ENFORCEMENT CONSULTANTS REPORT ON ESSENTIAL FISH HABITAT (EFH) AND ROCKFISH CONSERVATION AREA (RCA) AMENDMENT 28 – FINAL ACTION

The Enforcement Consultants (EC) have reviewed the materials associated with Agenda Item F.3, Essential Fish Habitat (EFH) and Rockfish Conservation Area (RCA) Amendment 28 - Final Action, and have the following comments.

At the Pacific Fishery Management Council's (Council) March 2018 meeting, the EC met with Dr. John Stadler, Ms. Alison Bailey, Ms. Gretchen Hanshew, Dr. Waldo Wakefield, and Council Staff - Brett Wiedoff and Kerry Griffin, to discuss the proposed alternatives and associated polygon-shaped areas for groundfish Essential Fish Habitat (EFH) and Rockfish Conservation Area (RCA) consideration.

Following that discussion, the EC evaluated area closure enforceability for all the proposed polygon-shaped areas described in the alternatives using current vessel monitoring system (VMS) technology and applying a sixty-minute and fifteen-minute VMS ping rate. In our analysis, we assumed a trawl speed of three to four knots. At the sixty-minute ping rate, currently required under regulation, we found thirty-three polygon-shaped areas to be potentially problematic for enforcement purposes, because VMS provided insufficient vessel coordinate and associated data to be useful in reviewing vessel activity. The fifteen-minute ping rate, which would provide four times the amount of VMS data, is a component of the Vessel Movement Monitoring package the Council forwarded to the National Marine Fisheries Service (NMFS) in April 2016. Per Agenda Item H.1.a. Supplemental NMFS Report 2, March 2018, the status of the Vessel Movement Monitoring proposed rule is to be determined.

Referring to the attached spreadsheet and proposed EFH alternatives screen shots, it is evident a fifteen-minute ping rate greatly improves monitoring for incursions into the thirty-three proposed polygon-shaped areas the EC deemed problematic under the sixty-minute ping rate, by increasing the likelihood that a vessel crossing a polygon will generate at least one VMS signature within the polygon. Referencing the legend found at the top of the spreadsheet, green signifies VMS is a good enforcement tool for determining area closure compliance; yellow means the VMS track indicates further investigation is necessary to determine area closure compliance; and red indicates VMS is inadequate for monitoring the polygon-shaped area as proposed.

To be clear, the red designation does not mean the EC deems the proposed polygons to be unacceptable, but as proposed, enforceability is problematic. This is not to say that the current Trawl RCA regulations do not have problematic areas, which they do. Moreover, as with the EFH polygons, using a fifteen-minute ping rate would greatly enhance enforceability of the current Trawl RCA. The EC also asks the Council to keep in mind that enforcing the corners of any conservation areas, particularly sharp corners, is always challenging, regardless of ping rate. Furthermore, the EC appreciates and agrees with the GMT statement, making note of regulatory changes that would need to be updated in support of EFH and RCA changes.

In closing, the EC would like to thank Dr. John Stadler for his assistance in our evaluation.

TABLE 1 – Polygon-shaped areas with evaluated enforceability.

