



**Citation**

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DRM Database Metadata

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Data Field	Year collected	Currently collected?	Metadata
Batch	ALL	Y	Batch identifies the survey event. There are 23 total batches with 17 late summer surveys, 4 winter surveys, 1 post-cold water event survey in May of 2010, and one hurricane response event in October of 2017.
			Batch Identifiers use 'A', 'B', and 'C' to distinguish different surveys within the same year.
			<u>Batch number / Batch Identifier / Survey Months</u>
			1 / 2005 / (Aug-Sep)
			2 / 2006A / (Jan-Mar) - Post bleaching winter survey (Not included this report)
			3 / 2006B / (Aug-Oct)
			4 / 2007 / (Aug-Oct)
			5 / 2008 / (Aug-Nov)
			6 / 2009 / (Aug-Nov)
			7 / 2010A / (Jan-Feb) - Cold water event survey (Not included this report)
			8 / 2010B / (May) - Post cold water event survey (Not included this report)
			9 / 2010C / (Aug-Sep)
			10 / 2011 / (Aug-Sep)
			11 / 2012 / (Aug-Sep)
			12 / 2013 / (Sep-Oct)
			13 / 2014 / (Sep-Oct)
			14 / 2015A / (Feb) - Post bleaching winter survey (Not included this report)
			15 / 2015B / (Jul-Oct)
			16 / 2016A / (Feb-Mar) - Post bleaching winter survey (Not included this report)
			17 / 2016B / (Sep-Oct)
			18 / 2017A / (Aug-Oct) - Low number of surveyed sites due to Hurricane IRMA
			19 / 2017B / (Oct) - IRMA Rapid Response Research Cruise (Not included this report)
			20 / 2018 / (Aug-Oct)
			21 / 2019 / (Aug-Oct)
			22 / 2020 / (Aug-Sep)
			23 / 2021 / (Aug-Nov)
			24 / 2022 / (Aug-Nov)
Site	ALL	Y	Alphabetical Batch-identifier ("A" in 2005 to "W" in 2022) followed by a four digit numerical code for each site. Example (B1120)
			1000 numbers = Primary sample sites
			2000 numbers = Secondary or "backup" sites when a primary site is not appropriate habitat or the secondary site is more convenient.

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Data Field	Year collected	Currently collected?	Metadata
Site Cont.			3000 numbers = Strategic Sites or sites that were not included the original list of assigned sites and the location was chosen in the field.
			####-2 numbers = Sample sites that were duplicate numbers in the same Batch dataset and had to be assigned a "-2" to differentiate them from one another (i.e. 1035-2).
			2017B-IRMA sites are not included in this report. These sites were also not randomly selected but still utilize 1000s and 2000s. These sites were sampled in October 2017 during a research cruise to document hurricane impacts. This effort only sampled sites in the Florida Keys. For more information on this effort, contact Jennifer Stein (Jennifer.Stein@MyFWC.com).
			All sites where "MQ" is included in the name were collected in the Marquesas subregion. MQ-#### (surveyed in 2019), MQ20-#### (surveyed in 2020), MQ21-#### (surveyed in 2021), MQ22-#### (surveyed in 2022). Due to the lack of benthic habitat data in the Marquesas, these sites were pre-selected based on known coral habitat and were not apart of the stratified random sample draw.
Transect	ALL	Y	Unique value given to each new transect within the entire dataset. The unique values continue sequentially with each new survey event.
			Transect dimensions: 1m width x 10m length = 10m <sup>2</sup> .
			Total transects per site – From 2005-2019, two belt transects were surveyed for all coral species ≥ 4cm. From 2020-2022, four belt transects were surveyed where two transects (transects 1 and 2) were surveyed for all coral species ≥ 4cm and the remaining two transects (transects 3 and 4) only 10 targeted coral species ≥ 4cm were surveyed.
			The 10 targeted coral species are those known to be susceptible to SCTLD. Data from Transects 3 and 4 are not included in this report. Those ten coral species are as follows: <i>Colpopyllia natans</i> , <i>Dichocoenia stokesii</i> , <i>Diploria labyrinthiformis</i> , <i>Meandrina meandrites</i> , <i>Mussa angulosa</i> , <i>Mycetophyllia aliciae</i> , <i>M. ferox</i> , <i>M. lamarckiana</i> , <i>Pseudodiploria clivosa</i> , <i>P. strigosa</i> .
			Data from Transects 3 and 4 is not included in this report since it only targets 10 coral species and should not be analyzed with all species data from Transects 1 and 2. To obtain data from Transects 3 and 4 please email Jennifer.Stein@myfwc.com.
If one transect is missing from the dataset, it is due to no corals ≥ 4cm (excluding <i>Millipora</i> spp.) observed on the missing transect. However, since the transect was surveyed, the survey area should reflect 20m <sup>2</sup> per site (two belt transects) or 40m <sup>2</sup> (four belt transects for only the 10 target species).			
Date	ALL	Y	Date of survey. (MM/DD/YYYY)

