

# Products & Services Guide



**National Weather Service  
Corpus Christi, Texas  
November 2010**







## **ACKNOWLEDGMENTS**

**This guide is intended to provide the news media and emergency services agencies with information and examples of the products issued by the National Weather Service in Corpus Christi, Texas. Armando Garza, former Meteorologist in Charge, initiated the development of this guide. Former meteorologists Bob Burton and current meteorologist Jason Runyen created most of the content for this guide. Warning Coordination Meteorologist John Metz directed the production of this guide. Recognition is also given to the entire staff of WFO Corpus Christi for valuable information and suggestions that were essential in the preparation of this guide. If you have any suggestions for improving this guide, please contact the Warning Coordination Meteorologist or the Meteorologist in Charge at the National Weather Service in Corpus Christi, Texas.**

**The 2010 version of this guide was compiled and updated by Matthew Grantham, Meteorologist Intern and Alex Tardy, Science and Operations Officer. The following forecasters and program leaders updated parts of the guide: Mike Gittinger, Tim Tinsley, Jason Runyen, Roger Gass and Greg Wilk.**



## **PRECAUTIONARY NOTE**

**The examples used in this guide are fictional and should not be taken as factual events. These examples are meant to illustrate the format and content of each product produced by your local National Weather Service office. In some cases the examples were cut short and limited to one page. However, the information provided should be adequate to understand the product.**

## **STAFF**

### **Meteorologist In Charge (MIC) - (scott.cordero@noaa.gov)**

The MIC will answer all questions on administrative or policy matters, impact of equipment failures, personnel matters, employment, impact of severe storms or floods, or office operations. Also, the MIC will respond to questions involving legal or political decisions or actions and designate an appropriate manager to answer these questions.

### **Warning and Coordination Meteorologist (WCM) - John Metz (john.metz@noaa.gov)**

The WCM serves as the principal interface between the Weather Forecast Office (WFO) and the users of WFO products and services. Serves as the NWS customer representative who leads the effort to ensure the evaluation, adjustment, and improvements of products and services. Handles everyday media interviews and works closely with emergency managers.

### **Science and Operations Officer (SOO) - Alex Tardy (alexander.tardy@noaa.gov)**

The primary focus of the SOO is to ensure the scientific integrity of hydrometeorological products and services provided to the public by the WFO. The SOO also leads joint research projects and developmental efforts conducted with participating universities or local research centers. In addition, guides the transfer of new science practices and technologies from the research community to the operational environment by providing training workshops/seminars on a routine basis.

### **Forecasters**

10 operational forecasters provide weather products and services to customers round the clock using new technologies which consist of Doppler radar, high-resolution satellite, automated surface observing systems, and high powered computers providing gridded meteorological information. Most forecasts for South Texas are provided out to 7 days.

### **Hydro-Meteorological Technicians (HMT)**

The HMTs and Interns are the primary contacts with the general public and provide forecasts and weather briefings to the press, radio, and television stations. The HMT is responsible for vast amounts of weather data collection: upper air releases and data collection twice a day, surface weather/climatological network observations, and assists with radar surveillance and collection/dissemination of a variety of hydro-meteorological data. The observation program leader— Doug Vogelsang (OPL) handles the cooperative observing network (douglas.vogelsang@noaa.gov).

### **Electronics Systems Analyst (ESA) - Alan Del Castillo (alan.del.castillo@noaa.gov)**

Serves as the primary contact for inquiries concerning NWS communications and with a staff of two radar technicians and one automated surface observing systems technician, is responsible for maintaining the integrity of all equipment used by this office.

### **Hydrology Focal Point - Gregory Wilk (greg.wilk@noaa.gov)**

Serves as individual responsible for resolving most day-to-day hydrology program support issues at this office, and performs liaison activities with local water related users.

## CONTACT INFORMATION



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Toll Free Line for Severe Weather Spotters - 888-579-9731  
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### Administration

**Meteorologist in Charge (MIC) 361-299-1353 ext. 222  
Warning Coordination Meteorologist (WCM) 361-299-1353 ext 223  
Science Operations Officer (SOO) 361-299-1353 ext 224  
Administrative Support Assistant (ASA) 299-1353**

### Tour Arrangements

**Contact the Warning Coordination Meteorologist 361-299-1353 x 223  
Monday - Friday 8:00 AM - 4:00 PM  
No Tours on weekends or Federal Holidays**

### Internet

**[weather.gov/corpuschristi](http://weather.gov/corpuschristi)**

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## ACRONYMS USED IN THIS GUIDE

ASOS.....	Automated Surface Observing System
AWIPS.....	Advanced Weather Interactive Processing System
CDT.....	Central Daylight Time
CRS.....	Console Replacement System
CST.....	Central Standard Time
CWA.....	County Warning Area
EAS.....	Emergency Alert System
EMWIN.....	Emergency Managers Weather Information Network
ENSO.....	El Nino/La Nina Southern Oscillation
F.....	Fahrenheit
FEMA.....	Federal Emergency Management Agency
FTP.....	File Transfer Protocol
GOES.....	Geostationary Operational Environmental Satellites
HPC.....	Hydrometeorological Prediction Center
HTML.....	Hypertext markup language
HTTP.....	Hypertext transfer protocol
HSA.....	Hydrologic Service Area
MPH.....	Miles Per Hour
NAWAS.....	National Warning System
NEXRAD.....	WSR-88D Next Generation Weather Radar
NCEP.....	National Center for Environmental Prediction
NOAA.....	National Oceanic and Atmospheric Administration
NWR.....	NOAA Weather Radio
NWS.....	National Weather Service
NWWS.....	National Weather Wire Service
OPC.....	Ocean Prediction Center
POP.....	Probability Of Precipitation
RFC.....	River Forecast Center
SAME.....	Specific Area Message Encoder
SPC.....	Storm Prediction Center
UTC.....	Coordinated Universal Time
VTEC.....	Valid Time Event Code



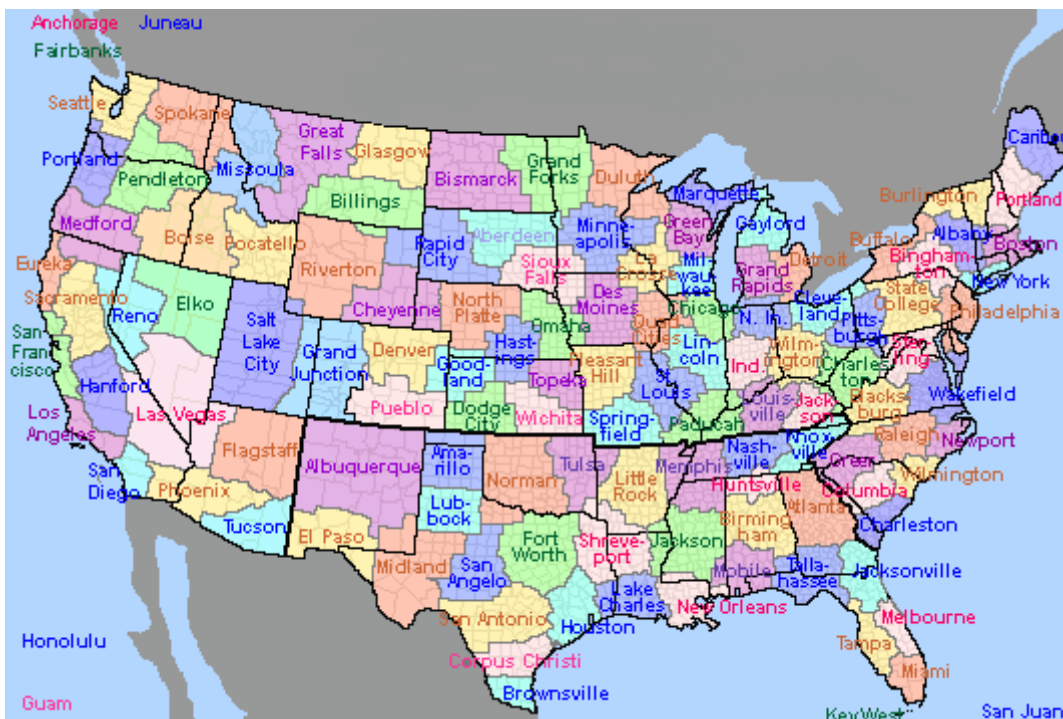


# Introduction

The National Weather Service (NWS) is a component of the National Oceanic and Atmospheric Administration (NOAA), an agency of the Department of Commerce. The NWS has been tasked by Congress to use meteorological and hydrological expertise to reduce loss of life and property from weather related events such as tornadoes, severe thunderstorms, winter storms and floods. To accomplish its mission, the NWS gathers information from a variety of sources and uses that information to determine the potential hazard for any given area. Some of these sources are surface observations, balloon observations, severe weather spotters, law enforcement agencies, remote automatic sensors, radar and satellites, and cooperative observers.

Equipment used by the NWS include the WSR-88D Next Generation Weather Radar (NEXRAD), the Automated Surface Observing System (ASOS), and the Next Generation Geostationary Operational Environmental Satellites (GOES-Next). An Advanced Weather Interactive Processing System (AWIPS) provides information processing and forecast workstations at each forecast office, as well as an interactive communications link among all the offices. Advanced supercomputers facilitate improvement of the timeliness and accuracy of weather forecasts.

The NWS consists of 122 Weather Forecast Offices (WFOs) and 13 River Forecast Centers that prepare and issue public, aviation, hydrologic, and climate products for their local area. Using radar, satellite, and surface observations, WFOs monitor the weather, keeping a vigilant watch for any weather conditions that may threaten lives and property. When such events arise, WFOs issue warnings and statements for their local area to alert local and state emergency officials and the public to the dangerous weather situation. Texas has nine WFOs, with four in south Texas located in Corpus Christi, Brownsville, Houston, and San Antonio.

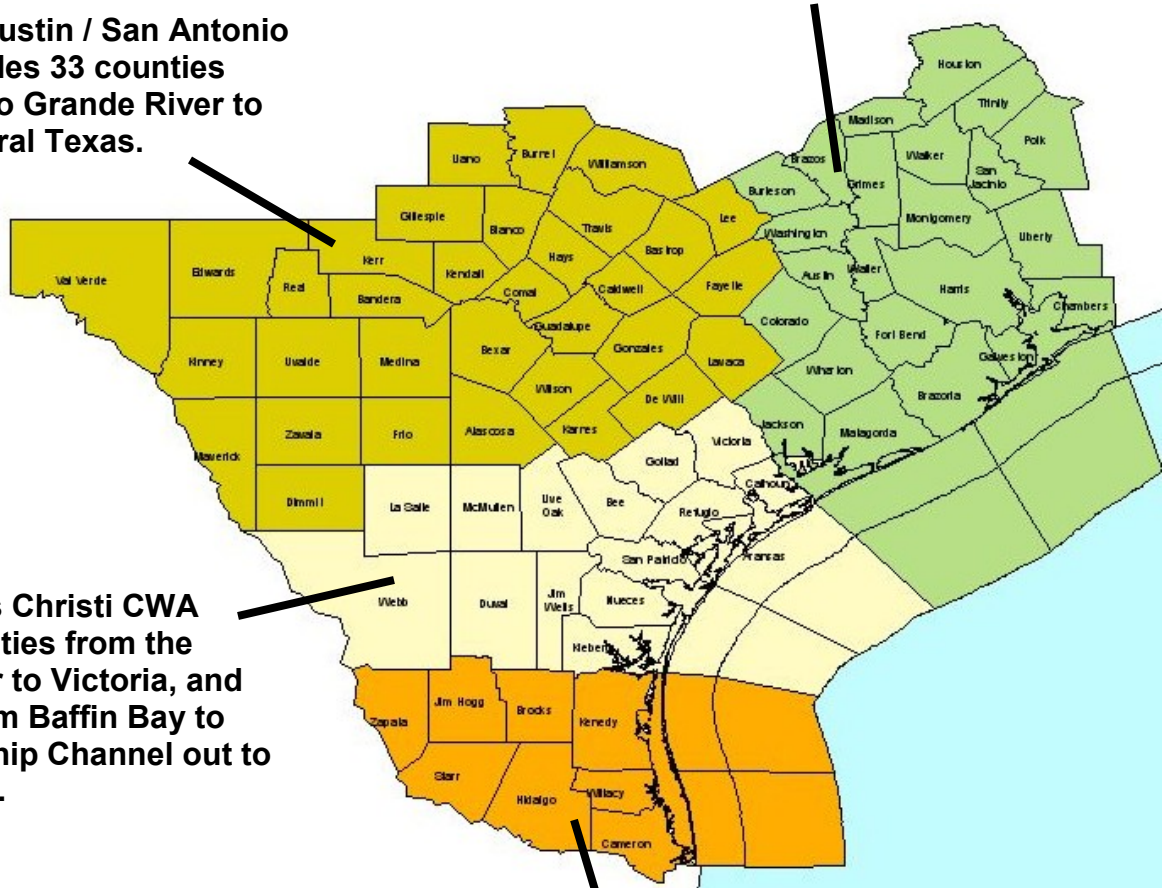


# County Warning Areas

Every Weather Forecast Office is responsible for issuing forecasts and warnings for the counties in its area. This area is defined as a County Warning Area (CWA).

The NWS Houston / Galveston CWA includes 23 counties in southeast Texas and marine areas from the Matagorda Ship Channel out to 60 nautical miles.

The NWS Austin / San Antonio CWA includes 33 counties from the Rio Grande River to South Central Texas.



The NWS Corpus Christi CWA includes 15 counties from the Rio Grande River to Victoria, and marine areas from Baffin Bay to the Matagorda Ship Channel out to 60 nautical miles.

The NWS Brownsville CWA includes 8 counties in Deep South Texas and marine areas from the Rio Grande River to Baffin Bay out to 60 nautical miles.

COUNTY	ZONE	FIPS
Aransas	245	48007
Bee	232	48025
Calhoun	247	48057
Duval	240	48131
Goliad	233	48175
Jim Wells	241	48249
Kleberg	242	48273
La Salle	229	48282
Live Oak	231	48297
McMullen	230	48311
Nueces	243	48355
Refugio	246	48391
San Patricio	244	48409
Victoria	234	48469

MARINE AREAS	ZONE
Baffin Bay to Port Aransas	230
Baffin Bay to Port Aransas out 20 nm	250
Baffin Bay to Port Aransas 20-60 nm	270
Port Aransas to Matagorda	235
Port Aransas to Matagorda out 20 nm	255
Port Aransas to Matagorda 20-60 nm	275

# County Descriptions

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The following is a description of the zones of the CWA for the Corpus Christi office.

## **ARANSAS COUNTY - TXZ245**

Defined as the zone that covers an area of 528 square miles with 252 square miles of land. The county elevation ranges from sea level to 30 feet. The county includes Copano, St, Charles, and Aransas Bays and San Jose Island. Rockport is the largest city and county seat.

## **BEE COUNTY - TXZ232**

Defined as the zone that covers an area of 880 square miles. The county elevation ranges from 75 to 540 feet. Beeville is the county seat and largest town. Other communities include Pettus, Pawnee, Skidmore, and Tynan.

## **CALHOUN COUNTY - TXZ247**

Defined as the zone that is located on the Gulf Coast and covers a third of Matagorda Bay and San Antonio, Lavaca and Espiritu Santo Bays with half of it's 1032 square mile area being water. Altitude of this coastal prairie county ranges from sea level to 55 feet. The county includes Matagorda Island. The Guadalupe River is the western border of the county. Major communities include Port Lavaca (county seat), Point Comfort, Seadrift, and Port O'Connor.

## **DUVAL COUNTY - TXZ240**

Defined as the zone in south Texas that is about fifty miles inland from Corpus Christi Bay. The county comprises 1,796 square miles of nearly level to undulating terrain with an elevation ranging from 180 to 800 feet above sea level. San Diego is the county seat and most populous town. Other cities include Freer and Benavides.

## **GOLIAD COUNTY - TXZ233**

Defined as the zone twenty five miles inland from Copano Bay. The county comprises of 859 square miles, most of which is nearly level to gently rolling coastal plains. The elevation ranges from 75 to 375 feet. Goliad is the county seat and largest town.

## **JIM WELLS COUNTY - TXZ241**

Defined as the zone that covers approximately 868 square miles in the Rio Grande Plains region of South Texas. The terrain is flat to undulating, with elevations ranging from 30 feet near the Nueces River to 440 feet northwest of Alice. Alice is the county seat and largest town. Other communities include Orange Grove, Ben Bolt, Sandia, and Premont.

## **KLEBERG COUNTY - TXZ242**

Defined as the zone that is situated on a grassy plain with elevations from sea level to 170 feet. The county covers 1090 square miles including most of Baffin Bay and a portion of North Padre Island. Kingsville is the largest city in the county and the county seat.

