
Pacific Fisheries Information Network

West Coast Groundfish Scorecard Report



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Subject

The objective of the online scorecard report is to provide a "best estimate" of total mortality of groundfish stock species and stock complexes for all commercial, tribal, and marine recreational fisheries within the federal fishery management plan and the Pacific Fishery Management Council's jurisdiction for inseason tracking.

Background

Historically, species tracking has been provided by Quota Species Monitoring (QSM) and the Best Estimate Report (BER) for commercial and tribal landings, and through a confidential scorecard report in PacFIN's Oracle Business Intelligence tool (i.e., PacFIN Answers). These legacy reports were limited in scope, and did not include (1) all groundfish stocks, (2) all near real-time data, and (3) data from PacFIN's Groundfish Harvest Specifications and Management Measures (SPEX) database. Access to those datasets along with significant improvements to the PacFIN and RecFIN database systems has bolstered the ability of PacFIN staff to integrate these disparate datasets in order to improve inseason tracking of groundfish stocks.

Methodology

The approach for both the online non-confidential public and confidential private scorecard reports is the same. The public version is limited to stock summary information to protect confidentiality. Whereas, the private version provides (1) stock summaries, (2) sector summaries, and (3) detailed records. Both the public and private reports can be filtered on year, and each of the hierarchical tiers in the private scorecard are linked through a drill down on individual stock, from stock summaries to sectors, and then to detailed reports (Appendix 1.).

Data Sources

The data sources within PacFIN and RecFIN are as follows:

- **State Fish Tickets:** The state fish tickets within PacFIN's comprehensive fish ticket table includes all West Coast shorebased commercial and tribal landings¹. Groundfish species within this table are enhanced by the application of state agencies' catch-by-area and species composition proportions to correct catch areas, nominal species categories, and multispecies market categories.
- **Etickets:** Pacific States Marine Fisheries Commission's (PSMFC) electronic fish ticket reporting system includes all IFQ and sablefish landings, as well as the majority of groundfish landings in Washington and Oregon. This system continues to expand, but does not currently include all groundfish landings.
- **California Agency Tickets (Eticket sub-system):** California Department of Fish and Wildlife "agency tickets" are groundfish landings that are not included in Etickets and that have not been entered by CDFW's data entry department. These unofficial tickets are entered manually into the Eticket system in near real-time by CA Coop Survey port samplers in California to support the scorecard and inseason management, which is similar to the legacy QSM approach. These agency

¹ Landing is defined as retained catch

tickets along with Etickets capture the majority of the commercial groundfish landings in California. Agency tickets are temporary and will not be necessary (phased out) when Etickets become mandatory for all California commercial landings. California Etickets become mandatory in the summer of 2019.

- **Comprehensive NPAC (observer data):** PacFIN’s analytical table for all West Coast commercial and tribal catch and discard estimates from the at-sea whiting fishery.
- **West Coast Groundfish Observer Program (WCGOP):** WCGOP total annual discard estimates for all shorebased groundfish fisheries are obtained from the Northwest Fisheries Science Center (NWFSC) online GEMM system (https://www.nwfsc.noaa.gov/data/api/v1/source/observer.gemm_fact/selection.csv). All of these WCGOP discard estimates by sector, and species are translated to GMT sectors and stock species or stock complexes in order to link the discard estimates by year with shorebased landings in PacFIN (Appendix 2.).
- **GMT Nearshore Fixed Gear Discard Estimates:** The GMT provides annual discard estimates for the nearshore fixed gear sector because the WCGOP discards do not separate the discards by state (i.e., Oregon and California), which is necessary for the GMT.
- **Comprehensive Recreational Catch Estimates:** RecFIN’s analytical table that includes all West Coast marine recreational catch and discard estimates. These estimates are not in real-time and are typically delayed by several months.
- **Pacific Coast Groundfish Harvest Specifications and Management Measures Database System (SPEX):** The SPEX database system contains definitions of stock management specifications and allocations by year, stock (species) and area. Useful attributes from this system, include ACL Code (i.e., groundfish stock species or complex database codes), Sector Allocations and Fishery Harvest Guideline (FHG), which are imported into analytical reporting tables and other database objects within the PacFIN and RecFIN databases.

