landings from the PacFIN comprehensive fish ticket table. Shoreside commercial landings are derived by the following criteria: (1) IFQ landing, (2) participation group is commercial, and (3) gear is mid-water trawl. Both at-sea and shoreside catch are in round metric tons except for prohibited and protected species, which are in numbers of fish caught and not weight. The numbers of fish for salmon and Pacific halibut are taken directly from the electronic tickets.

Report Group	Species Name	Mothership Allocation - 96,884 (mt)**	Catcher Processor Allocation - 137,252 (mt)**	Shore Alloc 169,5
ROUND FISH (mt)				


Report run time: April 18th, 2018 12:35am

Filters applied:


Year
• 2017

Report Date
• 12/31/2017

4. Download Reports

PacFIN APEX reports allow users to download a customized report in CSV, Excel or PDF format. To download a report, click on the **Download** button . This will open the Download Option window where you can select to either export your data in CSV, Excel or PDF format.


Download Options



CSV

Comma-delimited file


ONLY includes column headings. NO header, footer, or run-time details.



Excel

Excel file saved in a XML format

Includes column headings, header, footer, and run-time details



PDF

Printable PDF document

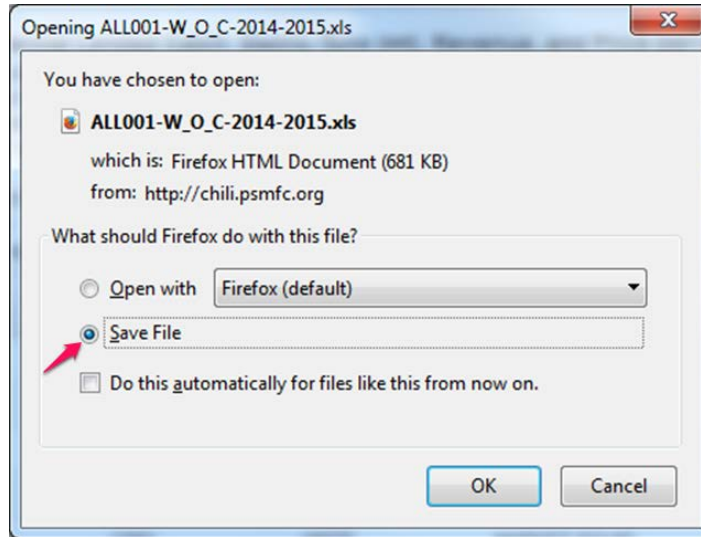
Includes column headings, header, footer, and run-time details

4.1 Export a report to Excel

- a. Click the **Excel** button once to download the report. The user will see a message asking whether to save the file or open the file. Depending on the type of browser used, the download message will appear with a different look.
 - i. Internet Explorer – user should click the **Save** button to save the excel file to a local directory.



- ii. Firefox – user should check the **Save File** radio button to save the Excel file to a local directory.



- iii. Chrome – user doesn't get a message as in IE or Firefox. Instead, the file is saved directly to the windows default download folder (i.e., C:\Users\your windows account name\Downloads). When the Excel button is clicked, the user should see the download status and Excel file being downloaded on the lower left corner of the browser window.

Pacific Fisheries Information Network

Species Report: Commercial Landed Catch: Metric-Tons (mt), Revenue, and Price-per-pound (Price/lbs)

This report was generated using the state agency fish ticket data from the PacFIN comprehensive fish ticket table and at sea observer data. This report includes all U.S. catch areas including the Puget Sound, and other inland areas where marine fish are caught. Canadian and Alaskan catches have been excluded. Shoreside reported catches have species and area composition samples applied. On board observers did not distinguish between retained and discarded catch prior to 1997, so at-sea data prior to 1997 is not included. Data that involve fewer than three vessels or dealers have been withheld to preserve confidentiality.

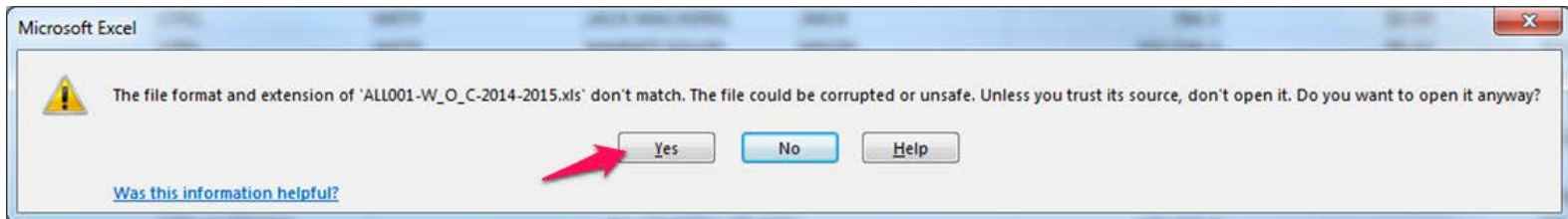
Year	Agency	Management Group	Complex	Common Name	Species Code
2014-2015	C	CPEL	....	PACIFIC HERRING	PHRG
2014-2015	C	CPEL	.... SUBTOTAL	_NO COMPLEX	-
2014-2015	C	CPEL	WETF	CHUB MACKEREL	CMCK
2014-2015	C	CPEL	WETF	JACK MACKEREL	JMCK

* Data has been withheld from this row for confidentiality purposes.
 ** WITHHELD FOR CONFIDENTIALITY includes species not displayable in this report due to confidentiality restrictions.

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ALL001--2014-2015.xls

- b. Read the report in Excel. Find the downloaded file on your computer and then open it. You will get a warning message as shown in the screenshot below. Ignore the message and click **Yes** to open the file. The Excel file reserves all features from online (e.g., title, description, header and footer notes, as well as subtotal/total rows and formatting).



4.2 Export a report to a CSV file

Click the **CSV** button once and the APEX report will be exported into a CSV file. Unlike an Excel export, the CSV file only contains the report data, while the report title, description, footer notes, and the subtotal/total/grand total rows are not included. The confidential subtotal rows are an exception because the confidential subtotal values are needed for calculating the total landed catch of all species by agency. We expect R users would want to import the CSV file into R for analysis. Therefore, we excluded those APEX report features from the CSV file so that users don't have to manually edit the CSV file before importing it into R.

4.3 Export a report to PDF

Click the **PDF** button once. The APEX report will be exported to a PDF file. The PDF download button is only available to the reports that are less than 26 columns, because the APEX printing service cannot handle more than 26 columns. PDF export retains the full APEX reporting features as with EXCEL export.