## **LA SALLE COUNTY - TXZ229**

Defined as the zone that comprises 1,494 square miles of usually flat to rolling terrain with elevations ranging from 250 to 600 feet. Cotulla, the county's largest town and the county seat, is located in the northwest part of the county. Encinal is a smaller town in the southwest corner of the county.

# County Descriptions (continued)

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## LIVE OAK COUNTY - TXZ231

Defined as the zone that covers an area of 1,079 square miles. The county elevation ranges from 95 to 400 feet. George West (county seat) and Three Rivers are the major towns.

## MCMULLEN COUNTY - TXZ230

Defined as the zone that comprises 1,143 square miles of flat to rolling terrain. The county elevation ranges from approximately 150 to 500 feet. Tilden is the county seat.

## NUECES COUNTY - TXZ243

Defined as the zone that covers an area of 1166 square miles including Corpus Christi and Nueces Bays. The county elevation ranges from sea level to 140 feet. The county seat and largest city is Corpus Christi. Other cities include Robstown, Bishop, and Port Aransas.

## REFUGIO COUNTY - TXZ246

Defined as the zone that covers an area of 819 square miles including a portion of Copano Bay . The county elevation ranges from sea level to 95 feet. Refugio is the county seat.

## SAN PATRICIO COUNTY - TXZ244

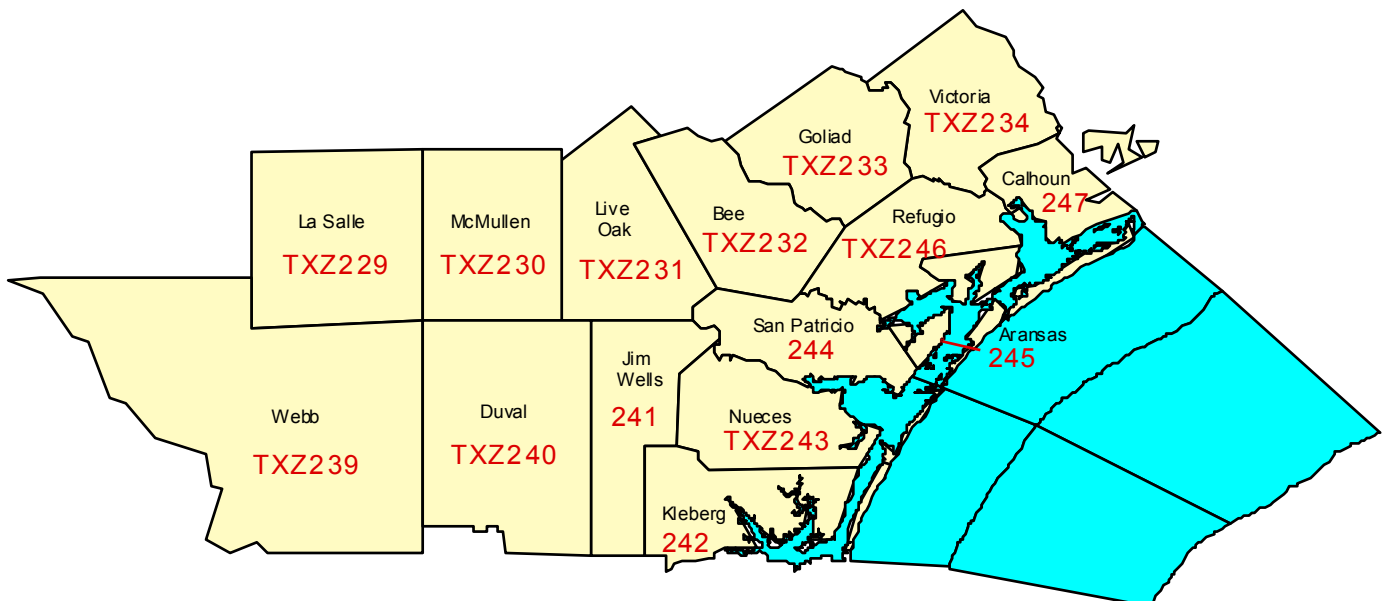
Defined as the zone that covers an area of 707 square miles. The county elevation ranges from sea level to 200 feet. Sinton, the county seat, is near the center of the county. Other cities include Portland, Mathis, Ingleside, and Aransas Pass.

## VICTORIA COUNTY - TXZ234

Defined as the zone that covers an area of 889 square miles. The county elevation ranges from sea level in the southeast to 200 feet north of Nursery in the north. Victoria is the county's largest town and county seat.

## WEBB COUNTY - TXZ239

Defined as the zone that covers an area of 3,376 square miles of rolling terrain. The county elevation ranges from 300 to 900 feet. Laredo is the county's largest city and seat of government, located in the southwest part of the county near the Rio Grande.



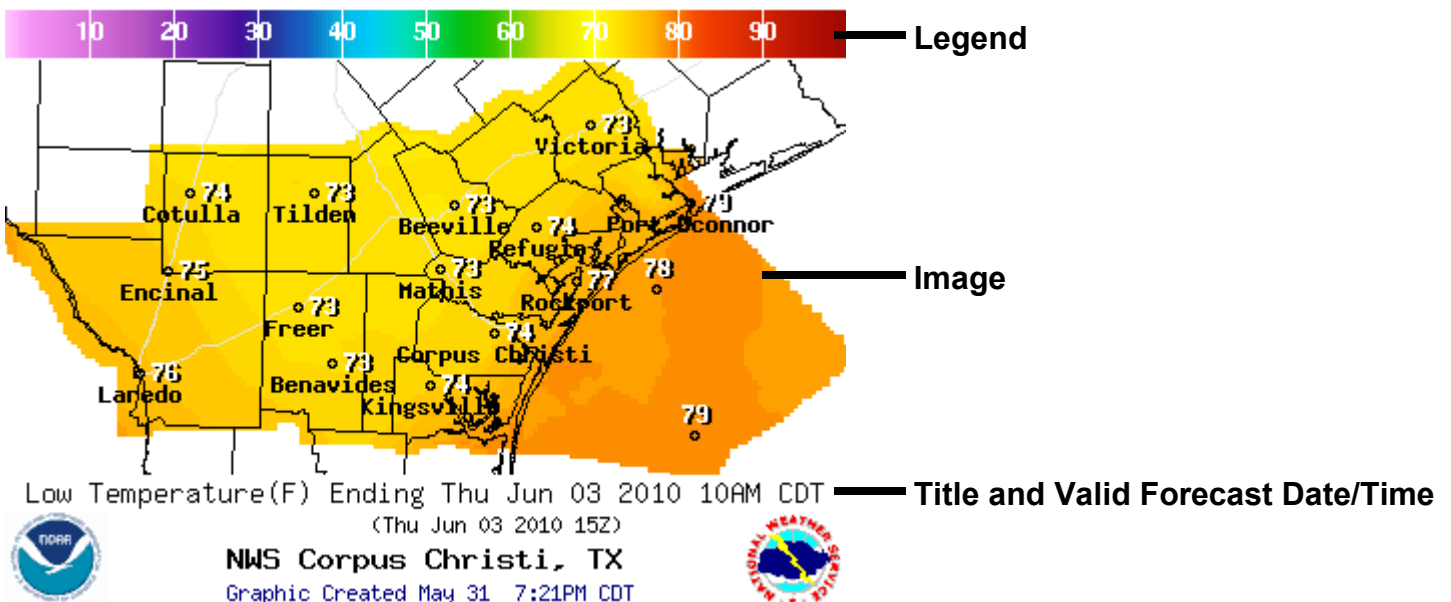
# Product Formats

NWS products come in two formats, text and graphic. Text products follow a basic format and include a Mass Media Header, Title, Body and Call to Action Statements. Graphical products come in many different formats. All graphics contain a product header that identifies the type of product and a valid date and time. Each product will contain a legend so the product can be properly interpreted.

## Basic Text Product Format

<p>WFUS54 KCRP 210130 TORCRP TXC469-210230- /X.NEW.KCRP.TO.W.0002.041121T0127Z-041121T0230Z/</p>	<p>Mass Media Header and VTEC</p>
<p>BULLETIN - EAS ACTIVATION REQUESTED TORNADO WARNING NATIONAL WEATHER SERVICE CORPUS CHRISTI TX 727 PM CST SAT NOV 20 2005</p>	<p>Title and Issuance Date/Time</p>
<p>THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A * TORNADO WARNING FOR... CENTRAL VICTORIA COUNTY IN TEXAS * UNTIL 830 PM CST * AT 720 PM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING A TORNADO 5 MILES WEST OF DACOSTA...OR ABOUT 8 MILES SOUTH OF VICTORIA... MOVING EAST AT 15 MPH. * THE TORNADO IS EXPECTED TO BE NEAR... 6 MILES NEAR DACOSTA BY 735 PM CST 5 MILES NORTH OF PLACEDO BY 740 PM CST 7 MILES SOUTH OF TELFERNER BY 745 PM CST IN ADDITION TO THE TORNADO...THIS STORM IS CAPABLE OF PRODUCING PENNY SIZE HAIL AND DAMAGING STRAIGHT LINE WINDS UP TO 60 MPH.</p>	<p>Body</p>
<p>THE SAFEST PLACE TO BE DURING A TORNADO IS IN A BASEMENT. GET UNDER A WORKBENCH OR OTHER PIECE OF STURDY FURNITURE. IF NO BASEMENT IS AVAILABLE...SEEK SHELTER ON THE LOWEST FLOOR OF THE BUILDING IN AN INTERIOR HALLWAY OR ROOM SUCH AS A CLOSET. USE BLANKETS OR PILLOWS TO COVER YOUR BODY AND ALWAYS STAY AWAY FROM WINDOWS.</p>	<p>Call to Action Statements</p>
<p>LAT...LON 2869 9667 2864 9679 2862 9702 2877 9706 2880 9704 2886 9675 2885 9672 2883 9673 2880 9670 2877 9670 2872 9665</p>	<p>Additional Information</p>
<p>\$\$</p>	

## Basic Graphic Product Format



# Decoding (VTEC)

Most warning products issued by the NWS will contain a special code in the header called Valid Time Event Code (VTEC). This code will enable vendors to automate and tailor the product stream delivered to their clients and allows customers to select the specific message types they want to receive. VTEC will help improve automated dissemination of weather information to the public through a myriad of methods, such as paging systems and television message crawl systems used to relay urgent severe weather and flood information.

P-VTEC Line /k.aaa.cccc.pp.s.####.yymmddThhnnZB-yymmddThhnnZE/

## Product Status (k)

O	Operational product
T	Test product
E	Experimental Product
X	Experimental VTEC in Operational product

## Significance (s)

W	Warning
A	Watch
Y	Advisory
S	Statement

## Action (aaa)

NEW	Event New
CON	Event Continued
EXA	Event Extended/Area
EXT	Event Extended/Time
EXB	Event Extended/Both
UPG	Event upgraded
CAN	Event cancelled
EXP	Event expired
ROU	Event Routine
COR	Corrected Area and Time

## Event Tracking Number (####)

Numerical count of products issued for calendar year

## Office ID (cccc)

kcrp	Corpus Christi
kewx	New Braunfels
kbro	Brownsville
khgx	Houston

## Date/Time Group

yymmddThhnnZB	Event Beginning Date/Time
yymmddThhnnZE	Event Ending Date/Time
yy	year
mm	month
dd	day
T	fixed time indicator
hh	hour
nn	minute
Z	fixed UTC indicator

## Phenomena (pp)

BZ	Blizzard	WI	Wind	AS	Air Stagnation
WS	Winter Storm	HW	High Wind	AV	Avalanche
WW	Winter Weather	LW	Lake Wind	TS	Tsunami
SN	Snow	FG	Dense Fog	MA	Marine
HS	Heavy Snow	SM	Dense Smoke	SC	Small Craft
LE	Lake Effect Snow	HT	Heat	GL	Gale
BS	Blowing/Drifting Snow	EH	Excessive Heat	SR	Storm
SB	Snow & Blowing Snow	DU	Blowing Dust	HF	Hurricane Force Wind
LB	Lake Effect Snow & Blowing Snow	DS	Dust Storm	TR	Tropical Storm
HP	Heavy Sleet	FL	Flood	HU	Hurricane
ZR	Freezing Rain	FF	Flash Flood	TY	Typhoon
IS	Ice Storm	SV	Severe Thunderstorm	TI	Inland Tropical Storm Wind
FZ	Freeze	TO	Tornado	HI	Inland Hurricane Wind
FR	Frost	FW	Fire Weather	LS	Lakeshore Flood
ZF	Freezing Fog	RH	Radiological Hazard	CF	Coastal Flood
WC	Wind Chill	VO	Volcano	UP	Ice Accretion
EC	Extreme Cold	AF	Volcanic Ashfall	LO	Low Water
				SU	High Surf



# Product Dissemination

NWS text and graphical products can be received by a variety of methods including: Internet, NOAA Weather Radio (NWR), NOAA Weather Wire Service (NWWS), National Warning System (NAWAS), the Emergency Managers Weather Information Network (EMWIN), and NOAA Climate Centers.

## Internet

The NWS in Corpus Christi maintains a website on the internet. Accessing this website allows users to view all public products issued by the NWS in Corpus Christi. Also, there are links to many other sources for weather information including every NWS office in the nation. The NWS website is the most comprehensive source for local, state, and national weather information.

NWS Corpus Christi, TX: [weather.gov/corpuschristi](http://weather.gov/corpuschristi) or [www.srh.noaa.gov/crp](http://www.srh.noaa.gov/crp)

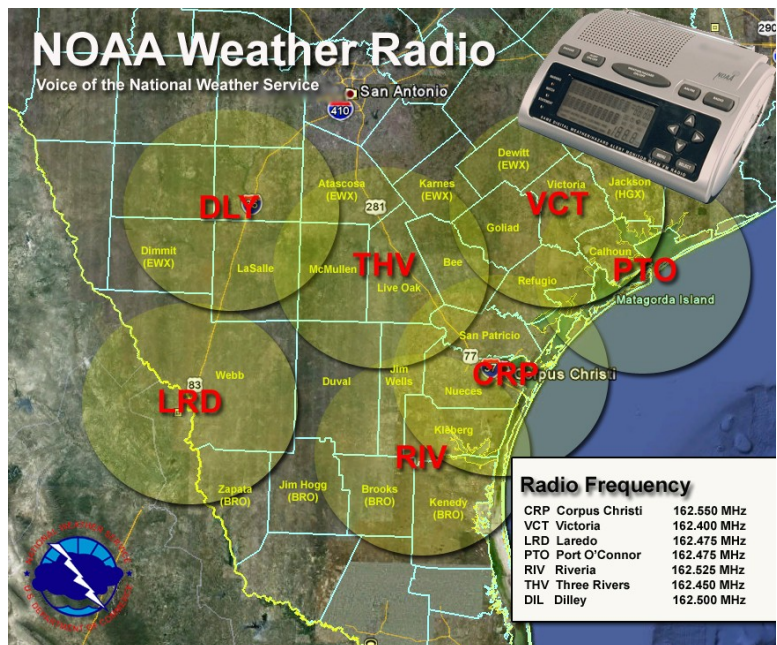
The screenshot shows the NOAA website for the National Weather Service Weather Forecast Office in Corpus Christi, TX. The page has a blue header with the NOAA logo and the text "National Weather Service Weather Forecast Office Corpus Christi, TX". Below the header is a navigation menu with links for Home, Site Map, News, Organization, and a search bar. The main content area is titled "Top News of the Day" and features a link to "The 2010 Coastal Bend Hurricane Guide". Below this are several buttons for "Watches & Warnings", "Observations", "Forecast Graphics", "Rivers & Lakes", "Climate", and "Submit a Storm Report". A map of the Corpus Christi region is displayed, with a caption "Click on the map below for the latest forecast." and a "Zoom Out" button. Below the map is a "Latest Conditions in Corpus Christi, TX" section showing the date "May 31", time "7:51 pm", and temperature "82°F (28°C)" with a "A Few Clouds" icon. A "Choose Your Front Page City" dropdown menu is also visible.



# Product Dissemination

## All Hazards NOAA Weather Radio

All Hazards NOAA Weather Radio is a direct broadcast by the NWS on the VHF-FM band. The broadcast is a continuous cycle of individual products providing a tailored weather information package for residents within the weather radio broadcast area. The product format varies with the time of day and with the season. A warning alarm is transmitted whenever severe weather, national emergency, or other hazardous event requires rapid public warnings. Regular programming is interrupted to broadcast these warnings. This warning alarm can be heard on weather radios equipped with the “alarm” feature.



