

# **Orange Roughy Fish By-Catch Report: 2008-09 to 2012-13**

## Summary Tables

Table 1: Summary of Total Observed Catch and Total Observed Catch of orange Roughy by fishery							
Fishery		2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
ORH3B (NWCR)	Total observed catch - All species	412.10	301.77	15.43		80.13	<b>809.42</b>
	Total commercial catch of orange roughy	661.2	679.12	43.73	60.7	87.2	<b>1531.94</b>
	Ratio: Total Observed/ Total commercial catch	0.62	0.44	0.35	0.00	0.92	<b>0.53</b>
ORH3B (ESCR)	Total observed catch - All species	5695.38	4484.39	1560.48	1262.13	334.14	<b>12953.40</b>
	Total commercial catch of orange roughy	6046.21	4737.97	2741.63	2361.40	2064.32	<b>17951.52</b>
	Ratio: Total Observed/ Total commercial catch	0.94	0.95	0.57	0.53	0.16	<b>0.72</b>
ORH7A (& Westpac Bank)	Total observed catch - All species	247.83	247.83	329.22	253.30	303.92	<b>1470.98</b>
	Total commercial catch of orange roughy	230.89	230.89	448.92	516.93	704.6	<b>2223.78</b>
	Ratio: Total Observed/ Total commercial catch	1.07	1.04	0.73	0.49	0.43	<b>0.66</b>

## ORH3B (North West Chatham Rise)

Table 2a: QMS Species (Observed Catch (tonnes)): ORH3B (NWCR)

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Orange roughy	Hoplostethus atlanticus	QMS	330.65	183.76	13.97		77.92	<b>606.30</b>	19.48	49.22
Hoki	Macruronus novaezealandiae	QMS	21.36	40.25	0.01		0.05	<b>61.67</b>	0.01	0.03
Smooth oreo	Pseudocyttus maculatus	QMS	11.86	5.43	0.08		0.59	<b>17.96</b>	0.15	0.37
Hake	Merluccius australis	QMS	2.39	2.38	0.00		0.01	<b>4.78</b>	0.00	0.00
Pale ghost shark	Hydrolagus bemisi	QMS	0.25	0.78	0.01		0.00	<b>1.04</b>	0.00	0.00
Ghost shark	Hydrolagus novaezealandiae	QMS	0.55	0.43	0.00		0.00	<b>0.98</b>	0.00	0.00
Ribaldo	Mora moro	QMS	0.41	0.16	0.00		0.00	<b>0.57</b>	0.00	0.00
Cardinal fish	Epigonus telescopus	QMS	0.09	0.12	0.04		0.03	<b>0.29</b>	0.01	0.02
Black oreo	Alloctytus niger	QMS	0.04	0.03	0.00		0.19	<b>0.27</b>	0.05	0.12
Ling	Genypterus blacodes	QMS	0.09	0.00	0.00		0.00	<b>0.09</b>	0.00	0.00
Warty oreo	Alloctytus verrucosus	QMS	0.00	0.08	0.00		0.00	<b>0.08</b>	0.00	0.00
Spiky oreo	Neocyttus rhomboidalis	QMS	0.06	0.01	0.00		0.00	<b>0.07</b>	0.00	0.00
Lookdown dory	Cyttus traversi	QMS	0.01	0.00	0.00		0.00	<b>0.01</b>	0.00	0.00
Sea perch	Helicolenus spp.	QMS	0.01	0.00	0.00		0.00	<b>0.01</b>	0.00	0.00
Flatfish	N/A	QMS	0.01	0.00	0.00		0.00	<b>0.01</b>	0.00	0.00
Alfonsino	Beryx splendens	QMS	0.00	0.00	0.00		0.00	<b>0.00</b>	0.00	0.00
Giant stargazer	Kathetostoma spp.	QMS	0.00	0.01	0.00		0.00	<b>0.01</b>	0.00	0.00

**Table 2b: QMS Species (% of Total Observed Catch): ORH3B (NWCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Orange roughy	Hoplostethus atlanticus	QMS	80.23%	60.89%	90.56%		97.25%	<b>74.91%</b>
Hoki	Macruronus novaezelandiae	QMS	5.18%	13.34%	0.05%		0.07%	<b>7.62%</b>
Smooth oreo	Pseudocyttus maculatus	QMS	2.88%	1.80%	0.49%		0.73%	<b>2.22%</b>
Hake	Merluccius australis	QMS	0.58%	0.79%	0.00%		0.01%	<b>0.59%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.06%	0.26%	0.04%		0.00%	<b>0.13%</b>
Ghost shark	Hydrolagus novaezealandiae	QMS	0.13%	0.14%	0.00%		0.00%	<b>0.12%</b>
Ribaldo	Mora moro	QMS	0.10%	0.05%	0.00%		0.00%	<b>0.07%</b>
Cardinal fish	Epigonus telescopus	QMS	0.02%	0.04%	0.28%		0.04%	<b>0.04%</b>
Black oreo	Alloctytus niger	QMS	0.01%	0.01%	0.01%		0.24%	<b>0.03%</b>
Ling	Genypterus blacodes	QMS	0.02%	0.00%	0.00%		0.00%	<b>0.01%</b>
Warty oreo	Alloctytus verrucosus	QMS	0.00%	0.03%	0.00%		0.00%	<b>0.01%</b>
Spiky oreo	Neocyttus rhomboidalis	QMS	0.01%	0.00%	0.00%		0.00%	<b>0.01%</b>
Lookdown dory	Cyttus traversi	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Sea perch	Helicolenus spp.	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Flatfish	N/A	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Alfonsino	Beryx splendens	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Giant stargazer	Kathetostoma spp.	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>

**Table 3a: Non-QMS Species (Observed Catch (tonnes)): ORH3B (NWCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Rattails	Macrouridae (Family)	N-QMS	6.12	28.11	0.01		0.01	<b>34.26</b>	8.57	21.64
Slickhead	Alepocephalidae (Family)	N-QMS	10.77	10.89	0.00		0.00	<b>21.67</b>	5.42	13.69
Morids	Moridae (Family)	N-QMS	1.58	8.97	0.02		0.00	<b>10.57</b>	2.64	6.68
Deepwater dogfish (Unspecified)	N/A	N-QMS	4.50	3.53	0.00		0.00	<b>8.04</b>	2.01	5.08
Sharks & Dogfish	Selachii (Order)	N-QMS	2.90	2.59	0.00		0.09	<b>5.58</b>	1.39	3.52
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	1.71	1.55	0.79		0.99	<b>5.05</b>	1.26	3.19
Johnson's cod	Halargyreus johnsonii	N-QMS	3.53	1.23	0.07		0.03	<b>4.86</b>	1.22	3.07
Long-nosed chimaera	Harriotta raleighana	N-QMS	2.02	2.76	0.00		0.00	<b>4.78</b>	1.20	3.02
Basketwork eel	Diastobranchus capensis	N-QMS	2.20	0.91	0.02		0.00	<b>3.13</b>	0.78	1.97
Four-rayed rattail	Coryphaenoides subserrulatus	N-QMS	2.73	0.00	0.00		0.00	<b>2.74</b>	0.68	1.73
Warty squid	Onykia spp.	N-QMS	1.19	0.83	0.00		0.00	<b>2.02</b>	0.51	1.28
Shovelnose dogfish	Deania calcea	N-QMS	1.17	0.21	0.00		0.00	<b>1.38</b>	0.35	0.87
Seal shark	Dalatias licha	N-QMS	0.23	0.99	0.01		0.00	<b>1.23</b>	0.31	0.78
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.31	0.52	0.00		0.02	<b>0.85</b>	0.21	0.53
Plunket's shark	Centroscymnus plunketi	N-QMS	0.21	0.17	0.13		0.15	<b>0.65</b>	0.16	0.41
Violet cod	Antimora rostrata	N-QMS	0.45	0.09	0.00		0.00	<b>0.54</b>	0.13	0.34
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.40	0.11	0.01		0.00	<b>0.51</b>	0.13	0.32
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.09	0.33	0.01		0.01	<b>0.44</b>	0.11	0.28
Deepsea skates	Notoraja spp.	N-QMS	0.00	0.38	0.00		0.00	<b>0.38</b>	0.10	0.24
Javelinfish	Lepidorhynchus denticulatus	N-QMS	0.28	0.07	0.00		0.00	<b>0.35</b>	0.09	0.22
Toadfish	Neophrynichthys spp.	N-QMS	0.25	0.09	0.00		0.00	<b>0.34</b>	0.08	0.21

Skate, Other	Rajidae (Family)	N-QMS	0.33	0.00	0.00		0.00	<b>0.34</b>	0.08	0.21
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.02	0.29	0.00		0.00	<b>0.31</b>	0.08	0.20
Chimaera spp.	Chimaera spp.	N-QMS	0.00	0.26	0.00		0.00	<b>0.26</b>	0.06	0.16
Conger eel	Conger spp.	N-QMS	0.13	0.05	0.00		0.00	<b>0.18</b>	0.04	0.11
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.01	0.15	0.00		0.00	<b>0.17</b>	0.04	0.10
Eels, Marine (Unspecified)	N/A	N-QMS	0.00	0.16	0.00		0.00	<b>0.16</b>	0.04	0.10
Spineback	Notacanthus sexspinis	N-QMS	0.01	0.06	0.00		0.00	<b>0.08</b>	0.02	0.05
Witch	Arnoglossus scapha	N-QMS	0.00	0.05	0.00		0.00	<b>0.05</b>	0.01	0.03
King crab	Lithodes murrayi, Neolithodes brodiei	N-QMS	0.02	0.03	0.00		0.00	<b>0.05</b>	0.01	0.03
Deepwater octopus	Graneledone spp.	N-QMS	0.05	0.00	0.00		0.00	<b>0.05</b>	0.01	0.03
Chimaera, purple	Chimaera sp.	N-QMS	0.01	0.03	0.00		0.00	<b>0.05</b>	0.01	0.03