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Data Field	Year collected	Currently collected?	Metadata
Latitude	ALL	Y	Decimal Degrees. The coordinates may change from those originally assigned to a sample site if a surveyor chooses to move the location to appropriate habitat.
Longitude	ALL	Y	Decimal Degrees. The coordinates may change from those originally assigned to a sample site if a surveyor chooses to move the location to appropriate habitat.
			NOTE: If the location of the survey is moved farther than 25 meters from the original sample location, the new survey site will be assigned a Strategic Site number by the online data entry system (3000's).
Depth	ALL	Y	Depth of transect in feet.
			NOTE: From 2005-2017 two depth measurements were collected along each transect at a site. Starting in 2018, it was reduced to only one measurement per transect.
			The depth values in this report from 2005-2017 are a single measurement and not an average of both.
Subregion	ALL	Y	Latitudinal framework to divide up the reef for surveying.
			For analysis or reporting purposes, data from select subregions are often merged to provide a more broad scale representation of the data. Subregions typically merged: North Palm Beach and South Palm Beach; Deerfield, Broward, and Broward Miami; Upper Keys and Mid-Upper Keys Transition.
			<u>Subregion / Years Surveyed / Notes</u>
			<u>Martin</u> / 2005, 2006, 2008-2012, 2014-2016, 2020, 2021, 2022
			<u>Palm Beach</u> / 2005-2013 / Starting in 2014, the Palm Beach Subregion was divided into North Palm Beach and South Palm Beach Subregions.
			<u>North Palm Beach</u> / 2014, 2019-2022 / Starting in 2014, the Palm Beach Subregion was divided into North Palm Beach and South Palm Beach Subregions.
			<u>South Palm Beach</u> / 2014-2016, 2018-2022 / Starting in 2014, the Palm Beach Subregion was divided into North Palm Beach and South Palm Beach Subregions.
			<u>Deerfield</u> / 2014-2016, 2019, 2022 / Starting in 2014, the Deerfield Subregion was split from the Broward Subregion to become its own Subregion.
			<u>Broward</u> / 2005-2013 / Starting in 2014, the Broward Subregion was merged with Miami to become the Broward-Miami Subregion.
			<u>Broward-Miami</u> / 2014-2022 / Starting in 2014, the Broward Subregion was merged with Miami to become the Broward-Miami Subregion.
			<u>Biscayne</u> / 2005-2022
			<u>Upper Keys</u> / 2005-2022 / Starting in 2017, the Upper Keys was divided into Upper Keys and Middle-Upper Keys Transition.

