

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE SUMMARY ANALYSIS  
OF TRAWLER-PROPOSED AND OCEANA-PROPOSED BOTTOM TRAWL  
CLOSED AREAS USING 2003 WEST COAST TRAWL LOGBOOK DATA

The Washington Department of Fish and Wildlife has reviewed and analyzed the potential impacts to fishers by closing areas proposed by the trawl fishing industry and by Oceana to bottom trawling, based on trawl logbook data. Washington Department of Fish and Wildlife staff used West Coast groundfish trawl logbook data from 2003, extracted from PacFIN in March 2005, to plot the locations of trawl tows relative to the closed areas proposed by the trawl fishing industry and under the Oceana alternative (EFH EIS Alternative C.12), for the areas off Washington state (i.e., north of the Columbia River).

Set points and haul-out points were plotted when available; however, in some instances, only set points were available. Because haul-out data were incomplete, the resulting catch data analysis was based on set point locations only (i.e., if a tow began within the proposed closed area, then the catch data associated with that tow is described as coming from within that area; if a tow began outside of the closed area, then the catch data associated with that tow is excluded from the area). We realize that tows set outside the closed area may have traversed and/or ended within the proposed closed area, particularly tows set adjacent to or near the closed area; conversely, catches associated with tows set within the area may have occurred outside the area and, to some extent, these conditions could offset one another. As mentioned above, haul-out data are incomplete and we wanted to use the available data to evaluate potential fishing impacts.

The trawl tows were plotted on maps relative to the proposed closed areas, and the trawl rockfish conservation area (RCA) boundaries for 2005 are also overlaid, for reference purposes. As the RCA boundaries change between fishing periods, the boundaries for the majority of the fishing year (March-October) were plotted. It is important to note that the trawl RCA boundaries were first implemented in September 2002; however, trawl activity shown to occur within the RCA are likely the result of changes in the RCA boundaries and/or are associated with exempted fishing permits (EFPs). The RCA boundaries have also changed from year-to-year; however, the 2005 boundaries are relatively comparable to the 2003 boundaries.

Department staff produced a set of tables that summarizes the amount of area covered under the trawl proposal and the Oceana proposal, number of tows that occurred in each area, and the amount of catch by area, based on logbook data. Catch data were summarized for the following species categories—petrale, DTS (Dover sole/ thornyheads/sablefish), rockfish, arrowtooth flounder, spiny dogfish, and Pacific cod. A blank cell represents no trawl activity, and a value of 0.0% indicates a value of < 0.1%.

Based on our discussions with groundfish fishery representatives, the Department is willing to include the state waters off the Washington coast (i.e., the area from the shoreline to three miles) as a HAPC alternative. This area represents key habitat for juvenile rockfish and other groundfish species, and adult nearshore species (e.g., black rockfish). This area is currently closed under Washington State regulations to trawl (since 2001) and groundfish-directed fixed gear (since 1996) fisheries and we are proposing that this area be closed to these activities through federal essential fish habitat regulations as well. Inclusion of Washington's coastal state waters would add a significant amount of overall area, which would be closed to trawl and groundfish-directed fixed gear, without additional impact to fishing.

## Percent Catch Within Areas off WA and Northern OR

<b>Total Catch</b> Area Name - Oceana (Industry)	<b>Oceana</b>			<b>Industry</b>	
	<b>OR</b>	<b>WA</b>	<b>Total</b>	<b>OR</b>	<b>WA</b>
Olympic 1	1.4%	9.7%	1.8%		
Olympic 2 (Olympic 2)	0.1%	12.3%	1.4%	0.0%	0.7%
Biogenic Area 1 (Deepwater 1)	1.1%	0.7%	0.6%	0.0%	
Biogenic Area 2	0.0%	0.8%	0.1%		
Grays Canyon	0.0%	0.1%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>3%</b>	<b>24%</b>	<b>4%</b>	<b>0.0%</b>	<b>0.7%</b>

<b>DTS</b> Area Name - Oceana (Industry)	<b>Oceana</b>			<b>Industry</b>	
	<b>OR</b>	<b>WA</b>	<b>Total</b>	<b>OR</b>	<b>WA</b>
Olympic 1	1.6%	20.3%	2.0%		
Olympic 2 (Olympic 2)	0.0%	12.7%	0.8%	0.0%	5.7%
Biogenic Area 1 (Deepwater 1)	1.4%	1.8%	0.8%	0.0%	
Biogenic Area 2	0.0%	1.9%	0.1%		
Grays Canyon	0.0%	0.2%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>3%</b>	<b>37%</b>	<b>4%</b>	<b>0.0%</b>	<b>5.7%</b>