**Table 3b: QMS Species (% of Total Observed Catch): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Rattails	Macrouridae (Family)	N-QMS	1.49%	9.32%	0.08%		0.01%	<b>4.23%</b>
Slickhead	Alepocephalidae (Family)	N-QMS	2.61%	3.61%	0.01%		0.00%	<b>2.68%</b>
Morids	Moridae (Family)	N-QMS	0.38%	2.97%	0.15%		0.00%	<b>1.31%</b>
Deepwater dogfish (Unspecified)	N/A	N-QMS	1.09%	1.17%	0.00%		0.00%	<b>0.99%</b>
Sharks & Dogfish	Selachii (Order)	N-QMS	0.70%	0.86%	0.00%		0.11%	<b>0.69%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.42%	0.51%	5.15%		1.24%	<b>0.62%</b>
Johnson's cod	Halargyreus johnsonii	N-QMS	0.86%	0.41%	0.43%		0.04%	<b>0.60%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.49%	0.91%	0.00%		0.00%	<b>0.59%</b>
Basketwork eel	Diastobranchus capensis	N-QMS	0.53%	0.30%	0.10%		0.00%	<b>0.39%</b>
Four-rayed rattail	Coryphaenoides subserrulatus	N-QMS	0.66%	0.00%	0.00%		0.00%	<b>0.34%</b>
Warty squid	Onykia spp.	N-QMS	0.29%	0.27%	0.01%		0.00%	<b>0.25%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.28%	0.07%	0.00%		0.00%	<b>0.17%</b>
Seal shark	Dalatias licha	N-QMS	0.06%	0.33%	0.05%		0.00%	<b>0.15%</b>
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.08%	0.17%	0.01%		0.02%	<b>0.10%</b>
Plunket's shark	Centroscymnus plunketi	N-QMS	0.05%	0.06%	0.85%		0.19%	<b>0.08%</b>
Violet cod	Antimora rostrata	N-QMS	0.11%	0.03%	0.00%		0.00%	<b>0.07%</b>
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.10%	0.04%	0.05%		0.00%	<b>0.06%</b>
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.02%	0.11%	0.06%		0.02%	<b>0.05%</b>
Deepsea skates	Notoraja spp.	N-QMS	0.00%	0.13%	0.01%		0.00%	<b>0.05%</b>
Javelinfish	Lepidorhynchus denticulatus	N-QMS	0.07%	0.02%	0.00%		0.00%	<b>0.04%</b>
Toadfish	Neophrynichthys spp.	N-QMS	0.06%	0.03%	0.00%		0.00%	<b>0.04%</b>
Skate, Other	Rajidae (Family)	N-QMS	0.08%	0.00%	0.00%		0.00%	<b>0.04%</b>
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.01%	0.10%	0.00%		0.00%	<b>0.04%</b>
Chimaera spp.	Chimaera spp.	N-QMS	0.00%	0.09%	0.01%		0.00%	<b>0.03%</b>
Conger eel	Conger spp.	N-QMS	0.03%	0.02%	0.00%		0.00%	<b>0.02%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00%	0.05%	0.00%		0.00%	<b>0.02%</b>

Eels, Marine (Unspecified)	N/A	N-QMS	0.00%	0.05%	0.00%		0.00%	<b>0.02%</b>
Spineback	Notacanthus sexspinis	N-QMS	0.00%	0.02%	0.00%		0.00%	<b>0.01%</b>
Witch	Arnoglossus scapha	N-QMS	0.00%	0.02%	0.00%		0.00%	<b>0.01%</b>
King crab	Lithodes murrayi, Neolithodes brodiei	N-QMS	0.01%	0.01%	0.00%		0.00%	<b>0.01%</b>
Deepwater octopus	Graneledone spp.	N-QMS	0.01%	0.00%	0.00%		0.00%	<b>0.01%</b>
Chimaera, purple	Chimaera sp.	N-QMS	0.00%	0.01%	0.00%		0.00%	<b>0.01%</b>



**Table 4a: Elasmobranch Species (Observed Catch (tonnes)): ORH3B (NWCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Deepwater dogfish (Unspecified)	N/A	N-QMS	4.50	3.53	0.00		0.00	<b>8.04</b>	2.01	5.08
Sharks & Dogfish	Selachii (Order)	N-QMS	2.90	2.59	0.00		0.09	<b>5.58</b>	1.39	3.52
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	1.71	1.55	0.79		0.99	<b>5.05</b>	1.26	3.19
Long-nosed chimaera	Harriotta raleighana	N-QMS	2.02	2.76	0.00		0.00	<b>4.78</b>	1.20	3.02
Shovelnose dogfish	Deania calcea	N-QMS	1.17	0.21	0.00		0.00	<b>1.38</b>	0.35	0.87
Seal shark	Dalatias licha	N-QMS	0.23	0.99	0.01		0.00	<b>1.23</b>	0.31	0.78
Pale ghost shark	Hydrolagus bemisi	QMS	0.25	0.78	0.01		0.00	<b>1.04</b>	0.26	0.66
Ghost shark	Hydrolagus novaezealandiae	QMS	0.55	0.43	0.00		0.00	<b>0.98</b>	0.24	0.62
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.31	0.52	0.00		0.02	<b>0.85</b>	0.21	0.53
Plunket's shark	Centroscymnus plunketi	N-QMS	0.21	0.17	0.13		0.15	<b>0.65</b>	0.16	0.41
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.40	0.11	0.01		0.00	<b>0.51</b>	0.13	0.32
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.09	0.33	0.01		0.01	<b>0.44</b>	0.11	0.28
Deepsea skates	Notoraja spp.	N-QMS	0.00	0.38	0.00		0.00	<b>0.38</b>	0.10	0.24
Skate, Other	Rajidae (Family)	N-QMS	0.33	0.00	0.00		0.00	<b>0.34</b>	0.08	0.21
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.02	0.29	0.00		0.00	<b>0.31</b>	0.08	0.20
Chimaera spp.	Chimaera spp.	N-QMS	0.00	0.26	0.00		0.00	<b>0.26</b>	0.06	0.16
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.01	0.15	0.00		0.00	<b>0.17</b>	0.04	0.10
Chimaera, purple	Chimaera sp.	N-QMS	0.01	0.03	0.00		0.00	<b>0.05</b>	0.01	0.03
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00	0.04	0.00		0.00	<b>0.04</b>	0.01	0.02
Rays	various (see comment)	N-QMS	0.00	0.04	0.00		0.00	<b>0.04</b>	0.01	0.02
Purple chimaera	Chimaera lignaria	N-QMS	0.00	0.03	0.00		0.00	<b>0.03</b>	0.01	0.02
Smooth skate	Dipturus innominatus	QMS	0.00	0.02	0.00		0.00	<b>0.02</b>	0.01	0.01
Cat shark	Apristurus spp.	N-QMS	0.01	0.01	0.00		0.00	<b>0.02</b>	0.00	0.01
Frill shark	Chlamydoselachus	N-QMS	0.00	0.01	0.00		0.00	<b>0.01</b>	0.00	0.01

	anguineus									
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.00	0.01	0.00		0.00	<b>0.01</b>	0.00	0.01
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00	0.01	0.00		0.00	<b>0.01</b>	0.00	0.00
Electric ray	Torpedo fairchildi	N-QMS	0.00	0.00	0.00		0.00	<b>0.00</b>	0.00	0.00
Rough skate	Zearaja nasuta	QMS	0.00	0.00	0.00		0.00	<b>0.00</b>	0.00	0.00
Spiny dogfish	Squalus acanthias	QMS	0.00	0.00	0.00		0.00	<b>0.00</b>	0.00	0.00

**Table 4b: Elasmobranch Species (Observed Catch (tonnes)): ORH3B (NWCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Deepwater dogfish (Unspecified)	N/A	N-QMS	1.09%	1.17%	0.00%		0.00%	<b>0.99%</b>
Sharks & Dogfish	Selachii (Order)	N-QMS	0.70%	0.86%	0.00%		0.11%	<b>0.69%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.42%	0.51%	5.15%		1.24%	<b>0.62%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.49%	0.91%	0.00%		0.00%	<b>0.59%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.28%	0.07%	0.00%		0.00%	<b>0.17%</b>
Seal shark	Dalatias licha	N-QMS	0.06%	0.33%	0.05%		0.00%	<b>0.15%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.06%	0.26%	0.04%		0.00%	<b>0.13%</b>
Ghost shark	Hydrolagus novaezealandiae	QMS	0.13%	0.14%	0.00%		0.00%	<b>0.12%</b>
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.08%	0.17%	0.01%		0.02%	<b>0.10%</b>
Plunket's shark	Centroscymnus plunketi	N-QMS	0.05%	0.06%	0.85%		0.19%	<b>0.08%</b>
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.10%	0.04%	0.05%		0.00%	<b>0.06%</b>
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.02%	0.11%	0.06%		0.02%	<b>0.05%</b>
Deepsea skates	Notoraja spp.	N-QMS	0.00%	0.13%	0.01%		0.00%	<b>0.05%</b>
Skate, Other	Rajidae (Family)	N-QMS	0.08%	0.00%	0.00%		0.00%	<b>0.04%</b>
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.01%	0.10%	0.00%		0.00%	<b>0.04%</b>
Chimaera spp.	Chimaera spp.	N-QMS	0.00%	0.09%	0.01%		0.00%	<b>0.03%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00%	0.05%	0.00%		0.00%	<b>0.02%</b>
Chimaera, purple	Chimaera sp.	N-QMS	0.00%	0.01%	0.00%		0.00%	<b>0.01%</b>
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00%	0.01%	0.00%		0.00%	<b>0.00%</b>
Rays	various (see comment)	N-QMS	0.00%	0.01%	0.00%		0.00%	<b>0.00%</b>
Purple chimaera	Chimaera lignaria	N-QMS	0.00%	0.01%	0.00%		0.00%	<b>0.00%</b>
Smooth skate	Dipturus innominatus	QMS	0.00%	0.01%	0.00%		0.00%	<b>0.00%</b>
Cat shark	Apristurus spp.	N-QMS	0.00%	0.00%	0.01%		0.00%	<b>0.00%</b>
Frill shark	Chlamydoselachus anguineus	N-QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Electric ray	Torpedo fairchildi	N-QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Rough skate	Zearaja nasuta	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>
Spiny dogfish	Squalus acanthias	QMS	0.00%	0.00%	0.00%		0.00%	<b>0.00%</b>



