

NATIONAL WEATHER SERVICE INSTRUCTION 10-605

JULY 27, 2009

Operations and Services

Tropical Cyclone Weather Services Program, NWSPD 10-6

**TROPICAL CYCLONE OFFICIAL DEFINING POINTS AND GEOGRAPHIC
DEFINING POINTS**

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

OPR: W/OS21 (T. Schott)

Certified by: W/OS21 (T. Pierce)

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SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-605 dated June 1, 2008. The following (primary) breakpoint revisions were made to this directive:

WFO:

Breakpoint change for 2009:

Brownsville

Change Port Mansfield latitude to 26.60N
Delete Brownsville breakpoint
Add new breakpoint: Mouth of the Rio Grande River, TX
26.96N 97.15W

Corpus Christi

Delete Corpus Christi breakpoint
Add new breakpoint: North Entrance of the Padre Island National
Seashore, 27.47N 97.29W

Morehead City, NC/
Wakefield, VA

Delete Currituck Beach Light breakpoint
Add new breakpoint: Duck, NC, 36.23N 75.77W

New Orleans, LA

Add new breakpoint: Lake Maurepas, LA, 30.25N 90.50W

Signed by David B. Caldwell

July 21, 2009

David B. Caldwell

Date

Director, Office of Climate,
Water, and Weather Services

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

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 River, 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, 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, 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 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.....	30.04°N	83.92°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, 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 Key, FL.....	28.18°N	82.85°W
Tarpon Springs, FL.....	28.15°N	82.79°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

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, FL29.03°N80.89°W
 Flager Beach, FL.....29.47°N81.12°W

Jacksonville, FL

Flagler Beach, FL29.47°N81.12°W
 St. Augustine, FL29.88°N81.27°W
 Fernandina Beach, FL30.66°N81.44°W
 Altamaha Sound, GA31.29°N81.29°W

Charleston, SC

Altamaha Sound, GA31.29°N81.29°W
 Savannah River, GA32.03°N80.86°W
 Edisto Beach, SC32.49°N80.32°W
 South Santee River, SC.....33.12°N79.27°W

Wilmington, NC

South Santee River, SC33.12°N79.27°W
 Murrells Inlet, SC.....33.56°N79.01°W
 Little River Inlet, SC33.85°N78.55°W
 Cape Fear, NC33.84°N77.96°W
 Surf City, NC34.44°N77.52°W

Morehead City, NC

Surf City, NC34.44°N77.52°W
 New River Inlet, NC34.53°N77.34°W
 Bogue Inlet, NC34.64°N77.11°W
 Cape Lookout, NC34.60°N76.53°W
 Ocracoke Inlet, NC35.06°N76.00°W
 Cape Hatteras, NC35.22°N75.53°W
 Oregon Inlet, NC35.77°N75.53°W

(The inclusion of Pamlico and Albemarle Sounds, or portions of, should be on a case-by-case basis).

Duck, NC 36.23°N75.77°W

Wakefield, VA

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

Duck, NC..... 36.23°N75.77°W
 NC/VA Border36.55°N75.87°W
 Cape Charles Light, VA37.12°N75.90°W
 Parramore Island, VA37.52°N75.64°W
 Chincoteague, VA37.93°N75.32°W
 Chesapeake Bay,
 New Point Comfort, VA37.30°N76.28°W
 Chesapeake Bay,
 Windmill Point, VA37.61°N76.28°W
 Chesapeake Bay,
 Smith Point, VA37.89°N76.24°W

Sterling, VA

Chesapeake Bay,
 Smith Point, VA.....37.89°N76.24°W
 Tidal Potomac,
 Cobb Island, MD.....38.26°N76.84°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

Mt. Holly, NJ

Cape Henlopen, DE	38.80°N	.....	75.09°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
Delaware Bay north/south of Slaughter Beach, DE to	38.91°N	.....	75.30°W
Sandy Hook, NJ	40.46°N	.....	74.00°W

New York City, NY

Sandy Hook, NJ	40.46°N	.....	74.00°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, MA

The inclusion of the following islands will be on a case by case basis:

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
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, 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, ME43.92°N69.25°W
 Stonington, ME44.16°N68.64°W

Caribou, ME

Stonington, ME44.16°N68.67°W
 Bar Harbor, ME44.39°N68.20°W
 Eastport, ME44.92°N67.00°W

San Diego, CA

Mouth of Tijuana River, CA.....32.53°N117.12°W
 San Mateo Point, CA33.38°N117.60°W
 Mouth of San Gabriel River, CA.....33.75°N118.11°W

Los Angeles/Oxnard, CA

Mouth of San Gabriel River, CA33.75°N118.11°W
 Point Mugu, CA34.11°N119.12°W
 Point Conception, CA34.45°N120.45°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

WFO Guam Warning Area

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

Agrihan	18.80°N	145.70°E
Saipan (CNMI)	15.20°N	145.80°E
Tinian (CNMI)	15.00°N	145.60°E
Rota (CNMI)	14.10°N	145.20°E
Guam	13.50°N	144.80°E