Data Integration and Estimation

All source datasets are integrated for use in the scorecard report. The integration process includes data enhancements, as well as projection estimates of landings and discards for shorebased landings. These enhancements and projection estimates are as follows:

- **Stock Assignments:** Stock assignments (i.e., ACL codes) are merged into the PacFIN and RecFIN comprehensive tables (e.g., comprehensive fish tickets, etc.) from the SPEX system. These programmatic routines translate PacFIN/RecFIN catch year, catch area, and groundfish species into management stock species or complexes.
- **Etickets:** State agencies' catch-by-area and species composition proportions are applied to the near real-time Eticket groundfish landings, as well as California agency tickets in order to correct catch areas, nominal species categories, and multispecies market categories. However, because those proportions are not available in real-time, a moving average of proportions for the most recent three years by month are used as a proxy. These Etickets, California agency tickets, and the proxy composition proportions are replaced when the validated state fish tickets and corresponding composition proportions become available, which is typically within one to three months.
- **Shorebased WCGOP Discard Estimates:** Annual shorebased discard estimates are combined with annual fish ticket landings to provide estimates of total shorebased mortality. However, because

these discard estimates are not available in real time, a moving average of the most recent three years are used to estimate the WCGOP annual discards for all stocks and sectors except for the nearshore fixed gear. The nearshore fixed gear discard estimates are provided by the GMT. The moving average of WCGOP discard estimates are replaced when new estimates become available in August of each year. Moreover, these annual estimates are “front loaded” to the current year stocks, which creates the illusion of high discards at the start of the year. Further, these discard estimates are available for stock summaries and for the stock by sector summaries (private report view), but not for detailed records because the discard estimates are not calculated at that level of granularity.

- **Shorebased Tribal Projection Estimates:** A moving average of the last three years by month are applied to current year and month when tribal landings are not available in PacFIN. These landing projection estimates are replaced when actual tribal data become available. In addition, these projection estimates are available for stock summaries and for the stock by sector summaries (private report view), but not for detailed records.

Output table

Report View 1. Column and column descriptions of the stock summary report view. These data can be downloaded from both the public and private scorecard reports.

Column	Column Description
ACL CODE	Stock assignment code based on Species/Area/Year as defined in the SPEX database. These assignment are defined by PFMC staff and GMT members.
ACL CODE NAME	Stock assignment name based on Species/Area/Year as defined in the SPEX database.
RETAINED WEIGHT MT	Total coast wide retained weight in metric tons of a stock for a particular year
DISCARD WEIGHT MT	Total coast wide discard weight in metric tons of a stock for a particular year
TOTAL MORTALITY MT	Total coast wide mortality weight in metric tons (i.e., RETAINED WEIGHT MT + DISCARD WEIGHT MT) of a stock for a particular year
ANNUAL CATCH LIMIT	Annual catch limit for a stock for a particular year as defined in the SPEX database.
PERCENTAGE ATTAINED	TOTAL MORTALITY MT divided by ANNUAL CATCH LIMIT * 100

Report View 2 (Private). Column and column descriptions of the GMT fishery sectors by stock summary report view. These data can be downloaded from the private scorecard report only.