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Data Field	Year collected	Currently collected?	Metadata
Subregions Cont.			<u>Mid-Upper Keys Transition</u> / 2017-2022 / Starting in 2017, the Upper Keys was divided into Upper Keys and Middle-Upper Keys Transition.
			<u>Middle Keys</u> / 2005-2022
			<u>Lower Keys</u> / 2005-2022
			<u>Marquesas</u> / 2007, 2019-2022
			<u>Tortugas--Dry Tortugas NP</u> / 2007, 2009, 2011, 2012, 2014-2022 / DRM surveys in the Dry Tortugas area started in 2007.
			<u>Tortugas--Tortugas Bank</u> / 2007 / Only surveyed in 2007.
Zone	ALL	Y	Cross-shelf framework to divide up the reef for surveying. Zones are based on distance from shore and depth.
Habitat	ALL	Y	Habitat distinction within the Subregion and Zones.  The below is not a complete list of Habitats listed in the data but are the most commonly surveyed. If you have any questions about Habitat distinctions, please contact Jennifer.Stein@MyFWC.com.
			<u>Code and Habitat Description</u>
			CONT_HR = Contiguous reef, high relief
			CONT_LR = Contiguous reef, low relief
			CONT_MR = Contiguous reef, moderate relief
			CPDP_LR = Colonized pavement, deep, low relief
			CPSH_HR = Colonized pavement, shallow, high relief
			CPSH_LR = Colonized pavement, shallow, low relief
			ISOL_HR = Isolated reef structures, high relief
			ISOL_LR = Isolated reef structures, low relief
			ISOL_MR = Isolated reef structures, moderate relief
			LIRI_HR = Linear reef, inner reef line, high relief
			LIRI_LR = Linear reef, inner reef line, low relief
			LIRM_HR = Linear reef, middle reef line, high relief
			LIRM_LR = Linear reef, middle reef line, low relief
			LIRO_HR = Linear reef, outer reef line, high relief
			LIRO_LR = Linear reef, outer reef line, low relief
			OTHR_NA = Other non-reef habitat
			PTDP_HR = Patch reefs, deep, high relief
			PTDP_LR = Patch reefs, deep, low relief
			PTSH_HR = Patch reefs, shallow, high relief
			PTSH_LR = Patch reefs, shallow, low relief
			RGDP_HR = Reef ridge, deep, high relief
			RGSH_HR = Reef ridge, shallow, high relief
			RGSH_LR = Reef ridge, shallow, low relief
			RUBB_LR = Reef rubble, low relief
			SAND_NA = Sand
			SGRS_NA = Seagrass
			SPGR_HR = Spur-groove reef, high relief
			SPGR_LR = Spur-groove reef, low relief
			UCHB_LR = Unconsolidated hardbottom, low relief
			UNCR_UN = Unclassified reef

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Data Field	Year collected	Currently collected?	Metadata
			UNDF_UN = Undefined, unknown
Species	ALL	Y	Four letter code to identify coral species. First letter = First letter of Genus, Following letters = First three letters of Species. If Species is unknown, the four digit code will be the first four letters of the Genus.
			The species codes are listed separately at the end of this document 'Coral Species Code'
			NOTE: Starting in 2018, <i>Millepora</i> spp. were no longer recorded during DRM surveys and are not included in this report.
			During the 2020, 2021, and 2022 survey events, four belt transects were completed at each site. Along Transects 3 and 4, only ten species were targeted. Those species are outlined in the 'Transect' section of this metadata report.
Width	ALL	Y	Maximum diameter of coral colony from a planar view. Measured in centimeters. Only corals $\geq 4$ cm are included in this report.
Height	ALL	Y	Maximum perpendicular measurement (height) of coral colony. Measured in centimeters. NULL = No Entry. Only corals $\geq 4$ cm are included in this report.
Bleaching	ALL	Y	Identifies symptoms of stress that results in loss of coral tissue color.
			<u>Codes and Descriptions</u>
			(P) = Pale (Tissue color is lighter than normal healthy tissue)
			(PB) = Partially Bleached (Portions of the coral have a complete loss of color)
			(BL) = Bleached (100% of coral tissue has lost its color and appears white)
Old Mort 'Old'	ALL	Y	Percent of the coral colony that has died and is covered with turf algae or macroalgae.
Total RM 'Recent'	2005-2017	N	Percent of the coral colony with recent mortality that has not been colonized by turf algae, macroalgae or other organisms. For 2018-2022, this value is the sum of 'Other Recent Mortality' and 'Disease Recent Mortality'.
Other RM 'oPercRecMort'	2018-2022	Y	Percent of the coral colony with recent mortality not from disease that has not been colonized by turf algae, macroalgae or other organisms. Other causes of recent mortality may be biotic or abiotic. Prior to 2018 values are NULL.
Dis RM 'dPercRecMort'	2018-2022	Y	Percent of the coral colony with recent mortality from disease that has not been colonized by turf algae, macroalgae or other organisms. Prior to 2018 values are NULL.
TL Pattern	2018, 2019	N	If recent mortality from disease is observed, the surveyor will describe the pattern of the lesion(s).
			<u>Codes and Descriptions</u>
			(F) = Focal (lesion originating from one location)
			(MF) = Multifocal (lesions originating from more than one location)
			(D) = Diffuse (tissue loss has no distinct origin and irregular tissue loss margins)