## ORH3B (East and South Chatham Rise)

Table 5a: QMS Species (Observed Catch (tonnes)): ORH3B (ESCR)										
Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Orange roughy	<i>Hoplostethus atlanticus</i>	QMS	3,939.57	3,072.23	1,459.19	1,118.75	315.28	<b>9,905.02</b>	1981.00	3590.30
Smooth oreo	<i>Pseudocyttus maculatus</i>	QMS	956.24	524.68	55.16	57.22	6.24	<b>1,599.54</b>	319.91	579.79
Black oreo	<i>Alloctytus niger</i>	QMS	180.62	190.93	8.21	13.52	1.22	<b>394.49</b>	78.90	142.99
Hoki	<i>Macruronus novaezealandiae</i>	QMS	56.79	54.93	3.39	4.77	1.09	<b>120.97</b>	24.19	43.85
Ribaldo	<i>Mora moro</i>	QMS	6.31	6.26	2.30	2.24	1.35	<b>18.45</b>	3.69	6.69
Cardinal fish	<i>Epigonus telescopus</i>	QMS	12.02	2.47	1.33	0.45	0.38	<b>16.65</b>	3.33	6.03
Spiky oreo	<i>Neocyttus rhomboidalis</i>	QMS	7.20	2.17	0.45	1.24	0.66	<b>11.71</b>	2.34	4.25
Pale ghost shark	<i>Hydrolagus bemisi</i>	QMS	1.87	4.53	0.09	0.22	0.00	<b>6.71</b>	1.34	2.43
Hake	<i>Merluccius australis</i>	QMS	1.51	1.19	0.26	0.35	0.10	<b>3.41</b>	0.68	1.23
Warty oreo	<i>Alloctytus verrucosus</i>	QMS	0.58	0.88	0.00	0.01	0.00	<b>1.47</b>	0.29	0.53
Alfonsino	<i>Beryx splendens</i>	QMS	0.56	0.16	0.00	0.01	0.00	<b>0.74</b>	0.15	0.27
Ling	<i>Genypterus blacodes</i>	QMS	0.08	0.04	0.02	0.22	0.00	<b>0.35</b>	0.07	0.13
Sea perch	<i>Helicolenus</i> spp.	QMS	0.03	0.23	0.01	0.01	0.00	<b>0.28</b>	0.06	0.10
Smooth skate	<i>Dipturus innominatus</i>	QMS	0.07	0.12	0.01	0.01	0.00	<b>0.21</b>	0.04	0.08
Alfonsino & Long-finned beryx	<i>Beryx splendens</i> , <i>B. decadactylus</i>	QMS	0.01	0.00	0.01	0.16	0.00	<b>0.18</b>	0.04	0.06
Ghost shark	<i>Hydrolagus novaezealandiae</i>	QMS	0.07	0.05	0.00	0.01	0.00	<b>0.13</b>	0.03	0.05
Giant stargazer	<i>Kathetostoma</i> spp.	QMS	0.00	0.01	0.01	0.00	0.00	<b>0.02</b>	0.00	0.01
Lookdown dory	<i>Cyttus traversi</i>	QMS	0.00	0.01	0.00	0.00	0.00	<b>0.01</b>	0.00	0.01
Flatfish	N/A	QMS	0.00	0.01	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00

**Table 5b: QMS Species (% of Total Observed Catch): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Orange roughy	Hoplostethus atlanticus	QMS	69.17%	68.51%	93.51%	88.64%	94.36%	<b>76.47%</b>
Smooth oreo	Pseudocyttus maculatus	QMS	16.79%	11.70%	3.53%	4.53%	1.87%	<b>12.35%</b>
Black oreo	Allocyttus niger	QMS	3.17%	4.26%	0.53%	1.07%	0.36%	<b>3.05%</b>
Hoki	Macruronus novaezelandiae	QMS	1.00%	1.23%	0.22%	0.38%	0.33%	<b>0.93%</b>
Ribaldo	Mora moro	QMS	0.11%	0.14%	0.15%	0.18%	0.40%	<b>0.14%</b>
Cardinal fish	Epigonus telescopus	QMS	0.21%	0.06%	0.09%	0.04%	0.11%	<b>0.13%</b>
Spiky oreo	Neocyttus rhomboidalis	QMS	0.13%	0.05%	0.03%	0.10%	0.20%	<b>0.09%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.03%	0.10%	0.01%	0.02%	0.00%	<b>0.05%</b>
Hake	Merluccius australis	QMS	0.03%	0.03%	0.02%	0.03%	0.03%	<b>0.03%</b>
Warty oreo	Allocyttus verrucosus	QMS	0.01%	0.02%	0.00%	0.00%	0.00%	<b>0.01%</b>
Alfonsino	Beryx splendens	QMS	0.01%	0.00%	0.00%	0.00%	0.00%	<b>0.01%</b>
Ling	Genypterus blacodes	QMS	0.00%	0.00%	0.00%	0.02%	0.00%	<b>0.00%</b>
Sea perch	Helicolenus spp.	QMS	0.00%	0.01%	0.00%	0.00%	0.00%	<b>0.00%</b>
Smooth skate	Dipturus innominatus	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Alfonsino & Long-finned beryx	Beryx splendens, B. decadactylus	QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Ghost shark	Hydrolagus novaezealandiae	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Giant stargazer	Kathetostoma spp.	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Lookdown dory	Cyttus traversi	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Flatfish	N/A	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

**Table 6a: Non-QMS Species (Observed Catch (tonnes)): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Rattails	Macrouridae (Family)	N-QMS	38.86	63.07	0.55	2.72	0.07	<b>105.27</b>	21.05	38.16
Morids	Moridae (Family)	N-QMS	27.18	69.03	0.91	1.38	0.03	<b>98.53</b>	19.71	35.71
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	46.86	29.64	3.24	7.31	0.27	<b>87.31</b>	17.46	31.65
Slickhead	Alepocephalidae (Family)	N-QMS	24.38	55.02	0.18	1.88	0.05	<b>81.51</b>	16.30	29.55
Shovelnose dogfish	Deania calcea	N-QMS	28.12	41.86	1.32	2.36	0.19	<b>73.85</b>	14.77	26.77
Deepwater dogfish (Unspecified)	N/A	N-QMS	47.88	20.33	0.00	0.42	0.00	<b>68.63</b>	13.73	24.88
Johnson's cod	Halargyreus johnsonii	N-QMS	21.17	33.94	3.79	2.72	0.08	<b>61.70</b>	12.34	22.36
Sharks & Dogfish	Selachii (Order)	N-QMS	0.47	38.99	9.17	1.69	0.16	<b>50.49</b>	10.10	18.30
Warty squid	Onykia spp.	N-QMS	19.50	7.08	0.50	0.66	0.02	<b>27.75</b>	5.55	10.06
Seal shark	Dalatias licha	N-QMS	19.91	2.06	0.15	3.36	0.00	<b>25.47</b>	5.09	9.23
Long-nosed chimaera	Harriotta raleighana	N-QMS	9.52	14.61	0.04	0.68	0.00	<b>24.85</b>	4.97	9.01
Oreo	Oreosomatidae (Family)	N-QMS	4.09	19.28	0.00	0.00	0.00	<b>23.37</b>	4.67	8.47
Basketwork eel	Diastobranchus capensis	N-QMS	10.05	11.83	0.38	0.85	0.04	<b>23.15</b>	4.63	8.39
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	12.44	3.75	0.27	0.10	0.03	<b>16.60</b>	3.32	6.02
Javelinfish	Lepidorhynchus denticulatus	N-QMS	3.63	3.78	0.19	5.79	0.04	<b>13.41</b>	2.68	4.86
Violet cod	Antimora rostrata	N-QMS	9.26	0.93	0.00	0.00	0.00	<b>10.19</b>	2.04	3.69
Plunket's shark	Centroscymnus plunketi	N-QMS	5.28	0.83	0.05	0.13	0.01	<b>6.30</b>	1.26	2.28
Leafscale gulper shark	Centrophorus squamosus	N-QMS	1.35	1.21	0.19	0.66	0.00	<b>3.41</b>	0.68	1.23
Pacific sleeper shark	Somniosus pacificus	N-QMS	1.30	2.10	0.00	0.00	0.00	<b>3.40</b>	0.68	1.23
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.39	2.36	0.01	0.00	0.00	<b>2.76</b>	0.55	1.00
Toadfish	Neophrynichthys spp.	N-QMS	0.37	2.20	0.00	0.02	0.00	<b>2.59</b>	0.52	0.94

