WDFW Ecologically Important Areas Marine Spatial Planning Project Science Panel Webinar

Jan 20, 2015

Mapping Important Ecological Areas Webinar Outline

1. Summarize Panels Questions from November Meeting
2. Update on Wildlife Data/Mappng Progress
3. Update on Fish Data/Mapping Progress
4. Next steps

Science Panel Questions

1. Add value to a grid cell based off its uniqueness
2. Potentially may want to include estuaries based on functionality, not on size. Estuaries may be small but in strategic locations. To do so flag outflow of the major rivers and just by their presence flag them as important.
3. Try to differentiate within estuaries.
4. Clarifying the assumptions made in defining what is Ecologically Important
5. Assemble a list of criteria that you are using for establishing your data sets and what you know you should have but don't. That way ecological function gaps will be transparent.

Science Panel Questions

6. On the issue of missing life history information: Another model used habitat and depth proxies to develop different life history information. Potentially look into that method.
7. Asking specific questions of the data based on the specific stressor at hand would help all begin to assess the model. See Massachusetts OCEAN plan for example.
8. Could you add a temporal aspect to these data layers?
9. Can we look at relative abundance or areas that are a priority to be restored?
10. Consider challenges and data quality considerations of meshing hexagon model with ocean data and public involvement that are mapped in grid cells
11. Explaining six categories, maybe change to seven categories which creates a neutral one?

Draft Wildlife Scoring Criteria

Wildlife Element	Level of Significance	Level of Certainty	Assigned Category	Comments
Nearshore Zone				
Snowy Plover Breeding areas[1]	High	High	1	Occurrence polygons around known breeding areas
Streaked Horned Lark Breeding areas[1]	High	High	1	Occurrence polygons around known breeding areas
Tufted Puffin Breeding Colonies[2]	High	High	1	WDFW Species of Concern
Tufted Puffin Foraging Area	High	Low	3	Buffer 3.96 km representing modeled foraging areas.
High Abundance, multiple Species Seabird Breeding Colonies[2]	High	High	1	> 500 total birds (annual average) and or > 6 different species
Med Abundance, few species Seabird Breeding Colonies[2]	Med	High	3	100-500 total birds abundance (annual average) or 4-6 species
Low Abundance, few species Seabird Breeding Colonies[2]	Low	High	5	< 100 total bird abundance (annual average) or 1-3 species