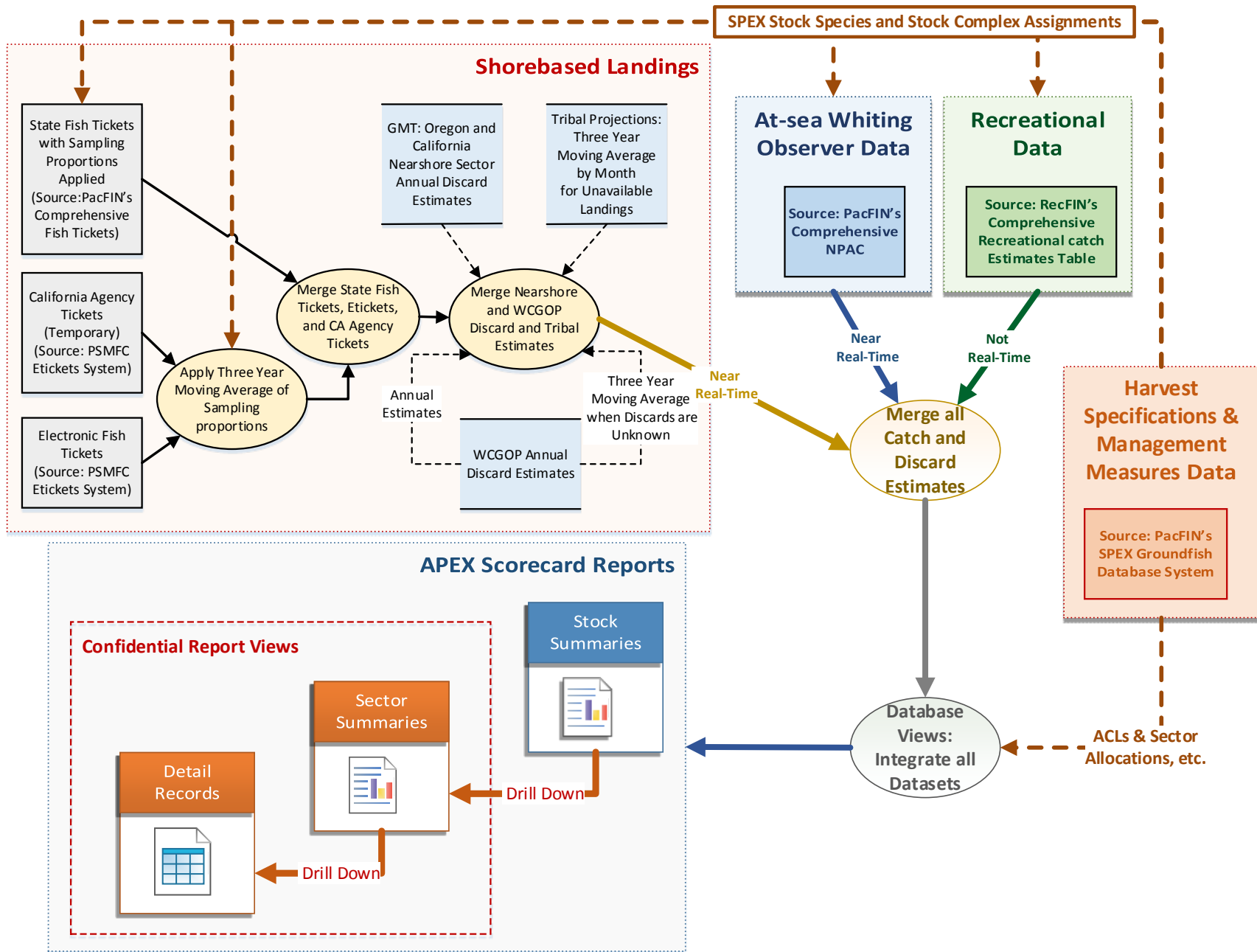
Column	Column Description
GMT FISHERY SECTOR	Blend of WCGOP sectors and Dahl groundfish sectors. (e.g., Non-nearshore Fixed Gear, etc.)
RETAINED WEIGHT MT	Total coast wide retained weight in metric tons of a stock for a particular year
DISCARD WEIGHT MT	Total coast wide discard weight in metric tons of a stock for a particular year
TOTAL MORTALITY MT	Total coast wide mortality weight in metric tons (i.e., RETAINED WEIGHT MT + DISCARD WEIGHT MT) of a stock for a particular year
CONFIDENTIAL	Identifies if the summary information for a record is confidential.

Report View 3 (Private). Column and column descriptions of the detail scorecard report view. These data can be downloaded from the private scorecard report only.

Column	Column Description
UNIQUE ID	Unique ID used to link records to original data sources. These IDs relate to the data source records in the "SOURCE" column. For example, if the source is COMPFT, then the unique ID is the fish ticket ID.
SOURCE	Data source that was integrated. For example, COMPFT sources the comprehensive fish tickets (state fish tickets). Codes include: ETIX, NPAC, REC, COMPFT, AGENCY
AGENCY	An agency identifier (i.e., W = WDFW, O = ODFW, and C = CDFW)
DATE	Date of landing/catch
YEAR	Year of landing/catch
MONTH	Month of landing/catch
DAY	Day of landing/catch
VESSEL NUMBER	It can be a USCG documentation number or state registration number (ex: 1234567 or AK1234nn) or MISSING or