Brodie's king crab	Neolithodes brodiei	N-QMS	1.14	1.04	0.00	0.00	0.00	<b>2.18</b>	0.44	0.79
Common roughy	Paratrachichthys trailli	N-QMS	0.00	2.00	0.00	0.00	0.00	<b>2.00</b>	0.40	0.73
Cat shark	Apristurus spp.	N-QMS	0.21	1.54	0.00	0.00	0.00	<b>1.75</b>	0.35	0.64
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00	0.00	1.73	0.00	0.00	<b>1.73</b>	0.35	0.63
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.62	0.56	0.13	0.40	0.00	<b>1.71</b>	0.34	0.62
Witch	Arnoglossus scapha	N-QMS	0.23	1.00	0.00	0.00	0.00	<b>1.25</b>	0.25	0.45
King crab	Lithodes murrayi, Neolithodes brodiei	N-QMS	0.03	1.01	0.00	0.00	0.00	<b>1.04</b>	0.21	0.38
Smooth deepsea anemones	Actinostolidae (Family)	N-QMS	0.35	0.43	0.00	0.03	0.00	<b>0.81</b>	0.16	0.30
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.10	0.71	0.00	0.01	0.00	<b>0.81</b>	0.16	0.30
Chimaera spp.	Chimaera spp.	N-QMS	0.21	0.32	0.19	0.00	0.00	<b>0.71</b>	0.14	0.26
White rattail	Trachyrincus longirostris	N-QMS	0.67	0.01	0.00	0.00	0.00	<b>0.68</b>	0.14	0.25
Blobfish	Psychrolutes sp.	N-QMS	0.44	0.23	0.00	0.00	0.00	<b>0.67</b>	0.13	0.24
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.03	0.58	0.00	0.00	0.00	<b>0.61</b>	0.12	0.22
Eels, Marine (Unspecified)	N/A	N-QMS	0.01	0.58	0.00	0.00	0.00	<b>0.59</b>	0.12	0.21
Finless flounder	Neoachirosetta milfordi	N-QMS	0.00	0.58	0.00	0.00	0.00	<b>0.58</b>	0.12	0.21
Warty squid	Onykia ingens	N-QMS	0.02	0.24	0.30	0.00	0.00	<b>0.56</b>	0.11	0.20
Cardinal fish, bigeye	Epigonus lenimen	N-QMS	0.29	0.17	0.00	0.01	0.00	<b>0.46</b>	0.09	0.17
Cardinal fish, robust	Epigonus robustus	N-QMS	0.01	0.40	0.00	0.01	0.00	<b>0.42</b>	0.08	0.15
Pseudostichopus mollis	Pseudostichopus mollis	N-QMS	0.16	0.23	0.00	0.00	0.00	<b>0.39</b>	0.08	0.14
Scaleless black dragonfishes	Melanostomiidae (Family)	N-QMS	0.00	0.35	0.00	0.00	0.00	<b>0.35</b>	0.07	0.13
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.08	0.27	0.01	0.01	0.00	<b>0.35</b>	0.07	0.13
Todarodes filippovae	Todarodes filippovae	N-QMS	0.27	0.05	0.01	0.00	0.00	<b>0.33</b>	0.07	0.12
Cod (Unspecified)	0	N-QMS	0.00	0.29	0.00	0.00	0.00	<b>0.29</b>	0.06	0.10
Rudderfish	Centrolophus niger	N-QMS	0.09	0.19	0.00	0.00	0.00	<b>0.28</b>	0.06	0.10
Chimaera, purple	Chimaera sp.	N-QMS	0.10	0.15	0.00	0.00	0.00	<b>0.26</b>	0.05	0.09
Etmopterus spp.	Etmopterus spp.	N-QMS	0.25	0.00	0.00	0.00	0.00	<b>0.25</b>	0.05	0.09
Deepsea skates	Notoraja spp.	N-QMS	0.16	0.09	0.00	0.00	0.00	<b>0.24</b>	0.05	0.09
Pholidoteuthis boschmai	Pholidoteuthis boschmai	N-QMS	0.00	0.24	0.00	0.00	0.00	<b>0.24</b>	0.05	0.09



Conger eel	Conger spp.	N-QMS	0.05	0.13	0.00	0.01	0.00	<b>0.19</b>	0.04	0.07
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.15	0.01	0.00	0.03	0.00	<b>0.19</b>	0.04	0.07
Small-headed cod	Lepidion microcephalus	N-QMS	0.00	0.05	0.05	0.03	0.05	<b>0.18</b>	0.04	0.07
Red scorpion fish	Scorpaena cardinalis, S. papillosus	N-QMS	0.00	0.16	0.00	0.00	0.00	<b>0.16</b>	0.03	0.06
Deepwater octopus	Graneledone spp.	N-QMS	0.05	0.11	0.00	0.00	0.00	<b>0.16</b>	0.03	0.06
Lanternfish	Myctophidae (Family)	N-QMS	0.00	0.15	0.00	0.00	0.00	<b>0.15</b>	0.03	0.05
Giant lepidion	Lepidion schmidti, L. inosimae	N-QMS	0.00	0.12	0.00	0.00	0.01	<b>0.13</b>	0.03	0.05
Rough shovelnose dogfish	Deania histricosa	N-QMS	0.00	0.13	0.00	0.00	0.00	<b>0.13</b>	0.03	0.05
Sunfish	Mola mola	N-QMS	0.11	0.02	0.00	0.00	0.00	<b>0.13</b>	0.03	0.05
White warehou	Seriotelella caerulea	N-QMS	0.00	0.13	0.00	0.00	0.00	<b>0.13</b>	0.03	0.05
Deep-sea spider crab	Vitjazmaia latidactyla	N-QMS	0.09	0.00	0.00	0.02	0.00	<b>0.12</b>	0.02	0.04
Spineback	Notacanthus sexspinis	N-QMS	0.03	0.06	0.02	0.01	0.00	<b>0.12</b>	0.02	0.04
Hydrolagus spp.	Hydrolagus spp.	N-QMS	0.08	0.03	0.00	0.00	0.00	<b>0.11</b>	0.02	0.04
Deepwater eel (Unspecified)	N/A	N-QMS	0.11	0.00	0.00	0.00	0.00	<b>0.11</b>	0.02	0.04

**Table 6b: QMS Species (% of Total Observed Catch): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Rattails	Macrouridae (Family)	N-QMS	0.68%	1.41%	0.04%	0.22%	0.02%	<b>0.81%</b>
Morids	Moridae (Family)	N-QMS	0.48%	1.54%	0.06%	0.11%	0.01%	<b>0.76%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.82%	0.66%	0.21%	0.58%	0.08%	<b>0.67%</b>
Slickhead	Alepocephalidae (Family)	N-QMS	0.43%	1.23%	0.01%	0.15%	0.02%	<b>0.63%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.49%	0.93%	0.08%	0.19%	0.06%	<b>0.57%</b>
Deepwater dogfish (Unspecified)	N/A	N-QMS	0.84%	0.45%	0.00%	0.03%	0.00%	<b>0.53%</b>
Johnson's cod	Halargyreus johnsonii	N-QMS	0.37%	0.76%	0.24%	0.22%	0.03%	<b>0.48%</b>
Sharks & Dogfish	Selachii (Order)	N-QMS	0.01%	0.87%	0.59%	0.13%	0.05%	<b>0.39%</b>
Warty squid	Onykia spp.	N-QMS	0.34%	0.16%	0.03%	0.05%	0.01%	<b>0.21%</b>
Seal shark	Dalatias licha	N-QMS	0.35%	0.05%	0.01%	0.27%	0.00%	<b>0.20%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.17%	0.33%	0.00%	0.05%	0.00%	<b>0.19%</b>
Oreo	Oreosomatidae (Family)	N-QMS	0.07%	0.43%	0.00%	0.00%	0.00%	<b>0.18%</b>
Basketwork eel	Diastobranchus capensis	N-QMS	0.18%	0.26%	0.02%	0.07%	0.01%	<b>0.18%</b>
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.22%	0.08%	0.02%	0.01%	0.01%	<b>0.13%</b>
Javelinfish	Lepidorhynchus denticulatus	N-QMS	0.06%	0.08%	0.01%	0.46%	0.01%	<b>0.10%</b>
Violet cod	Antimora rostrata	N-QMS	0.16%	0.02%	0.00%	0.00%	0.00%	<b>0.08%</b>
Plunket's shark	Centroscymnus plunketi	N-QMS	0.09%	0.02%	0.00%	0.01%	0.00%	<b>0.05%</b>
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.02%	0.03%	0.01%	0.05%	0.00%	<b>0.03%</b>
Pacific sleeper shark	Somniosus pacificus	N-QMS	0.02%	0.05%	0.00%	0.00%	0.00%	<b>0.03%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.01%	0.05%	0.00%	0.00%	0.00%	<b>0.02%</b>
Toadfish	Neophrynichthys spp.	N-QMS	0.01%	0.05%	0.00%	0.00%	0.00%	<b>0.02%</b>
Brodie's king crab	Neolithodes brodiei	N-QMS	0.02%	0.02%	0.00%	0.00%	0.00%	<b>0.02%</b>
Common roughy	Paratrachichthys trailli	N-QMS	0.00%	0.04%	0.00%	0.00%	0.00%	<b>0.02%</b>
Cat shark	Apristurus spp.	N-QMS	0.00%	0.03%	0.00%	0.00%	0.00%	<b>0.01%</b>
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00%	0.00%	0.11%	0.00%	0.00%	<b>0.01%</b>
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.01%	0.01%	0.01%	0.03%	0.00%	<b>0.01%</b>