NWS broadcasts can usually be heard approximately 50 miles from the antenna site. The effective range depends on many factors, particularly the height of the broadcasting antenna, terrain, quality of the receiver, and type of receiving antenna.

In January 1998, the NWS installed new equipment for automating NWR broadcasts. The computer-based broadcasting console, known as the Console Replacement System (CRS), automates the broadcast process. CRS will automatically translate written NWS forecasts and warnings into synthesized-voice recordings for broadcast on NWR. In 2012, CRS System is expected to get a full upgrade with many improvements and automated new voices.

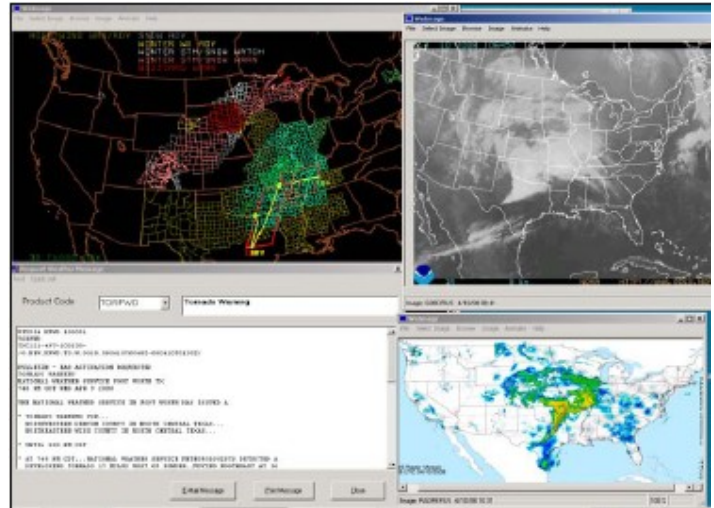
CRS provides faster broadcasts of severe weather watches, warnings and emergency information over All Hazards NOAA Weather Radio, and also allows our staff more time to critical warning services and forecast duties.

Local Broadcast Stations		
162.400 Mhz	WXK-34	Victoria
162.450 Mhz	WNG-696	Three Rivers
162.475 Mhz	WXK-26	Laredo
162.475 Mhz	WXL-26	Port O'Connor
162.500 Mhz	WNG-523	Dilley
162.525 Mhz	WNG-609	Riviera
162.550 Mhz	KHB-41	Corpus Christi

# Product Dissemination

## Emergency Managers Weather Information Network (EMWIN)

The Emergency Managers Weather Information Network (EMWIN) is a low cost satellite weather data broadcast service that provides one of the most robust National Weather Service (NWS) systems for public weather dissemination. The service includes warnings, forecasts, graphics, and imagery. The goal of EMWIN is to provide emergency managers the capability to respond faster to severe weather, tsunamis and other hazards. Due to changes in the satellite configuration in 2010 that provide this broadcast, existing EMWIN users must take action to ensure continued reception of this data service.



The new primary dissemination method is an L-band broadcast via the Geostationary Operational Environmental Satellites (GOES). This allows the reception of the EMWIN signal over a large portion of the earth's surface and makes EMWIN products available to both national and international customers. In addition, the use of both GOES satellites allows signal redundancy for most of the continental U.S. The primary audience of EMWIN is the emergency management community, however its low cost, no recurring fees and ease of use has made it popular with others. An EMWIN system can help communities qualify for StormReady! EMWIN continues working when the internet goes down, because data comes from a Satellite.

### What improvements in service does the transition provide?

- More data! Data rate is doubled to 19.2 Kbps and there is an increased use of compression.
- Greater reliability! Forward error correction, a dedicated transponder and no eclipse seasons.
- Enhanced data! Including regional Doppler radar images.

### What are the costs to transition?

- The cost of an entire EMWIN-N capable system is as low as \$2000 plus the cost of a computer.
- To upgrade an existing EMWIN system costs start at \$1000.

### To Purchase an EMWIN system:

<http://www.weather.gov/emwin/winven.htm>

### For more information on EMWIN:

<http://iwin.nws.noaa.gov/emwin/index.htm>



# Product Dissemination

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## National Warning System (NAWAS)

Funded by the Federal Emergency Management Agency (FEMA), the National Warning System (NAWAS) is a comprehensive party-line network of telephone circuits connecting more than 1,500 state and federal warning points throughout the United States. Although NAWAS is a national system, the day-to-day operation is under the control of individual states. Each state has its own plan for the use of NAWAS during weather emergencies.

NAWAS is used to warn the public, through local governments, about potential loss of life and/or property. Such threatening situations are not limited to meteorological or hydrological events. The warning messages can include, but are not limited to, dam breaks, earthquakes, volcanoes, major fires, terrorist activities, landslides, and hazardous material releases.

When a warning is issued, the NWS coordinates, via NAWAS, with emergency agencies in the affected counties. Should the event be serious, a roll call will be requested for all counties involved to verify dissemination of the product.

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## Emergency Alert System (EAS)

The Emergency Alert System (EAS) permits Federal, State, and local governments to communicate instructions and essential information to the public during emergencies through commercial and public radio and television broadcast stations. The EAS replaced the Emergency Broadcast System (EBS), which was established in 1964, as the primary means for public officials to rapidly disseminate emergency information to the general public. The purpose of the EAS is to reduce loss of life and property and to promote rapid recovery in the event of a natural disaster, a manmade disaster, or an attack on this Nation.

The EAS is composed of several organizations: AM and FM radio stations, TV broadcast stations, cable systems, and participating common carriers. Voluntary non government entities operating during emergencies at national, state, or local area levels are also members of the EAS. Each EAS source assumes the responsibility for serving a specifically designated local area.

NOAA Weather Radio (NWR) has added a Specific Area Message Encoder (SAME) to all of its transmitters. The NWS identifies its weather alert areas using the same digital code used by the EAS. This means that the NWS audio can be connected directly to the EAS decoder from any inexpensive weather radio receiver, and the EAS decoder will recognize the codes and notify the user of any weather alerts immediately. Stations that do not listen to NWR are strongly encouraged to add NOAA as an optional input to the EAS decoder.

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## Interactive (iNWS)

<http://inws.wrh.noaa.gov>

### INWS MOBILE ALERTING

Receive customized text message and e-mail alerts for National Weather Service products that you care about.



# Non-Weather Emergency Products

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In the event of a local, state, or national emergency, the NWS can issue any of the following emergency messages on All Hazards NOAA Weather Radio. These messages will activate the Emergency Alert System and disseminate the information to the general public. In the near future, emergency managers will have the capability to disseminate these messages automatically by computer from any location to facilitate the quick release of emergency information to the public.

**Child Abduction Emergency (CAE)** - An emergency message, based on established criteria, about a missing child believed to be abducted. A local or state law enforcement agency investigating the abduction will describe the missing child, provide a description of the suspect or vehicle, and ask the public to notify the requesting agency if they have any information on the whereabouts of the child or suspect.

**Civil Danger Warning (CDW)** - A warning of an event that presents a danger to a significant civilian population. The CDW, which usually warns of a specific hazard and gives specific protective action, has a higher priority than the Local Area Emergency (LAE). Examples include contaminated water supply and imminent or in-progress military or terrorist attack. Public protective actions could include evacuation, shelter in place, or other actions (such as boiling contaminated water or seeking medical treatment).

**Civil Emergency Message (CEM)** - An emergency message regarding an in-progress or imminent significant threat(s) to public safety and/or property. The CEM is a higher priority message than the Local Area Emergency (LAE), but the hazard is less specific than the Civil Danger Warning (CDW). For example, the CEM could be used to describe a change in the Homeland Security Alert System level in response to a terrorist threat.

**Earthquake Warning (EQW)** - A warning of current or imminent earthquake activity. Authorized officials may recommend or order protective actions according to state law or local ordinance

**Evacuation Immediate (EVI)** - A warning where immediate evacuation is recommended or ordered according to state law or local ordinance. As an example, authorized officials may recommend the evacuation of affected areas due to an approaching tropical cyclone. In the event flammable or explosive gas is released, authorized officials may recommend evacuation of designated areas where casualties or property damage from a vapor cloud explosion or fire may occur.

**Fire Warning (FRW)** - A warning of a spreading wildfire or structural fire that threatens a populated area. Evacuation of areas in the fire's path may be recommended by authorized officials according to state law or local ordinance.

**Hazardous Materials Warning (HMW)** - A warning of the release of a non-radioactive hazardous material (such as flammable gas, toxic chemical, or biological agent) that may recommend evacuation (for an explosion, fire or oil spill hazard) or shelter in place (for a toxic fume hazard).

# Non-Weather Emergency Products

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**Local Area Emergency (LAE)** - An emergency message that defines an event that by itself does not pose a significant threat to public safety and/or property. However, the event could escalate, contribute to other more serious events, or disrupt critical public safety services. Instructions, other than public protective actions, may be provided by authorized officials. Examples include: a disruption in water, electric or natural gas service, road closures due to excessive snowfall, or a potential terrorist threat where the public is asked to remain alert.

**Network Message Notification (NMN)** - Not yet defined and not in the suite of products for relay by NWS.

**911 Telephone Outage Emergency (TOE)** - An emergency message that defines a local or state 911 telephone network outage by geographic area or telephone exchange. Authorized officials may provide alternative phone numbers in which to reach 911 or dispatch personnel.

**Nuclear Power Plant Warning (NUW)** - A warning of an event at a nuclear power plant classified such as a Site Area Emergency or General Emergency as classified by the Nuclear Regulatory Commission (NRC). A Site Area Emergency is confined to the plant site; no off-site impact is expected. Typically, a General Emergency is confined to an area less than a 10-mile radius around the plant. Authorized officials may recommend evacuation or medical treatment of exposed persons in nearby areas.

**Radiological Hazard Warning (RHW)** - A warning of the loss, discovery, or release of a radiological hazard. Examples include: the theft of a radioactive isotope used for medical, seismic, or other purposes; the discovery of radioactive materials; a transportation (aircraft, truck or rail, etc.) accident which may involve nuclear weapons, nuclear fuel, or radioactive wastes. Authorized officials may recommend protective actions to be taken if a radioactive hazard is discovered.

**Shelter in Place Warning (SPW)** - A warning of an event where the public is recommended to shelter in place (go inside, close doors and windows, turn off air conditioning or heating systems, and turn on a radio or TV for more information). An example is the release of hazardous materials where toxic fumes or radioactivity may affect an area.

**Tsunami Warning (TSW)** - A warning of current or imminent Tsunami activity. Authorized officials may recommend or order protective actions according to state law or local ordinance. Generally, you would recommend the evacuation of coastal areas to at least 15 feet above mean sea level for the Gulf of Mexico coast.

**Volcano Warning (VOW)** - A warning of current or imminent volcanic activity. Authorized officials may recommend or order protective actions according to state law or local ordinance.



# Product Dissemination

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## Requests for Climate Information

Each weather office can answer general requests for information concerning their area of responsibility. However, extensive research efforts and/or requests for official information for legal purposes are referred to either the National Climatic Data Center in Asheville, North Carolina, or the Southern Region Climate Center in Baton Rouge, Louisiana.

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, NC 28801-5001  
Ph: (828) 271-4800  
Fax: (828) 271-4876  
[www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

Southern Regional Climate Center  
E328 Howe-Russell Complex  
Louisiana State University  
Baton Rouge, LA 70803  
Ph: (225) 578-5021  
Fax: (225) 578-2912  
[www.srcc.lsu.edu/](http://www.srcc.lsu.edu/)

## SKYWARN Spotter Training Program

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The National Weather Service (NWS) in Corpus Christi relies on trained storm spotters to relay critical life saving information to the NWS office. SKYWARN spotters can be members of the general public, or as in most cases, amateur radio operators known as "HAM's". HAM operators have the advantage of using an established network of radio repeaters to communicate over long distances and directly to the amateur radio net control station located in the NWS office.

The National Weather Service office in Corpus Christi uses amateur radio as one method of communicating with spotter and emergency management organizations. Radar and storm information can be passed through this radio system to the spotter in the field.

Although severe weather can strike at any time of the year, the spring months of April and May are the most active. Therefore the NWS conducts spotter training classes in the late winter and early spring to prepare volunteers for the active severe weather season.

The goal of the training is not just to recognize tornadoes, but to have some understanding of storm structure, which in turn better prepares the spotter for the extreme and unusual circumstances. Each seminar is approximately 1.5 hours in length and is most often given on a weekday evening between 7:00 and 8:30pm. All of the seminars are open to the public and free of charge. Check the NWS website for a listing of SKYWARN Classes in your area.

NWS Corpus Christi website: [weather.gov/corpuschristi](http://weather.gov/corpuschristi) or [www.srh.noaa.gov/crp](http://www.srh.noaa.gov/crp)





Is your community ready when the weather changes? Americans live in the most severe weather-prone country on earth. Each year a startling 10,000 thunderstorms, 2,500 floods, 1000 tornadoes, and 10 hurricanes impact the United States. Potentially deadly severe weather impacts every American. Communities can now rely on the NWS Storm/Tsunami Ready program to help them guard against the ravages of Mother Nature.

## What is Storm/Tsunami Ready?

Ninety percent of all presidentially declared disasters are weather related. Through the Storm/Tsunami Ready program, the NWS gives communities the skills and education needed to survive severe weather - before and during the event. Storm/Tsunami Ready helps community leaders and emergency managers strengthen their local hazardous weather operations.

## How Can My Community Become Storm/Tsunami Ready?

The entire community - from the mayor and emergency managers, to business leaders and civic groups - can take the lead on becoming Storm/Tsunami Ready. Local NWS offices work with communities to complete an application and review process. To be recognized as Storm/Tsunami Ready, a community must:



- ✓ Establish a 24-hour warning point and emergency operations center.
- ✓ Have more than one way to receive severe weather warnings and forecasts and to alert the public.
- ✓ Create a system that monitors local weather conditions.
- ✓ Promote the importance of public readiness through community seminars.
- ✓ Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

To learn more about the Storm/Tsunami Ready program visit [www.nws.noaa.gov/stormready/](http://www.nws.noaa.gov/stormready/) or contact the Warning Coordination Meteorologist at your local NWS office.



# Routine Weather

Terminology  
Climatology  
Products

**Graphical Forecasts  
Area Forecast Discussion  
Short Term Forecasts  
Zone Forecasts English/Spanish  
Area Forecast Matrix  
Daily Climatological Report  
Tabular State Forecast  
Max/Min Temperature and Precipitation Table**

# Routine Weather Terminology

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**Breezy** - Sustained winds of 15 to 25 mph (blustery or brisk for cold weather).

**Broken clouds** - clouds that cover more than 5/8 to less than 8/8 of the sky.

**Ceiling** - Height of the lowest layer of clouds that covers more than 4/8 of the sky.

**Chance** - A 30 to 50 percent probability of measurable precipitation occurring.

**Cirrus** - High clouds composed of ice crystals.

**Cumulonimbus Cloud** - A cloud with great vertical extent that produces rain and may produce hail, strong winds, or lightning.

**Cumulus Cloud** - A cloud that develops vertically, appearing as rising mounds, domes or towers, the upper parts of which often resemble a cauliflower .

**Dewpoint** - The temperature to which air must be cooled at the same pressure for saturation to occur.

**Disturbance** - Used by forecasters to indicate a relatively small center of low pressure. In technical terms, usually refers to a short wave trough, vorticity maximum, or any area that shows signs of cyclonic circulation.

**Drizzle** - Small water drops with diameters of .2 to .5 millimeters.

**Eddy** - A circulation drawing energy from a flow of much larger scale and brought about by pressure irregularities as in the lee of a solid obstacle.

**El Nino** - A warming of the tropical Pacific waters, often referred to as weak, moderate or strong.

**Fair** - Weather generally depicting at most thin high cloud cover and no extremes in temperature, visibility or wind.

**Gust** - A brief, sudden increase in wind speed. The speed is at least 10 mph greater than the average wind.

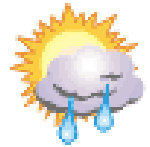
**Hail** - Precipitation in the form of spheres or irregular lumps of ice, always produced by convective clouds.

**Inversion** - Contrary to the normal situation that occurs throughout most of the United States, the temperature increases with height in the lower atmosphere. The atmosphere is very stable and has little mixing with the air above it.

**Isolated** - Showers covering less than 20 percent of an area.

# Routine Weather Terminology

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**Jet Stream** - Relatively strong winds contained within a narrow stream in the upper atmosphere. Jets of differing strengths occur at different elevations.

