

NATIONAL WEATHER SERVICE INSTRUCTION 10-605

SEPTEMBER 14, 2014

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/>.

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SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-605 dated June 6, 2013. The following revisions were made to this directive:

1. Added five missing breakpoints for Pacific Region:

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

Signed

9/4/14

Christopher S. Strager

Date

Acting Director, Office of Climate,
Water, and Weather Services

**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
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 John18.33°N.....64.85°W
 Saint Croix17.74°N.....64.73°W

Melbourne, FL

Jupiter Inlet, FL.....26.95°N.....80.07°W
 Stuart, FL27.21°N.....80.18°W
 Fort Pierce, FL27.46°N.....80.28°W
 Vero Beach, FL.....27.65°N.....80.35°W
 Sebastian Inlet, FL27.83°N.....80.43°W
 Cocoa Beach, FL.....28.32°N.....80.61°W
 Volusia / Brevard County Line28.79°N.....80.73°W
 New Smyrna Beach, FL.....29.03°N.....80.89°W
 Flagler Beach, FL.....29.47°N.....81.12°W

Jacksonville, FL

Flagler Beach, FL.....29.47°N.....81.12°W
 St. Augustine, FL29.88°N.....81.27°W
 Ponte Vedra Beach, FL.....30.24°N.....81.38°W
 Fernandina Beach, FL.....30.66°N.....81.44°W
 Altamaha Sound, GA31.29°N.....81.29°W

Charleston, SC

Altamaha Sound, GA31.29°N.....81.29°W
 Savannah River, GA32.03°N.....80.86°W
 Edisto Beach, SC32.49°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, NC34.44°N.....77.52°W

Newport / Morehead City, NC

Surf City, NC34.44°N.....77.52°W
 New River Inlet, NC34.53°N.....77.34°W
 Bogue Inlet, NC34.64°N.....77.11°W
 Cape Lookout, NC34.60°N.....76.53°W
 Ocracoke Inlet, NC35.06°N.....76.00°W
 Cape Hatteras, NC35.22°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 Border36.55°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
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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 Mateo Point, CA.....	33.38°N	117.60°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

Northwest Hawaiian Islands

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°W

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