MBARA Diver's Reef Survey Form Rev 20 Jun 2016  Clear Form
Reef Number and Name 146 Duke Energy 2
Latitude (00 00.000) 29 46.995 Longitude (00 00.000) 85 41.666 Was published lat/lon correct? Yes Sonar Depth (ft) 93
GPS Manufacturer & Model: SIMRAD NSS9 EVO3
Survey Date Jun 17, 2018 Dive # 1 Time 1020
Cloud Cover % sunny/hazy Wind Spd & Dir Wave Height (ft) 2-3
Boat Name Bobcat Boat Captain Bob Cox Crew Carol Cox
Divers Carol Cox and Kimberly Higdon
Survey Type Roving Diver Depth Gauge Depth (ft) 94 Diver Bottom Time (minutes) 43
Water Temp Surface (Fahrenheit) 83 Water Temp Bottom (Fahrenheit) 76
Water Visibility Surface (feet) 60 Water Visibility Bottom (feet) 60
Thermocline Depth (feet) Current Direction Current Speed (knots)
Other Water Column Characteristics (check all that apply)
$_{\square}$ Plankton $_{\square}$ Algae $_{\square}$ Jellyfish $_{\square}$ Turbid $_{\square}$ Other
Bottom Composition (check all that apply)
oxtimes Sand $oxtimes$ Silt $oxtimes$ Mud $oxtimes$ Gravel $oxtimes$ Shell $oxtimes$ Other
Reef Materials & Quantity 2 FLAR, 1 Hybrid
Reef Height at Highest Point (measured from base to top of the reef)(feet) 8
Physical Condition (Durability, stability, storm damage, other damage or movement):
<ul> <li>● No damage ○ Damage</li> <li>● No movement ○ Movement</li> </ul>
Explain damage/movement and suspected cause

Fish Counts (Click on the hyper-links below for identification)											
✓ Angelfish-Blue	O 1	<ul><li>2-10</li></ul>	<u> </u>	O 101+	Length (inches)	Comments					
Angelfish-Queen	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Barracuda-Great	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Batfish-Polka-Dot	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
✓ Blenny-Seaweed	O 1	<u> </u>	<ul><li>11-100</li></ul>	O 101+	Length (inches)	Comments					
✓ Blenny-?	O 1	<ul><li>2-10</li></ul>	<u> </u>	O 101+	Length (inches)	Comments barred blenny					
Blenny-?	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
✓ Butterflyfish-Spotfin	<ul><li>1</li></ul>	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Butterflyfish?	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Cardinalfish-Two-Spot	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
✓ Chromis-Purple-Reeffish	O 1	<ul><li>2-10</li></ul>	<u> </u>	O 101+	Length (inches)	Comments					
	O 1	<u> </u>	<ul><li>11-100</li></ul>	O 101+	Length (inches)	Comments					
✓ Damselfish-Cocoa	O 1	<u> </u>	<ul><li>11-100</li></ul>	O 101+	Length (inches)	Comments					
Damselfish?	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
✓ Drum-Cubbyu	O 1	<u> </u>	<ul><li>11-100</li></ul>	O 101+	Length (inches)	Comments					
Drum-Jackknifefish	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Eel?	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Flounder-Gulf	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Filefish?	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
Frogfish-Ocellated	O 1	<u> </u>	<u> </u>	O 101+	Length (inches)	Comments					
✓ Goby-Spotted	O 1	<u> </u>	<ul><li>11-100</li></ul>	O 101+	Length (inches)	Comments					

1 2-10 11-100 101+ Length (inches)

Goby?

Comments

<b>✓</b> Grouper-Gag	<u> </u>		Length (inches) Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	C Comments	
Grouper-Goliath	O 1	Length: <3ft	Comments	
Grouper-Goliath	O 1	Length: <3ft	Comments	
Grouper-Goliath	O 1	Length: <3ft	Comments	
Grouper-Graysby	<u> </u>	○ 2-10 ○ 11-100 ○ 101+	Length (inches) Comments	
Grouper-Red	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
Grouper-Rock-Hind	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
Grouper-Scamp	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
Grunt-Juvenile	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
✓ Grunt-Tomtate	<u> </u>	○ 2-10 ○ 11-100 ● 101+	Length (inches) Comments	
Grunt-White	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
Grunt?	O 1	○ 2-10 ○ 11-100 ○ 101+	Length (inches) Comments	
Hogfish	<u> </u>	<u> </u>	Length (inches) Comments	
Hogfish-Spanish	O 1	○ 2-10 ○ 11-100 ○ 101+	Length (inches) Comments	
	O 1	C 2-10 C 11-100 C 101+	Length (inches) Comments	
Jack-Blue-Runner	O 1	○ 2-10 ○ 11-100 ○ 101+	Length (inches) Comments	
✓ Jack-Greater-Amberjac	<u>k</u>	<b>●</b> 2-10 ○ 11-100 ○ 101+	Length (inches) Comments	
	O 1	C 2-10 C 11-100 C 101+	Length (inches) Comments	
☐ Jack-Round-Scad-Cigar Minnow	<u> </u>	C 2-10 C 11-100 C 101+	Length (inches) Comments	
	O 1	C 2-10 C 11-100 C 101+	Length (inches) Comments	
☐ Jack?	<u> </u>	<u> </u>	Length (inches) Comments	