**La Nina** - A cooling of the tropical Pacific waters, often referred to as weak, moderate or strong.

**Likely** - A 60 to 70 percent chance of measurable precipitation occurring.

**Marine Layer** - A moist shallow layer of air of marine origin that usually has drier warmer air above it.

**Measurable Precipitation** - Fallen precipitation of at least .01 inch.

**Numerous** - Showers covering 60 percent or more of an area.

**Orographic Lift** - Forcing of air over terrain - can produce and enhance clouds or precipitation.

**Overcast** - Greater than 7/8 cloud cover.

**Relative Humidity** - The amount of water vapor in the air as compared to what the air can hold at saturation. Temperature and dewpoint temperature are used to calculate RH.

**Scattered Clouds** - Between 1/8 and 4/8 cloud cover.

**Scattered Showers** - Showers covering 30 to 59 percent of an area.

**Slight Chance** - A 20 percent chance or less of measurable precipitation.

**Snow Flurries** - Snowfall of light and intermittent nature with little or no accumulation.

**Stratus** - A low, gray cloud layer with a rather uniform base.

**Very Windy** - Sustained winds of 31 to 39 mph.

**Virga** - Wisps or streaks of rain falling out of a cloud but not reaching the ground.

**Widespread** - Covering nearly all of an area - used primarily for emphasis.

**Windy** - Sustained winds of 23 to 30 mph.

# Routine Weather Terminology

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## SKY CONDITIONS

Sky conditions are described depending upon how many tenths of the sky is covered by opaque clouds (clouds that cannot be seen through).

clear or sunny	0% - $\leq$ 5% cloud coverage
mostly clear/mostly sunny	> 5% - $\leq$ 25% cloud coverage
partly cloudy/partly sunny	> 25% - $\leq$ 50% cloud coverage
mostly cloudy	> 50% - $\leq$ 87% cloud coverage
Cloudy	> 87% - 100% cloud coverage

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## WINDS

Direction given is always from which the wind is blowing. Wind speeds are given in miles per hour. The following table lists approximate speeds for non-numerical terms used to describe sustained wind speed.

< 8 mph	light or light and variable
8-14 mph	gentle
15-22 mph	breezy
23-30 mph	windy
31-39 mph	very windy
40 mph or greater	strong, damaging, or dangerous (high wind warning required)

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## TEMPERATURES

The following terms represent temperature ranges and are used to allow for small variability in temperature forecasts.

Near 40	Approaching 40 or a range from 38 to 42
Around or about 85	A range of temperatures from 83 to 87
Lower 50s	Temperatures of 50,51,52,53
Middle 70s	Temperatures of 74,75,76,77
Upper 30s	Temperatures of 37,38,39
60s	Temperatures 60 to 69

# Routine Weather Terminology

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## PRECIPITATION: CUMULIFORM VS. STRATIFORM

The basic process of producing precipitation is air that rises and cools to the point that the atmosphere can no longer hold its moisture. The moisture condenses into the small particles that form the visible cloud. If the moisture is sufficient, the particles continue to combine to form into rain droplets (or if below freezing, snowflakes). When the rain droplets or snowflakes grow to the point where updrafts can no longer support their weight, they fall to the earth.

Cumuliform or convective Cumuliform-type clouds, also known as convective clouds, can produce showers. Showers are defined as: precipitation of brief duration or intermittent created by localized areas of rising moist air. While the areal coverage of showers is relatively small, precipitation rates are usually much greater than those from stratiform clouds. The most intense showers that come from cumuliform-type clouds are called thunderstorms that produce thunder and lightning. In addition, thunderstorms may produce hail, gusty winds, flash floods, or tornadoes.



**Stratiform:** Stratiform precipitation is formed by large areas of rising moist air and generally is of longer duration than showers. This type of precipitation will affect relatively large areas with the intensity changing slowly during the event. Stratiform precipitation is the predominant type of precipitation received by coastal areas of the United States while the mountains and deserts receive either type depending on the weather situation.



While the public will generally not notice the difference, precipitation will either come from cumuliform or stratiform clouds. This difference is reflected in the products issued by the NWS by indicating whether the precipitation will be continuous (from stratiform clouds) or showery (from cumulus clouds).

*Stratiform precipitation is generally indicated using the term rain while cumuliform precipitation is generally indicated using the terms showers or thunderstorms.*

# Routine Weather Terminology



## PROBABILITY OF PRECIPITATION (POP)

The basic process of producing precipitation is air that rises and cools to the point that the atmosphere can no longer hold its moisture. The moisture condenses into the small particles that form the visible cloud. If the moisture is sufficient, the particles continue to combine to form into rain droplets (or if below freezing, snowflakes). When the rain droplets or snowflakes grow to the point where updrafts can no longer support their weight, they fall to the earth.

The National Weather Service uses numerical and non-numerical methods to indicate the chance of precipitation for a specific area. The Probability of Precipitation (POP) is defined as the likelihood of occurrence of measurable liquid (0.01 inches or more) precipitation (or the water equivalent of frozen precipitation) during a specified period of time for any point in the forecast area. The POP is expressed as a percent and usually accompanies expressions of uncertainty or areal qualifiers within the narrative of a forecast. Normally, the period of time is 12 hours, unless specified otherwise.

Expressions of Uncertainty may be used with either cumuliform or stratiform rain. For example, a forecast for a slight chance of rain indicates that at least one location in a forecast area should receive measurable precipitation 20 out of 100 times (20%) that this type of weather situation occurs.

**Example:** A forecast for scattered thunderstorms means that 30-50 percent of the forecast area should have at least one thunderstorm during the forecast period.

As guidance, expressions of uncertainty and areal qualifying terms have the following relationship to POP values:

POP Percent	Expressions of Uncertainty	Equivalent Areal Qualifiers (convective only)
10-20 percent 30-40-50 percent 60-70 percent 80-90-100 percent	slight chance chance likely (none used)	isolated scattered numerous occasional (or none used)

# General Climatology of South Texas

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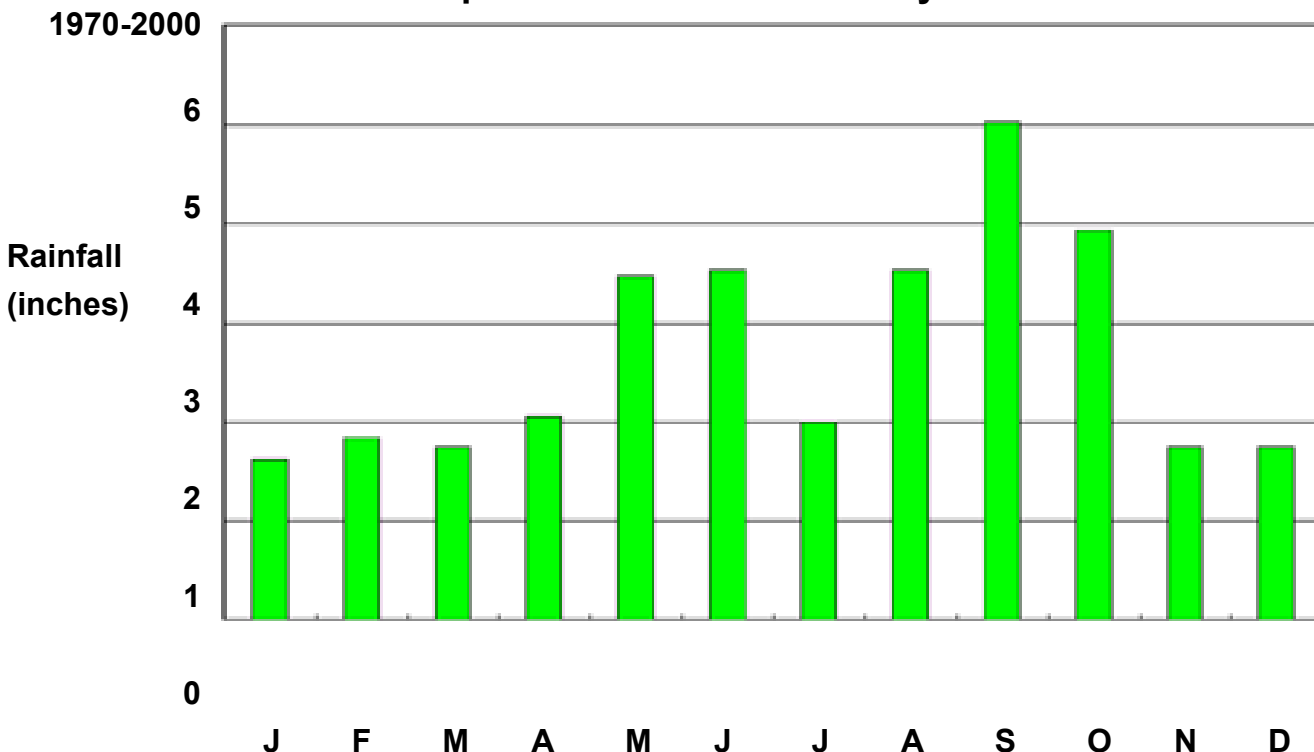
Considering the proximity to the tropics, the South Texas climate can be characterized by warm and humid summers and mild winters. The climate is affected by moist air from the Gulf of Mexico to the east and relatively drier conditions across the Sierra Madre mountains to the west in Mexico. Two distinct climate regions exist in South Texas, moist subtropical to the northeast and semi-arid to the west.

Summers are long and persist from May through September and winters are short and typically last from December to February. High temperatures in the peak of summer range from around the century mark over the Rio Grande Plains to the mid 90s across the Coastal Bend. Overnight low temperatures drop into the low to mid 70s except near 80 on the immediate coast. Ocean water temperatures will reach the mid to upper 80s in the summer and provide some relief to the immediate coastal areas once the typical midday or afternoon sea breeze develops and moves inland.

During the winter, high temperature range from the mid 60s to near 70 degrees and overnight lows dip into the mid 40s. Freezing conditions are rare along the immediate coastline occurring once every couple of years, but can occur 5 times or more across northern inland portions of South Texas each winter. The earliest freeze ever recorded in Corpus Christi occurred on October 31st and the latest freeze occurred on March 31st.

On average, precipitation amounts range from around 20 inches over the western Rio Grande Plains to near 40 inches in the northeast Coastal Bend. There are two rainy seasons in South Texas, with the first occurring in May and June and the second occurring in September. The first wet period corresponds to the formation of Sea Breeze precipitation and the second is skewed by landfalling tropical cyclones or easterly waves.

Corpus Christi - Mean Monthly Rainfall





# Sea Breeze



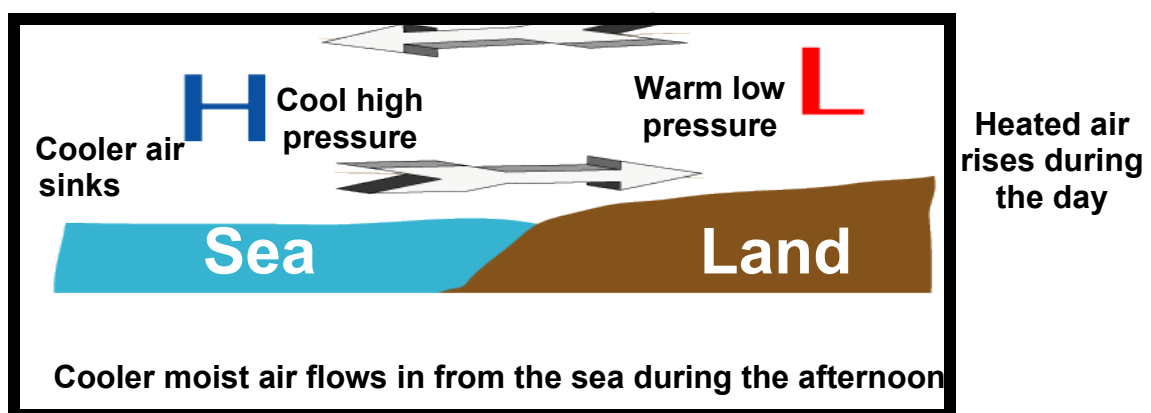
The sea-breeze is a fairly common phenomenon across South Texas during the summer months from May through September. The sea-breeze serves several functions in influencing the weather across the area; including acting as a focus for thunderstorm development and providing some relief from the hot summer temperatures.

The sea-breeze is essentially the result from the differences in the temperatures between the land areas and bodies of water. Due to a higher heat capacity, water temperature rise and cool much slower than temperatures over land. This difference in temperatures will continue to increase as a result of daytime heating. This process creates a “heat low” over land areas and a relative area of high pressure over the waters. Air tends to flow from high to low pressure, thus an onshore flow develops. The stronger the areas of high and low pressure become during maximum heating, the stronger the sea-breeze will become.

Due to the differences in the low-level environments over the land and water, this onshore flow will develop frontal characteristics. This boundary formed with the cooler, marine air on the high pressure side of the front and the warmer continental air mass on the low pressure side will begin to march inland. If there is much of a prevailing large-scale offshore wind, the sea-breeze will have a hard time becoming organized and may not move very far inland at all. With the aid of a prevailing onshore flow, the sea-breeze can move 50 to 70 miles inland.

The sea-breeze works to produce showers and thunderstorms across south Texas on the leading edge where air is forced to rise. The convection associated with the sea-breeze front typically does not affect locations along the immediate coast but generally develops along and west of Highway 77. Due to generally weak flow and low wind shear environment throughout the troposphere in the warm season, this convection tends to remain in the form of ordinary single or multi-cell thunderstorms. These thunderstorms are usually short lived and dissipate as the sea-breeze moves farther inland due to sinking motion on the backside of the sea breeze circulation.

## Sea Breeze Circulation

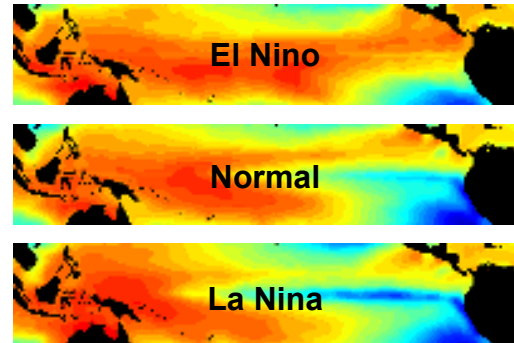


# El Niño & La Nina

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The term El Niño (Spanish for “the Christ Child”) was originally used by fishermen along the coasts of Ecuador and Peru to refer to a warm ocean current that typically appears around Christmas and can last for several months or more. The term “El Niño” has come to be reserved for these exceptionally warm intervals that not only disrupt the fishing industry but also bring heavy rains. La Nina events are the opposite of El Niño, where ocean water temperatures in the Pacific are cooler than normal.

Over the past 40 years, nine El Niños have affected the South American coast. Most of them raised water temperatures not only along the coast, but also at the Galapagos Islands and in a belt stretching 5000 miles across the equatorial Pacific. The weaker events raised sea temperatures only 1 to 2 °F and had only minor impacts on South American fisheries. But the strong ones, like the El Niño of 1982-83, left an imprint, not only upon the local weather and marine life, but also on climatic conditions around the globe. The most recent strong El Niño occurred in 2009-10 winter season. Corpus Christi, Texas experienced the wettest October 1 to September 30 period on record during 2009-10.



East Pacific Sea-Surface Temps

Normally, in the tropical Pacific Ocean, the trade winds are persistent winds that blow westward from a region of higher pressure over the eastern Pacific toward a region of lower pressure centered over Indonesia. The westward-blowing trade winds drag surface water with them which raises sea levels in the western Pacific and lowers it in the eastern Pacific. Along the South American coast, where the surface water moves away, colder, nutrient-rich water comes up from below to replace it, a phenomenon known as “upwelling”.

During El Niño years, this equatorial atmospheric pressure pattern breaks down, as air pressure rises over the region of the western Pacific and falls over the eastern Pacific. This change in pressure weakens the trade winds, and during strong pressure reversals, east winds are replaced by west winds. The change in winds decreases or stops the upwelling along the west coast of South America allowing warmer waters from the western Pacific to surge eastward toward South America. Toward the end of the warming period, atmospheric pressure over the eastern Pacific reverses and begins to rise, while the pressure over the western Pacific begins to fall. This oscillation of surface air pressure at opposite ends of the Pacific Ocean is called the Southern Oscillation. Because the pressure reversals and ocean warming are concurrent, it is referred to as the El Niño / Southern Oscillation or ENSO.

The oceans and the atmosphere function as a coupled system and affect each other. During normal years, the trade winds blowing from the east along with the upwelling of coastal waters, chills the air above. This cooler, more dense air does not easily form clouds; consequently, the west coast of South America receives relatively little rain. But when the easterlies weaken during the early stages of an El Niño event, the upwelling slows and the ocean warms. The moist air above the ocean also warms. It becomes buoyant enough to form deep clouds which produce heavy rain along the coastal areas. The change in ocean temperatures causes the major rain zone over the western Pacific to shift eastward which in turn has a ripple effect on global jet stream patterns (Pacific Jet) and resultant weather conditions.

