

where revenue_s is the revenue based on ex-vessel prices by species s , β_s is the tribal importance score by species s , and the recently assessed penalty β_s is -2 for species that were assessed in the most recent assessment cycle or 0 for all other species. The initial scores are then standardized to have a maximum of 10. The tribal landings ex-vessel revenue was pulled from PacFIN with the total revenue summed across the five-year period of 2018-2022.

The tribal importance scores range from 0 to 3.0 and represent the relative value of groundfish species to tribal harvesters (Table 3). These species scores were refined through consultation with tribal representatives with the values initially developed in 2016 and updated in 2024. Continued comments and input from the tribal community regarding tribal scores will ensure that the scoring reflect the current conditions of the tribal fishery.

Table 3: Tribal importance score by species. The tribal score is colored reflecting low to high scores ranging between blue to green, respectively.

Species	Score
Arrowtooth flounder	0.0
Aurora rockfish	0.0
Bank rockfish	0.0
Big skate	2.0
Black rockfish	2.0
Blackgill rockfish	0.0
Blue/Deacon rockfish	2.0
Bocaccio	0.0
Brown rockfish	2.5
Cabazon	2.0
California scorpionfish	0.0
Canary rockfish	3.0
Chilipepper rockfish	0.0
China rockfish	2.0
Copper rockfish	2.0
Cowcod	0.0
Curlfin sole	0.0
Darkblotched rockfish	2.0
Dover sole	1.5
English sole	1.5
Flag rockfish	0.0
Flathead Sole	0.0
Gopher/Black and yellow rockfish	0.0
Grass rockfish	0.0
Greenspotted rockfish	0.0
Greenstriped rockfish	0.0
Honeycomb rockfish	0.0
Kelp greenling	2.0
Kelp rockfish	0.0

Table 3: Tribal importance score by species. The tribal score is colored reflecting low to high scores ranging between blue to green, respectively. (*continued*)

Species	Score
Leopard shark	0.0
Lingcod	2.0
Longnose skate	2.0
Longspine thornyhead	0.0
Olive rockfish	0.0
Pacific cod	3.0
Pacific ocean perch	2.0
Pacific sanddab	1.5
Pacific spiny dogfish	0.0
Petrale sole	2.0
Quillback rockfish	2.0
Redbanded rockfish	2.0
Redstripe rockfish	0.0
Rex Sole	2.0
Rock sole	0.0
Rosethorn rockfish	0.0
Rosy rockfish	0.0
Rougheye/Blackspotted rockfish	3.0
Sablefish	2.0
Sand sole	1.5
Sharpchin rockfish	0.0
Shortraker rockfish	3.0
Shortspine thornyhead	2.0
Silvergray rockfish	0.0
Speckled rockfish	0.0
Splitnose rockfish	0.0
Squarespot rockfish	0.0
Starry flounder	1.5
Starry rockfish	0.0
Stripetail rockfish	0.0
Treefish rockfish	0.0
Vermilion/Sunset rockfish	0.0
Widow rockfish	2.0
Yelloweye rockfish	3.0
Yellowmouth rockfish	0.0
Yellowtail rockfish	2.0

2.5 Recreational Importance

Recreational landings lack a measure of value that is equivalent to commercial ex-vessel revenue. In the absence of an equivalent metric, these rankings rely on state-specific species-importance score to adjust the recreational catches based on the importance of the species within each state’s recreational fishery. The species-specific scores are used to calculate “pseudo” revenues by state by adjusting the the total recreational catches over a range of years. The coastwide pseudo revenue by species is calculated as:

$$\text{Pseudo Revenue}_s = \sum_{a=1}^A \text{catch}_{s,a} * \text{importance score}_{s,a} \quad (4)$$

where catch is the recreational catch by species s and state a and importance score by species s and state a . The catch data are pulled from the WCGOP GEMM report with catches summed between 2018-2022. The recreational importance score by species and state are shown in Table 4. These weights were initially developed in cooperation with the state recreational representatives to the Groundfish Management Team and reviewed by the Groundfish Advisory Panel in 2016 and updated in 2024 based on input from state representatives to reflect current recreational fishery conditions.

The overall factor for recreational importance is then calculated as:

$$\text{Initial Score}_s = \log(\text{pseudo revenue}_s + 1) + \text{recently assessed penalty}_s$$

where the recently assessed penalty is -2 for species that were assessed in the most recent assessment cycle or 0 for all other species. The transformed scores are then standardized to have a maximum value of 10.

Continued comments and input from the recreational fishing community or state agencies regarding relative value of species among recreational fishery participants of each state will allow these weights to reflect the current priority of the recreational sector.

Table 4: Recreational species importance by state based on the relative species desirability to recreational anglers.