Republic of Palau

Sonsorol	5.30°N	132.20°E
Koror	7.30°N	134.40°E
Kayangel	8.10°N	134.70°E

Federated States of Micronesia

Ngulu (Yap State)	8.30°N	137.50°E
Yap	9.50°N	137.10°E
Ulithi (Yap State)	9.90°N	139.60°E
Fais (Yap State)	9.80°N	140.50°E
Fareulap (Yap State)	8.60°N	144.60°E
Woleai (Yap State)	7.40°N	143.90°E
Satawal (Yap State)	7.40°N	147.10°E

Puluwat Atoll (Chuuk State)	7.10°N	149.00°E
Ulul (Chuuk State)	8.60°N	149.70°E
Chuuk	7.50°N	151.90°E
Fananu (Chuuk State)	8.60°N	151.90°E
Losap (Chuuk State)	6.90°N	152.70°E
Lukunor (Chuuk State)	5.60°N	154.00°E
Nukuoro (Pohnpei State)	3.90°N	154.90°E
Sapwuafik (Pohnpei State)	5.90°N	157.40°E
Pakin (Pohnpei State)	7.00°N	157.90°E
Pohnpei	6.90°N	158.20°E
Mokil (Pohnpei State)	6.80°N	159.80°E
Pingelap Atoll (Pohnpei State)	6.20°N	160.70°E
Kosrae	5.30°N	163.00°E

Republic of the Marshall Islands

Enewetak Atoll	11.08°N	162.50°E
Ujae	8.90°N	165.80°E
Kwajalein	8.70°N	167.80°E
Ailinglaplap	7.50°N	168.90°E
Jaluit Atoll	5.90°N	169.60°E
Utirik	11.20°N	169.60°E
Wotje Atoll	9.30°N	170.20°E
Majuro	7.10°N	171.20°E
Mili Atoll	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	Exuma	ek-SOO-ma
Abrejos	aahbray-oh-hoes		
Amalie	a-MAHL-ye	Flores	FLO-rish
Angel	aan-hel	Fort de France	for-de-FRAHCS
Anguilla	ang-GWIL-a		
Antigua	an-TEE-ga	Galera	gaa-lehra
Arena	aah-ray-nah	Grenada	gre-NAY-dah
Arista	ah-ree-staa	Guadaloupe	GWAH-deh-loop
Aruba	ah-ROO-ba	Guasave	gwaa-saa-ve
Antilles	an-TILL-leez	Guaymas	gwhy-maahs
Azores	uh-ZOHRZ		
		Huatulco	whaa-tool-coe
Bahia	ba-e-yuh		
Ballenas	ba-yaynas	Islas	eeslas
Barahona	ba-ra-HO-na		
Barbados	bar-BAY-dohz	Jalisco	ha-lee-sco
Barbuda	bar-BOO-dah	Juanico	whaa-nee-coe
Barra	baa-rra		
Barranquilla	Bahr-rahn-KEE-yah	Lazaro	laasa-roe
Basse-Terre	baha-TER	Loreto	lo-ae-toe
Bimini	BIM-I-ni	Leeward	LEE-werd
Bonaire	ba-NAIR		
Burros	bhoorroes	Manzanillo	manza-nee-oh
		Maracaibo	mar-a-KYE-boh
Cap	Haitien kahp ah-ee-SYAN	Maracay	mah-rah-KYE
Caracas	kah-RAH-kahs	Marigot	ma-ree-GOH
Cardenas	car-denaass	Mateo	muh-ta-yo
Caribbean	kar-a-BE-an	Mayaguez	may-yah-GWAYS
Castries	KAS-tree	Medano	may-daa-no
Cayman	kay-MAHN	Melaque	may-laa-kay
Champerico	chaam-per-e-coe	Merida	MAY-re-thah
Charlotte		Mochis	mo-chees
Colima	coleema	Montego	mon-TEE-go
Corrientes	cor-re-ehn-tays	Montserrat	mont-se-RAT
Cozumel	koh-soo-MEL	Mugu	muhgu
Curacao	koor-a-SOH	Mulege	moo-lay-hay
Cuyutlan	coo-yootlaan		
		Nicaragua	nik-a-RAH-gwah
Dominica	dom-I-NEE-ka		
		Ocho Rios	OH-cho REE-os
Eleuthera	el-OO-thera	Oranjestad	o-RAHN-yuh-stat
Escondido	es-cond-dee-dow		
Eugenia	ayuh-hen-yuh	Paramaribo	par-a-MAR-I-boh
		Parguera	par-GWER-a

Penasco	pen-yaas-co	Surinam	SOOR-I-nam
Pointe-a-Pitre	pwan-ta-PEE-tr	Tampico	tam-PEE-ko
Ponce	PON-sa	Tehuantepec	te-whaan-te-pec
Port-au-Prince	port-oh-PRINS	Tela	TAY-lah
Punta	poonta	Tobago	to-BAY-go
Revillagigedo	ray-veeaheehaydo	Todos	todohs
Saba	SAH-ba	Tomas	tow-maas
Sao Miguel	soun ME-gel	Tonala	ton-aahla
Sipacate	see-paa-caa-tay	Tosca	toesca
St Croix	ST croy	Vallarta	vah-yar-ta
St Lucia	ST LOO-she-a	Yavaros	yaa-vaa-roce
Soufriere	soo-free-AR	Yucatan	yoo-ka-TAN
		Zihuatanejo	zeeh-whaa-tanay-ho