	UNKNOWN if vessel number is not provided or invalid. It is also "Null" if no vessel was used.
GROUP GEAR	PacFIN gear group code
CATCH AREA	PacFIN area code after application of area comps.
WATER AREA	RecFIN water area name for marine recreational catch
SPECIES CODE	PacFIN species code
NOMINAL/ACTUAL SPECIES	Converted nominal PacFIN species codes to Actual PacFIN species codes. For example, nominal dover sole, "DVR1" would be converted to "DOVR"
DAHL GROUND FISH SECTOR	<p>Numeric codes identifying groundfish "sectors." These sectors are meant to identify landings according to fishery components, or sectors, used in management. Sectors are defined through a combination of species composition of landings, gear type, and permit status, among other factors.</p> <p>Dahl groundfish sector descriptions: https://pacfin.psmfc.org/wp-content/uploads/2015/10/PacFIN_groundfish_sector_codes.pdf</p>
IS IFQ	If landing was IFQ, flag = 'T'; if not an IFQ landing, flag = 'F'
RETAINED WEIGHT (LBS)	Landed weight converted to round weight. Units are in pounds.
DISCARD WEIGHT (LBS)	Discard weight converted to round weight. Units are in pounds.

Appendix 1. Schematic of the data integration process that is used to produce the APEX scorecard reports.



Appendix 2. Table that shows the translations of shorebased landings from Dahl groundfish sectors and WCGOP sectors into the final GMT sectors that are used in the private APEX scorecard report.

Dahl Groundfish Sector Codes	WCGOP Sectors	GMT Scorecard Sectors
3	SHORESIDE HAKE	SHORESIDE HAKE
3	MIDWATER HAKE EM	SHORESIDE HAKE
3	MIDWATER HAKE	SHORESIDE HAKE
4	CS - BOTTOM TRAWL	IFQ
4	CS - MIDWATER TRAWL	IFQ
4	CS EM - BOTTOM TRAWL	IFQ
4	MIDWATER ROCKFISH	IFQ
4	MIDWATER ROCKFISH EM	IFQ
7	LE SABLEFISH - HOOK & LINE	NONNEARSHORE FIXED GEAR
7	LE FIXED GEAR DTL - POT	NONNEARSHORE FIXED GEAR
7	LE SABLEFISH - POT	NONNEARSHORE FIXED GEAR
7	LE FIXED GEAR DTL - HOOK & LINE	NONNEARSHORE FIXED GEAR
8	OA FIXED GEAR - POT	NONNEARSHORE FIXED GEAR
8	OA FIXED GEAR - HOOK & LINE	NONNEARSHORE FIXED GEAR
9	LE FIXED GEAR DTL - POT	NONNEARSHORE FIXED GEAR
9	LE SABLEFISH - HOOK & LINE	NONNEARSHORE FIXED GEAR
9	LE SABLEFISH - POT	NONNEARSHORE FIXED GEAR
9	LE FIXED GEAR DTL - HOOK & LINE	NONNEARSHORE FIXED GEAR
10	OA FIXED GEAR - HOOK & LINE	NONNEARSHORE FIXED GEAR
10	OA FIXED GEAR - POT	NONNEARSHORE FIXED GEAR
11	PHLB DERBY	INCIDENTAL/MISCELLANEOUS
11	RIDGEBACK PRAWN	INCIDENTAL/MISCELLANEOUS
11	INCIDENTAL	INCIDENTAL/MISCELLANEOUS
11	SEA CUCUMBER	INCIDENTAL/MISCELLANEOUS
12	RIDGEBACK PRAWN	INCIDENTAL/MISCELLANEOUS
12	PHLB DERBY	INCIDENTAL/MISCELLANEOUS
12	INCIDENTAL	INCIDENTAL/MISCELLANEOUS
12	SEA CUCUMBER	INCIDENTAL/MISCELLANEOUS
13	OA CA HALIBUT	INCIDENTAL/MISCELLANEOUS
14		INCIDENTAL/MISCELLANEOUS
15	SEA CUCUMBER	INCIDENTAL/MISCELLANEOUS
15	INCIDENTAL	INCIDENTAL/MISCELLANEOUS
15	RIDGEBACK PRAWN	INCIDENTAL/MISCELLANEOUS
15	PHLB DERBY	INCIDENTAL/MISCELLANEOUS
17	TRIBAL SHORESIDE	TREATY
18	TRIBAL SHORESIDE	TREATY
20	CS - POT	IFQ
20	CS - HOOK & LINE	IFQ
20	CS EM - POT	IFQ
XX	PINK SHRIMP	INCIDENTAL/MISCELLANEOUS