Draft Wildlife Scoring Criteria

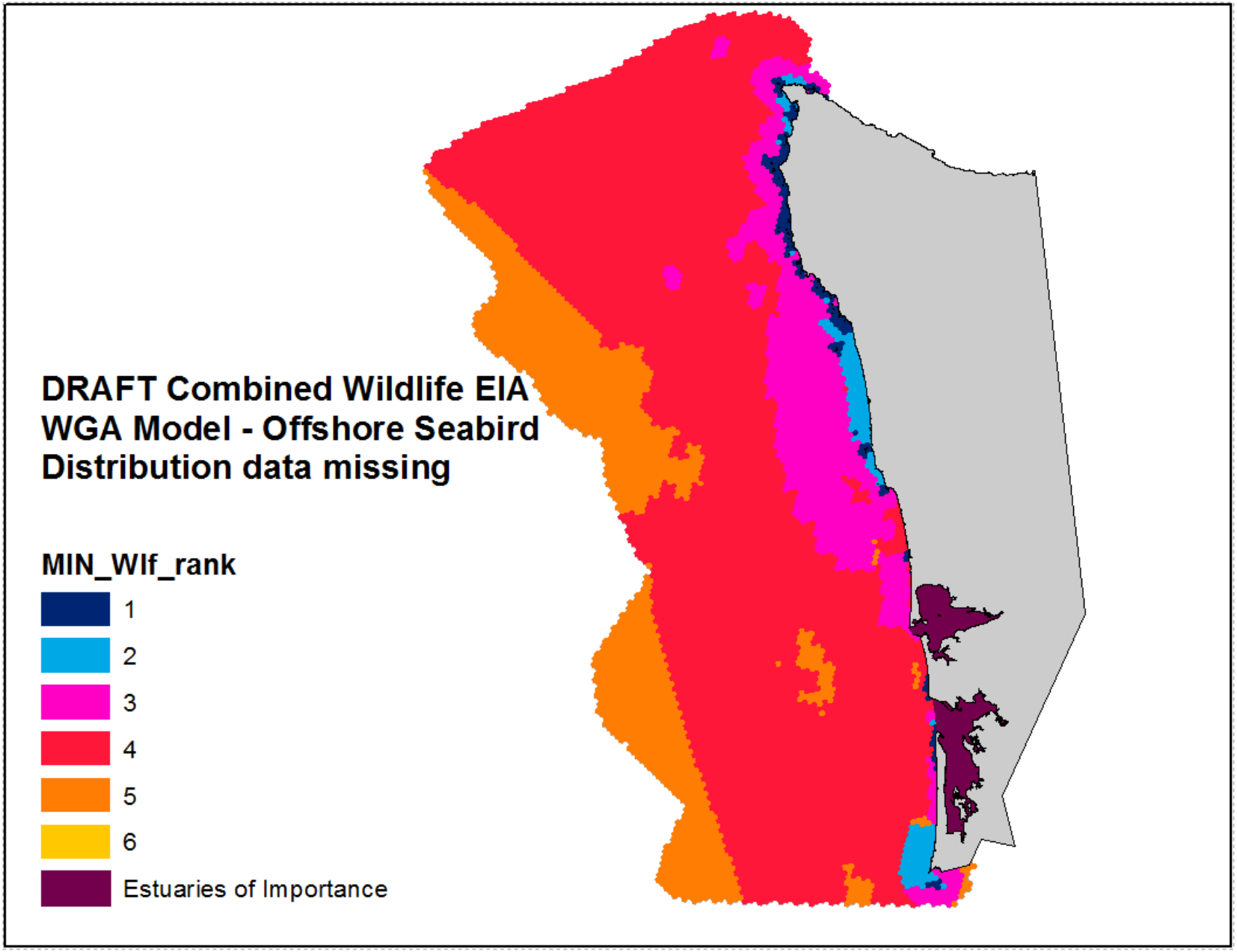
Wildlife Element	Level of Significance	Level of Certainty	Assigned Category	Comments
Nearshore Zone				
Sea Otter Regular Concentration Areas[5]	High	Med	2	Developed from 12-13 annual WDFW/USFWS Aerial Surveys of Sea Otter counts, distribution and expert knowledge
Core Kelp Bed Areas[6]	High	High	1	Kelp present > 75% of 23 years surveyed
Other Kelp Bed Areas[6]	High	Med	2	Kelp Present 25-75% years of 23 years surveyed
Rarely Kelp Bed Areas[6]	High	Low	3	1-25% years
Colony Seabird foraging areas[2]	Med	Low Medium High	1-3 species = 5 4-7 species = 4 8-10 species =3	Modeled species specific foraging buffer around each colony feature (island, cove, point, or beach)
Pinniped foraging areas[7]	Med	Low Med High	1 species = 5 2 species = 4 3 species = 3	Modeled 6500 m buffer around haulout sites
Harbor Porpoise High concentration areas[3]	High	High Med Low	2 3 4	Very reliable survey blocks with limited uncertainty

Draft Wildlife Scoring Criteria

Wildlife Element	Level of Significance	Level of Certainty	Assigned Category	Comments
Nearshore Zone				
Marbled Murrelet high concentration areas[3]	High	High Med Low	1 2 3	Listed Species, encounter rate projected across transect sampling units, score based on relative annual consistency. High Certainty = areas where CV of abundance is < .9, Med Certainty = CV = .9 – 2; Low Certainty = CV > 2.0.
High concentration areas for > 6-7 seabird species[3]	High	High Med Low	1 2 3	Out of a total of 12 resident seabird species surveyed, encounter rate. High Certainty = areas where CV of abundance is < .9, Med Certainty = CV = .9 – 2; Low Certainty = CV > 2.0.
High concentration areas for 4-5 seabird species[3]	Med-High	High Med Low	2 3 4	Out of a total of 12 resident seabird species surveyed, encounter rate. High Certainty = areas where CV of abundance is < .9, Med Certainty = CV = .9 – 2; Low Certainty = CV > 2.0.
High concentration areas for 2-3 seabird species[3]	Med	High Med Low	3 4 5	Out of a total of 12 resident seabird species surveyed, encounter rate. High Certainty = areas where CV of abundance is < .9, Med Certainty = CV = .9 – 2; Low Certainty = CV > 2.0.

