

NATIONAL WEATHER SERVICE INSTRUCTION 10-605

SEPTEMBER 9, 2016

Operations and Services

Tropical Cyclone Weather Services Program, NWSPD 10-6

TROPICAL CYCLONE OFFICIAL GEOGRAPHIC DEFINING POINTS

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

OPR: W/AFS26 (M. Dion)

Certified by: W/AFS2 (E. Jacks)

Type of Issuance: Routine

SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-605, *Tropical Cyclone Official Geographic Defining Points*, dated September 14, 2014. Changes made to reflect the NWS Headquarters reorganization effective April 1, 2015

The following revisions were made to this directive:

WFO Corpus Christi – Added Mesquite Bay breakpoint.

WFO Jacksonville – Added Marineland, Saint Andrews Sound, Crescent Beach, and Nassau Sound breakpoints. Moved Flagler Beach breakpoint to Flagler / Volusia County Line.

WFO San Diego – Changed name and location of San Mateo Point breakpoint to San Onofre State Beach.

Signed

8/26/2016

Andrew D. Stern
Director, Analyze, Forecast
and Support Office

Date

**OFFICIAL DEFINING POINTS FOR TROPICAL CYCLONE
WATCHES AND WARNINGS**

*An asterisk following a breakpoint indicates the use of the breakpoint includes land areas adjacent to the body of water.

Mexico

La Pesca, MX.....	23.76°N	.....	97.78°W
Rio San Fernando, MX.....	25.00°N	.....	97.60°W

Brownsville, TX

Mouth of the Rio Grande, TX.....	25.96°N	.....	97.15°W
Port Mansfield, TX.....	26.59°N	.....	97.29°W
Baffin Bay, TX.....	27.29°N	.....	97.37°W

Corpus Christi, TX

Baffin Bay, TX.....	27.29°N	.....	97.37°W
North Entrance of the Padre Island National Seashore, TX	27.47°N	.....	97.29°W
Port Aransas, TX.....	27.83°N	.....	97.07°W
Mesquite Bay, TX.....	28.06°N	.....	96.85°W
Port O'Connor, TX.....	28.39°N	.....	96.41°W

Houston / Galveston, TX

Port O'Connor, TX.....	28.39°N	.....	96.41°W
Matagorda, TX.....	28.63°N	.....	95.93°W
Sargent, TX.....	28.77°N	.....	95.60°W
Freeport, TX.....	28.93°N	.....	95.33°W
San Luis Pass, TX.....	29.07°N	.....	95.13°W
Port Bolivar, TX.....	29.38°N	.....	94.76°W
High Island, TX.....	29.54°N	.....	94.39°W

Lake Charles, LA

High Island, TX.....	29.54°N	.....	94.39°W
Sabine Pass, TX.....	29.69°N	.....	93.84°W
Cameron, LA.....	29.78°N	.....	93.30°W
Intracoastal City, LA.....	29.62°N	.....	92.04°W
Morgan City, LA.....	29.48°N	.....	91.29°W

New Orleans / Baton Rouge, LA

Morgan City, LA.....	29.48°N	.....	91.29°W
Grand Isle, LA.....	29.25°N	.....	89.96°W
Mouth of Mississippi River, LA.....	29.12°N	.....	89.10°W
Mouth of Pearl River, LA.....	30.15°N	.....	89.60°W
Lake Pontchartrain, LA*.....	30.20°N	.....	90.13°W
Lake Maurepas, LA*.....	30.25°N	.....	90.50°W
Pascagoula, MS.....	30.35°N	.....	88.55°W
MS / AL Border.....	30.40°N	.....	88.40°W

Mobile, AL

MS / AL Border.....	30.40°N	.....	88.40°W
AL / FL Border.....	30.27°N	.....	87.55°W
Destin, FL.....	30.39°N	.....	86.50°W

Tallahassee, FL

Destin, FL	30.39°N	86.50°W
Walton / Bay County Line, FL	30.28°N	85.98°W
Panama City, FL	30.12°N	85.70°W
Mexico Beach, FL.....	29.93°N	85.39°W
Indian Pass, FL.....	29.68°N	85.27°W
Apalachicola, FL.....	29.73°N	84.99°W
Ochlocknee River, FL.....	29.96°N	84.38°W
St. Marks, FL	30.10°N	84.20°W
Aucilla River, FL	30.09°N	83.99°W
Keaton Beach, FL	29.82°N	83.59°W
Steinhatchee River, FL.....	29.67°N	83.40°W
Suwannee River, FL.....	29.30°N	83.17°W