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Data Field	Year collected	Currently collected?	Metadata
TL Rate	2018-2022	Y	<p>If recent mortality from disease is observed, the surveyor will describe the rate of tissue loss of the lesion(s).</p> <p><u>Codes and Descriptions</u></p> <p>(Fast) = Area of recent mortality from disease is &gt; 1cm in width.</p> <p>(Slow) = Area of recent mortality from disease is &lt; 1cm in width.</p>
Disease Conditions	ALL	Y	<p>From 2005-2017 this field was called 'Disease'. Starting in 2018 this field was renamed 'Disease Conditions' where more than one condition could be added. These columns were combined for this report.</p> <p>If recent mortality from disease is observed, the surveyor will describe it as an unknown or known coral disease(s).</p> <p><u>Codes and Disease Descriptions</u></p> <p>(UNK) = Unknown Coral Disease (NOTE: In 2018, corals observed with the disease outbreak were recorded as UNK since the pathogen was and still is unknown.)</p> <p>(STL) = Stony Coral Tissue Loss Disease (Added in 2019)</p> <p>(WPL) = White Plague</p> <p>(WBD) = White Band Disease (NOTE: Only observed on Acroporid spp.)</p> <p>(WPX) = White Pox (NOTE: Only observed on Acroporid spp.)</p> <p>(RTL) = Rapid Tissue Loss (NOTE: Only observed on Acroporid spp.)</p> <p>(DSD) = Dark Spot Disease</p> <p>(YB) = Yellow Band Disease</p> <p>(BB/RB) = Black Band / Red Band Disease</p> <p>(DC) = Discolored (NOTE: Added in 2018. This code is used when there is a discoloration of the coral tissue caused by disease or in association with a disease lesion.)</p>
Other Conditions	2018-2022	Y	<p>Other biotic or abiotic conditions that cause recent mortality.</p> <p><u>Codes and Condition Descriptions</u></p> <p>(PRD) = Predation</p> <p>(OGI) = Overgrowth and interaction</p> <p>(ABR) = Abrasion</p> <p>(SC) = Sediment Cover</p> <p>(CLN) = Clionid sp.</p> <p>(MUC) = Mucus sheathing (NOTE: Added in 2018. Mucus sheathing may not cause recent mortality but can be documented in the 'Other Condition(s)' field.)</p> <p>(OUK) = Other Unknown Condition</p>