Draft Wildlife Scoring Criteria

Wildlife Element	Level of Significance	Level of Certainty	Assigned Category	Comments
Outer Ocean/Shelf Zone				
Short-tailed Albatross[8]	Med-High, Med, Med-low	Low	50% VC = 4 95% VC = 5 99% VC = 5	Radio-telemetry kernel density map (Utilization Distribution), 8 juvenile birds = low certainty
Seabird distribution maps[9]	High	High Med Low	1 2 3	High Diversity, high likelihood Individual Species probability of occurrence maps
	Med	High Med Low	3 4 5	Moderate Diversity, and or medium likelihood
	Low	High Med Low	6 5 5	Low Density and or low likelihood
Seabird Hot Spots[10]	High	Low	1-2 species = 5 3-4 species = 4 5-7 species = 3	Distribution-based hot spot maps indicating number of species present
Colony Seabird foraging areas[2]	Med	Low Med	1-3 species = 5 4-7 species = 4	Modeled species specific foraging buffer around each colony feature (island, cove, point, or beach), encompasses both nearshore and offshore zone.

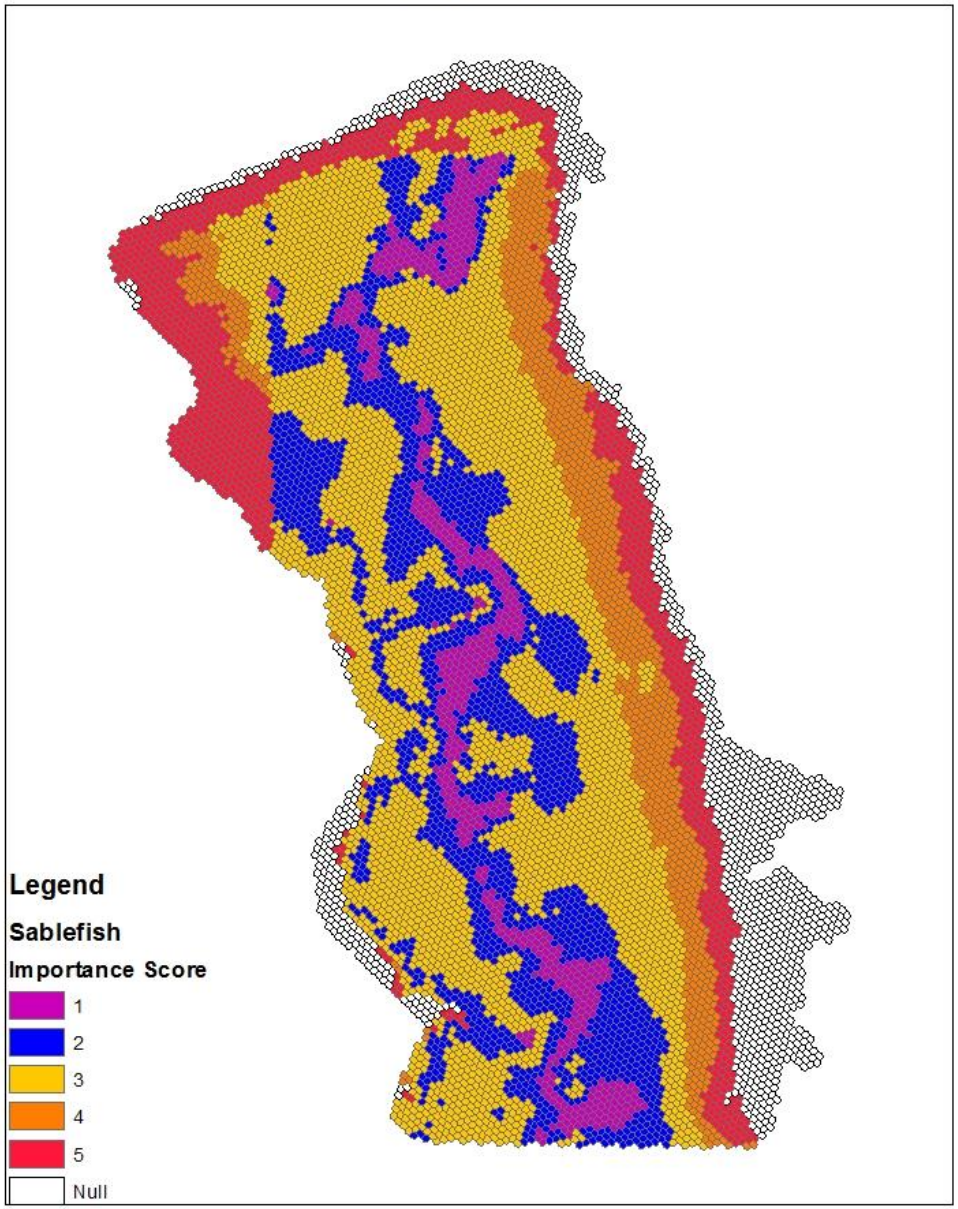

DRAFT Combined Wildlife EIA
WGA Model - Offshore Seabird
Distribution data missing
MIN_Wlf_rank
1
2
3
4
5
6
Estuaries of Importance

GROUNDFISH MODELS

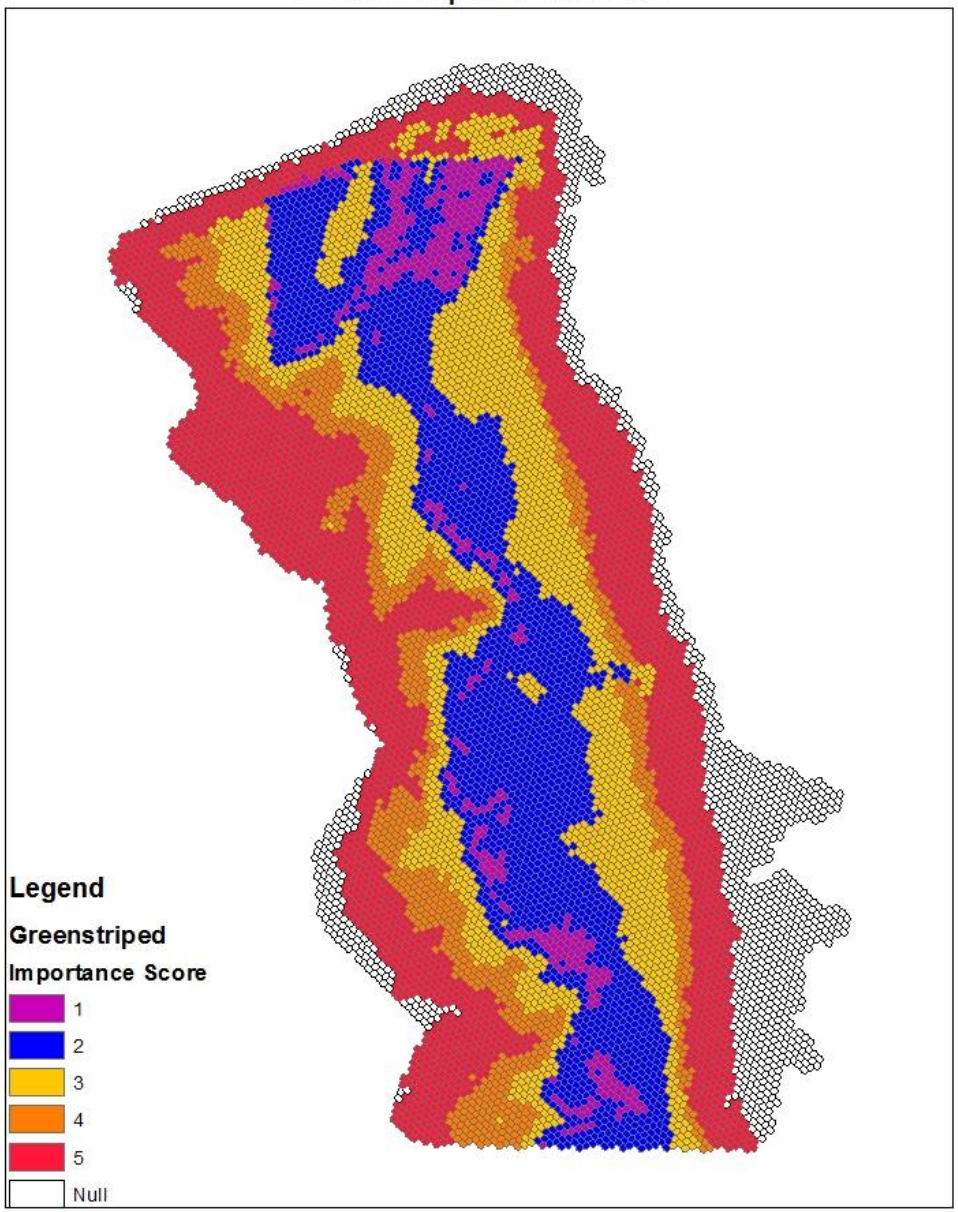
DRAFT Scoring Criteria for NOAA Groundfish Model