Tampa Bay Area, FL

Suwannee River, FL.....	29.30°N	83.17°W
Yankeetown, FL.....	29.03°N	82.75°W
Chassahowitzka, FL.....	28.70°N	82.65°W
Aripeka, FL	28.43°N	82.66°W
Anclote River, FL	28.18°N	82.80°W
Anna Maria Island, FL.....	27.53°N	82.73°W
Middle of Longboat Key, FL	27.39°N	82.64°W
Englewood, FL	26.94°N	82.37°W
Boca Grande, FL	26.75°N	82.26°W
Bonita Beach, FL	26.32°N	81.84°W

Miami, FL (Gulf)

Bonita Beach, FL	26.32°N	81.84°W
Chokoloskee, FL.....	25.78°N	81.38°W
East Cape Sable, FL.....	25.12°N	81.08°W
Flamingo, FL.....	25.14°N	80.93°W

Key West, FL (Gulf)

Flamingo, FL.....	25.14°N	80.93°W
Dry Tortugas, FL	24.66°N	82.86°W
Key West, FL	24.55°N	81.81°W
Seven Mile Bridge, FL.....	24.70°N	81.15°W
Craig Key, FL	24.83°N	80.77°W
Card Sound Bridge, FL.....	25.29°N	80.37°W
Ocean Reef, FL	25.33°N	80.26°W

Miami, FL (Atlantic)

Ocean Reef, FL.....	25.33°N	80.26°W
Golden Beach, FL	25.97°N	80.12°W
Hallandale Beach, FL.....	25.99°N	80.12°W
Deerfield Beach, FL.....	26.32°N	80.07°W
Boca Raton, FL	26.36°N	80.07°W
Jupiter Inlet, FL.....	26.95°N	80.07°W

San Juan, PR

Puerto Rico.....	18.22°N	66.44°W
Vieques	18.12°N	65.43°W
Culebra.....	18.32°N	65.28°W

Saint Thomas / Saint John	18.33°N	64.85°W
Saint Croix	17.74°N	64.73°W
Melbourne, FL		
Jupiter Inlet, FL.....	26.95°N	80.07°W
Stuart, FL	27.21°N	80.18°W
Fort Pierce, FL	27.46°N	80.28°W
Vero Beach, FL.....	27.65°N	80.35°W
Sebastian Inlet, FL	27.83°N	80.43°W
Cocoa Beach, FL.....	28.32°N	80.61°W
Volusia / Brevard County Line	28.79°N	80.73°W
New Smyrna Beach, FL.....	29.03°N	80.89°W
Jacksonville, FL		
Flagler / Volusia County Line	29.43°N	81.11°W
Marineland, FL	29.67°N	81.21°W
Crescent Beach, FL.....	29.77°N	81.25°W
St. Augustine, FL	29.88°N	81.27°W
Ponte Vedra Beach, FL.....	30.24°N	81.38°W
Nassau Sound, FL	30.51°N	81.43°W
Fernandina Beach, FL.....	30.66°N	81.44°W
Saint Andrews Sound, FL/GA	30.99°N	81.42°W
Altamaha Sound, GA	31.29°N	81.29°W
Charleston, SC		
Altamaha Sound, GA	31.29°N	81.29°W
Savannah River, GA	32.03°N	80.86°W
Edisto Beach, SC	32.49°N	80.32°W
South Santee River, SC.....	33.12°N	79.27°W
Wilmington, NC		
South Santee River, SC.....	33.12°N	79.27°W
Murrells Inlet, SC.....	33.56°N	79.01°W
Little River Inlet, SC.....	33.85°N	78.55°W
Cape Fear, NC.....	33.84°N	77.96°W
Surf City, NC	34.44°N	77.52°W
Newport / Morehead City, NC		
Surf City, NC	34.44°N	77.52°W
New River Inlet, NC	34.53°N	77.34°W
Bogue Inlet, NC	34.64°N	77.11°W
Cape Lookout, NC	34.60°N	76.53°W
Ocracoke Inlet, NC	35.06°N	76.00°W
Cape Hatteras, NC	35.22°N	75.53°W
Oregon Inlet, NC.....	35.77°N	75.53°W
North Pamlico Sound, NC*.....	35.26°N	76.04°W
South Pamlico Sound, NC*	35.24°N	76.04°W
Pamlico Sound, NC*	35.35°N	75.85°W
Albemarle Sound, NC*	36.05°N	76.10°W
East Albemarle Sound, NC*.....	36.05°N	75.90°W
Duck, NC.....	36.23°N	75.77°W

Wakefield, VA

(The inclusion of Currituck Sound, NC, should be on a case-by-case basis).