<b>Petrale Sole</b> Area Name - Oceana (Industry)	<b>Oceana</b>			<b>Industry</b>	
	<b>OR</b>	<b>WA</b>	<b>Total</b>	<b>OR</b>	<b>WA</b>
Olympic 1	1.8%	48.4%	13.0%		
Olympic 2 (Olympic 2)	0.6%	4.1%	1.3%	0.0%	0.1%
Biogenic Area 1 (Deepwater 1)	0.4%	0.0%	0.2%	0.0%	
Biogenic Area 2	0.1%	0.0%	0.0%		
Grays Canyon	0.0%	0.0%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>3%</b>	<b>53%</b>	<b>15%</b>	<b>0.0%</b>	<b>0.1%</b>

<b>Arrowtooth Flounder</b> Area Name - Oceana (Industry)	<b>Oceana</b>			<b>Industry</b>	
	<b>OR</b>	<b>WA</b>	<b>Total</b>	<b>OR</b>	<b>WA</b>
Olympic 1	1.3%	15.0%	10.4%		
Olympic 2 (Olympic 2)	0.0%	9.4%	6.3%	0.0%	1.3%
Biogenic Area 1 (Deepwater 1)	1.4%	0.1%	0.5%	0.0%	
Biogenic Area 2	0.3%	0.0%	0.1%		
Grays Canyon	0.0%	0.0%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>3%</b>	<b>25%</b>	<b>17%</b>	<b>0.0%</b>	<b>1.3%</b>

<b>Pacific Cod</b> Area Name - Oceana (Industry)	<b>Oceana</b>			<b>Industry</b>	
	<b>OR</b>	<b>WA</b>	<b>Total</b>	<b>OR</b>	<b>WA</b>
Olympic 1	0.1%	3.1%	2.3%		
Olympic 2 (Olympic 2)	1.8%	4.4%	3.7%	0.0%	0.2%
Biogenic Area 1 (Deepwater 1)	0.0%	0.0%	0.0%	0.0%	
Biogenic Area 2	0.0%	0.0%	0.0%		
Grays Canyon	0.0%	0.0%	0.0%		

Biogenic Area 3 (Willapa)	0.0%	0.0%	0.0%	0.0%	
<b>Total</b>	<b>2%</b>	<b>7%</b>	<b>6%</b>	<b>0.0%</b>	<b>0.2%</b>

### Spiny Dogfish

Area Name - Oceana (Industry)	Oceana			Industry	
	OR	WA	Total	OR	WA
Olympic 1	0.0%	9.8%	7.1%		
Olympic 2 (Olympic 2)	0.0%	3.8%	2.7%	0.0%	0.6%
Biogenic Area 1 (Deepwater 1)	0.0%	0.0%	0.0%	0.0%	
Biogenic Area 2	0.0%	0.0%	0.0%		
Grays Canyon	0.0%	0.0%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>0%</b>	<b>14%</b>	<b>10%</b>	<b>0.0%</b>	<b>0.6%</b>

### Rockfish

Area Name - Oceana (Industry)	Oceana			Industry	
	OR	WA	Total	OR	WA
Olympic 1	4.8%	23.5%	7.9%		
Olympic 2 (Olympic 2)	0.5%	5.0%	1.5%	0.0%	0.6%
Biogenic Area 1 (Deepwater 1)	1.8%	0.7%	0.9%	0.0%	
Biogenic Area 2	0.0%	0.9%	0.2%		
Grays Canyon	0.1%	0.0%	0.0%		
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%	
<b>Total</b>	<b>7%</b>	<b>30%</b>	<b>11%</b>	<b>0.0%</b>	<b>0.6%</b>

## Size Comparison of Areas off WA and Northern OR

(in hectares)

Area Name - Oceana (Industry)	Oceana	Industry	% Diff
Olympic 2 (Olympic 2)	76,005	43,516	-43%
Olympic 1	70,270	0	
Biogenic Area 1 (Deepwater 1)	75,105	168,384	224%
Biogenic Area 2	11,698	0	
Grays Canyon	20,626	0	
Biogenic Area 3 (Willapa)	9,124	12,041	132%
<b>Total</b>	<b>262,828</b>	<b>223,941</b>	<b>-15%</b>