<b>✓</b>	<u>Lionfish</u>	0	1	$\bigcirc$	2-10	•	11-100	$\circ$	101+	Length (inches)	Comments	killed
	<u>Mackeral-King</u>	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Length (inches)	Comments	
	<u>Mackeral-Spanish</u>	$\circ$	1	$\circ$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Minnows-Glass-Small-Fry	0	1	$\bigcirc$	2-10	0	11-100	$\bigcirc$	101+	Length (inches)	Comments	
	Pinfish?	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Length (inches)	Comments	
<b>/</b>	Porgy-Sheepshead- Porgy	0	1	•	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Porgy-Sheepshead	$\bigcirc$	1	$\bigcirc$	2-10	$\bigcirc$	11-100	$\circ$	101+	Length (inches)	Comments	
	Porgy?	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	<u>Puffer-Bandtail</u>	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	<u>Puffer-Sharpnose</u>	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Puffer?	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Ray?	0	1	$\circ$	2-10	$\circ$	11-100	0	101+	Length (inches)	Comments	
	Shark-Bull	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	<u>Shark-Sandbar</u>	0	1	$\circ$	2-10	$\circ$	11-100	0	101+	Length (inches)	Comments	
	Shark?	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Sharksucker-Sharksucker	0	1	0	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Sand-Perch	0	1	$\circ$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	<u>Seabass-Bank</u>	0	1	$\circ$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Seabass-Belted-Sandfish	0	1	$\circ$	2-10	$\circ$	11-100	0	101+	Length (inches)	Comments	
	<u>Seabass-Black</u>	0	1	$\circ$	2-10	$\circ$	11-100	0	101+	Length (inches)	Comments	
	<u>Seabass-Pygmy</u>	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
	Seabass?	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
<b>√</b>	Snapper-Gray	0	1	$\bigcirc$	2-10	•	11-100	$\circ$	101+	Length (inches)	Comments	
	<u>Snapper-Lane</u>	0	1	$\bigcirc$	2-10	$\circ$	11-100	$\circ$	101+	Length (inches)	Comments	
<b>/</b>	<u>Snapper-Red</u>	0	1	$\bigcirc$	2-10	$\circ$	11-100	•	101+	Length (inches)	Comments	
	<u>Snapper-Vermillion</u>	0	1	$\bigcirc$	2-10	0	11-100	$\circ$	101+	Length (inches)	Comments	
	Snapper?	0	1	$\bigcirc$	2-10	0	11-100	$\circ$	101+	Length (inches)	Comments	
<b>✓</b>	Soapfish-Whitespotted	0	1	•	2-10	0	11-100	0	101+	Length (inches)	Comments	