VMS is an adequate enforcement tool

VMS as an enforcement tool is diminished

VMS as an enforcement tool is less than adequate

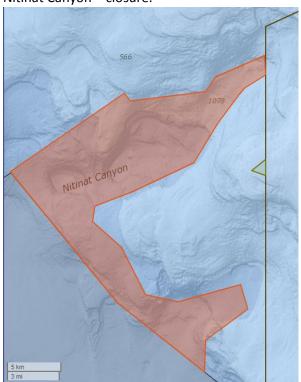
| Alternative | Polygon | 15 min | 60 min | Issues | Recommendation |
|----------------|--|--------|--------|--|----------------------------|
| Collaborative | Nitinat Canyon | | | North and south eastern edges are narrow | |
| Collaborative | Grays canyon southern Mod | | | Clipping by U&A creates narrow opening north of the U&A line | |
| Collaborative | Grays canyon western Mod | | | Clipping by U&A creates narrow opening south of the U&A line | |
| Collaborative | Willapa Shelf | | | Narrow (~2 miles) | |
| Collaborative | Rogue River Reef | | | South eastern point narrow (clipped by state waters) | Trim off south east finger |
| Collaborative | Saint George Reef | | | Remnants left after clipping by state waters | Eliminate |
| Collaborative | Mad River Rough Patch | | | Narrow | |
| Collaborative | Blunts Reef Modification | | | Narrow, clipped by state waters | |
| Collaborative | The Football | | | Narrow, < 1 mi | |
| Collaborative | Gobblers Knob | | | Narrow ~ 1 mi | |
| Collaborative | Point Reyes Reef | | | Narrow, 1.5 at widest | |
| Collaborative | Pescadero Reef | | | Narrow, 1.25 at widest | |
| Collaborative | MBNMS S of Davenport | | | Narrow, 1 mi at widest | |
| Collaborative | MBNMS La Cruz Canyon | | | SW finger is narrow <0.5 mi | |
| Collaborative | MBNMS West of Piedras Blancas SMCA | | | Narrow, 0.6 mi at widest, clipped by state waters | |
| Oceana, et al. | Grays canyon | | | Clipping by U&A creates narrow opening north of the U&A line | |
| Oceana, et al. | Astoria Canyonhead | | | 2 mi at widest point | |
| Oceana, et al. | Rogue Canyonhead | | | 1.5 mi at widest point | |
| Oceana, et al. | Reading Rock Canyonheads | | | 2 miles at widest | |
| Oceana, et al. | Samoa Reef | | | small, narrow point on NW | |

| Alternative | Polygon | 15 min | 60 min | Issues | Recommendation |
|---------------------|---------------------------------------|--------|--------|---|---|
| Oceana, et al. | Blunts Reef Expansion | | | Narrow, clipped by state waters | |
| Oceana, et al. | South Delgada Canyonheads | | | Very narrow, except for southern third | |
| Oceana, et al. | Noyo Canyonhead | | | narrow, 0.6 mi on south end | |
| Oceana, et al. | Pt Arena Canyonhead | | | Narrow, 1 mi at narrowest | |
| Oceana, et al. | Pescadero Reef | | | 2 mi wide | |
| Oceana, et al. | Ascension Canyonhead | | | Narrow,1 mile | |
| Oceana, et al. | Ano Nuevo Canyonhead | | | Narrow, < 1 mi wide | |
| Oceana, et al. | MBNMS South of Davenport | | | Narrow, 1 mi at widest | |
| МТС | Garibaldi Reef South | | | 1 mi x 2 mi | |
| МТС | Daisy Bank Western Mod | | | Combined they create a long, narrow finger off Daisy Bank closure <1 mi wide | |
| MTC | Daisy Bank SW modification | | | | |
| МТС | Daisy Bank Southern Modificatin | | | | |
| GRS | Garibaldi Reef South | | | Narrow, 1 mi wide | |
| New EFHCAs in WA | Priority habitats | | | Narrow | If selected, set borders equal to current RCA |

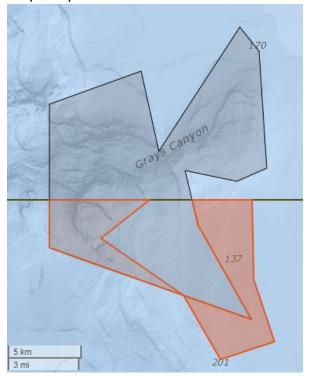
EC EFH Polygons of Concern

Alternative 1.a. Collaborative (North to South)

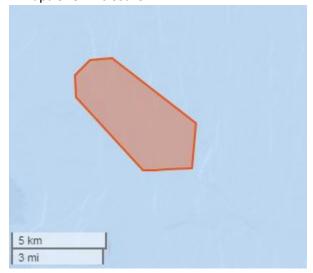
1. Nitinat Canyon – closure.



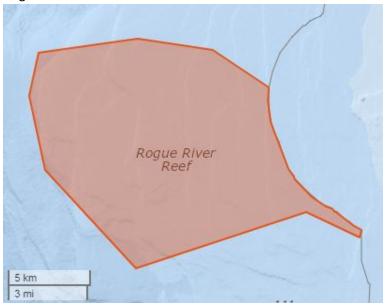
2. Grays Canyon Southern and Western Modifications (1 closure and 1 reopening)



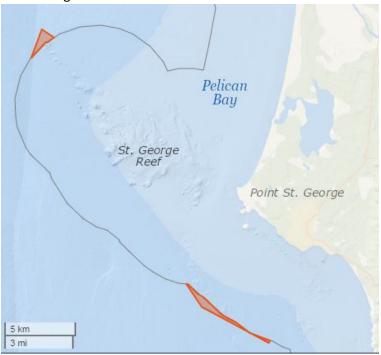
3. Willapa Shelf – closure.



