### MBARA Diver's Reef Survey Form Rev 11 May 2013

Reef Number and Name 43 Arizona Chemical Reef Latitude | 29 53.351 Longitude Was published lat/lon correct? Yes 85 32.005  $(00\ 00.000)$  $(00\ 00.000)$ GPS Manufacturer & Model: Garmin 188C Sonar Depth (feet) Survey Date Jul 12, 2014 59 Time 1000 Weather Conditions Partly Sunny Sea Condition 2 ft Boat Captain Bob Cox **Boat Name** Bob Cat Dive Leader Bob Cox Dive Team Members Carol Cox Brian and Kimberly Higdon Depth Gauge Depth (feet) 63 **Diver Bottom Time (minutes)** 48 Water Temp Surface (Fahrenheit) Water Temp Bottom (Fahrenheit) 76 83 Water Visibility Surface (feet) 15 Water Visibility Bottom (feet) 30 Thermocline Depth (feet) 30 Current Direction E **Current Speed (knots)** .5 Other Water Column Characteristics (check all that apply) R Plankton □ Algae **⊠** Turbid □ Other Bottom Composition (check all that apply) □ Silt 🗆 Gravel **⊠** Sand ⊢ Mud 🖂 Shell □ Other Reef Materials & Quantity distillation tower (4 ft. diameter 80 ft. long) cut into 2 pieces Reef Height at Highest Point (measured from base to top of the reef)(feet) 4 Physical Condition (Durability, stability, storm damage, other damage or movement): • No damage  $\bigcirc$  Minor damage  $\bigcirc$  Moderate damage ○ Major damage • Minor movement O Moderate movement ○ No movement Major movement Some settling, but less than prior visit Explain damage/movement and suspected cause

Clear Form

# Fish Counts (Click on the hyper-links below for identification)

Angelfish-Blue	1	0 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Angelfish-Queen	○ 1	0 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Barracuda-Great	O 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Barracuda-Guaguanche	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Batfish-Polka-Dot	○ 1	○ 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Blenny-Molly-Miller	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
✓ Blenny-Seaweed	○ 1	○ 2-10	0 (i) 11-100 (i) 101+	Length (inches) 2	Comments
Blenny-Tessellated	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Blenny?	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Butterflyfish-Spotfin	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Butterflyfish?	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Cardinalfish-Two-Spot	○ 1	2-10	0 () 11-100 () 101+	Length (inches) 1	Comments
Chromis-Purple-Reeffish	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
□ Chromis-Yellowtail- Reeffish	○ 1	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Cobia (Ling)	<u> </u>	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Cowfish-Scrawled	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
✓ Damselfish-Cocoa	○ 1	0 2-10	0 () 11-100 () 101+	Length (inches) 1-2	Comments
Damselfish?	○ 1	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Dolphin?	○ 1	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
✓ Drum-Cubbyu	○ 1	0 2-10	0 (i) 11-100 (i) 101+	Length (inches) 2-8	Comments
Drum-Jackknifefish	○ 1	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Eel?	○ 1	0 2-10	0 () 11-100 () 101+	- Length (inches)	Comments
Flounder-Gulf	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Filefish?	○ 1	○ 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Frogfish-Ocellated	○ 1	0 2-10	0 () 11-100 () 101+	Length (inches)	Comments
Goby-Spotted	1	○ 2-10	0 () 11-100 () 101+	Length (inches) 1	Comments
Goby?	• 1	○ 2-10	0 () 11-100 () 101+	Length (inches) 2	Comments seminole

✓ Grouper-Gag	○ 1	○ 2-10	• 11-100 ( 101+	Length (inches) 12-24	Comments
Grouper-Goliath	O 1	O 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grouper-Graysby	O 1	O 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grouper-Red	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grouper-Rock-Hind	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grouper-Scamp	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 3	Comments
Grunt-Juvenile	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grunt-Tomtate	○ 1	○ 2-10	○ 11-100	Length (inches) 1-3	Comments
Grunt-White	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Grunt?	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Hogfish	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Hogfish-Spanish	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Jack-Almaco-Lesser-AJ	○ 1	O 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Jack-Blue-Runner	○ 1	2-10	○ 11-100 ○ 101+	Length (inches) 10	Comments
Jack-Greater-Amberjack	○ 1	○ 2-10	11-100 101+	Length (inches) 18	Comments
Jack-Lookdown	O 1	O 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Jack-Rainbow-Runner	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
<mark>Jack-Round-Scad-Cigar-</mark> Minnow	O 1	O 2-10	○ 11-100 ● 101+	Length (inches) 2	Comments
Jack?	O 1	O 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
✓Lionfish	• 1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 8	Comments Collected
Lizardfish?	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Mackeral-King	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Mackeral-Spanish	○ 1	2-10	○ 11-100 ○ 101+	Length (inches) 20	Comments
Mahi	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Minnows-Glass-Small-Fry	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Pinfish?	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Porgy-Saucereye	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
✓ Porgy-Sheepshead-Porgy	O 1	2-10	○ 11-100 ○ 101+	Length (inches) 12	Comments