	Spadefish-Atlantic	0	1	0	2-10	$\bigcirc$	11-100		10	1+ Ler	ngth (inches)		Comments	
<b>✓</b>	Toadfish-Leopard	0	1	•	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
<b>✓</b>	Triggerfish-Gray	$\bigcirc$	1	0	2-10	•	11-100		10	1+ Ler	ngth (inches)		Comments	
<b>✓</b>	Wrasse-Painted-Wrasse	$\bigcirc$	1	$\bigcirc$	2-10	•	11-100		10	1+ Ler	ngth (inches)		Comments	
	Wrasse-Slippery-Dick	$\bigcirc$	1	0	2-10	0	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	0	2-10	0	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	0	2-10	0	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	0	2-10	$\bigcirc$	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	0	2-10	0	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	0	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	$\bigcirc$	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	$\bigcirc$	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\bigcirc$	1	$\bigcirc$	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
	Unlisted-See-Comments	$\circ$	1	$\circ$	2-10	$\circ$	11-100		10	1+ Ler	ngth (inches)		Comments	
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	Unlisted-See-Comments	$\bigcirc$	1	$\circ$	2-10	$\circ$	11-100		10 <sup>-</sup>		ngth (inches)		Comments	
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□ Gr	Unlisted-See-Comments	icł	c on t	the	e hyp	oer	-link	s b	elo	1+ Ler		ation)	Comments	
	Unlisted-See-Comments  owth on Reef (Cl	icl	<b>C ON</b> 1	the	26-50	oer % (	-link	s b 5%	elo	1+ Ler  ow for  76-100%	identific	ation)		
<b>✓</b>	Unlisted-See-Comments owth on Reef (Cl	• •	<b>C ON</b> 1 1-25% 1-25%	the	26-50 <sup>6</sup>	oer % (	-link ) 51-7 ) 51-7	s b 5%	elo	1+ Ler  OW for  76-100%  76-100%	identific	ation)	Describe	
<b>✓</b>	Unlisted-See-Comments  Owth on Reef (Cl  Algae  Anemone	ich	1-25% 1-25% 1-25%	the O	26-50° 26-50° 26-50°	oer % (	-link 51-7 51-7	s b 5% 5%	elo O O	1+ Ler  OW for  76-100%  76-100%	identific  Size (inches  Size (inches	ation)	Describe Describe	
<ul><li>✓</li><li>✓</li><li></li></ul>	Unlisted-See-Comments  Owth on Reef (Cl  Algae  Anemone  Barnacles	<ul><li>icl</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>	1-25% 1-25% 1-25% 1-25%	<ul><li>c</li><li>c</li><li>c</li><li>c</li><li>c</li><li>c</li></ul>	26-50° 26-50° 26-50° 26-50°	oer % ( % (	-link ) 51-7 ) 51-7 ) 51-7 ) 51-7	s b 5% 5% 5%	elo O O	1+ Ler 76-100% 76-100% 76-100% 76-100%	identific  Size (inches  Size (inches  Size (inches  Size (inches	ation)	Describe Describe Describe	
<ul><li>✓</li><li>✓</li><li></li></ul>	Unlisted-See-Comments  Owth on Reef (Cl  Algae  Anemone  Barnacles  Bivalves	<ul><li>ich</li><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>	1-25% 1-25% 1-25% 1-25% 1-25%	0 0 0	26-50° 26-50° 26-50° 26-50°	oer % (***) % (***)	-link ) 51-7 ) 51-7 ) 51-7 ) 51-7	s b 5% 5% 5% 5%	elo o o	1+ Ler  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches  Size (inches  Size (inches  Size (inches	ation)	Describe Describe Describe	
	Unlisted-See-Comments  Owth on Reef (Cl  Algae  Anemone  Barnacles  Bivalves  Coral-Colorful-Sea-Whip	ich	1-25% 1-25% 1-25% 1-25% 1-25% 1-25%	0 0 0 0	26-50° 26-50° 26-50° 26-50° 26-50°	oer % () % () % ()	-link ) 51-7 ) 51-7 ) 51-7 ) 51-7 ) 51-7	s b 5% 5% 5% 5% 5%	elo o o o	1+ Ler  ow for  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches  Size (inches  Size (inches  Size (inches  Size (inches	ation)	Describe Describe Describe Describe	
	Unlisted-See-Comments  Owth on Reef (Cl  Algae  Anemone  Barnacles  Bivalves  Coral-Colorful-Sea-Whip  Coral-Hard-Unkown	ich	1-25% 1-25% 1-25% 1-25% 1-25% 1-25%	0 0 0 0 0 0 0	26-50° 26-50° 26-50° 26-50° 26-50° 26-50°	oer % () % () % ()	-link ) 51-7 ) 51-7 ) 51-7 ) 51-7 ) 51-7 ) 51-7	s b 5% 5% 5% 5% 5%	elo o o o o	1+ Ler  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches  Size (inches  Size (inches  Size (inches  Size (inches  Size (inches	ation)	Describe Describe Describe Describe Describe Describe	
	Unlisted-See-Comments Owth on Reef (Cl Algae Anemone Barnacles Bivalves Coral-Colorful-Sea-Whip Coral-Hard-Unkown Coral-Gorgonian	ich	1-25% 1-25% 1-25% 1-25% 1-25% 1-25% 1-25%	0 0 0 0 0	26-50° 26-50° 26-50° 26-50° 26-50° 26-50°	oer (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	-link 51-7 51-7 51-7 51-7 51-7 51-7 51-7	s b 5% 5% 5% 5% 5% 5%		1+ Ler  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches	ation)	Describe Describe Describe Describe Describe Describe Describe	
	Unlisted-See-Comments Owth on Reef (Cl Algae Anemone Barnacles Bivalves Coral-Colorful-Sea-Whip Coral-Hard-Unkown Coral-Gorgonian Coral-Occulina	ich	1-25% 1-25% 1-25% 1-25% 1-25% 1-25% 1-25% 1-25%		26-50° 26-50° 26-50° 26-50° 26-50° 26-50° 26-50°	oer (% () () () () () () () () () () () () ()	-link 51-7 51-7 51-7 51-7 51-7 51-7 51-7	s b 5% 5% 5% 5% 5% 5% 5%		1+ Ler  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches	ation)	Describe Describe Describe Describe Describe Describe Describe Describe	
	Unlisted-See-Comments OWth on Reef (Cl Algae Anemone Barnacles Bivalves Coral-Colorful-Sea-Whip Coral-Hard-Unkown Coral-Gorgonian Coral-Occulina Coral-White-Telesto	ich	1-25% 1-25% 1-25% 1-25% 1-25% 1-25% 1-25% 1-25%		26-50° 26-50° 26-50° 26-50° 26-50° 26-50° 26-50° 26-50°	oer (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	-link 51-7 51-7 51-7 51-7 51-7 51-7 51-7	s b 5% 5% 5% 5% 5% 5% 5% 5%		1+ Ler  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%  76-100%	identific  Size (inches  Size (inches	ation)	Describe Describe Describe Describe Describe Describe Describe Describe Describe	