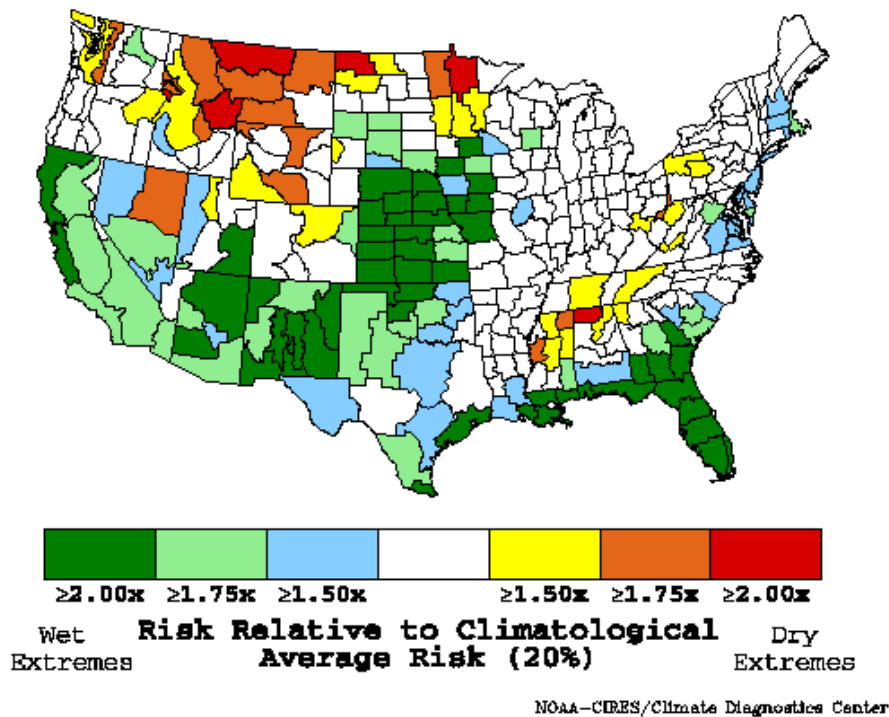
# El Nino & La Nina

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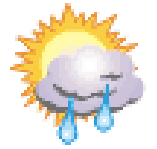
The impacts of El Nino and La Nina show up most clearly during wintertime. Most El Nino winters are mild over western Canada and much of the northern United States, and cooler than normal in the southern United States. Wetter than normal conditions persist from California to Florida.

During La Nina years, temperatures in the winter are warmer than normal in the North Central States, and cooler than normal in the Southeast and the Southwest. Wetter than normal conditions occur in the Northwest. The southern third of the United States is typically drier than normal.

**DJF Precipitation Extremes During El Nino  
Risk of Extreme Wet or Dry Years**



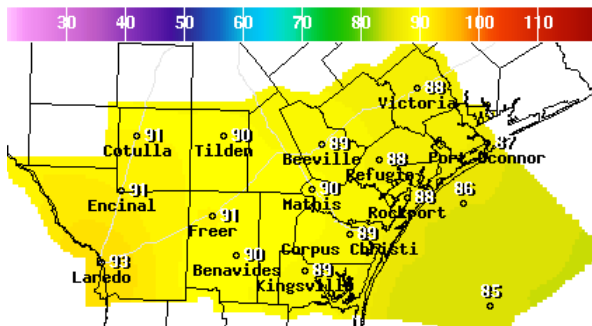
# Routine Weather Products



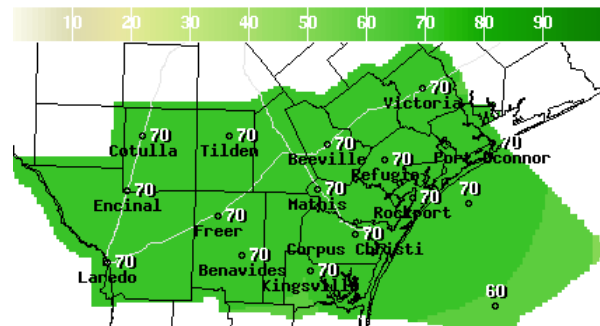
## GRAPHICAL FORECASTS

The NWS provides text and graphical forecasts through the Interactive Forecast Preparation System (IFPS). IFPS is a graphical means of producing forecast values such as temperature, humidity and probability of precipitation. From this data, formatters automatically generate the text products. Text products can also be generated on the Web using “point and click”.

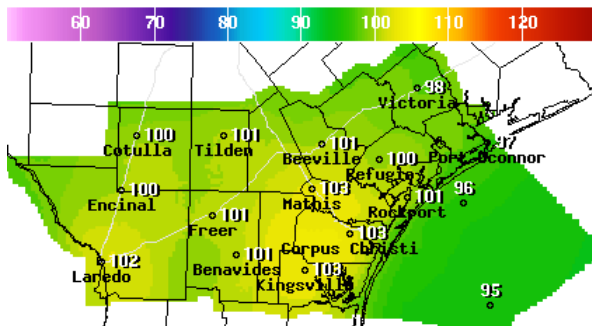
Check our website at: <http://www.weather.gov/forecasts/wfo/sectors/crp.php>



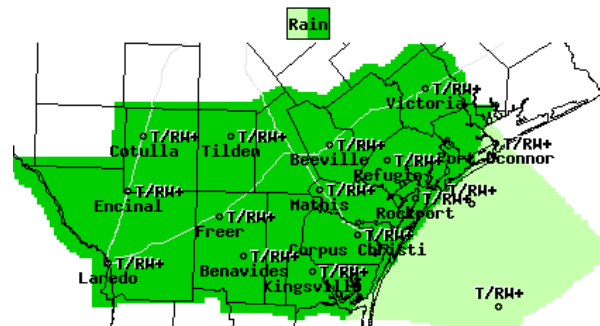
High Temperature(F) Ending Wed Jul 28 2010 9PM CDT  
(Thu Jul 29 2010 02Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT



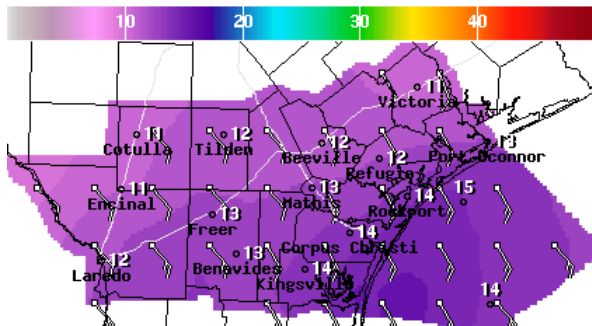
12Hr Prob. Precip(%) Ending Wed Jul 28 2010 7PM CDT  
(Thu Jul 29 2010 00Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT



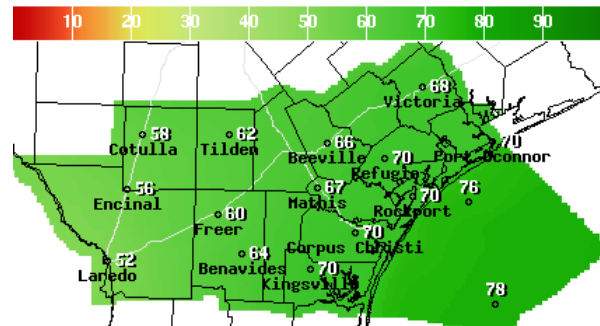
Heat Index(F) For Wed Jul 28 2010 4PM CDT  
(Wed Jul 28 2010 21Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT



Predominant Weather (wx) For Wed Jul 28 2010 4PM CDT  
(Wed Jul 28 2010 21Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT



WindSpd(kts) & WindDir For Wed Jul 28 2010 4PM CDT  
(Wed Jul 28 2010 21Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT



Relative Humidity(%) For Wed Jul 28 2010 4PM CDT  
(Wed Jul 28 2010 21Z)  
NWS Corpus Christi, TX  
Graphic Created Jul 28 2:15PM CDT

# Routine Weather Products



## AREA FORECAST DISCUSSION

The Area Forecast Discussion (AFD) is a semi-technical product primarily used as a means to explain the scientific rationale behind a forecast and summarize watches, warnings and/or advisories in effect.

The primary users of this product are federal agencies, weather safety officials, high-end recreationalists, and the media. This product is also used for coordination among WFOs, National Centers and River Forecast Centers,

000  
FXUS64 KCRP 300816  
AFDCRP

AREA FORECAST DISCUSSION  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
316 AM CDT MON AUG 30 2010

.SHORT TERM (TODAY THROUGH TUESDAY)...MID/UPPER LEVEL HIGH PRESSURE WILL MOVE WEST ACROSS THE REGION TODAY THROUGH TUESDAY. THE HIGH PRESSURE WILL SUPPRESS CONVECTION SOMEWHAT...BUT GIVEN AMPLE LOW LEVEL MOISTURE...INSTABILITY AND CONVERGENCE ALONG THE SEA BREEZE...AM EXPECTING ISOLD TO SCT CONVECTION TO DVLP DESPITE THE HIGH PRESSURE ALOFT. THEREFORE HAVE CONTD THE 20 TO 30 POPS ACROSS MAINLY THE EASTERN PORTIONS OF THE CWA FOR TODAY AND TUE. CONVECTION IS EXPECTED TO DISSIPATE FARTHER WEST ACROSS THE BRUSH COUNTRY DUE TO DECREASING INSTABILITY AND MOISTURE. THE DEWPOINTS ARE EXPECTED TO BE IN THE 70S RESULTING IN HEAT INDEX VALUES RANGING FROM 105 TO 109 THIS AFTERNOON. A FEW LOCATIONS MAY BRIEFLY REACH 110-113 VALUES.

&&

.MARINE...A WEAK TO MODERATE ONSHORE FLOW WILL PREVAIL TODAY THROUGH TUESDAY...ALONG WITH ISOLD TO SCT SHRA/TSRA`S.

&&

.LONG TERM (TUESDAY NIGHT THROUGH SUNDAY)...THE MODELS ARE FAIRLY SIMILAR THROUGH FRIDAY WITH MAINTAINING A MOIST FETCH FROM THE GULF WHICH WL PRODUCE PWATS AROUND 2 TO 2.2 INCHES. THE BOUNDARY LAYER MOISTURE WL BE SUFFICIENTLY DEEP ALONG WITH A WK MID LVL CAP AND ACTIVE SEABREEZE TO MAINTAIN ISOLATED TO SCATTERED CONVECTION IN THE FCST THROUGH FRIDAY. THE MODELS REALLY BEGIN TO DIVERGE FOR THE LABOR DAY WEEKEND. THE LATEST ECMWF SOLN BUILDS IN THE RDG AXIS ALOFT AND DRIES OUT THE CWA QUITE SIGNIFICANTLY FOR THE LABOR DAY WEEKEND. THE CANADIAN AND GFS MODELS OFFER A MUCH WETTER SOLN FOR THE WEEKEND. GIVEN THE PERSISTENT EASTERLY FETCH OF MOISTURE AND THE POSSIBILITY OF A STRONG TROPICAL WAVE MOVING THROUGH THE WESTERN GULF...THE CURRENT THINKING IS THAT THE LATTER SOLNS ARE MORE REALISTIC THAN THE DRY ECMWF. WL CONTINUE TO GO WITH CHC POPS FOR THE WEEKEND. PERSISTENCE PLUS OR MINUS A DEGREE OR TWO WL BE THE BEST FCST FOR THE TEMPS THROUGH THE WEEK.

&&

.PRELIMINARY POINT TEMPS/POPS...  
CORPUS CHRISTI 95 78 94 77 94 / 30 10 30 10 30  
VICTORIA 94 76 96 77 95 / 30 10 30 10 30

# Routine Weather Products



## SHORT TERM FORECAST

**A NOWCAST is issued on an as needed basis to provide the latest information on rain, thunderstorms, fog, etc. During weather events when watches, warnings, or advisories are in effect, the NOWCAST may be used to provide detailed information on significant weather.**

EXAMPLE SHORT-TERM FORECAST (NOW, FPUS74)

000  
FPUS74 KCRP 122359  
NOWCRP

SHORT TERM FORECAST  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
659 PM CDT TUE OCT 12 2010

TXZ230>232-130130-  
MCMULLEN-LIVE OAK-BEE-  
INCLUDING THE CITIES OF...CALLIHAM...CROSS...LOMA ALTA...TILDEN...  
GEORGE WEST...THREE RIVERS...BEEVILLE  
659 PM CDT TUE OCT 12 2010

.NOW...  
THROUGH 830 PM CDT...SHOWERS AND THUNDERSTORMS WILL CONTINUE TO  
MOVE SOUTHEAST AT 15 MPH ACROSS NORTHERN MCMULLEN...LIVE OAK AND  
BEE COUNTIES. THESE STORMS WILL AFFECT LOCATIONS FROM GEORGE WEST TO  
BEEVILLE BY 730 PM. BRIEF GUSTY WINDS...MODERATE TO HEAVY  
DOWNPOURS...AND GENERAL RAINFALL AMOUNTS LESS THAN ONE QUARTER OF  
AN INCH WITH ISOLATED AMOUNTS UP TO ONE INCH CAN BE EXPECTED.

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# Routine Weather Products

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## ZONE FORECASTS

Zone forecasts are 7-day forecasts issued at least twice daily at 400 AM and 400 PM in the languages of English and Spanish, and are updated as needed. Zone boundaries are defined by areas that have sufficient climatological and meteorological similarities. It is primarily used for planning purposes to support and promote public health, commerce, and quality of life.

NUECES-SAN PATRICIO-  
INCLUDING THE CITIES OF...CORPUS CHRISTI...PORTLAND...INGLESIDE...  
ARANSAS PASS...SINTON...MATHIS  
349 AM CDT WED OCT 13 2010

.TODAY...PARTLY CLOUDY. HIGHS IN THE UPPER 80S INLAND...IN THE  
MID 80S COAST. NORTH WINDS 10 TO 15 MPH.

.TONIGHT...MOSTLY CLEAR. LOWS IN THE UPPER 50S INLAND...IN THE  
MID 60S COAST. NORTH WINDS 10 TO 15 MPH.

.THURSDAY...SUNNY. HIGHS IN THE MID 80S. NORTH WINDS 10 TO  
15 MPH.

.THURSDAY NIGHT...CLEAR. LOWS IN THE LOWER 50S INLAND...IN THE  
UPPER 50S COAST. NORTH WINDS AROUND 10 MPH.

.FRIDAY...MOSTLY SUNNY. HIGHS IN THE MID 80S. LIGHT EAST WINDS.

.FRIDAY NIGHT...MOSTLY CLEAR. LOWS IN THE UPPER 50S INLAND...IN  
THE LOWER 60S COAST.

.SATURDAY THROUGH SUNDAY...PARTLY CLOUDY. LOWS IN THE UPPER 50S  
INLAND...IN THE MID 60S COAST. HIGHS IN THE MID 80S INLAND...IN  
THE LOWER 80S COAST.

.SUNDAY NIGHT AND MONDAY...PARTLY CLOUDY WITH A LESS THAN  
20 PERCENT CHANCE OF SHOWERS. LOWS IN THE LOWER 60S INLAND...IN  
THE UPPER 60S COAST. HIGHS IN THE UPPER 80S INLAND...IN THE MID  
80S COAST.

.MONDAY NIGHT...PARTLY CLOUDY. A LESS THAN 20 PERCENT CHANCE OF  
SHOWERS AFTER MIDNIGHT. LOWS IN THE UPPER 60S INLAND...IN THE  
LOWER 70S COAST.

.TUESDAY...PARTLY CLOUDY WITH A LESS THAN 20 PERCENT CHANCE OF  
SHOWERS IN THE MORNING...THEN MOSTLY CLOUDY IN THE AFTERNOON.  
HIGHS IN THE UPPER 80S INLAND...IN THE MID 80S COAST.