✓ Porgy-Sheepshead	• 1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 12	Comments
Porgy?	01	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
✓ Puffer-Bandtail	1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 1	Comments
✓ Puffer-Sharpnose	• 1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 1	Comments
Puffer?	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Ray?	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Shark?	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Sharksucker-Sharksucker	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Sharksucker-Whitefin	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
<mark>√</mark> Sand-Perch	○ 1	2-10	○ 11-100 ○ 101+	Length (inches) 2	Comments
Seabass-Bank	○ 1	○ 2-10	● 11-100 ○ 101+	Length (inches) 2-3	Comments
Seabass-Belted-Sandfish	○ 1	○ 2-10	11-100 \(C) 101+	Length (inches) 1	Comments
Seabass-Black	<u> </u>	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Seabass-Pygmy	01	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Seabass?	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
✓ Snapper-Gray	○ 1	○ 2-10	11-100 \(\begin{bmatrix} 101+\)	Length (inches) 10-14	Comments
Snapper-Lane	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
✓ Snapper-Red	• 1	○ 2-10	○ 11-100 ○ 101+	Length (inches) 1	Comments
✓ Snapper-Vermillion	○ 1	○ 2-10	● 11-100 ○ 101+	Length (inches) 2	Comments
Snapper?	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Soapfish-Whitespotted	O 1	2-10	○ 11-100 ○ 101+	Length (inches) 6	Comments
Spadefish-Atlantic	O 1	2-10	○ 11-100 ○ 101+	Length (inches) 16	Comments
✓ Toadfish-Leopard	○ 1	2-10	○ 11-100 ○ 101+	Length (inches) 8-12	Comments
<b>√</b> Triggerfish-Gray	○ 1	○ 2-10	● 11-100 ○ 101+	Length (inches) 14	Comments
✓ Wrasse-Slippery-Dick	O 1	○ 2-10	● 11-100 ○ 101+	Length (inches) 1-3	Comments
✓ Unlisted-See-Comments	O 1	○ 2-10	11-100 () 101+	Length (inches) 2	Comments anchovies
Unlisted-See-Comments	O 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments
Unlisted-See-Comments	○ 1	○ 2-10	○ 11-100 ○ 101+	Length (inches)	Comments

# Growth on Reef (Click on the hyper-links below for identification)

Algae	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Anemone	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
✓ Barnacles	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
✓ Bivalves	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Coral-Colorful-Sea-Whip	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Coral-Hard-Unkown	○ 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Coral-Gorgonian	○ 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Coral-Occulina	○ 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Coral-White-Telesto	○ 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Feather-Duster-Worms	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
Sponges	○ 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	
✓ Unlisted-See-Comments	● 1-25% ○ 26-50% ○ 51-75% ○ 76-100% Size (inches) Describe	tunicates

## Invertebrates at Reef (Click on the hyper-links below for identification)

Cowry-Spotted-Cyphoma	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Cowry-West-Indian-Simnia	01	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Crab-Swimming	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Crab-Stareye-Hermit	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Crab-Stone	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Crab-Yellowline-Arrow	○ 1	O 2-10	11-100	○ 101+	Size (inches)	Comments
✓ Crab?	<u> </u>	2-10	○ 11-100	○ 101+	Size (inches)	Comments
Lobster-Shovelnose	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Lobster-Spiny	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Octopus	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Sea-Cucumber	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Sea-Slug	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
Sea-Star	<u> </u>	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments
✓ Sea-Urchin	○ 1	○ 2-10	11-100	○ 101+	Size (inches)	Comments

Snail-Atlantic-Hairy-Triton	01	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Snail-Murex	01	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Snail-Netted-Olive	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Snail-Florida-Horse-Conch	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Unlisted-See-Comments	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Turtles and Air Breathers/Mammals (Click on the hyper-links below for identification)							
Turtle-Green	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Turtle-Leatherback	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Turtle-Loggerhead	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Turtle?	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Whale?	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Unlisted-See-Comments	○ 1	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Unlisted-See-Comments	01	○ 2-10	○ 11-100	○ 101+	Size (inches)	Comments	
Unlisted-See-Comments	○ 1	O 2-10	○ 11-100	○ 101+	Size (inches)	Comments	

# Other Observations/Photos:

Observations	
Photos? Yes	Attached? Yes
Video? Yes	





Image Field



Image Field



Image Field











Image Field



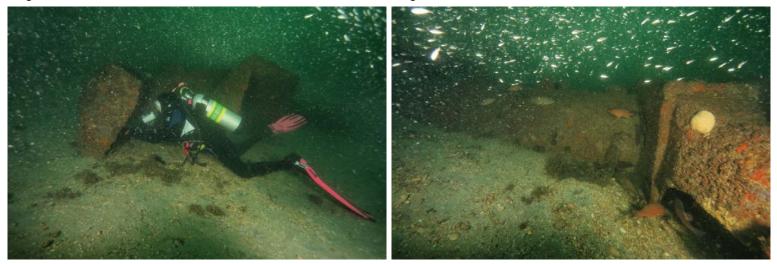
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