Witch	Arnoglossus scapha	N-QMS	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%
King crab	Lithodes murrayi, Neolithodes brodiei	N-QMS	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%
Smooth deepsea anemones	Actinostolidae (Family)	N-QMS	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00%	0.02%	0.00%	0.00%	0.00%	0.01%
Chimaera spp.	Chimaera spp.	N-QMS	0.00%	0.01%	0.01%	0.00%	0.00%	0.01%
White rattail	Trachyrincus longirostris	N-QMS	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%
Blobfish	Psychrolutes sp.	N-QMS	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Eels, Marine (Unspecified)	N/A	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Finless flounder	Neochirosetta milfordi	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Warty squid	Onykia ingens	N-QMS	0.00%	0.01%	0.02%	0.00%	0.00%	0.00%
Cardinal fish, bigeye	Epigonus lenimen	N-QMS	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Cardinal fish, robust	Epigonus robustus	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Pseudostichopus mollis	Pseudostichopus mollis	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Scaleless black dragonfishes	Melanostomiidae (Family)	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Todarodes filippovae	Todarodes filippovae	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cod (Unspecified)	0	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rudderfish	Centrolophus niger	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Chimaera, purple	Chimaera sp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Etmopterus spp.	Etmopterus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deepsea skates	Notoraja spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pholidoteuthis boschmai	Pholidoteuthis boschmai	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Conger eel	Conger spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Small-headed cod	Lepidion microcephalus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Red scorpion fish	Scorpaena cardinalis, S. papillosus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deepwater octopus	Graneledone spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Lanternfish	Myctophidae (Family)	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Giant lepidion	Lepidion schmidti, L. inosimae	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rough shovelnose dogfish	Deania histricosa	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Sunfish	Mola mola	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
White warehou	Seriolella caerulea	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Deep-sea spider crab	Vitjazmaia latidactyla	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Spineback	Notacanthus sexspinis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Hydrolagus spp.	Hydrolagus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Deepwater eel (Unspecified)	N/A	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

**Table 7a: Elasmobranch Species (Observed Catch (tonnes)): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Deepwater dogfish (Unspecified)	N/A	N-QMS	47.88	29.64	1.32	7.31	0.27	<b>87.31</b>	17.46	31.65
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	46.86	41.86	0.00	2.36	0.19	<b>73.85</b>	14.77	26.77
Shovelnose dogfish	Deania calcea	N-QMS	28.12	20.33	9.17	0.42	0.00	<b>68.63</b>	13.73	24.88
Seal shark	Dalatias licha	N-QMS	19.91	38.99	0.15	1.69	0.16	<b>50.49</b>	10.10	18.30
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	12.44	2.06	0.04	3.36	0.00	<b>25.47</b>	5.09	9.23
Long-nosed chimaera	Harriotta raleighana	N-QMS	9.52	14.61	0.27	0.68	0.00	<b>24.85</b>	4.97	9.01
Plunket's shark	Centroscymnus plunketi	N-QMS	5.28	3.75	0.09	0.10	0.03	<b>16.60</b>	3.32	6.02
Pale ghost shark	Hydrolagus bemisi	QMS	1.87	4.53	0.05	0.22	0.00	<b>6.71</b>	1.34	2.43
Leafscale gulper shark	Centrophorus squamosus	N-QMS	1.35	0.83	0.19	0.13	0.01	<b>6.30</b>	1.26	2.28
Pacific sleeper shark	Somniosus pacificus	N-QMS	1.30	1.21	0.00	0.66	0.00	<b>3.41</b>	0.68	1.23
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.62	2.10	0.01	0.00	0.00	<b>3.40</b>	0.68	1.23
Sharks & Dogfish nei	Selachii (Order)	N-QMS	0.47	2.36	0.00	0.00	0.00	<b>2.76</b>	0.55	1.00
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.39	1.54	1.73	0.00	0.00	<b>1.75</b>	0.35	0.64
Etmopterus spp.	Etmopterus spp.	N-QMS	0.25	0.00	0.13	0.00	0.00	<b>1.73</b>	0.35	0.63
Cat shark	Apristurus spp.	N-QMS	0.21	0.56	0.00	0.40	0.00	<b>1.71</b>	0.34	0.62
Chimaera spp.	Chimaera spp.	N-QMS	0.21	0.71	0.19	0.01	0.00	<b>0.81</b>	0.16	0.30
Deepsea skates	Notoraja spp.	N-QMS	0.16	0.32	0.00	0.00	0.00	<b>0.71</b>	0.14	0.26
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.15	0.58	0.01	0.00	0.00	<b>0.61</b>	0.12	0.22
Chimaera, purple	Chimaera sp.	N-QMS	0.10	0.27	0.00	0.01	0.00	<b>0.35</b>	0.07	0.13
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.10	0.15	0.00	0.00	0.00	<b>0.26</b>	0.05	0.09
Hydrolagus spp.	Hydrolagus spp.	N-QMS	0.08	0.00	0.00	0.00	0.00	<b>0.25</b>	0.05	0.09
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.08	0.09	0.01	0.00	0.00	<b>0.24</b>	0.05	0.09
Ghost shark	Hydrolagus novaezealandiae	N-QMS	0.07	0.12	0.00	0.01	0.00	<b>0.21</b>	0.04	0.08
Smooth skate	Dipturus innominatus	QMS	0.07	0.01	0.00	0.03	0.00	<b>0.19</b>	0.04	0.07

Rough skate	Zearaja nasuta	QMS	0.06	0.13	0.00	0.00	0.00	<b>0.13</b>	0.03	0.05
Giant black ghost shark	Hydrolagus sp. d	N-QMS	0.03	0.05	0.00	0.01	0.00	<b>0.13</b>	0.03	0.05
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.03	0.03	0.00	0.00	0.00	<b>0.11</b>	0.02	0.04
Skate, Other	Rajidae (Family)	N-QMS	0.02	0.03	0.01	0.00	0.00	<b>0.09</b>	0.02	0.03
Blind electric ray	Typhlonarke aysoni	N-QMS	0.01	0.05	0.00	0.00	0.00	<b>0.07</b>	0.01	0.03
Electric ray	Torpedo fairchildi	N-QMS	0.01	0.04	0.00	0.01	0.00	<b>0.04</b>	0.01	0.02
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.01	0.00	0.00	0.00	0.00	<b>0.03</b>	0.01	0.01
Richardson's skate	Bathyraja richardsoni	N-QMS	0.01	0.03	0.00	0.00	0.00	<b>0.03</b>	0.01	0.01
Pointynose blue ghost shark	Hydrolagus trolli	N-QMS	0.00	0.00	0.00	0.00	0.03	<b>0.03</b>	0.01	0.01
Skates	Rajidae arhynchobatidae (families)	N-QMS	0.00	0.02	0.00	0.00	0.00	<b>0.02</b>	0.00	0.01
Long-tailed skate	Arhynchobatis asperimus	N-QMS	0.00	0.02	0.00	0.00	0.00	<b>0.02</b>	0.00	0.01
Spiny dogfish	Squalus acanthias	QMS	0.00	0.01	0.01	0.00	0.00	<b>0.01</b>	0.00	0.00
Shark (Unspecified)	0	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Notoraja spinifera	Notoraja spinifera	N-QMS	0.00	0.01	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Purple chimaera	Chimaera lignaria	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Cat shark	Other than Apristurus spp.	N-QMS	0.00	0.00	0.00	0.01	0.00	<b>0.01</b>	0.00	0.00
Etmopterus pusillus	Etmopterus pusillus	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Rays	various (see comment)	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
School shark	Galeorhinus galeus	QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Rough shovelnose dogfish	Deania histricosa	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00
Velvet dogfish	Zameus squamulosus	N-QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00

**Table 7b: Elasmobranch Species (Observed Catch (tonnes)): ORH3B (ESCR)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Deepwater dogfish (Unspecified)	N/A	N-QMS	0.84%	0.66%	0.08%	0.58%	0.08%	<b>0.67%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.82%	0.93%	0.00%	0.19%	0.06%	<b>0.57%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.49%	0.45%	0.59%	0.03%	0.00%	<b>0.53%</b>
Seal shark	Dalatias licha	N-QMS	0.35%	0.87%	0.01%	0.13%	0.05%	<b>0.39%</b>
Longnose velvet dogfish	Centroscyrnus crepidater	N-QMS	0.22%	0.05%	0.00%	0.27%	0.00%	<b>0.20%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.17%	0.33%	0.02%	0.05%	0.00%	<b>0.19%</b>
Plunket's shark	Centroscyrnus plunketi	N-QMS	0.09%	0.08%	0.01%	0.01%	0.01%	<b>0.13%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.03%	0.10%	0.00%	0.02%	0.00%	<b>0.05%</b>
Leafscale gulper shark	Centropristis squamosus	N-QMS	0.02%	0.02%	0.01%	0.01%	0.00%	<b>0.05%</b>
Pacific sleeper shark	Somniosus pacificus	N-QMS	0.02%	0.03%	0.00%	0.05%	0.00%	<b>0.03%</b>
Smooth skin dogfish	Centroscyrnus owstoni	N-QMS	0.01%	0.05%	0.00%	0.00%	0.00%	<b>0.03%</b>
Sharks & Dogfish nei	Selachii (Order)	N-QMS	0.01%	0.05%	0.00%	0.00%	0.00%	<b>0.02%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.01%	0.03%	0.11%	0.00%	0.00%	<b>0.01%</b>
Etmopterus spp.	Etmopterus spp.	N-QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.01%</b>
Cat shark	Apristurus spp.	N-QMS	0.00%	0.01%	0.00%	0.03%	0.00%	<b>0.01%</b>
Chimaera spp.	Chimaera spp.	N-QMS	0.00%	0.02%	0.01%	0.00%	0.00%	<b>0.01%</b>
Deepsea skates	Notoraja spp.	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	<b>0.01%</b>
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	<b>0.00%</b>
Chimaera, purple	Chimaera sp.	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	<b>0.00%</b>
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Hydrolagus spp.	Hydrolagus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Potuguese dogfish	Centroscyrnus coelolepis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Ghost shark	Hydrolagus novaezealandiae	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Smooth skate	Dipturus innominatus	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rough skate	Zearaja nasuta	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Giant black ghost shark	Hydrolagus sp. d	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Roughskin dogfish	Scymnodon macracanthus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Skate, Other	Rajidae (Family)	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Blind electric ray	Typhlonarke aysoni	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