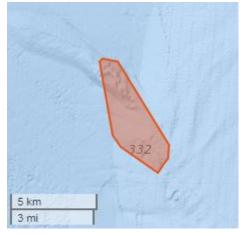
4. Rogue River Reef – closure.



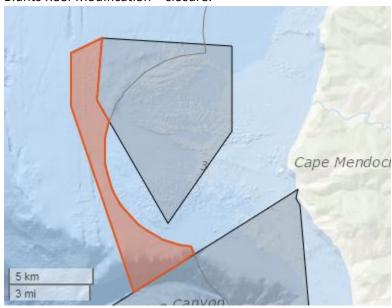
5. Saint George Reef – closure. Truncation at state waters results in two very small polygons



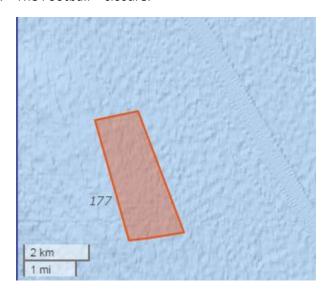
6. Mad River Rough Patch – closure.



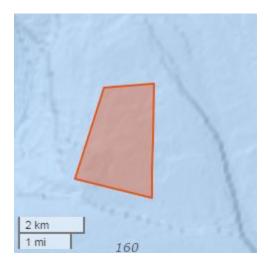
7. Blunts Reef Modification – closure.



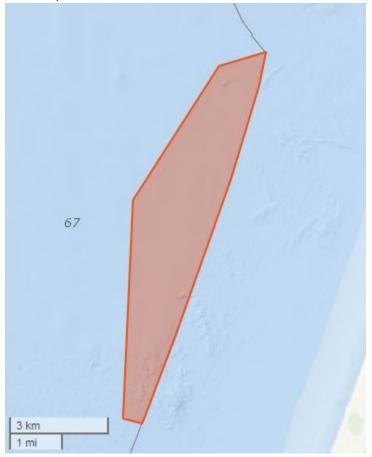
8. The Football – closure.



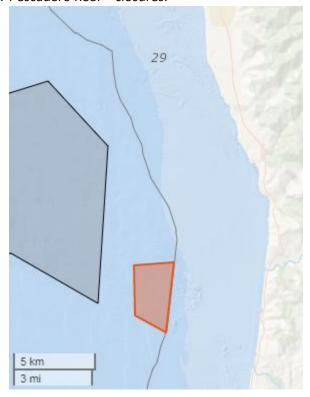
9. Gobblers Knob – closure.



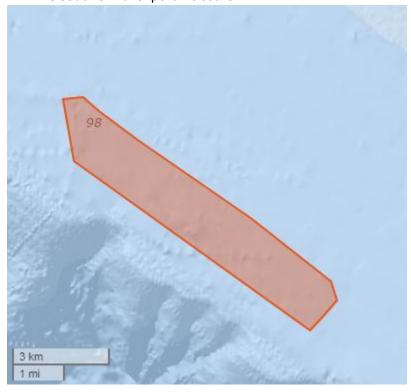
10. Point Reyes Reef – closure.



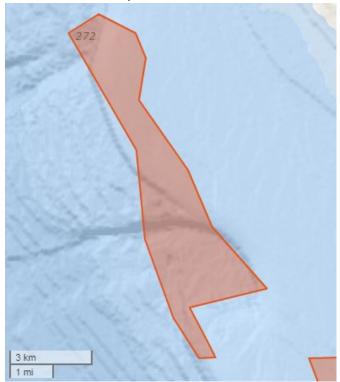
11. Pescadero Reef – closures.



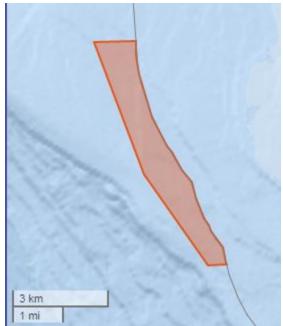
12. MBNMS South of Davenport – closure.