## Percent Tows Within Areas off WA and Northern OR

Area Name - Oceana (Industry)	OR	Oceana		Total	Industry	
		WA	Total		OR	WA
Olympic 1	1.2%	13.1%	2.8%			
Olympic 2 (Olympic 2)	0.2%	5.2%	1.0%	0.0%	1.4%	
Biogenic Area 1 (Deepwater 1)	0.8%	0.4%	0.4%	0.0%		
Biogenic Area 2	0.1%	0.6%	0.1%			
Grays Canyon	0.1%	0.1%	0.0%			
Biogenic Area 3 (Willapa)	0.0%		0.0%	0.0%		
<b>Total</b>	<b>2%</b>	<b>19%</b>	<b>4%</b>	<b>0.3%</b>	<b>1.4%</b>	

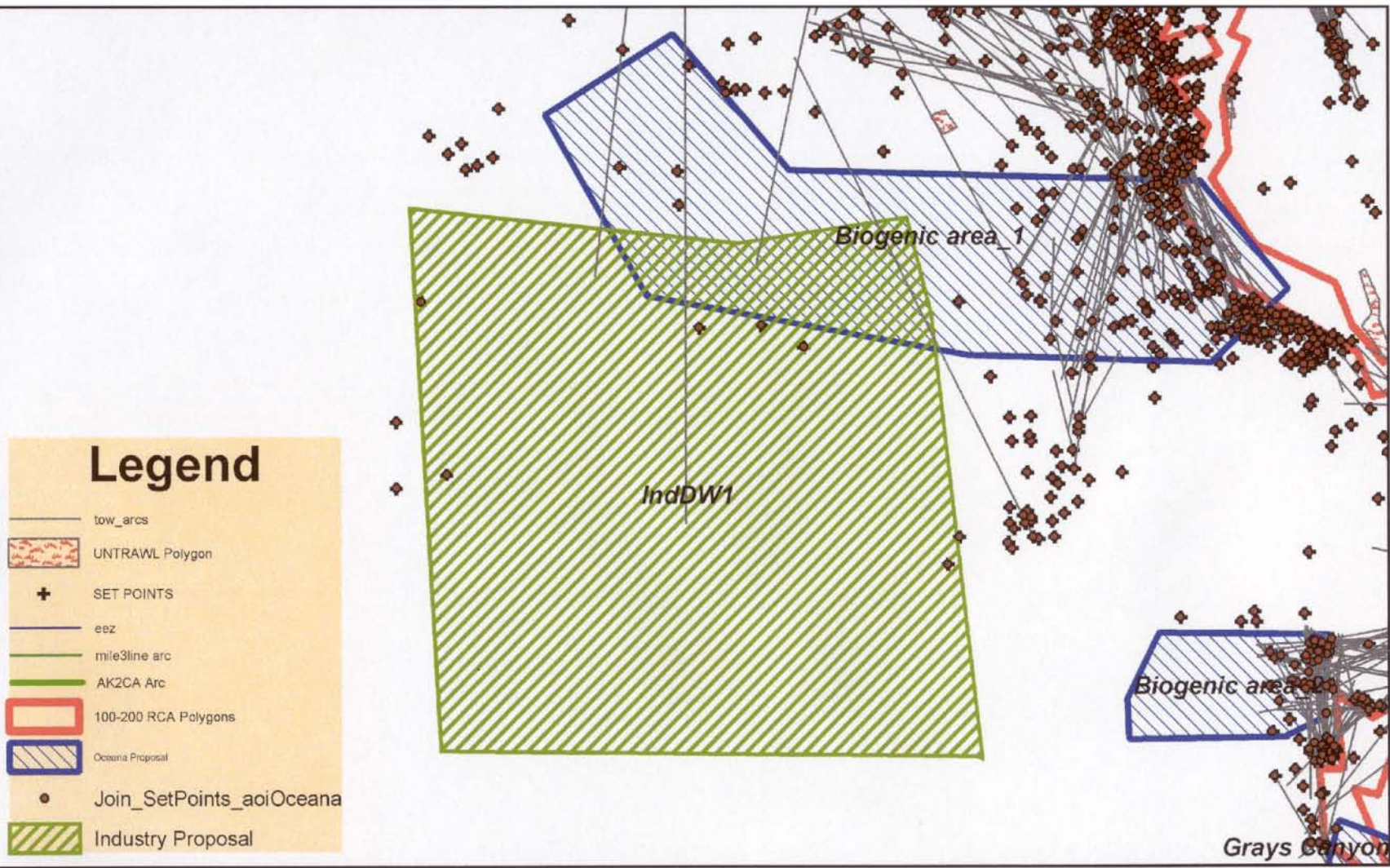
(Note: Blank cells represent no tows; 0.0% is < 0.1%)