**The below data fields are not included in this report**

**To obtain data from fields listed below, please contact Jennifer Stein (Jennifer.Stein@MyFWC.com).**

Surveyor	ALL	Y	Primary data collector for a transect.
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Shared	ALL	Y	Did the primary data collector for a transect have help from another surveyor? If so, the other surveyor will need to enter data for that transect or allow the primary surveyor to enter their data for them.
Buddy	ALL	Y	Dive buddy for the primary surveyor
Habitat Type "fhabitat"	2018-2022	Y	fhabitat = field habitat. One of four distinctions identified by the surveyor underwater to help in refining the grid file for better site allocation in future surveys.
			NOTE: This field contains different habitat identifiers than the 'Habitat' field described above.
			Isolated Reef
			Reef Rubble
			Contiguous Reef Other
			Contiguous Reef Spur and Grove
Rugosity Msmts 1 - 10	2018-2022	Y	Ten rugosity measurements are collected along transects 1 and 2. One rugosity measurement is collected within each square meter of a transect. Measurements are in centimeters. Rugosity measurements are only collected along Transects 1 and 2 and not on Transects 3 and 4.
Diadema Present	2006-2021	N	Presence / absence of Diadema in the visible area surrounding your transect. Starting in 2022 the presence / absence of Diadema was split into two categories (healthy and diseased) in response to a large die-off reported throughout the Caribbean and Florida.
H.Diad	2022	Y	Presence / absence of Healthy Diadema in the visible area surrounding your transect.
D.Diad	2022	Y	Presence / absence of Diseased (sick or dying) Diadema in the visible area surrounding your transect.
<i>Acropora</i> spp. Present	2006-2018	N	Presence / absence of <i>Acropora</i> spp. in the visible area surrounding your transect.
ACER Present	2018-2022	Y	Presence / absence of <i>Acropora cervicornis</i> in the visible area surrounding your transect.
APAL Present	2018-2022	Y	Presence / absence of <i>Acropora palmata</i> in the visible area surrounding your transect.
DCYL Present	2006-2022	Y	Presence / absence of <i>Dendrogyra cylindricus</i> in the visible area surrounding your transect.
MALC - NB, P, PB, BL - Count	2015-2017	N	Starting in 2015, <i>Millepora</i> spp. were tallied in one of the four bleaching categories. Prior to 2015, <i>Millepora</i> spp. were recorded and measured the same as all other coral species within the belt transects. In 2018, recording <i>Millepora</i> spp. were eliminated from the survey.
			NB = <i>Millepora</i> spp. was not bleached.
			P = <i>Millepora</i> spp. was pale.
			PB = <i>Millepora</i> spp. was partially bleached.
			BL = <i>Millepora</i> spp. was fully bleached.

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Isolates	2005-2017	N	The number of isolated areas of live tissue on a single colony separated by old mortality. NOTE: Starting in 2018, this data was no longer collected.
Impacts	2017 only	N	This field was added in 2017 to document impacts from Hurricane Irma. This data is not included in the query.
			<u>Codes and Impact Descriptions</u>
			(A) = Abrasion
			(D) = Dislodged
			(B) = Broken
			(S) = Sediment Cover
Comments	2005-2022	Y	Surveyor could provide additional information on a coral colony.
Juv. Coral Abundance (3 Families and MCAV)	2020-2022	Y	Starting in 2020, juvenile coral abundances of three target families was collected along four belt transects (1, 2, 3, 4). The three target families are as follows: Mussinae, Faviinae, and Meandrinidae. The species <i>Montastraea cavernosa</i> was added to the juvenile coral tally in 2022.
			These three coral families and <i>Montastraea cavernosa</i> are known to be susceptible to SCTLD.
			Please contact Jennifer.Stein@myfwc.com for more information.
<b>Below are the species listed in the database</b>			
<b>Coral Species Codes (Former names are not used in the DRM database)</b>			
Coral Species Codes	ACER = Acropora cervicornis		
	APAL = Acropora palmata		
	APRO = Acropora prolifera		
	ACRO = Acropora sp.		
	AAGA = Agaricia agaricites (Former name: Undaria agaricites)		
	AFRA = Agaricia fragilis		
	AGRA = Agaricia grahamae		
	AHUM = Agaricia humilis (Former name: Undaria humilis)		
	ALAM = Agaricia lamarcki		
	AGAR = Agaricia sp.		
	ATEN = Agaricia tenuifolia (Former name: Undaria tenuifolia)		
	AUND = Agaricia undata		
	CARB = Cladacora arbuscula		
	CNAT = Colpophyllia natans		
	DCYL = Dendrogyra cylindrus		
	DSTO = Dichocoenia stokesi		
	DLAB = Diploria labyrinthiformis		
	DIPL = Diploria sp.		
	EFAS = Eusmilia fastigiata		
	FFRA = Favia fragum		
	HCUC = Helioseris cucullata (Former name: Leptoseris cucullata)		
	IRIG = Isophyllia rigida (Former name: Isophyllastraea rigida)		
	ISIN = Isophyllia sinuosa		
	ISOP = Isophyllia sp.		