Score	Percentiles	Notes
1	> 0.80	The top 20 percent.
2	>0.55 and <= 0.80	5 percent above the median value and up to the 80th perentile .
3	> 0.15 and <= 0.55	A wide intermediate category (within ~1 std. dev. below mean to just above the median).
4	>= 0.03 and <= 0.15	Analogous to > 1 std. dev. below mean in normal distribution.
5	< 0.03	Analogous to > 2 std. devs below mean in normal distribution
6	“no determination made”	Neither model produces an estimate for the cell.

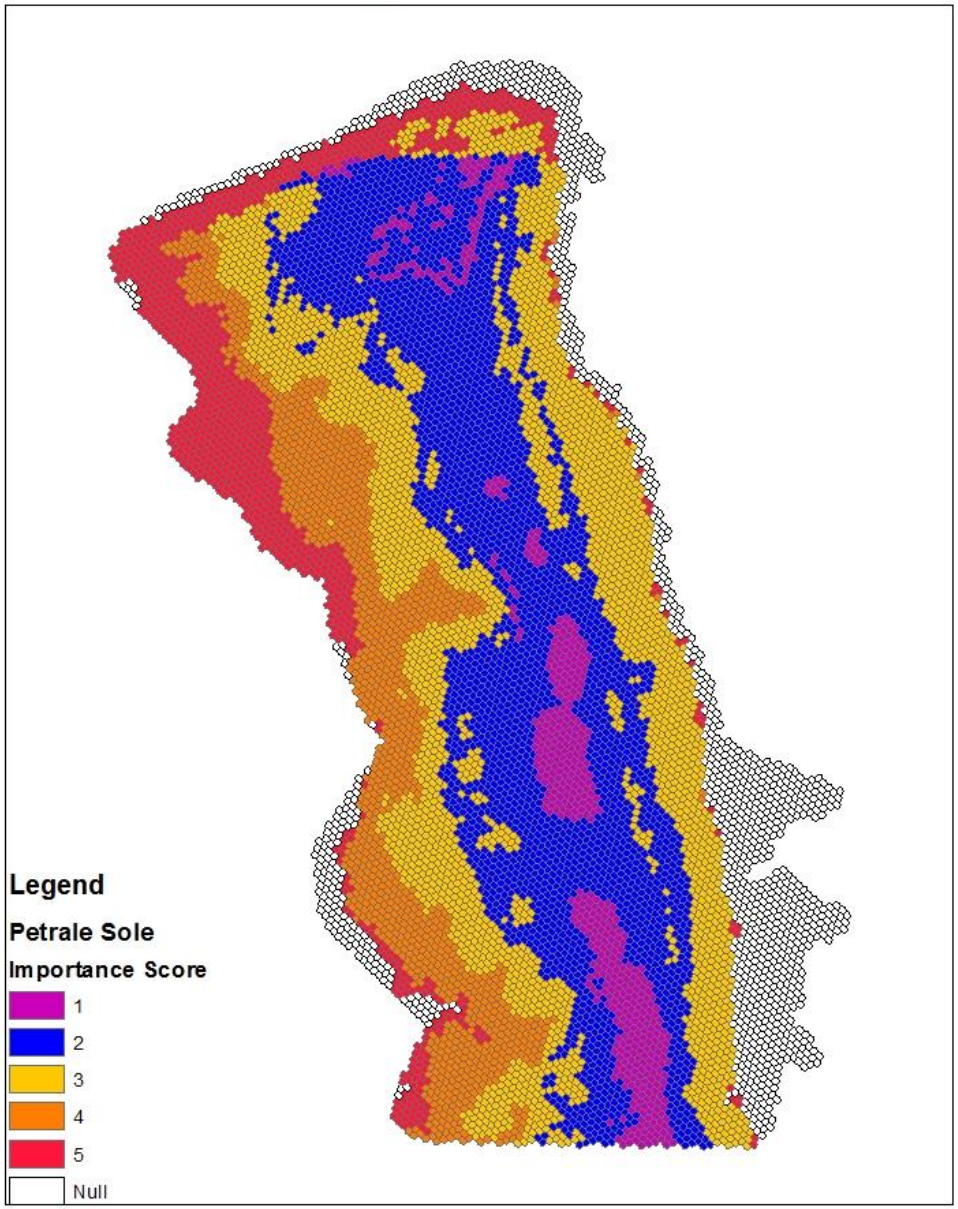
Sablefish



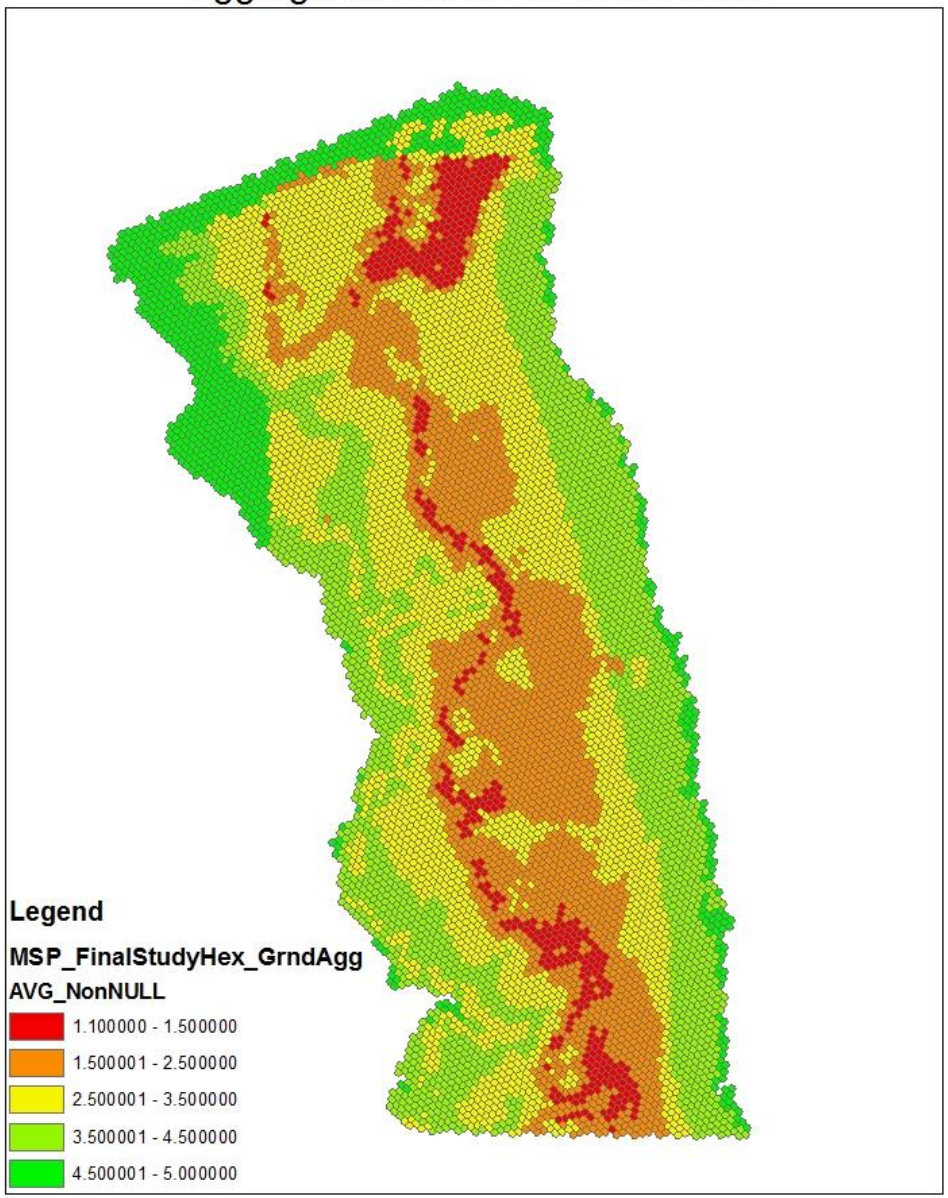
Greenstriped Rockfish



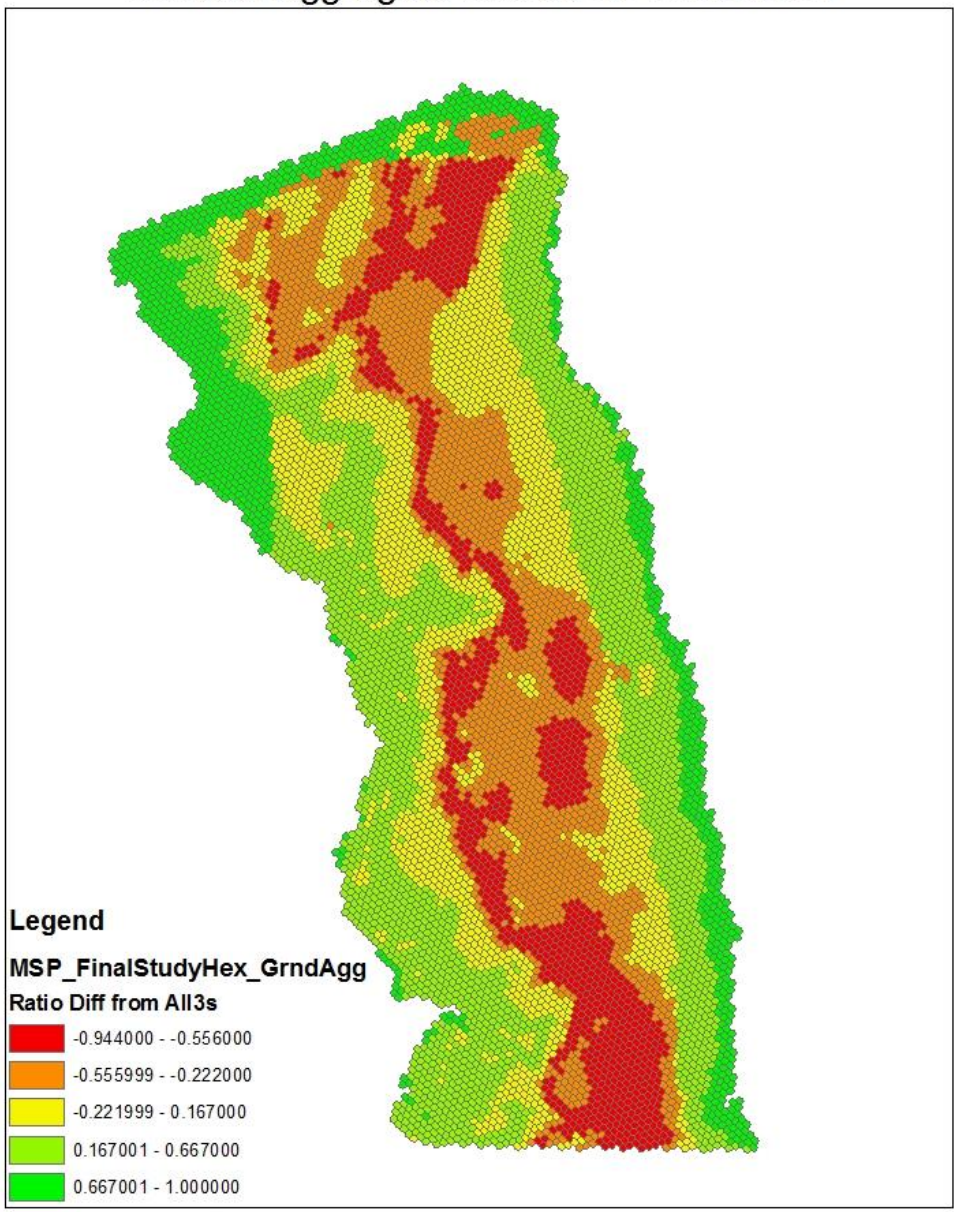
Petrale Sole



Aggregated Scores for Groundfish



3-Model Aggregate Scores for Groundfish



Rollup Model Discussion Questions

- No Data vs Not habitat vs Unknown ?
- Highest Value vs Majority vs “Average”
- Policy vs Science
- Other

WDFW's View on MSP Products

- There are many ways of doing this project but we do not see that there is one right way.
- None of the data sets are perfect.
- We intend to document all the choices we make and emphasize the uncertainties involved with each data set.
- One aim of our project is to help identify data gaps in what we don't know about ecologically importance and communicate where we could invest in research to learn more. Yet how do we communicate this effectively?