Species	California	Oregon	Washington
Arrowtooth flounder	0.00	0.00	0.00
Aurora rockfish	0.00	0.00	0.00
Bank rockfish	0.90	0.00	0.00
Big skate	0.50	0.00	0.00
Black rockfish	2.00	2.00	2.00
Blackgill rockfish	0.00	0.00	0.00
Blue/Deacon rockfish	1.82	1.90	1.80
Bocaccio	1.86	0.60	1.30
Brown rockfish	1.45	0.50	0.00
Cabazon	1.14	1.50	0.75
California scorpionfish	1.75	0.00	0.00

Table 4: Recreational species importance by state based on the relative species desirability to recreational anglers. (*continued*)

Species	California	Oregon	Washington
Canary rockfish	1.90	1.90	2.00
Chilipepper rockfish	1.86	0.00	0.00
China rockfish	1.06	1.20	1.00
Copper rockfish	1.78	1.50	1.00
Cowcod	1.50	0.00	0.00
Curlfin sole	0.00	0.00	0.00
Darkblotched rockfish	0.00	0.00	0.00
Dover sole	0.50	0.30	0.25
English sole	0.50	0.30	0.25
Flag rockfish	1.48	0.00	0.00
Flathead Sole	0.00	0.00	0.25
Gopher/Black and yellow rockfish	1.13	0.00	0.00
Grass rockfish	0.91	0.00	0.00
Greenspotted rockfish	1.37	0.00	0.00
Greenstriped rockfish	1.00	0.00	0.00
Honeycomb rockfish	1.25	0.00	0.00
Kelp greenling	1.19	0.80	0.75
Kelp rockfish	1.14	0.00	0.00
Leopard shark	0.00	0.00	0.00
Lingcod	2.00	2.00	2.00
Longnose skate	0.00	0.20	0.00
Longspine thornyhead	0.00	0.00	0.00
Olive rockfish	1.16	0.00	0.00
Pacific cod	0.00	0.00	1.30
Pacific Ocean perch	0.00	0.00	0.00
Pacific sanddab	0.82	0.50	0.75
Pacific spiny dogfish	0.30	0.00	0.00
Petrable sole	0.62	0.70	0.75
Quillback rockfish	2.00	1.50	1.00
Redbanded rockfish	0.80	0.00	0.00
Redstripe rockfish	0.00	0.00	0.00
Rex sole	0.50	0.00	0.25
Rock sole	0.65	0.00	0.75
Rosethorn rockfish	0.00	0.00	0.00
Rosy rockfish	0.00	0.00	0.00
Rougheye/Blackspotted rockfish	0.00	0.00	0.00
Sablefish	0.50	0.70	1.75
Sand sole	0.65	0.70	0.25
Sharpchin rockfish	0.00	0.00	0.00
Shortraker rockfish	0.00	0.00	0.00
Shortspine thornyhead	0.00	0.00	0.00

Table 4: Recreational species importance by state based on the relative species desirability to recreational anglers. (*continued*)

Species	California	Oregon	Washington
Silvergray rockfish	0.00	0.00	0.00
Speckled rockfish	1.00	0.00	0.00
Splitnose rockfish	0.00	0.00	0.00
Squarespot rockfish	1.80	0.00	0.00
Starry flounder	0.65	0.50	0.75
Starry rockfish	1.10	0.00	0.00
Stripetail rockfish	0.00	0.00	0.00
Treefish rockfish	0.70	0.00	0.00
Vermilion/Sunset rockfish	1.90	1.15	1.00
Widow rockfish	1.30	1.00	1.50
Yelloweye rockfish	1.90	1.80	2.00
Yellowmouth rockfish	0.00	0.00	0.00
Yellowtail rockfish	1.15	1.50	2.00

2.6 Constituent Demand

The constituent demand factor includes aspects of species importance that may not be adequately captured by coastwide measures of commercial and recreational importance. Additionally, this factor also measures the potential for species to be choke species within the fishery given future Annual Catch Limits relative to current average catch.

The first element examines commercial importance by state and trawl or non-trawl ex-vessel revenues comparing then to the coastwide totals in order to identify species that are considerably more important to a segment of the commercial fishery compared to their coastwide importance. The ex-vessel revenue is summed across recent years by state and gear grouping. The summed ex-vessel revenue by species is then ranked within each state and gear group with and standardized to range between 0 and 1. Any species that has a state-specific standardized score greater than 0.10 compared to the coastwide score is assigned a +1 for each state and any species that is equally important to both the trawl and non-trawl gear types is assigned a +1. The state-specific and gear-specific adjustments are then summed to determine the commercial importance modifier.

The second element examines the recreational catches by state compared to the coastwide totals. Similar to commercial ex-vessel revenue, the catches are ranked and standardized by each state and compared to the ranked and standardized coastwide values. Any species that has a state-specific standardized score greater than 0.10 compared to the coastwide value is assigned a +1 for each state. The state-specific adjustments are then summed to determine the recreational importance modifier.

The third element accounts for species that currently are or could be choke stocks based on current average catches compared to future ACLs. Future ACLs may be constraining due to stock status, population sizes, or due to decreasing ACLs given increases in time-varying uncertainty for species with older assessments. Species are assigned a score ranging between