Duck, NC.....	36.23°N	75.77°W
NC / VA Border.....	36.55°N	75.87°W
Cape Charles Light, VA.....	37.12°N	75.90°W
Parramore Island, VA.....	37.52°N	75.64°W
Chincoteague, VA.....	37.93°N	75.32°W
Chesapeake Bay, New Point Comfort, VA.....	37.30°N	76.28°W
Chesapeake Bay, Windmill Point, VA.....	37.61°N	76.28°W
Chesapeake Bay, Smith Point, VA.....	37.89°N	76.24°W
Fenwick Island, DE.....	38.46°N	75.05°W

Baltimore / Washington (Sterling, VA)

Chesapeake Bay, Smith Point, VA.....	37.89°N	76.24°W
Tidal Potomac, Cobb Island, MD.....	38.26°N	76.84°W
Tidal Potomac, Indian Head, MD.....	38.61°N	77.15°W
Tidal Potomac, Key Bridge, MD.....	38.89°N	77.07°W
Chesapeake Bay, Drum Point, MD.....	38.32°N	76.42°W
Chesapeake Bay, North Beach, MD.....	38.70°N	76.53°W
Chesapeake Bay, Sandy Point, MD.....	39.02°N	76.40°W
Chesapeake Bay, Pooles Island, MD.....	39.29°N	76.27°W

Philadelphia / Mt. Holly, NJ

Fenwick Island, DE.....	38.46°N	75.05°W
Cape Henlopen, DE.....	38.80°N	75.09°W
Delaware Bay South*.....	38.95°N	75.10°W
Delaware Bay North*.....	39.10°N	75.25°W
Cape May, NJ.....	38.94°N	74.90°W
Great Egg Inlet, NJ.....	39.29°N	74.54°W
Little Egg Inlet, NJ.....	39.49°N	74.31°W
Manasquan Inlet, NJ.....	40.10°N	74.03°W
Sandy Hook, NJ.....	40.46°N	74.00°W

New York City / Upton, NY

Sandy Hook, NJ.....	40.46°N	74.00°W
East Rockaway Inlet, NY.....	40.58°W	73.75°W
Fire Island Inlet, LI, NY.....	40.63°N	73.31°W
Moriches Inlet, LI, NY.....	40.77°N	72.75°W
Montauk Point, LI, NY.....	41.07°N	71.86°W
Port Jefferson Harbor, LI, NY.....	40.96°N	73.08°W

New Haven, CT	41.30°N	72.91°W	
Watch Hill, RI.....	41.31°N	71.86°W	
Boston / Taunton, MA			
Block Island, RI	41.16°N	71.56°W	
Martha's Vineyard, MA.....	41.38°N	70.63°W	
Nantucket, MA.....	41.27°N	70.04°W	
Watch Hill, RI.....	41.31°N	71.86°W	
Point Judith, RI	41.35°N	71.49°W	
Westport, MA	41.50°N	71.11°W	
Woods Hole, MA.....	41.52°N	70.68°W	
Chatham, MA.....	41.67°N	69.95°W	
Provincetown, MA.....	42.06°N	70.25°W	
Sagamore Beach, MA	41.80°N	70.53°W	
Plymouth, MA.....	41.98°N	70.65°W	
.....Plymouth is only used as a southern terminus.			
Hull, MA.....	42.30°N	70.91°W	
Gloucester, MA.....	42.58°N	70.66°W	
Merrimack River, MA	42.84°N	70.82°W	
Portland / Gray, ME			
Merrimack River, MA	42.81°N	70.82°W	
Portsmouth, NH	43.05°N	70.72°W	
Cape Elizabeth, ME	43.56°N	70.19°W	
Port Clyde, ME	43.92°N	69.25°W	
Stonington, ME.....	44.16°N	68.64°W	
Caribou, ME			
Stonington, ME.....	44.16°N	68.67°W	
Bar Harbor, ME	44.39°N	68.20°W	
Eastport, ME	44.92°N	67.00°W	San Diego, CA
Mouth of Tijuana River, CA.....	32.53°N	117.12°W	
San Onofre State Beach, CA.....	33.39°N	117.59°W	
Mouth of San Gabriel River, CA.....	33.75°N	118.11°W	
Los Angeles / Oxnard, CA			
Mouth of San Gabriel River, CA	33.75°N	118.11°W	
Point Mugu, CA.....	34.11°N	119.12°W	
Point Conception, CA.....	34.45°N	120.45°W	
Point Sal, CA.....	34.90°N	120.67°W	
Point Piedras Blancas, CA.....	35.66°N	121.29°W	
Honolulu, HI			
<i>Northwest Hawaiian Islands</i>			
Nihoa.....	23.05°N	161.92°W	
French Frigate Shoals	23.86°N	166.27°W	
Maro Reef	25.33°N	170.50°W	
Lisianski	26.08°N	174.00°W	
Pearl and Hermes Atoll.....	27.83°N	175.83°W	
Midway	28.02°N	177.37°W	
Kure Atoll	28.42°N	178.33	