Electric ray	Torpedo fairchildi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Richardson's skate	Bathyraja richardsoni	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Pointynose blue ghost shark	Hydrolagus trolli	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Skates	Rajidae arhynchobatidae (families)	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Long-tailed skate	Arhynchobatis asperrimus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Spiny dogfish	Squalus acanthias	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Shark (Unspecified)	0	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Notoraja spinifera	Notoraja spinifera	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Purple chimaera	Chimaera lignaria	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Cat shark	Other than Apristurus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Etmopterus pusillus	Etmopterus pusillus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Cookiecutter shark	Isistius brasiliensis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rays	various (see comment)	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
School shark	Galeorhinus galeus	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rough shovelnose dogfish	Deania histricosa	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Velvet dogfish	Zameus squamulosus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>





## ORH7A (& Westpac Bank)

**Table 8a: QMS Species (Observed Catch (tonnes)): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Orange roughy	<i>Hoplostethus atlanticus</i>	QMS	229.79	332.08	320.57	238.62	281.57	<b>1402.63</b>	280.53	444.76
Spiky oreo	<i>Neocyttus rhomboidalis</i>	QMS	2.25	0.49	3.80	6.40	5.57	<b>18.51</b>	3.70	5.87
Ribaldo	<i>Mora moro</i>	QMS	0.84	0.33	0.77	0.82	2.13	<b>4.89</b>	0.98	1.55
Hake	<i>Merluccius australis</i>	QMS	0.27	0.26	0.28	0.24	0.42	<b>1.47</b>	0.29	0.47
Hoki	<i>Macruronus novaezealandiae</i>	QMS	0.10	0.14	0.22	0.33	0.29	<b>1.08</b>	0.22	0.34
Cardinal fish	<i>Epigonus telescopus</i>	QMS	0.00	0.00	0.10	0.16	0.04	<b>0.31</b>	0.06	0.10
Pale ghost shark	<i>Hydrolagus bemisi</i>	QMS	0.04	0.02	0.04	0.06	0.11	<b>0.26</b>	0.05	0.08
Ray's bream	<i>Brama brama</i>	QMS	0.00	0.00	0.00	0.00	0.14	<b>0.14</b>	0.03	0.05
Sea perch	<i>Helicolenus</i> spp.	QMS	0.03	0.02	0.01	0.01	0.07	<b>0.14</b>	0.03	0.04
Ghost shark	<i>Hydrolagus novaezealandiae</i>	QMS	0.00	0.00	0.00	0.01	0.00	<b>0.02</b>	0.00	0.01
Smooth oreo	<i>Pseudocyttus maculatus</i>	QMS	0.03	0.01	0.01	0.02	0.02	<b>0.08</b>	0.02	0.03
Silver warehou	<i>Seriolella punctata</i>	QMS	0.00	0.00	0.03	0.00	0.00	<b>0.03</b>	0.01	0.01
Black oreo	<i>Alloctytus niger</i>	QMS	0.00	0.00	0.00	0.00	0.01	<b>0.01</b>	0.00	0.00
Alfonsino	<i>Beryx splendens</i>	QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Ling	<i>Genypterus blacodes</i>	QMS	0.00	0.01	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Warty oreo	<i>Alloctytus verrucosus</i>	QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Giant stargazer	<i>Kathetostoma</i> spp.	QMS	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>	0.00	0.00
Lookdown dory	<i>Cyttus traversi</i>	QMS	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>	0.00	0.00

**Table 8b: QMS Species (% of Total Observed Catch): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Orange roughy	Hoplostethus atlanticus	QMS	92.72%	98.63%	97.37%	94.20%	92.65%	<b>95.35%</b>
Spiky oreo	Neocyttus rhomboidalis	QMS	0.91%	0.14%	1.15%	2.53%	1.83%	<b>1.26%</b>
Ribaldo	Mora moro	QMS	0.34%	0.10%	0.23%	0.32%	0.70%	<b>0.33%</b>
Hake	Merluccius australis	QMS	0.11%	0.08%	0.09%	0.10%	0.14%	<b>0.10%</b>
Hoki	Macruronus novaezelandiae	QMS	0.04%	0.04%	0.07%	0.13%	0.10%	<b>0.07%</b>
Cardinal fish	Epigonus telescopus	QMS	0.00%	0.00%	0.03%	0.06%	0.01%	<b>0.02%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.01%	0.00%	0.01%	0.02%	0.04%	<b>0.02%</b>
Ray's bream	Brama brama	QMS	0.00%	0.00%	0.00%	0.00%	0.05%	<b>0.01%</b>
Sea perch	Helicolenus spp.	QMS	0.01%	0.01%	0.00%	0.00%	0.02%	<b>0.01%</b>
Ghost shark	Hydrolagus novaezealandiae	QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Smooth oreo	Pseudocyttus maculatus	QMS	0.01%	0.00%	0.00%	0.01%	0.00%	<b>0.01%</b>
Silver warehou	Seriolella punctata	QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Black oreo	Allocyttus niger	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Alfonsino	Beryx splendens	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Ling	Genypterus blacodes	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Warty oreo	Allocyttus verrucosus	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Giant stargazer	Kathetostoma spp.	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Lookdown dory	Cyttus traversi	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

**Table 9a: Non-QMS Species (Observed Catch (tonnes)): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Sharks & Dogfish nei	Selachii (Order)	N-QMS	9.05	0.00	0.01	0.00	0.00	<b>9.06</b>	1.81	2.87
Leafscale gulper shark	Centrophorus squamosus	N-QMS	1.07	0.95	1.20	1.44	2.41	<b>7.07</b>	1.41	2.24
Common roughy	Paratrachichthys trailli	N-QMS	0.00	0.00	0.00	0.00	4.96	<b>4.96</b>	0.99	1.57
Shovelnose dogfish	Deania calcea	N-QMS	0.63	0.19	0.41	0.53	0.73	<b>2.49</b>	0.50	0.79
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.58	0.41	0.14	0.53	0.78	<b>2.44</b>	0.49	0.77
Johnson's cod	Halargyreus johnsonii	N-QMS	0.29	0.19	0.17	0.24	0.89	<b>1.77</b>	0.35	0.56
Plunket's shark	Centroscymnus plunketi	N-QMS	0.31	0.00	0.30	0.49	0.36	<b>1.47</b>	0.29	0.47
Unicorn rattail	Trachyrincus sp.	N-QMS	0.32	0.02	0.20	0.31	0.48	<b>1.33</b>	0.27	0.42
Seal shark	Dalatias licha	N-QMS	0.20	0.13	0.28	0.37	0.17	<b>1.16</b>	0.23	0.37
Rattails	Macrouridae (Family)	N-QMS	0.02	0.31	0.13	0.17	0.31	<b>0.94</b>	0.19	0.30
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.19	0.24	0.03	0.13	0.20	<b>0.79</b>	0.16	0.25
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.16	0.24	0.03	0.09	0.13	<b>0.65</b>	0.13	0.21
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.11	0.02	0.00	0.13	0.33	<b>0.59</b>	0.12	0.19
Black slickhead	Xenodermichthys spp.	N-QMS	0.09	0.07	0.02	0.09	0.28	<b>0.55</b>	0.11	0.17
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.08	0.06	0.02	0.10	0.21	<b>0.47</b>	0.09	0.15
Bigscaled brown slickhead	Alepocephalus australis	N-QMS	0.03	0.09	0.00	0.10	0.09	<b>0.30</b>	0.06	0.09
Violet squid	Histioteuthis spp.	N-QMS	0.05	0.03	0.02	0.04	0.07	<b>0.21</b>	0.04	0.07
Deepsea cardinalfish	Epigonus telescopus	N-QMS	0.10	0.03	0.06	0.01	0.00	<b>0.19</b>	0.04	0.06
Cape scorpionfish	Trachyscorpia capensis	N-QMS	0.03	0.03	0.00	0.06	0.08	<b>0.19</b>	0.04	0.06
Pholidoteuthis boschmai	Pholidoteuthis boschmai	N-QMS	0.03	0.11	0.00	0.01	0.04	<b>0.19</b>	0.04	0.06
Squid (Unspecified)	N/A	N-QMS	0.07	0.02	0.03	0.05	0.00	<b>0.17</b>	0.03	0.05