# Routine Weather Products



## AREA and POINT FORECAST MATRICES FOR SOUTH TEXAS

The Area Forecast Matrices displays various weather parameters for forecast areas specified in the valid ZFP at 3-hour, 6-hour, and/or 12-hour intervals. Issued at least twice daily and updated as needed, the AFM is intended for use by large volume users of NWS forecast information and for use by the general public. The NWS also issues a Point Forecast Matrix for selected locations. These products are drawn from the digital forecast database (NDFD).

```

000
FOUS54 KCRP 130845
AFMCRP

AREA FORECAST MATRICES
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
345 AM CDT WED OCT 13 2010

TXZ234-132215-
VICTORIA-
INCLUDING THE CITIES OF...VICTORIA
345 AM CDT WED OCT 13 2010

DATE          WED 10/13/10          THU 10/14/10          FRI 10/15/10
CDT 3HRLY    04 07 10 13 16 19 22 01 04 07 10 13 16 19 22 01 04 07 10 13 16 19
UTC 3HRLY    09 12 15 18 21 00 03 06 09 12 15 18 21 00 03 06 09 12 15 18 21 00

MAX/MIN
TEMP         60 58 73 85 87 76 66 62 58 56 70 82 84 75 59 53 50 49 63 80 83 74
DEWPT       52 48 51 55 55 55 55 54 52 51 50 50 50 49 47 45 42 42 44 46 47 47
RH          75 69 46 36 34 48 68 75 80 83 49 33 31 40 64 74 74 77 50 30 28 38
WIND DIR     N  NW  N  N  N  N  N  N  N  N  N  N  N  N  N  N  N  N  N  E  SE  SE  S
WIND SPD     5 11 14 17 14 13  9  9  9  9 10 10  9  5  5  5  4  3  2  1  3  5
CLOUDS      FW  FW  FW  FW  FW  FW  FW  FW  FW  CL  CL  CL  CL  CL  CL  CL  CL  FW  FW  FW  FW  FW
POP 12HR      0          0          0          0          0
QPF 12HR      0          0          0          0          0

DATE          SAT 10/16/10    SUN 10/17/10    MON 10/18/10    TUE 10/19/10
CDT 6HRLY    01 07 13 19    01 07 13 19    01 07 13 19    01 07 13 19
UTC 6HRLY    06 12 18 00    06 12 18 00    06 12 18 00    06 12 18 00

MIN/MAX
TEMP         51  85          55  85          60  85          64  85
DEWPT       53 52 59 60    58 56 62 63    63 61 65 65    66 64 68 69
PWIND DIR     S   SE        SE   SE        SE   S         S   S
WIND CHAR     LT   LT        LT   LT        LT   GN        LT   GN
AVG CLOUDS   FW  FW  FW  SC  SC  SC  SC  SC  SC  SC  B1  SC  SC  B1  B1  B1
POP 12HR      0   5          5   5          10  20         10  20
RAIN SHWRS           S   S                S   S

$$

```

# DECODING THE AREA FORECAST MATRICES

THE FOLLOWING PARAMETERS APPEAR DAILY...

MAX/MIN = DAYTIME HIGH AND NIGHTTIME LOW TEMPERATURE

TEMP = TEMPERATURE AT 3 HOURLY INTERVALS

DEWPT = DEWPOINT AT 3 HOURLY INTERVALS

RH = RELATIVE HUMIDITY AT 3 HOURLY INTERVALS

WIND DIR = WIND DIRECTION AT 3 HOURLY INTERVALS

WIND SPD = WIND SPEED IN MPH AT 3 HOURLY INTERVALS

CLOUDS = CLOUD COVER AT 3 HOURLY INTERVALS

CL = CLEAR SKIES (0-6% CLOUD COVER)

FW = MOSTLY CLEAR SKIES (7-31% CLOUD COVER)

SC = PARTLY CLOUDY SKIES (32-69% CLOUD COVER)

BK = MOSTLY CLOUDY SKIES (70-94% CLOUD COVER)

OV = CLOUDY SKIES (95-100% CLOUD COVER)

POP 12HR = PROBABILITY OF PRECIPITATION FOR DAY AND NIGHT

QPF12HR = PRECIPITATION AMOUNT IN INCHES FOR DAY AND NIGHT

THE FOLLOWING PARAMETERS APPEAR AS NEEDED...

WIND GUST = WIND GUST IN MPH AT 3 HOURLY INTERVALS

MAX QPF = MAXIMUM AMOUNT OF PRECIPITATION OCCURRING AT ANY ONE LOCATION

SNOW 12HR = SNOWFALL AMOUNT IN INCHES FOR DAY AND NIGHT

WIND CHILL = HOW IT FEELS BASED ON TEMPERATURE AND WIND EACH 3 HOURS

MIN CHILL = LOWEST WIND CHILL OVER LAST 6 HOUR PERIOD

HEAT INDEX = HOW IT FEELS BASED ON TEMPERATURE AND RH EACH 3 HOURS

MAX HEAT = HIGHEST HEAT INDEX OVER LAST 6 HOUR PERIOD

RAIN = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS RAIN

RAIN SHWRS = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS RAIN SHOWERS

SPRINKLES = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS SPRINKLES

TSTMS = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS THUNDERSTORMS

DRIZZLE = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS DRIZZLE

SNOW = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS SNOW

SNOW SHWRS = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS SNOW SHOWERS

FLURRIES = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS FLURRIES

SLEET = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS ICE PELLETS

FRZNG RAIN = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS FREEZING RAIN

FRZNG DRZL = PRECIPITATION TYPE FOR EACH 3 HOUR PERIOD IS FREEZING DRIZZLE

EACH PRECIPITATION PARAMETER IS CLASSIFIED AS FOLLOWS...

IS = ISOLATED (10-20% COVERAGE)

S = SLIGHT (10-20% PROBABILITY)

SC = SCATTERED (30-50% COVERAGE)

C = CHANCE (30-50% PROBABILITY)

NM = NUMEROUS (60-70% COVERAGE)

L = LIKELY (60-70% PROBABILITY)

O = OCCASIONAL (80-100% PROBABILITY)

D = DEFINITE (80-100% PROBABILITY)

EC = EXTENSIVE COVERAGE (80-100% PROBABILITY)

PA = PATCHY (<25% COVERAGE)

AR = AREAS (25-50% COVERAGE)

WD = WIDESPREAD (>50% COVERAGE)

OBSTRUCTIONS TO VISIBILITY ARE CLASSIFIED AS FOLLOWS...

F = FOG

PF = PATCHY FOG

F+ = DENSE FOG

PF+ = PATCHY DENSE FOG

H = HAZE

BS = BLOWING SNOW

BD = BLOWING DUST

VA = VOLCANIC ASH

K = SMOKE

ADDITIONAL EXTENDED FORECAST PARAMETERS ARE CLASSIFIED AS FOLLOWS...

PWIND = PRIMARY WIND DIRECTION FOR EACH 12 HOUR PERIOD

WIND CHAR = WIND CHARACTERISTIC FOR EACH 12 HOUR PERIOD

LT = LIGHT (< 8 mph)

GN = GENTLE (8-14 mph)

BZ = BREEZY (15-22 mph)

WY = WINDY (23-30 mph)

VW = VERY WINDY (31-39 mph)

SD = STRONG (>40 mph)

AVG CLOUDS = AVERAGE CLOUD COVER FOR EACH 12 HOUR PERIOD

MM = MISSING DATA

IF A HURRICANE IS EXPECTED THEN THE FOLLOWING APPLIES...

0-24 HOURS BEFORE LANDFALL...THE ACTUAL WIND SPEEDS WILL BE USED

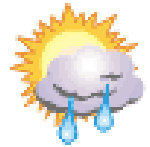
25-60 HOURS BEFORE LANDFALL...THE CODE "HU" WILL BE USED FOR WINDS

AND "HG" FOR WIND GUSTS

61-120 HOURS BEFORE LANDFALL...THE CODE "HU" WILL ONLY BE USED

\$\$

# Routine Weather Products



## TABULAR STATE FORECAST FOR SOUTH TEXAS

The Tabular State Forecast is a general 7 day public forecast of high and low temperatures, percent chance of precipitation, and precipitation amounts across South Texas. It is issued at 400 AM and 400 PM local, and is updated as needed.

000  
FPUS64 KCRP 300846  
SFTCRP  
TXZ229>234-239>247-302330-

TABULAR STATE FORECAST FOR SOUTH TEXAS  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
346 AM CDT MON AUG 30 2010

ROWS INCLUDE...

DAILY PREDOMINANT DAYTIME WEATHER 6AM-6PM  
FORECAST TEMPERATURES...EARLY MORNING LOW/DAYTIME HIGH  
PROBABILITY OF PRECIPITATION NIGHTTIME 6PM-6AM/DAYTIME 6AM-6PM  
- INDICATES TEMPERATURES BELOW ZERO  
MM INDICATES MISSING DATA  
QUANTITATIVE PRECIPITATION - INCHES - 12AM-12AM

FCST	FCST	FCST	FCST	FCST	FCST	FCST
TODAY	TUE	WED	THU	FRI	SAT	SUN
AUG 30	AUG 31	SEP 01	SEP 02	SEP 03	SEP 04	SEP 05

...MIDDLE TEXAS COAST...

CORPUS CHRISTI

PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY
/95	78/94	77/94	77/94	77/94	76/94	75/93
/30	10/30	10/30	10/20	20/30	20/40	20/40
0.06	0.03	0.08	0.07	0.00		

PORT ARANSAS

PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY
/89	83/91	82/91	82/91	82/91	82/91	81/90
/30	20/30	20/30	10/20	20/30	20/40	20/40
0.06	0.03	0.08	0.10	0.00		

PORT LAVACA

PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY
/93	78/94	79/94	79/93	79/94	78/94	77/93
/30	20/30	20/30	20/20	20/30	20/40	20/40
0.14	0.04	0.06	0.12	0.00		

PORT OCONNOR

PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY	PTCLDY
/91	83/91	82/91	82/91	82/91	81/91	80/90
/30	20/30	20/30	20/20	20/30	20/40	20/40
0.08	0.04	0.07	0.13	0.00		

# Routine Weather Products



## DAILY CLIMATOLOGICAL SUMMARY (CLI)

The Daily Climatological Summary report is issued each day at approximately 2 AM and 430 PM. The report provides a climatological summary of the weather at the Corpus Christi International Airport. This summary is also prepared for the Victoria Regional Airport, and Laredo International Airport.

CDUS44 KCRP 302134  
CLICRP

CLIMATE REPORT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
434 PM CDT FRI JUL 30 2010

.....  
...THE CORPUS CHRISTI CLIMATE SUMMARY FOR JULY 30 2010...  
VALID TODAY AS OF 0400 PM LOCAL TIME.

CLIMATE NORMAL PERIOD 1971 TO 2000  
CLIMATE RECORD PERIOD 1887 TO 2010

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
.....							
TEMPERATURE (F)							
TODAY							
MAXIMUM	95	303 PM	101	1960	94	1	98
				1946			
MINIMUM	75	601 AM	70	1971	75	0	80
				1949			
AVERAGE	85				84	1	89
PRECIPITATION (IN)							
TODAY	0.00		0.85	1916	0.07	-0.07	0.00
MONTH TO DATE	7.84				1.93	5.91	0.16
SINCE JAN 1	25.36				16.19	9.17	3.65
SNOWFALL (IN)							
TODAY	0.0						
MONTH TO DATE	0.0						
SINCE JUN 1	0.0						
SINCE JUL 1	0.0						
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							
TODAY	0				0	0	0
MONTH TO DATE	0				0	0	0
SINCE JUN 1	0				0	0	0
SINCE JUL 1	0				0	0	0

# Routine Weather Products



## TEMPERATURE AND PRECIPITATION SUMMARY (RTP)

This summary includes official automated weather stations in South Texas (ASOS and AWOS). This is issued twice a day, 7 am and 7 pm to capture the low and high temperatures and 24 hour precipitation

```
000
ASUS64 KCRP 131309
RTPCRP
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
MORNING TEMPERATURE AND PRECIPITATION SUMMARY FOR SOUTH TEXAS
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
809 AM CDT WED OCT 13 2010
```

```
VALUES REPRESENT YESTERDAYS HIGH...THE LOW OVER THE LAST 12 HOURS
AND 24 HOUR PRECIPITATION ENDING AT 6 AM CST/7 AM CDT
```

```
.BR CRP 1013 C DH01/TAIRZX/DH07/TAIRZP/PPDRZZ
:
:
:      STATION          HIGH   LOW   24-HR
:      NAME            TEMP   TEMP PCPN
:
KALI : ALICE AIRPORT/ASOS      :   92 /  71 /  0.00
KCRP : CORPUS CHRISTI ASOS     :   89 /  65 /  0.00
KCOT : COTULLA ASOS           :   94 /  64 /  0.00
KHBV : HEBBRONVILLE AWOS     :   91 /  65 /  0.00
KLRD : LAREDO AIRPORT         :   94 /  70 /  0.00
KTFP : MCCAMPBELL AWOS        :   91 /  73 /  0.00
KNGP : NAS CORPUS CHRISTI ASOS :   88 /   M /  0.06
KNQI : NAS KINGSVILLE ASOS   :   91 /  70 /  0.00
KPSX : PALACIOS ASOS          :   90 /  57 /  0.00
KPEZ : PLEASANTON AWOS        :   91 /  56 /  0.00
KPKV : PORT LAVACA AWOS       :   90 /  63 /  0.00
KRAS : PORT ARANSAS AWOS      :   86 /  72 /  0.00
KRBO : ROBSTOWN AWOS          :   92 /  71 /  0.00
KRKP : ROCKPORT ASOS          :   87 /  64 /  0.00
KVCT : VICTORIA AIRPORT ASOS   :   92 /  57 /  0.00
.END
```

```
THESE DATA ARE PRELIMINARY AND HAVE NOT UNDERGONE FINAL QUALITY
CONTROL (QC) BY NCDC. THEREFORE THESE DATA ARE SUBJECT TO REVISION.
FINAL AND CERTIFIED CLIMATE DATA CAN BE ACCESSED AT THE NATIONAL
CLIMATIC DATA CENTER (NCDC) - WWW.NCDC.NOAA.GOV
```

# Routine Weather Products



## MAX/MIN TEMPERATURE AND PRECIPITATION TABLE (RRM)

The Max/Min Temperature and Precipitation Table for South Texas cities is issued daily at 11 am. Most of the reports are from our network of volunteer weather observers. The NWS provides an official temperature sensor and rain gauge to each observer. These observers are required to report 365 days a year. Records are sent to the National Climatic Data Center at the end of each month.

000  
SRUS44 KCRP 131547  
RRMCRP

MISCELLANEOUS HYDROLOGIC DATA REPORT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1045 AM CDT WED OCT 13 2010

COASTAL BEND STATION AND COOP REPORTS

PLEASE NOTE...COOP HIGH TEMPERATURE IS FOR YESTERDAY  
COOP LOW TEMPERATURE IS THE 24 HOUR LOW SINCE YESTERDAY`S  
OBSERVATION.

RAINFALL NOT SHOWN ASSUMED TO BE ZERO

STATION	TEMPERATURES			24HR
	HI	LO	OBS	PCPN
...VICTORIA CROSSROADS AREA...				
COLETO CREEK	88	59	61	0.00
GOLIAD	89	57	58	0.00
VICTORIA FIRE DEPT	88	58	59	0.00
VICTORIA AIRPORT	91	62	77	0.00
...COASTAL COUNTIES...				
ARANSAS WILDLIFE	88	60	67	0.00
BISHOP	91	66	71	0.00
CC BOTANICAL GARDENS				
CORPUS CHRISTI NWS	90	66	69	0.00
KINGSVILLE (CITY)	90	70	72	0.00
MATHIS 4SSW	89	65	67	0.00
PADRE ISLAND	85	67	73	0.00
POINT COMFORT				
PORT ARANSAS				
PORT LAVACA	91	61	64	0.00
PORT OCONNOR				
REFUGIO 2NW				
REFUGIO 3SW				
ROBSTOWN				
ROCKPORT (CITY)	89	64	76	0.00
SINTON				
WELDER WILDLIFE				
...INLAND COUNTIES...				
BEEVILLE 5NE	89	59	62	0.00
BENAVIDES #2				

# Routine Weather Products



## CoCoRaHS Precipitation Report Summary (LCO)

A daily collection of precipitation reports from the national CoCoRaHS network is issued for South Texas at 10 am local time. These are volunteer observers that take measurements everyday at 7 am.