Honolulu, HI

Main Hawaiian Islands

Hawaii	19.65°N	.....	155.50°W
Kauai and Niihau	22.06°N	.....	159.51°W
Maui, Molokai, Lanai, Kahoolawe	20.80°N	.....	156.35°W
Oahu	21.46°N	.....	158.00°W
Johnston Atoll	16.75°N	.....	169.50°W

WFO Guam Warning Area and Phonetic Pronunciations

Mariana Islands United States (CNMI - Commonwealth of the Northern Mariana Islands)

Agrihan	ah-GREE-ahn	18.80°N	145.70°E
Saipan (CNMI)	sah-EE-pan	15.20°N	145.80°E
Tinian (CNMI)	TIN-ee-an	15.00°N	145.60°E
Rota (CNMI)	ROH-tah	14.10°N	145.20°E
Guam	gwam	13.50°N	144.80°E

Republic of Palau

Sonsorol	son-soh-rall	5.30°N	132.20°E
Koror	KOH-roar	7.30°N	134.40°E
Kayangel	KAY-ANG-gul	8.10°N	134.70°E

Federated States of Micronesia

Ngulu (Yap State)	noo-loo	8.30°N	137.50°E
Yap	yap	9.50°N	138.10°E
Ulithi (Yap State)	U-lih-thee	9.90°N	139.60°E
Fais (Yap State)	fice	9.80°N	140.50°E
Fareulap (Yap State)	fah-JAH-lup	8.60°N	144.60°E
Woleai (Yap State)	whoa-lee-ay	7.40°N	143.90°E
Satawal (Yap State)	sat-ah-wahl	7.40°N	147.10°E
Puluwat Atoll (Chuuk State)	poo-loo-what	7.10°N	149.00°E
Ulul (Chuuk State)	oo-lool	8.60°N	149.70°E
Chuuk	chook	7.50°N	151.90°E
Fananu (Chuuk State)	fah-NAH-noo	8.60°N	151.90°E
Losap (Chuuk State)	LOW-sap	6.90°N	152.70°E
Lukunor (Chuuk State)	LOOK-oo-nour	5.60°N	154.00°E
Nukuoro (Pohnpei State)	noo-koo-OR-oh	3.90°N	154.90°E
Sapwuafik (Pohnpei State)	sop-HUA-fick	5.90°N	157.40°E
Pakin (Pohnpei State)	PA-kin	7.00°N	157.90°E
Pohnpei	POHEN-pay	6.90°N	158.20°E
Mokil (Pohnpei State)	moh-keel	6.80°N	159.80°E
Pingelap Atoll (Pohnpei State)	PEENG-eh-lap	6.20°N	160.70°E
Kosrae	kos-RYE	5.30°N	163.00°E

Republic of the Marshall Islands

Enewetak Atoll	ahn-eh-wee-tock A-tol	11.40°N	162.40°E
Ujae	oo-jye	8.90°N	165.80°E
Kwajalein	kwa-jah-lynn	8.70°N	167.80°E
Ailingalaplak	aye-leeng-ah-lop-lop	7.50°N	168.90°E
Jaluit Atoll	ja-loo-eet A-tol	5.90°N	169.60°E
Utirik	oo-teer-eek	11.20°N	169.60°E
Wotje Atoll	wot-jay A-tol	9.30°N	170.20°E
Majuro	ma-JUR-o	7.10°N	171.20°E
Mili Atoll	mill-lee A-tol	6.10°N	171.90°E

A listing of international breakpoints can be found at:

http://www.nhc.noaa.gov/breakpoints_list.shtml.