	Unlisted-See-Comments	0	1-25%	$\circ$	26-509	6 (	51-759	% (	76-100	0%	Size (inches	s)	Describe	
	Unlisted-See-Comments	$\circ$	1-25%	$\circ$	26-509	6 (	51-759	% (	76-100	0%	Size (inches	s)	Describe	
	Unlisted-See-Comments	$\circ$	1-25%	$\circ$	26-50%	6 (	51-759	% (	76-100	0%	Size (inches	s)	Describe	
ln۷	Invertebrates at Reef (Click on the hyper-links below for identification)													
	Cowry-?	0	1	$\circ$	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Cowry-?	0	1	$\circ$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
	Cowry-?	0	1	$\bigcirc$	2-10	0	11-100	$\circ$	101+	Size	(inches)		Comments	
	<u>Crab-Hermit</u>	0	1	$\circ$	2-10	0	11-100	$\circ$	101+	Size	(inches)		Comments	
<b>✓</b>	<u>Crab-Yellowline-Arrow</u>	0	1	•	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Crab?	0	1	$\bigcirc$	2-10	0	11-100	$\circ$	101+	Size	(inches)		Comments	
	Crab?	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	<u>Lobster-Shovelnose</u>	$\bigcirc$	1	$\bigcirc$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
	<u>Octopus</u>	0	1	$\bigcirc$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
<b>✓</b>	Sea-Cucumber	•	1	$\bigcirc$	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	<u>Sea-Slug</u>	0	1	$\bigcirc$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
<b>✓</b>	<u>Sea-Star</u>	0	1	•	2-10	0	11-100	0	101+	Size	(inches)		Comments	
<b>✓</b>	<u>Sea-Urchin</u>	0	1	$\bigcirc$	2-10	•	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
	Shrimp-?	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Shrimp-?	$\circ$	1	$\circ$	2-10	$\circ$	11-100	0	101+	Size	(inches)		Comments	
	Snail-Florida-Horse- Conch	0	1	0	2-10	0	11-100	$\circ$	101+	Size	(inches)		Comments	
	Snail-?	0	1	0	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Snail-?	0	1	0	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Unlisted-See-Comments	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Size	(inches)		Comments	
	Unlisted-See-Comments	0	1	$\bigcirc$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
	Unlisted-See-Comments	0	1	0	2-10	0	11-100	$\circ$	101+	Size	(inches)		Comments	
	Unlisted-See-Comments	0	1	$\circ$	2-10	0	11-100	$\bigcirc$	101+	Size	(inches)		Comments	
	Unlisted-See-Comments	0	1	$\bigcirc$	2-10	0	11-100	0	101+	Size	(inches)		Comments	

Turtles and	Air Brea	athers/	Mamm	nals (Clic	k on the	hyper-link	s below	v for ider	ntification)			
Dolphin?		O 1	<u> </u>	<u> </u>	O 101+	Length (inches)		Comments				
Turtle-Logger	<u>head</u>	O 1	O 2-10	O 11-100	O 101+	Size (inches)		Comments				
Turtle?		O 1	<u> </u>	<u> </u>	O 101+	Size (inches)		Comments				
Whale?		O 1	O 2-10	<u> </u>	O 101+	Size (inches)		Comments				
Unlisted-See-C	Comments	O 1	<u> </u>	<u> </u>	O 101+	Size (inches)		Comments				
☑ Other Ob	☑ Other Observations/Photos:											
Observations F	Primary obje	ective was	Lionfish re	moval.								
L												
Photos? Yes	Attached?	Yes										
Video? No	. L							Pri	nt Form			



lmage Field







Image Field



Image Field



Image Field





Image Field Image Field





Image Field Image Field



Image Field Image Field

Image Field Image Field