Serrulate rattail	Coryphaenoides serrulatus	N-QMS	0.04	0.02%	0.00	0.00%	0.01	0.00%	0.06	0.05
Mahia rattail	Coelorinchus matamua	N-QMS	0.05	0.02%	0.00	0.00%	0.01	0.00%	0.05	0.05
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.02	0.01%	0.01	0.00%	0.03	0.01%	0.01	0.05
Smallscaled brown slickhead	Alepocephalus antipodanus	N-QMS	0.02	0.01%	0.04	0.01%	0.00	0.00%	0.02	0.05
Basketwork eel	Diastobranchus capensis	N-QMS	0.04	0.01%	0.02	0.01%	0.02	0.00%	0.01	0.04
Slickhead	Alepocephalidae (Family)	N-QMS	0.02	0.01%	0.00	0.00%	0.05	0.01%	0.08	0.04
Four-rayed rattail	Coryphaenoides subserrulatus	N-QMS	0.05	0.02%	0.00	0.00%	0.01	0.00%	0.03	0.04
Notable rattail	Coelorinchus innotabilis	N-QMS	0.03	0.01%	0.00	0.00%	0.00	0.00%	0.04	0.03
Enypniastes eximia	Enypniastes eximia	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.04	0.03
Rudderfish	Centrolophus niger	N-QMS	0.01	0.00%	0.01	0.00%	0.00	0.00%	0.03	0.02
Talismania longifilis	Talismania longifilis	N-QMS	0.02	0.01%	0.01	0.00%	0.00	0.00%	0.00	0.02
Todarodes filippovae	Todarodes filippovae	N-QMS	0.00	0.00%	0.02	0.01%	0.00	0.00%	0.00	0.02
Javelinfin	Lepidorhynchus denticulatus	N-QMS	0.01	0.01%	0.00	0.00%	0.01	0.00%	0.03	0.02
Unidentified fish	N/A	N-QMS	0.00	0.00%	0.00	0.00%	0.02	0.01%	0.00	0.02
Spinyfin	Diretmichthys parini	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.02	0.01
Common halosaur	Halosaurus pectoralis	N-QMS	0.01	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.01
Morids	Moridae (Family)	N-QMS	0.00	0.00%	0.00	0.00%	0.04	0.01%	0.00	0.01
Octopoteuthiidae	Octopoteuthiidae (Family)	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.04	0.01
Schedophilus huttoni	Schedophilus huttoni	N-QMS	0.00	0.00%	0.01	0.00%	0.00	0.00%	0.00	0.01
Coryphaenoides sp. b	Coryphaenoides sp. b	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.02	0.01
Warty squid	Onykia robsoni	N-QMS	0.00	0.00%	0.03	0.01%	0.00	0.00%	0.00	0.01
Giant lepidion	Lepidion inosimae	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.03	0.01
Giant lepidion	Lepidion schmidti, L. inosimae	N-QMS	0.00	0.00%	0.00	0.00%	0.03	0.01%	0.00	0.01
Omega prawn	Lipkius holthuisi	N-QMS	0.01	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.01
Warty squid	Onykia spp.	N-QMS	0.01	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.01
Viper fish	Chauliodus sloani	N-QMS	0.00	0.00%	0.00	0.00%	0.01	0.00%	0.01	0.01
Discfish	Diretmus argenteus	N-QMS	0.01	0.01%	0.01	0.00%	0.00	0.00%	0.00	0.01

Spider crabs (Unspecified)	N/A	N-QMS	0.03	0.01%	0.00	0.00%	0.00	0.00%	0.00	0.01
Giant squid	Architeuthis sp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Giant lepidion	Lepidion schmidti	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Slender smooth-hound	Gollum attenuatus	N-QMS	0.00	0.00%	0.00	0.00%	0.02	0.01%	0.00	0.01
Dana octopus squid	Taningia danae	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Bulbous rattail	Nezumia bubonis	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.01
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Banded rattail	Coelorinchus fasciatus	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00	0.00%	0.00	0.00%	0.01	0.00%	0.00	0.01
Smooth skate	Dipturus innominatus	N-QMS	0.00	0.00%	0.01	0.00%	0.00	0.00%	0.00	0.01
Rat-tail star	Zoroaster spp.	N-QMS	0.01	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Cat shark	Apristurus spp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Abyssal rattail	Coryphaenoides murrayi	N-QMS	0.01	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Sea cucumber (other than Stichopus mollis)	Holothuroidea (Class)	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.01
Octopus	Pinnoctopus cordiformis	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.00
Small-headed cod	Lepidion microcephalus	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.00
Tubbia tasmanica	Tubbia tasmanica	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.00
Blue shark	Prionace glauca	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.00
Pink frogmouth	Chaunax pictus	N-QMS	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.01	0.00
Electric ray	Torpedo fairchildi	N-QMS	0.00	0.00%	0.00	0.00%	0.01	0.00%	0.00	0.00
White rattail	Trachyrincus longirostris	N-QMS	0.00	0.00%	0.00	0.00%	0.01	0.00%	0.00	0.00

**Table 9b: Non-QMS Species (% of Total Observed Catch): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Sharks & Dogfish nei	Selachii (Order)	N-QMS	3.65%	0.00%	0.00%	0.00%	0.00%	<b>0.62%</b>
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.43%	0.28%	0.36%	0.57%	0.79%	<b>0.48%</b>
Common roughy	Paratrachichthys trailli	N-QMS	0.00%	0.00%	0.00%	0.00%	1.63%	<b>0.34%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.26%	0.06%	0.12%	0.21%	0.24%	<b>0.17%</b>
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.23%	0.12%	0.04%	0.21%	0.26%	<b>0.17%</b>
Johnson's cod	Halargyreus johnsonii	N-QMS	0.12%	0.05%	0.05%	0.09%	0.29%	<b>0.12%</b>
Plunket's shark	Centroscymnus plunketi	N-QMS	0.13%	0.00%	0.09%	0.20%	0.12%	<b>0.10%</b>
Unicorn rattail	Trachyrincus sp.	N-QMS	0.13%	0.01%	0.06%	0.12%	0.16%	<b>0.09%</b>
Seal shark	Dalatias licha	N-QMS	0.08%	0.04%	0.09%	0.15%	0.06%	<b>0.08%</b>
Rattails	Macrouridae (Family)	N-QMS	0.01%	0.09%	0.04%	0.07%	0.10%	<b>0.06%</b>
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.08%	0.07%	0.01%	0.05%	0.06%	<b>0.05%</b>
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.06%	0.07%	0.01%	0.03%	0.04%	<b>0.04%</b>
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.04%	0.00%	0.00%	0.05%	0.11%	<b>0.04%</b>
Black slickhead	Xenodermichthys spp.	N-QMS	0.03%	0.02%	0.01%	0.03%	0.09%	<b>0.04%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.03%	0.02%	0.01%	0.04%	0.07%	<b>0.03%</b>
Bigscaled brown slickhead	Alepocephalus australis	N-QMS	0.01%	0.03%	0.00%	0.04%	0.03%	<b>0.02%</b>
Violet squid	Histioteuthis spp.	N-QMS	0.02%	0.01%	0.00%	0.02%	0.02%	<b>0.01%</b>
Deepsea cardinalfish	Epigonus telescopus	N-QMS	0.04%	0.01%	0.02%	0.00%	0.00%	<b>0.01%</b>
Cape scorpionfish	Trachyscorpia capensis	N-QMS	0.01%	0.01%	0.00%	0.02%	0.02%	<b>0.01%</b>
Pholidoteuthis boschmai	Pholidoteuthis boschmai	N-QMS	0.01%	0.03%	0.00%	0.00%	0.01%	<b>0.01%</b>
Squid (Unspecified)	N/A	N-QMS	0.03%	0.01%	0.01%	0.02%	0.00%	<b>0.01%</b>
Serrulate rattail	Coryphaenoides serrulatus	N-QMS	0.02%	0.00%	0.00%	0.02%	0.02%	<b>0.01%</b>
Mahia rattail	Coelorinchus matamua	N-QMS	0.02%	0.00%	0.00%	0.02%	0.02%	<b>0.01%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.01%	0.00%	0.01%	0.01%	0.03%	<b>0.01%</b>
Smallscaled brown slickhead	Alepocephalus antipodanus	N-QMS	0.01%	0.01%	0.00%	0.01%	0.02%	<b>0.01%</b>
Basketwork eel	Diastobranchus capensis	N-QMS	0.01%	0.01%	0.00%	0.00%	0.02%	<b>0.01%</b>