<http://www.cocorahs.org/>

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SXUS54 KCRP 131513

LCOCR

COCORAHS PRECIPITATION SUMMARY

NATIONAL WEATHER SERVICE CORPUS CHRISTI TX

1001 AM CDT WED OCT 13 2010

:COCORAHS PRECIPITATION REPORTS

:THESE REPORTS ARE CONSIDERED SUPPLEMENTAL AND UNOFFICIAL

:VALUES ARE FOR THE PREVIOUS 24 HOURS ENDING AROUND 7 AM LOCAL TIME

:COCORAHS PRECIPITATION REPORTS IN SOUTH TEXAS

PCPN

TX-RF-5	: AUSTWELL 0.2 ESE	*	: 0.00
TX-RF-2	: AUSTWELL 0.3 ESE	*	: 0.00
TX-BEE-9	: BEEVILLE 0.2 NNE	*	: 0.00
TX-BEE-10	: BEEVILLE 4.5 NW	*	: 0.00
TX-BEE-5	: BEEVILLE 6.8 ESE	*	: 0.00
TX-NU-22	: BISHOP 0.9 ENE	*	: 0.00
TX-NU-19	: CALALLEN 3.5 SSE	*	: 0.00
TX-NU-21	: CORPUS CHRISTI 3.2 SSW	*	: 0.00
TX-NU-20	: CORPUS CHRISTI 3.6 W	*	: 0.00
TX-NU-24	: CORPUS CHRISTI 4.3 S	*	: 0.00
TX-NU-4	: CORPUS CHRISTI 8.0 WNW	*	: 0.00
TX-NU-7	: CORPUS CHRISTI 9.0 SSE	*	: T
TX-LS-3	: DILLEY 17.9 ESE	*	: 0.00
TX-WB-23	: FREER 29.5 WSW	*	: 0.00
TX-LO-2	: GEORGE WEST 0.1 WSW	*	: 0.07
TX-LO-11	: GEORGE WEST 2.9 E	*	: 0.00
TX-LO-12	: GEORGE WEST 8.0 NE	*	: 0.00
TX-GD-17	: GOLIAD 0.1 S	*	: 0.00
TX-GD-3	: GOLIAD 2.4 SE	*	: 0.00
TX-GD-9	: GOLIAD 10.1 NE	*	: 0.00
TX-GD-19	: GOLIAD 10.9 NE	*	: 0.00
TX-GD-12	: GOLIAD 11.5 N	*	: 0.00
TX-VC-9	: INEZ 5.3 SSW	*	: 0.00
TX-KL-2	: KINGSVILLE 6.5 SSE	*	: 0.02
TX-WB-28	: LAREDO 1.3 NNW	*	: 0.00
TX-WB-12	: LAREDO 1.8 N	*	: 0.00
TX-WB-6	: LAREDO 2.4 S	*	: 0.00
TX-WB-24	: LAREDO 3.2 N	*	: 0.00
TX-WB-31	: LAREDO 3.9 NNE	*	: 0.00
TX-WB-25	: LAREDO 4.3 SSE	*	: 0.00
TX-WB-19	: LAREDO 6.4 S	*	: 0.00
TX-WB-14	: LAREDO 18.4 NE	*	: 0.00
TX-WB-22	: LAREDO 23.7 ENE	*	: 0.00
TX-SP-8	: MATHIS 2.6 NW	*	: 0.00
TX-JW-4	: ORANGE GROVE 2.6 NNW	*	: 0.00
TX-CLH-10	: POINT COMFORT 0.8 N	*	: 0.00
TX-LO-13	: THREE RIVERS 8.6 NNE	*	: 0.00





# **Non-Precipitation Weather**

## **Terminology Products**

**Dense Fog Advisory  
Wind Advisory  
High Wind Watch/Warning  
Blowing Dust Advisory  
Smoke Advisory  
Heat Advisory  
Heat Index Table  
Freeze Warning  
Wind Chill Table**

# Non-Precipitation Weather Terminology

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Any event that does not contain precipitation is handled by a Non-Precipitation Weather product. Non-precipitation weather events are handled by issuing a watch, advisory, or warning. Non-Precipitation Weather products are issued by South Texas NWS offices with warning responsibility for the affected area. The description contains the part of Texas affected, the counties in that area and the expiration time.

**Blowing Dust/Sand Advisory** - Blowing dust or sand reducing visibility to 1/4 mile or less for 2 or more hours.

**Dense Fog Advisory** - Visibility reduced to 1/4 mile or less for 2 or more hours.

**Freeze Warning** - Temperatures 32 degrees F or colder for 2 or more hours expected within the next 24 hours.

**Freeze Watch** - When a significant freeze (temperatures 28 degrees F or less) is expected over most locations in the watch area within the next 24 to 48 hours.

**Heat Advisory** - Heat Index is 110 degrees F or higher for 2 or more hours (when heat indices are expected to range between 105 degrees F and 109 degrees F, a Special Weather Statement will be issued).

**High Wind Warning** - Sustained surface wind speeds of 40 mph or greater for 1 hour or longer, or gusts 58 mph or greater for any duration.

**High Wind Watch** - Sustained surface wind speeds of 40 mph or greater for 1 hour or longer, or gusts 58 mph or greater for any duration are expected 24 to 36 hours in advance.

**Inland Tropical Storm/Hurricane Wind Watch or Warning** - Issued when a tropical cyclone is expected to remain at tropical storm or hurricane intensity inland.

**Smoke Advisory** - Smoke reducing visibility to 1/4 mile or less for 2 or more hours.

**Wind Advisory** - Sustained surface winds from 30 to 39 mph and/or wind gusts of 40 mph or Higher over most locations.

**Wind Chill Advisory** - Wind Chill temperatures between 0 degrees F and -17 degrees F when wind speeds 10 mph or greater expected within the next 12 to 24 hours.

**Wind Chill Warning** - Wind Chill temperatures of -18 degrees F or colder and wind speeds 10 mph or greater are expected within the next 12 to 24 hours.

**Wind Chill Watch** - When wind chill temperatures of 0 degrees F or colder and wind speeds 10 mph or greater are expected over most locations within the next 24 to 48 hours.

# Non-Precipitation Weather Products



## DENSE FOG ADVISORY

EXAMPLE DENSE FOG ADVISORY (NPW, WWUS74)

WWUS74 KCRP 240931  
NPWCRP

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
331 AM CST SUN FEB 24 2010

TXZ241>244-241500-  
/O.NEW.KCRP.FG.Y.0010.080224T0931Z-080224T1500Z/  
JIM WELLS-KLEBERG-NUECES-SAN PATRICIO-  
INCLUDING THE CITIES OF...ALICE...PREMONT...KINGSVILLE...  
CORPUS CHRISTI...ROBSTOWN...PORT ARANSAS...PORTLAND...INGLESIDE...  
ARANSAS PASS...SINTON...MATHIS  
331 AM CST SUN FEB 24 2010

..DENSE FOG ADVISORY IN EFFECT UNTIL 9 AM CST THIS MORNING...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A DENSE  
FOG ADVISORY...WHICH IS IN EFFECT UNTIL 9 AM CST THIS MORNING.

RADIATION FOG INLAND COMBINED WITH SEA FOG ALONG THE IMMEDIATE  
COAST SOUTH OF PORT ARANSAS WILL GENERATE AREAS OF DENSE FOG OVER  
THE SOUTHERN COASTAL BEND. VISIBILITIES WILL BE REDUCED TO 1/4  
MILE OR LESS THROUGH SUNRISE.

MOTORISTS ARE URGED TO DRIVE WITH EXTREME CAUTION AND USE LOW BEAM  
HEADLIGHTS. SLOW DOWN AND ALLOW PLENTY OF EXTRA TIME TO REACH  
YOUR DESTINATION.

A DENSE FOG ADVISORY MEANS THAT FOG HAS REDUCED VISIBILITIES TO  
ONE-QUARTER OF A MILE OR LESS FOR 2 OR MORE HOURS.



# Non-Precipitation Weather Products



## WIND ADVISORY

160  
WWUS74 KCRP 041429  
NPWCRP

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
929 AM CDT THU NOV 4 2010

TXZ242>247-042300-  
/O.NEW.KCRP.WI.Y.0019.101104T1429Z-101104T2300Z/  
KLEBERG-NUECES-SAN PATRICIO-ARANSAS-REFUGIO-CALHOUN-  
INCLUDING THE CITIES OF...KINGSVILLE...CORPUS CHRISTI...  
PORTLAND...INGLESIDE...ARANSAS PASS...SINTON...MATHIS...  
ROCKPORT...REFUGIO...WOODSBORO...PORT LAVACA  
929 AM CDT THU NOV 4 2010

..WIND ADVISORY IN EFFECT UNTIL 6 PM CDT THIS EVENING

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A WIND  
ADVISORY...WHICH IS IN EFFECT UNTIL 6 PM CDT THIS EVENING.

STRONG NORTH TO NORTHWEST WINDS WILL DEVELOP ACROSS THE COASTAL  
BEND THIS MORNING. SUSTAINED WIND SPEED OF 20 TO 30 MPH WITH GUSTS  
TO 40 MPH WILL PREVAIL LATE MORNING THROUGH MID AFTERNOON BEFORE  
DIMINISHING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT SUSTAINED WIND SPEEDS ARE EXPECTED TO  
BE 25 TO 39 MPH OR HAVE GUSTS TO AROUND 40 MPH OR HIGHER.  
MOTORISTS...ESPECIALLY HIGH PROFILE VEHICLES...SHOULD DRIVE WITH  
CAUTION TODAY. THE STRONG WINDS WILL MAKE DRIVING DIFFICULT AT  
TIMES. SECURE LAWN FURNITURE...GARBAGE CANS...OR OTHER OBJECTS  
THAT COULD BE BLOWN AROUND BY THE STRONG WINDS.

# Non-Precipitation Weather Products



## HIGH WIND WATCH

EXAMPLE HIGH WIND WATCH (NPW,WWUS74)

SATNPWCRP  
WWUS74 KCRP 251100

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
500 AM CDT WED MAR 25 2001

TXZ231>234-241>247-261100-  
ARANSASA-BEE-CALHOUN-GOLIAD-JIM WELLS-KLEBERG-NUECES-REFUGIO-SAN PATRICIO-VICTORIA-  
INCLUDING THE CITIES OF...VICTORIA...THREE  
RIVERS...SKIDMORE...SINTON...SEADRIFT...ROCKPORT...ROBSTOWN...REFUGIO...PORTLAND...  
PORT OCONNOR...PORT LAVACA...PORT ARANSAS...MATHIS...KINGSVILLE...INGLESIDE...GOLIAD...  
GEORGE WEST...CORPUS CHRISTI...BEEVILLE...ARANSAS PASS AND ALICE  
500 AM CDT WED MAR 25 2001

...A HIGH WIND WATCH IS IN EFFECT FROM THIS MORNING THROUGH TONIGHT..

AN INTENSE LOW PRESSURE SYSTEM OVER WEST TEXAS...AND HIGH PRESSURE OVER THE ATLANTIC...WILL RESULT  
INA VERY STRONG PRESSURE GRADIENT ON THURSDAY. STRONG SOUTH WINDS BETWEEN 35 AND 45 MPH...WITH  
GUSTS AROUND 60 MPH...ARE EXPECTED OVER THE WATCH AREA.

HIGH WINDS WILL MAKE DRIVING VERY DIFFICULT AT TIMES...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE  
EXTREME CAUTION WHEN DRIVING ON ROADS WHERE THE WIND IS PERPENDICULAR TO THE ROAD AND ALSO WHEN  
TRAVELING ACROSS BRIDGES AND OVERPASSES. SECURE LOOSE OBJECTS SUCH AS LAWN FURNITURE AND GARBAGE  
CANS TO PREVENT THEM FROM BEING BLOWN AWAY.

## HIGH WIND WARNING

EXAMPLE HIGH WIND WARNING NPW,WWUS74)

SATNPWCRP  
WWUS74 KCRP 050731

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
228 AM CDT MON APR 5 2005

TXZ240>244-050927-  
DUVAL-JIM WELLS-KLEBERG-NUECES-SAN PATRICIO-  
INCLUDING THE CITIES OF...SINTON...ROBSTOWN...PORTLAND... PORT ARANSAS...MATHIS...  
KINGSVILLE...INGLESIDE...CORPUS CHRISTI...BENAVIDES...ARANSAS PASS AND ALICE  
228 AM CDT MON APR 5 2005

...A HIGH WIND WARNING IS IN EFFECT UNTIL 4:30 AM CDT EARLY THIS MORNING FOR THE SOUTHERN  
COASTAL BEND..

INTENSE WINDS CONTINUE TO DEVELOP OVER THE COASTAL BEND IN THE WAKE OF THE THUNDERSTORM COMPLEX  
THAT HAS MOVED INTO THE COASTAL WATERS DURING THE EARLY MORNING HOURS. NORTHEAST WINDS OF 40 MPH  
WITH GUSTS TO 55 MPH HAVE OCCURRED AT THE CORPUS CHRISTI INTERNATIONAL AIRPORT. THESE STRONG WINDS  
WILL CONTINUE UNTIL AROUND 400 AM BEFORE GRADUALLY SUBSIDING.

A HIGH WIND WARNING MEANS THAT SUSTAINED WIND SPEEDS OF 40 MPH OR GREATER LASTING 1 HOUR OR  
GREATER ARE OCCURRING OR ARE IMMINENT. HIGH WINDS WILL MAKE DRIVING DIFFICULT AT  
TIMES...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTREME CAUTION WHEN DRIVING ON ROADS WHERE THE  
WIND IS PERPENDICULAR TO THE ROAD AND ALSO WHEN TRAVELING ACROSS BRIDGES AND OVERPASSES. SECURE  
LOOSE OBJECTS SUCH AS LAWN FURNITURE AND GARBAGE CANS TO PREVENT THEM FROM BEING BLOWN AWAY.

# Non-Precipitation Weather Products

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## BLOWING DUST ADVISORY

EXAMPLE BLOWING DUST ADVISORY (NPW,WWUS74)

SATNPWCRP  
WWUS74 KCRP 111600

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1000 AM CST MON JAN 11 1999

TXZ220-230-239-240-120000-  
DUVAL-LASALLE-MCMULLEN-WEBB  
INCLUDING THE CITIES OF...COTULLA...FREER...LAREDO...TILDEN  
1000 AM CST MON JAN 11 1999

...A BLOWING DUST ADVISORY IS IN EFFECT UNTIL 6 PM THIS EVENING FOR THE RIO GRANDE PLAINS...

STRONG NORTH WINDS AVERAGING BETWEEN 25 AND 35 MPH WITH GUSTS TO 45 MPH WILL COMBINE WITH DRY SOILS AND RESULT IN AREAS OF BLOWING DUST TODAY. VISIBILITIES ARE EXPECTED TO AVERAGE AROUND 1 MILE WITH SOME LOCATIONS EXPERIENCING VISIBILITIES BELOW 1/4 MILE. MOTORISTS SHOULD SLOW DOWN AND DRIVE CAREFULLY IN AREAS OF REDUCED VISIBILITY. CONDITIONS SHOULD IMPROVE BY EVENING AS THE WIND DIMINISHES.

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## SMOKE ADVISORY

EXAMPLE SMOKE ADVISORY (NPW,WWUS74)

SATNPWCRP  
WWUS74 KCRP 231452

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
852 AM CST MON JAN 23 1999

TXZ230-120000-  
MCMULLENINCLUDING  
THE CITY OF...TILDEN  
852 AM CST MON JAN 23 1999

...A SMOKE ADVISORY IS IN EFFECT UNTIL 6 PM THIS EVENING...

THICK SMOKE FROM LARGE FIRES IN MUCH OF LASALLE COUNTY AND WESTERN PORTIONS OF MCMULLEN COUNTY WILL REDUCE VISIBILITIES TO LESS THAN 1/4 MILE AT TIMES. ALSO...WEST WINDS WILL PUSH SMOKE FROM LASALLE COUNTY INTO MCMULLEN COUNTY. SLOW DOWN AND DRIVE CAUTIOUSLY THROUGH THE SMOKE. THE DEPARTMENT OF PUBLIC SAFETY HAS REPORTED MANY ACCIDENTS DUE TO THE REDUCED VISIBILITY IN SMOKE. RESIDENTS WITH RESPIRATORY PROBLEMS SHOULD REMAIN INDOORS. VISIBILITY WILL SLOWLY IMPROVE ONCE THE FIRES HAVE BEEN BROUGHT UNDER CONTROL.

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# Non-Precipitation Weather Products

## HEAT ADVISORY

EXAMPLE HEAT ADVISORY (NPW, WWUS74)

SATNPWCRP

WWUS74 KCRP 111443

URGENT - WEATHER MESSAGE

NATIONAL WEATHER SERVICE CORPUS CHRISTI TX

943 AM CDT WED AUG 11 2010

TXZ234-242>247-112300-

/O.NEW.KCRP.HT.Y.0009.100811T1500Z-100811T2300Z/

VICTORIA-KLEBERG-NUECES-SAN PATRICIO-ARANSAS-REFUGIO-CALHOUN-

INCLUDING THE CITIES OF...VICTORIA...KINGSVILLE...

CORPUS CHRISTI...PORTLAND...INGLESIDE...ARANSAS PASS...SINTON...

MATHIS...ROCKPORT...REFUGIO...WOODSBORO...PORT LAVACA

943 AM CDT WED AUG 11 2010

...HEAT ADVISORY IN EFFECT UNTIL 6 PM CDT THIS EVENING...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A HEAT ADVISORY...WHICH IS IN EFFECT UNTIL 6 PM CDT THIS EVENING.