GEOGRAPHICAL DEFINING POINTS AND PHONETIC PRONUNCIATIONS

Abaco	AB-a-KO
Abreojos	aahbray-oh-hoes
Amalie	a-MAHL-ye
Angel	aan-hel
Anguilla	ang-GWIL-a
Antigua	an-TEE-ga
Arena	aah-ray-nah
Arista	ah-ree-staa
Aruba	ah-ROO-ba
Antilles	an-TILL-leez
Azores	uh-ZOHRZ
Bahia	ba-e-yuh
Ballenas	ba-yaynas
Barahona	ba-ra-HO-na
Barbados	bar-BAY-dohz
Barbuda	bar-BOO-dah
Barra	baa-rra
Barranquilla	Bahr-rah-n-KEE-yah
Basse-Terre	baha-TER
Bimini	BIM-I-ni
Bonaire	ba-NAIR
Burros	bhoorroes
Cap	Haitien kahp ah-ee-SYAN
Caracas	kah-RAH-kahs
Cardenas	car-denaass
Caribbean	kar-a-BE-an
Castries	KAS-tree
Cayman	kay-MAHN
Champerico	chaam-per-e-coe
Charlotte	SHAR-luht
Colima	coleema
Corrientes	cor-re-ehn-tays
Cozumel	koh-soo-MEL
Curacao	koor-a-SOH
Cuyutlan	coo-yootlaan
Dominica	dom-I-NEE-ka
Eleuthera	el-OO-thera
Escondido	es-cond-dee-dow
Eugenia	ayuh-hen-yuh
Exuma	ek-SOO-ma

Flores	FLO-rish
Fort de France	for-de-FRAHCS
Galera	gaa-lehra
Grenada	gre-NAY-dah
Guadeloupe	GWAH-deh-loop
Guasave	gwaa-saa-ve
Guaymas	gwhy-maahs
Huatulco	whaa-tool-coe
Islas	eeslas
Jalisco	ha-lee-sco
Juanico	whaa-nee-coe
Lazaro	laasa-roe
Loreto	lo-ae-toe
Leeward	LEE-werd
Manzanillo	manza-nee-oh
Maracaibo	mar-a-KYE-boh
Maracay	mah-rah-KYE
Marigot	ma-ree-GOH
Mateo	muh-ta-yo
Mayaguez	may-yah-GWAYS
Medano	may-daa-no
Melaque	may-laa-kay
Merida	MAY-re-thah
Mochis	mo-chees
Montego	mon-TEE-go
Montserrat	mont-se-RAT
Mugu	muhgu
Mulege	moo-lay-hay
Nicaragua	nik-a-RAH-gwah
Ocho Rios	OH-cho REE-os
Oranjestad	o-RAHN-yuh-stat
Paramaribo	par-a-MAR-I-boh
Parguera	par-GWER-a
Penasco	pen-yaas-co
Pointe-a-Pitre	pwan-ta-PEE-tr
Ponce	PON-sa
Port-au-Prince	port-oh-PRINS

Punta	poonta
Revillagigedo	ray-veeaheehaydo
Saba	SAH-ba
Sao Miguel	soun ME-gel
Sipacate	see-paa-caa-tay
St. Croix	ST croy
St. Lucia	ST LOO-she-a
Soufriere	soo-free-ARSurinam
Surinam	SOOR-I-nam
Tampico	tam-PEE-ko
Tehuantepec	te-whaan-te-pec
Tela	TAY-lah
Tobago	to-BAY-go
Todos	todohs
Tomas	tow-maas
Tonala	ton-aahla
Tosca	toesca
Vallarta	vah-yar-ta
Yavaros	yaa-vaa-roce
Yucatan	yoo-ka-TAN
Zihuatanejo	zeeh-whaa-tanay-ho