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Data Field	Year collected	Currently collected?	Metadata
Spp. Codes cont.			MAUR = <i>Madracis auretenra</i> (Former name: <i>Madracis mirabilis</i> )
			MDEC = <i>Madracis decactis</i>
			MFOR = <i>Madracis formosa</i>
			MPHA = <i>Madracis pharensis</i>
			MSEN = <i>Madracis senaria</i>
			MADR = <i>Madracis</i> sp.
			MARE = <i>Manicina areolata</i>
			MJAC = <i>Meandrina jacksoni</i>
			MMEA = <i>Meandrina meandrites</i>
			MEAN = <i>Meandrina</i> sp.
			MALC = <i>Millepora alcicornis</i> (Not included in this report)
			MCOM = <i>Millepora complanata</i> (Not included in this report)
			MILL = <i>Millepora</i> sp. (Not included in this report)
			MCAV = <i>Montastraea cavernosa</i>
			MANG = <i>Mussa angulosa</i>
			MALI = <i>Mycetophyllia aliciae</i>
			MFER = <i>Mycetophyllia ferox</i>
			MLAM = <i>Mycetophyllia lamarckiana</i> (Includes former: <i>Mycetophyllia danaana</i> )
			MYCE = <i>Mycetophyllia</i> sp.
			ODIF = <i>Oculina diffusa</i>
			OCUL = <i>Oculina</i> sp.
			OVAR = <i>Oculina varicosa</i>
			OANN = <i>Orbicella annularis</i> (Former name: <i>Montastrea annularis</i> )
			OFAV = <i>Orbicella faveolata</i> (Former name: <i>Montastrea faveolata</i> )
			OFRA = <i>Orbicella franksi</i> (Former name: <i>Montastrea franksi</i> )
			ORBI = <i>Orbicella</i> sp.
			PAME = <i>Phyllangia americana</i>
			PAST = <i>Porites astreoides</i>
			PBRA = <i>Porites</i> cf. <i>branneri</i>
			PDIV = <i>Porites divaricata</i>
			PFUR = <i>Porites furcata</i>
			PPOR = <i>Porites porites</i>
			PORI = <i>Porites</i> sp.
			PCLI = <i>Pseudodiploria clivosa</i> (Former name: <i>Diploria clivosa</i> )
			PSEU = <i>Pseudodiploria</i> sp.
			PSTR = <i>Pseudodiploria strigosa</i> (Former name: <i>Diploria strigosa</i> )
			SCUB = <i>Scolymia cubensis</i>
			SLAC = <i>Scolymia lacera</i>
			SCOL = <i>Scolymia</i> sp.
			SWEL = <i>Scolymia wellsii</i>
			SRAD = <i>Siderastrea radians</i>
			SSID = <i>Siderastrea siderea</i>

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Spp. Codes cont.			SIDE = Siderastrea sp.
			SBOU = Solenastrea bournoni
			SHYA = Solenastrea hyades
			SOLE = Solenastrea sp.
			SINT = Stephanocoenia intersepta (Former name: Stephanocoenia michelinii)
			UNKN = Unknown species