13. MBNMS La Cruz Canyon – closure.

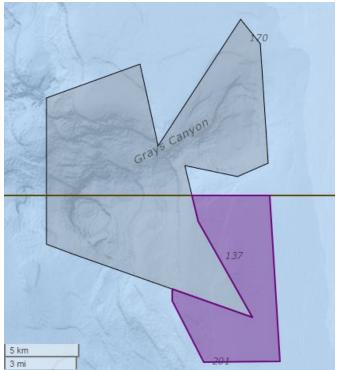


14. MBNMS West of Piedras Blancas SMCA – closure.

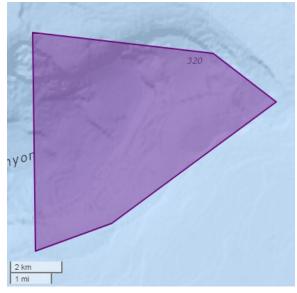


Alternative 1.b. Oceana, et al. (North to South)

1. Grays Canyon – closure.



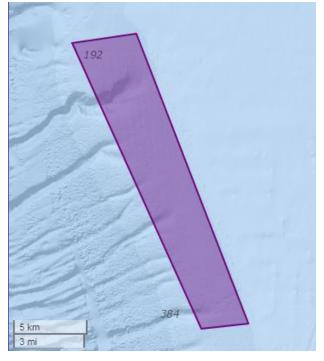
2. Astoria Canyonhead – closure.



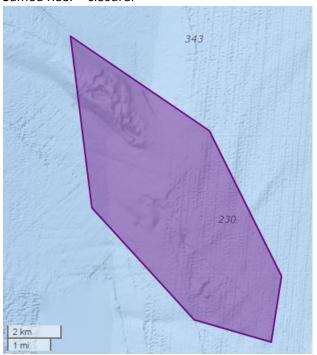
3. Rogue Canyonhead – closure.



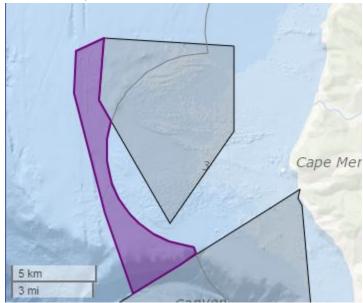
4. Reading Rock Canyonheads - closure



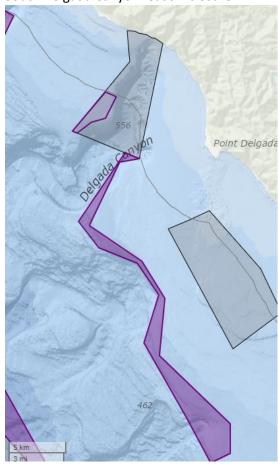
5. Samoa Reef – closure.



6. Blunt Reef Expansion – closure.



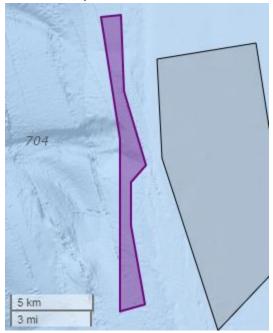
7. South Delgada Canyonheads – closure.



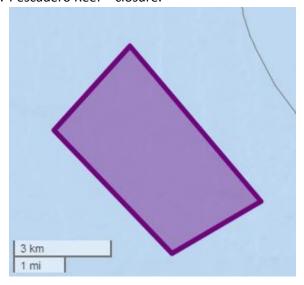
8. Noyo Canyonheads – closure.



9. Pt Arena Canyonhead – closure.



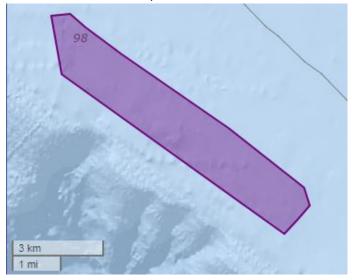
10. Pescadero Reef – closure.



11. Ascension Canyonhead (top left) and Ano Nuevo Canyonhead (top right) – closures.

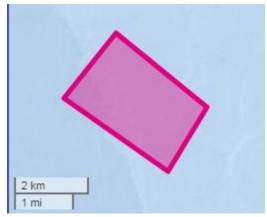


12. MBNMS South of Davenport – closure.

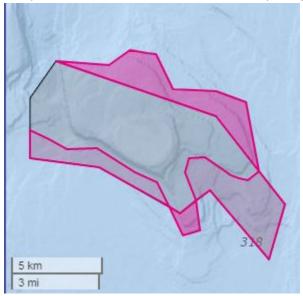


Alternative 1.c. MTC (North to South)

1. Garibaldi Reef South



2. Daisy Bank Modifications – closures and reopenings.



4. Alternative 1.g, New EFHCAs in WA – closure.



PFMC O4/08/18