## Number of Tows Within Areas off WA and Northern OR

Area Name - Oceana (Industry)	OR	Oceana		Total	Industry	
		WA	Total		OR	WA
Olympic 1	111	548	659			
Olympic 2 (Olympic 2)	21	217	238	2	60	
Biogenic Area 1 (Deepwater 1)	76	17	93	3		
Biogenic Area 2	6	24	30			
Grays Canyon	6	3	9			
Biogenic Area 3 (Willapa)	2		2	2		
<b>Total</b>	<b>222</b>	<b>809</b>	<b>1,031</b>	<b>7</b>	<b>60</b>	

(Note: Blank cells represent no tows; 0.0 is < 0.1)

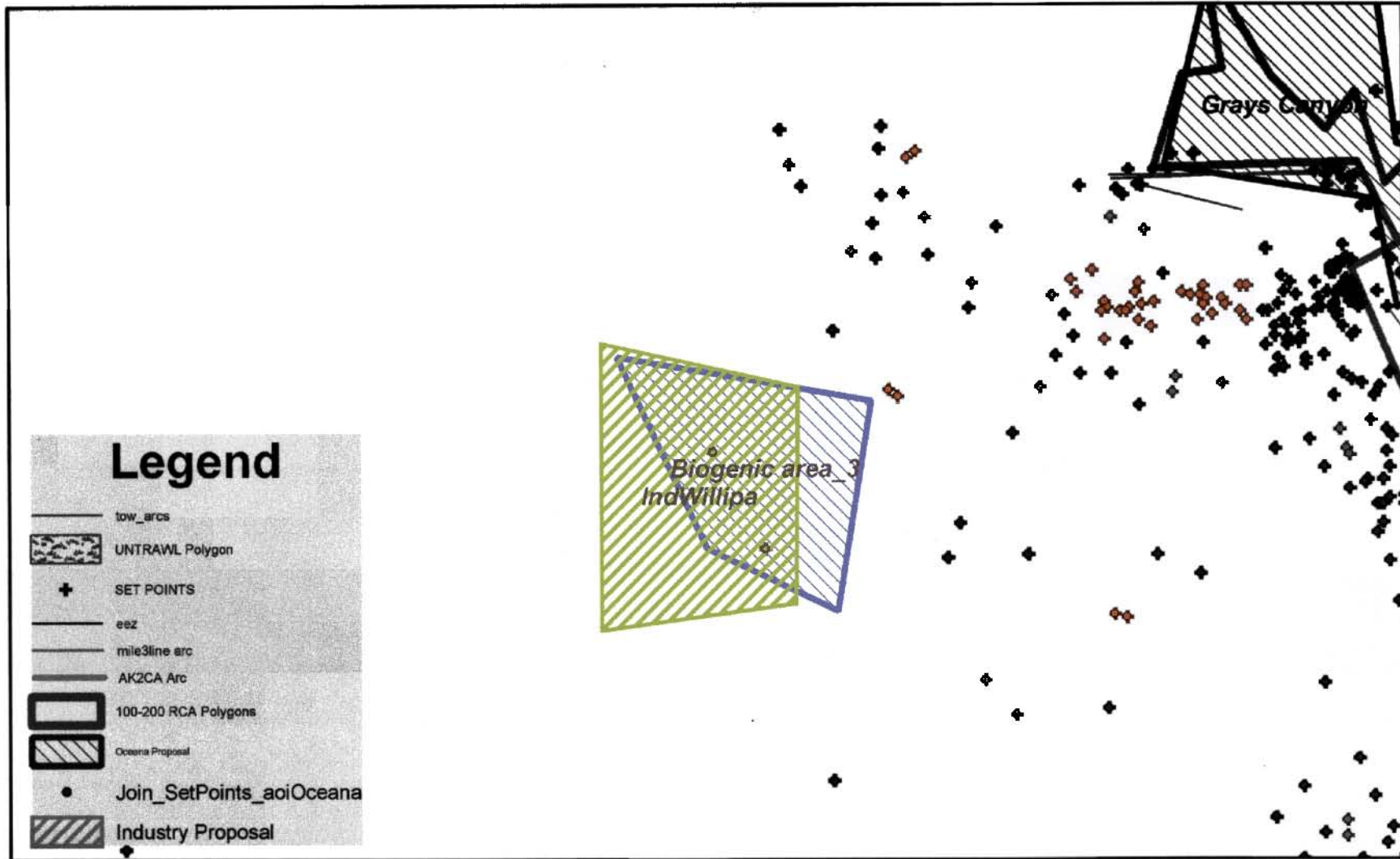
# Trawl Closures Biogenic Areas 1 & 2



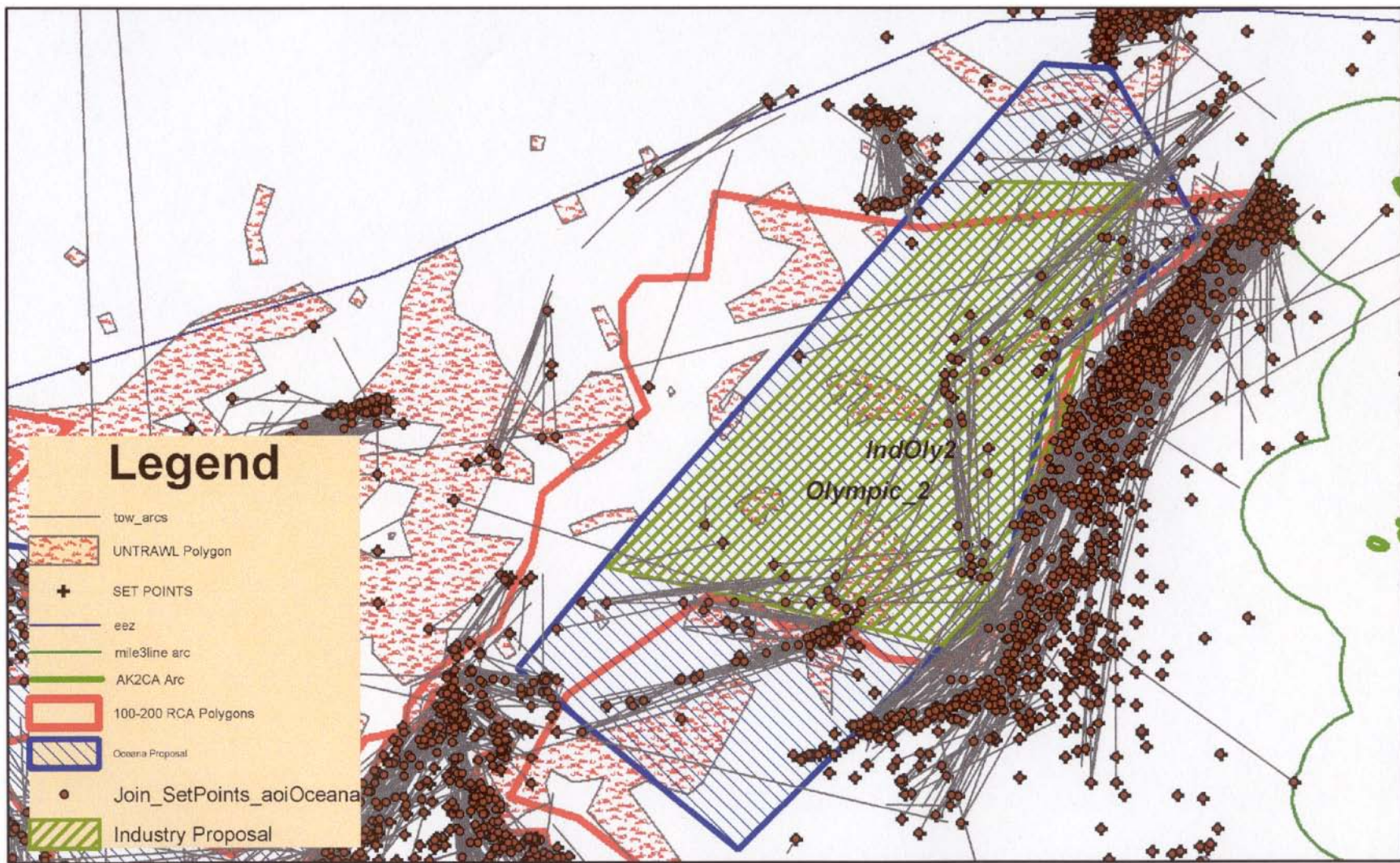
## Legend

- tow\_arcs
- UNTRAWL Polygon
- SET POINTS
- eez
- mile3line arc
- AK2CA Arc
- 100-200 RCA Polygons
- Oceania Proposal
- Join\_SetPoints\_aoiOceania
- Industry Proposal





# Trawl Closures Olympic Area 2



WDFW 04/12/05

Washington, Oregon and California Trawl Logbook Data from 2003