Slickhead	Alepocephalidae (Family)	N-QMS	0.01%	0.00%	0.01%	0.03%	0.00%	<b>0.01%</b>
Four-rayed rattail	Coryphaenoides subserrulatus	N-QMS	0.02%	0.00%	0.00%	0.01%	0.01%	<b>0.01%</b>
Notable rattail	Coelorinchus innotabilis	N-QMS	0.01%	0.00%	0.00%	0.02%	0.01%	<b>0.01%</b>
Enypniastes eximia	Enypniastes eximia	N-QMS	0.00%	0.00%	0.00%	0.02%	0.02%	<b>0.01%</b>
Rudderfish	Centrolophus niger	N-QMS	0.00%	0.00%	0.00%	0.01%	0.01%	<b>0.01%</b>
Talismania longifilis	Talismania longifilis	N-QMS	0.01%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Todarodes filippovae	Todarodes filippovae	N-QMS	0.00%	0.01%	0.00%	0.00%	0.01%	<b>0.00%</b>
Javelinfinch	Lepidorhynchus denticulatus	N-QMS	0.01%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Unidentified fish	N/A	N-QMS	0.00%	0.00%	0.01%	0.00%	0.01%	<b>0.00%</b>
Spinyfin	Diretmichthys parini	N-QMS	0.00%	0.00%	0.00%	0.01%	0.01%	<b>0.00%</b>
Common halosaur	Halosaurus pectoralis	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Morids	Moridae (Family)	N-QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Octopoteuthiidae	Octopoteuthiidae (Family)	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Schedophilus huttoni	Schedophilus huttoni	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Coryphaenoides sp. b	Coryphaenoides sp. b	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Warty squid	Onykia robsoni	N-QMS	0.00%	0.01%	0.00%	0.00%	0.00%	<b>0.00%</b>
Giant lepidion	Lepidion inosimae	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Giant lepidion	Lepidion schmidti, L. inosimae	N-QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Omega prawn	Lipkius holthuisi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Warty squid	Onykia spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Viper fish	Chauliodus sloani	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Discfish	Diretmus argenteus	N-QMS	0.01%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Spider crabs (Unspecified)	N/A	N-QMS	0.01%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Giant squid	Architeuthis sp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Giant lepidion	Lepidion schmidti	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Slender smooth-hound	Gollum attenuatus	N-QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Dana octopus squid	Taningia danae	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>
Dealfish	Trachipterus trachipterus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Warty squid	Onykia ingens	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Coryphaenoides mcmillani	Coryphaenoides mcmillani	N-QMS	0.00%	0.00%	0.00%	0.00%	0.01%	<b>0.00%</b>



Salps	-	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Spineback	Notacanthus sexspinis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Swollenhead conger	Bassanago bulbiceps	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Pale toadfish	Neophrynichthys angustus	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Rock cod	Lotella rhacina	N-QMS	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Witch	Arnoglossus scapha	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Bollons rattail	Coelorinchus bollonsi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Bulbous rattail	Nezumia bubonis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Banded rattail	Coelorinchus fasciatus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Smooth skate	Dipturus innominatus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rat-tail star	Zoroaster spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Cat shark	Apristurus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Abyssal rattail	Coryphaenoides murrayi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Sea cucumber (other than Stichopus mollis)	Holothuroidea (Class)	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Octopus	Pinnoctopus cordiformis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Small-headed cod	Lepidion microcephalus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Tubbia tasmanica	Tubbia tasmanica	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Blue shark	Prionace glauca	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Pink frogmouth	Chaunax pictus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Electric ray	Torpedo fairchildi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
White rattail	Trachyrincus longirostris	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

**Table 10a: Elasmobranch Species (Observed Catch (tonnes)): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch	Average Annual Observed Catch	Average annual catch scaled up based on observed ORH vs. Total ORH
Sharks & Dogfish not otherwise specified in Sch3, Part2 Reporting Regs 2001	Selachii (Order)	N-QMS	9.05	3.65%	0.00	0.00%	0.01	<b>9.06</b>	0.00	2.87
Leafscale gulper shark	Centrophorus squamosus	N-QMS	1.07	0.43%	0.95	0.28%	1.20	<b>7.07</b>	1.44	2.24
Shovelnose dogfish	Deania calcea	N-QMS	0.63	0.26%	0.19	0.06%	0.41	<b>2.49</b>	0.53	0.79
Smooth skin dogfish	Centroscymnus owstoni	N-QMS	0.58	0.23%	0.41	0.12%	0.14	<b>2.44</b>	0.53	0.77
Plunket's shark	Centroscymnus plunketi	N-QMS	0.31	0.13%	0.00	0.00%	0.30	<b>1.47</b>	0.49	0.47
Seal shark	Dalatias licha	N-QMS	0.20	0.08%	0.13	0.04%	0.28	<b>1.16</b>	0.37	0.37
Longnose velvet dogfish	Centroscymnus crepidater	N-QMS	0.19	0.08%	0.24	0.07%	0.03	<b>0.79</b>	0.13	0.25
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.16	0.06%	0.24	0.07%	0.03	<b>0.65</b>	0.09	0.21
Potuguese dogfish	Centroscymnus coelolepis	N-QMS	0.11	0.04%	0.02	0.00%	0.00	<b>0.59</b>	0.13	0.19
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.08	0.03%	0.06	0.02%	0.02	<b>0.47</b>	0.10	0.15
Pale ghost shark	Hydrolagus bemisi	QMS	0.04	0.01%	0.02	0.00%	0.04	<b>0.26</b>	0.06	0.08
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.02	0.01%	0.01	0.00%	0.03	<b>0.16</b>	0.01	0.05
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.03</b>	0.03	0.01
Slender smooth-hound	Gollum attenuatus	N-QMS	0.00	0.00%	0.00	0.00%	0.02	<b>0.02</b>	0.00	0.01
Ghost shark	Hydrolagus novaezealandiae	QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.02</b>	0.01	0.01
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.00	0.00
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00	0.00%	0.00	0.00%	0.01	<b>0.01</b>	0.00	0.00
Smooth skate	Dipturus innominatus	QMS	0.00	0.00%	0.01	0.00%	0.00	<b>0.01</b>	0.00	0.00
Cat shark	Apristurus spp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.00	0.00
Blue shark	Prionace glauca	QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.01	0.00
Electric ray	Torpedo fairchildi	N-QMS	0.00	0.00%	0.00	0.00%	0.01	<b>0.01</b>	0.00	0.00
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.00	0.00

Etmopterus pusillus	Etmopterus pusillus	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.00	0.00
Chimaera spp.	Chimaera spp.	N-QMS	0.00	0.00%	0.00	0.00%	0.01	<b>0.01</b>	0.00	0.00
Spiny dogfish	Squalus acanthias	QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.01</b>	0.00	0.00
Notoraja asperula	Notoraja asperula	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Deepsea skates	Notoraja spp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Notoraja spinifera	Notoraja spinifera	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Chimaera, purple	Chimaera sp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Frill shark	Chlamydoselachus anguineus	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Cat shark	Other than Apristurus spp.	N-QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00
Rough skate	Zearaja nasuta	QMS	0.00	0.00%	0.00	0.00%	0.00	<b>0.00</b>	0.00	0.00

**Table 10b: Elasmobranch Species (Observed Catch (tonnes)): ORH7A (& Westpac Bank)**

Common name	Scientific Name	Legal status	2008-09	2009-10	2010-11	2011-12	2012-13	5 year total observed catch
Sharks & Dogfish not otherwise specified in Sch3, Part2 Reporting Regs 2001	Selachii (Order)	N-QMS	3.65%	0.00%	0.00%	0.00%	0.00%	<b>0.62%</b>
Leafscale gulper shark	Centrophorus squamosus	N-QMS	0.43%	0.28%	0.36%	0.57%	0.79%	<b>0.48%</b>
Shovelnose dogfish	Deania calcea	N-QMS	0.26%	0.06%	0.12%	0.21%	0.24%	<b>0.17%</b>
Smooth skin dogfish	Centroscyrnus owstoni	N-QMS	0.23%	0.12%	0.04%	0.21%	0.26%	<b>0.17%</b>
Plunket's shark	Centroscyrnus plunketi	N-QMS	0.13%	0.00%	0.09%	0.20%	0.12%	<b>0.10%</b>
Seal shark	Dalatias licha	N-QMS	0.08%	0.04%	0.09%	0.15%	0.06%	<b>0.08%</b>
Longnose velvet dogfish	Centroscyrnus crepidater	N-QMS	0.08%	0.07%	0.01%	0.05%	0.06%	<b>0.05%</b>
Widenosed chimaera	Rhinochimaera pacifica	N-QMS	0.06%	0.07%	0.01%	0.03%	0.04%	<b>0.04%</b>
Potuguese dogfish	Centroscyrnus coelolepis	N-QMS	0.04%	0.00%	0.00%	0.05%	0.11%	<b>0.04%</b>
Baxter's lantern dogfish	Etmopterus baxteri	N-QMS	0.03%	0.02%	0.01%	0.04%	0.07%	<b>0.03%</b>
Pale ghost shark	Hydrolagus bemisi	QMS	0.01%	0.00%	0.01%	0.02%	0.04%	<b>0.02%</b>
Long-nosed chimaera	Harriotta raleighana	N-QMS	0.01%	0.00%	0.01%	0.01%	0.03%	<b>0.01%</b>
Deepwater spiny skate	Amblyraja hyperborea	N-QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Slender smooth-hound	Gollum attenuatus	N-QMS	0.00%	0.00%	0.01%	0.00%	0.00%	<b>0.00%</b>
Ghost shark	Hydrolagus novaezealandiae	QMS	0.00%	0.00%	0.00%	0.01%	0.00%	<b>0.00%</b>
Lucifer dogfish	Etmopterus lucifer	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Longnosed deepsea skate	Bathyraja shuntovi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Smooth skate	Dipturus innominatus	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Cat shark	Apristurus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Blue shark	Prionace glauca	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Electric ray	Torpedo fairchildi	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Prickly dogfish	Oxynotus bruniensis	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Etmopterus pusillus	Etmopterus pusillus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Chimaera spp.	Chimaera spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Spiny dogfish	Squalus acanthias	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Notoraja asperula	Notoraja asperula	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Deepsea skates	Notoraja spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Notoraja spinifera	Notoraja spinifera	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Chimaera, purple	Chimaera sp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

Frill shark	Chlamydoselachus anguineus	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Cat shark	Other than Apristurus spp.	N-QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
Rough skate	Zearaja nasuta	QMS	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>