THE COMBINATION OF HOT AFTERNOON TEMPERATURES AND HIGH DEWPOINTS WILL PRODUCE HEAT INDEX READINGS BETWEEN 109 AND 112 DEGREES TODAY ACROSS THE COASTAL BEND AND VICTORIA CROSSROADS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A HEAT ADVISORY IS ISSUED WHEN THE HEAT INDEX IS FORECAST TO REACH 110 DEGREES OR HIGHER FOR TWO HOURS OR MORE. RESIDENTS WITH OUTDOOR ACTIVITIES PLANNED ARE URGED TO DRINK PLENTY OF WATER...WEAR LIGHT WEIGHT AND LIGHT COLORED CLOTHING...AND TAKE FREQUENT BREAKS FROM THE HEAT. YOUNG CHILDREN AND PETS SHOULD NEVER BE LEFT UNATTENDED IN VEHICLES UNDER ANY CIRCUMSTANCES. THIS IS ESPECIALLY TRUE DURING WARM OR HOT WEATHER WHEN CAR INTERIORS CAN REACH LETHAL TEMPERATURES IN A MATTER OF MINUTES.

## HEAT INDEX CHART

		Temperature (°F)															
		90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Relative Humidity (%)	90	119	123	128													
	85	115	119	123	127												
	80	112	115	119	123	127											
	75	109	112	115	119	122	126										
	70	106	109	112	115	118	122	125	129								
	65	103	106	108	111	114	117	121	124	127							
	60	100	103	105	108	111	114	116	120	123	126	129					
	55	98	100	103	105	107	110	113	115	118	121	124	127				
	50	96	98	100	102	104	107	109	112	114	117	119	122	125	128		
	45	94	96	98	100	102	104	106	108	110	113	115	118	120	123	126	129
	40	92	94	96	97	99	101	103	105	107	109	111	113	116	118	121	123
35	91	92	94	95	97	98	100	102	104	106	107	109	112	114	116	118	
30	89	90	92	93	95	96	98	99	101	102	104	106	108	110	112	114	

# Non-Precipitation Weather Products

## FREEZE WARNING

EXAMPLE FREEZE WARNING (NPW, WWUS74)

SATNPWCRP  
WWUS74 KCRP 070957

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
457 AM CST THU JAN 7 2010

TXZ239-240-071900-  
/O.NEW.KCRP.FZ.W.0002.100108T0600Z-100108T1600Z/  
WEBB-DUVAL-  
INCLUDING THE CITIES OF...LAREDO...FREER...BENAVIDES...SAN DIEGO  
457 AM CST THU JAN 7 2010

...FREEZE WARNING IN EFFECT FROM MIDNIGHT TONIGHT TO 10 AM CST  
FRIDAY...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A  
FREEZE WARNING...WHICH IS IN EFFECT FROM MIDNIGHT TONIGHT TO  
10 AM CST FRIDAY.

AN ARCTIC COLD FRONT WILL MOVE ACROSS THE SOUTHERN RIO GRANDE  
PLAINS THIS MORNING. WIND WILL SHIFT TO THE NORTH AND INCREASE TO  
20 TO 25 MPH.

VERY COLD AIR WILL FILTER INTO THE REGION TODAY AND TONIGHT.  
FREEZING TEMPERATURES ARE EXPECTED TONIGHT THROUGH EARLY FRIDAY  
MORNING WITH MINIMUM READINGS IN THE LOWER 30S.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A FREEZE WARNING IS ISSUED WHEN TEMPERATURES ARE FORECAST TO  
REACH 32 DEGREES OR COLDER FOR 2 HOURS OR LONGER.

## WIND CHILL CHART

		Temperature (°F)												
		35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25
Wind Speed (m.p.h)	5	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40
	10	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47
	15	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51
	20	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55
	25	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58
	30	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60
	35	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62
	40	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64

# **Severe Weather**

**Terminology  
Climatology  
Products**

**Hazardous Weather Outlook  
Tornado / Severe Thunderstorm  
Tornado Warning  
Severe Thunderstorm Warning  
Severe Weather Statement  
Special Weather Statement  
Local Storm Report**

# Severe Weather Terminology

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**Downburst** - A strong downdraft from a thunderstorm which produces damaging winds on or near the ground.

**Funnel Cloud** - A rotating column of air not in contact with the ground.

**Lightning** - A visible electrical discharge produced by thunderstorms.

**Macroburst** - A downburst more than 2 1/2 miles in diameter and lasting 5 to 20 minutes.

**Microburst** - A small downburst, less than 2 1/2 miles in diameter and lasting 2 to 5 minutes.

**Severe Thunderstorm** - A thunderstorm with wind speeds of 58 mph (50 knots) or more and/or hail 1 inch in diameter or larger.

**Tornado** - A violently rotating column of air in contact with the ground.

**Wall Cloud** - A local and often abrupt lowering of a thunderstorm base into a low-hanging cloud. Diameter is usually 1 to 4 miles. Rotating wall clouds usually precede tornado development.

**Waterspout** - A waterspout is an intense columnar vortex (usually appearing as a funnel-shaped cloud) that occurs over a body of water and is connected to a cumuliform cloud. Although supercells can produce waterspouts, in most cases, waterspouts are not associated with a supercell thunderstorm

**Watch** - A watch is issued when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location, and/or timing is still uncertain. It is intended to provide enough lead time so those who need to set their plans in motion can do so. Watches are generally issued with the expectation that a weather event will require a warning; however, if warning criteria are not reached then an advisory may be issued. Therefore, watches may become warnings or advisories, or they may be canceled.

**Advisory - Special Weather Statement**- An advisory is issued for serious conditions that cause significant inconvenience and could, if caution is not exercised, lead to situations that may threaten life and/or property. They are often used for an event that is imminent but has not yet reached or may not reach the criteria required to issue a warning. Advisories are generally issued with the expectation that a weather event will not reach warning criteria. However, if the intensity of a weather event is greater than expected, an advisory will become a warning. Therefore, advisories may become warnings, or they may be cancelled.

**Warning** - This product is issued when a hazardous weather or hydrologic event is occurring, is imminent, or has a very high probability of occurrence. Warnings are used for conditions posing a threat to life or property. The NWS has sole authority to issue warnings for life threatening weather situations. Severe thunderstorm or tornado warnings are usually valid for up to 1 hour.

# Severe Weather Terminology

Tornadoes and severe thunderstorms are the most violent weather phenomena that occur in nature. Typically, these events occur during the spring storm season, but are possible any time of the year in South Texas. The greatest dangers from tornadoes and thunderstorms include: deadly lightning, violent winds, hail and heavy rain. With severe storms, all of these hazards may be present.

Thunderstorms begin when relatively warm, humid air is forced upward. Three primary causes of thunderstorms are:



Cold Front

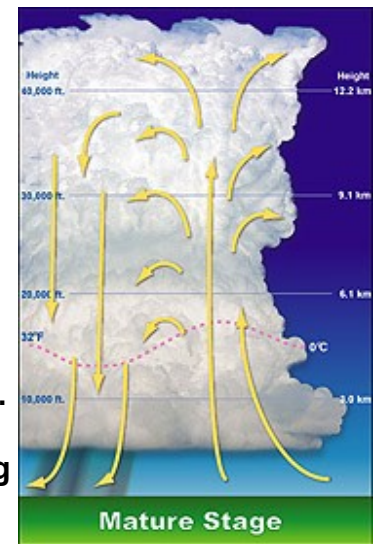
**Fronts** - A wedge of cold, dense air undercutting warm, moist air.

**Orographic** - Moist air that is forced over higher terrain (i.e. the mountains of Southern California).

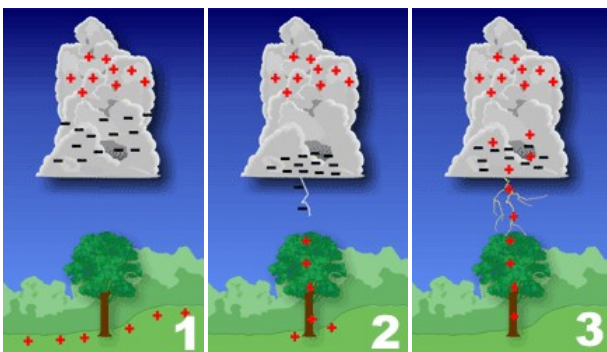
**Thermal** - Rising air caused by the sun's heating of the earth's surface.

As the air rises it expands and cools, and the water vapor it contains begins to condense into cloud droplets. Continued upward movement can produce a cumulonimbus or thunderstorm cloud. Once an individual thunderstorm cell reaches maturity, downdrafts caused by falling precipitation begin to destroy it.

Most thunderstorms consist of several cells each lasting about 20 minutes. New cells may form, replacing older ones, giving thunderstorms the potential to last several hours or more. Strong gusts of relatively cool wind occur beneath many mature thunderstorm cells. Lightning always accompanies thunderstorms. Hail, ranging from pea size to softball size, and strong winds sometimes occur causing considerable damage. Flash floods, tornadoes, and funnel clouds may also occur in thunderstorms.



Lightning is a huge electrical spark resulting from the generation and separation of electrically charged ice in a thunderstorm. The accumulation of an electrical charge in the lower portion of a cloud can induce the opposite charge on the earth's surface. Electrical charges accumulate until the air, a poor conductor of electricity, can no longer prevent a flow of current. When the discharge occurs, it is along a lightning channel that typically connects elevated ground objects (such as buildings and trees) to the cloud base. Lightning strikes the earth about 100 times per second worldwide, and more than 100 Americans are killed each year by lightning strikes.



Thunder is the sound produced by an explosive expansion of air heated by a lightning strike. When lightning is near, the thunder sounds like a sharp crack. Distant strikes produce a growling or

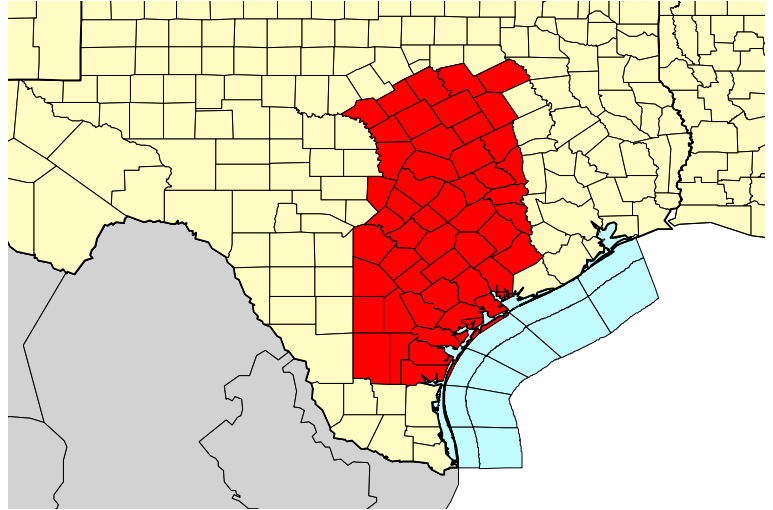
# Severe Weather Terminology

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rumbling noises, a result of the sound being refracted and modified by the turbulent environment of the thunderstorm. Because the speed of light is about a million times that of sound, the lightning bolt is visible before the thunder is heard. This makes it possible to estimate the distance (in miles) of the lightning strike by counting the number of seconds between lightning and thunder, then dividing by five.

When weather conditions in an area are expected to become severe, the National Weather Service's Storm Prediction Center (SPC) in Norman, Oklahoma issues a severe thunderstorm or tornado watch. This watch defines the area that severe weather may occur during the watch period.

A severe thunderstorm watch means the potential exists for thunderstorms to reach the severe threshold but the threat of tornadoes is limited. A tornado watch means there is a potential for severe thunderstorms and tornadoes.



*Tornado Watch #999 in effect until 6 PM CDT*

When severe weather is occurring or imminent, a warning is issued by the local NWS office having warning responsibility for that area. The warning consists of the type of event, location affected, duration of warning, and a call-to-action statement. It contains limited but critical information and is designed for rapid distribution to the public. Shortly after the warning is distributed, a severe weather statement is usually issued. The severe weather statement updates the initial warning and provides additional information. When a warning is issued, get to safety immediately!



**SEVERE THUNDERSTORM WATCH** - Conditions are favorable for the development of severe thunderstorms in and close to the watch area.

**SEVERE THUNDERSTORM WARNING** - Issued when a thunderstorm produces hail 1 inch in diameter or larger and/or winds equal to or exceeding 58 mph. Information in this warning includes: the storm track, the towns affected, and the primary threat associated with the storm.

**SEVERE WEATHER STATEMENT** - Issued to follow up a warning with important information on the progress of severe weather.

**SPECIAL WEATHER STATEMENT** - Issued to pass information on to the public about developing or approaching weather that is not expected to be severe but is nonetheless significant.

**TORNADO WATCH** - Conditions are favorable for the development of tornadoes in and close to the watch area.

**TORNADO WARNING** - Tornado is indicated by radar or sighted by storm spotters. The warning includes the tornado track and what towns are in its path.

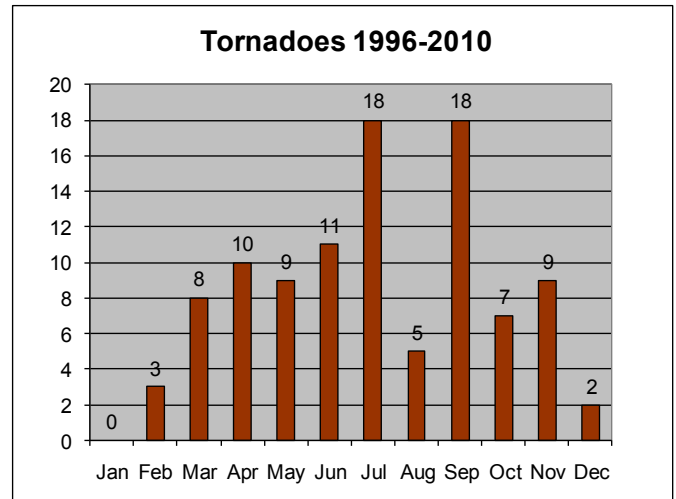
**If a Severe Weather Warning is issued for your area, go to the lowest floor of your home or business, get down low and cover your head. Stay away from windows and doors. Abandon vehicles and portable buildings for a reinforced shelter.**



# Severe Weather Climatology

Severe thunderstorms have been observed in every month and at all hours in the day across South Texas. Historically the peak during the year is during the spring months from April through June. More specifically, the month of May has the highest incidence of severe weather in the Corpus Christi County Warning Area (CWA). May is one of the rare months in which moisture, instability, lift and wind shear coincide at higher frequencies, all of which are important ingredients for severe weather. After May and until mid fall thunderstorms usually remain non-severe driven by the summer sea-breeze across the Coastal Bend.

Tornadoes have occurred in South Texas in every month of the year except for January. From 1950-2010 there have been nearly 400 tornadoes observed across South Texas, averaging out to 6.5 per year. This is a small fraction of the 175 tornadoes observed annually across the state of Texas. The main peak of tornado activity across South Texas occurs in the spring. However tropical cyclones have produced a great number of tornadoes in the summer as well. Hurricane Beulah spawned over 115 tornados in South Texas during September of 1967.



Since 1950 the overwhelming majority of tornadoes across South Texas have been classified as F0 (40-72 mph) or F1 (73-112 mph) on the Fujita Scale. 89% of the observed tornadoes in South Texas have been F0 or F1. 9% of the observed tornadoes have been F2 and 2% have been F3. No F4 or F5 tornadoes have been confirmed since 1950 across the Corpus Christi CWA, however the second deadliest tornado in Texas history (an F4) occurred in 1902 in Goliad killing 114 people and injuring 250.

Since 1950 the month of May has seen more than double the occurrence of damaging wind events associated with a severe thunderstorm than the next two closest months of April and June. There is also a peak in the distribution of damaging wind reports by hour of the day, usually in the late afternoon and early evening hours, between 5 and 7 p.m. CST. However severe thunderstorm winds can occur at all hours across South Texas.

Finally, similar to tornado and severe thunderstorm wind events, a peak in hail events occurs during the month of May. May by far has the biggest occurrence of severe hail events than any other month with 32% of hail events in observed hail events in South Texas. Over half of all the observed hail events in South Texas have occurred in the months of April or May. Also of note is a gradual increase in the probability of hail from March through May and then a sharp decrease into the summer months of June and July. Like severe thunderstorm wind events, severe hail typically occurs in the late afternoon and early evening, with a peak hour around 5 pm, but severe hail events can occur at all hours across South Texas.



# Severe Weather Products

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## HAZARDOUS WEATHER OUTLOOK

**WFO Corpus Christi will issue a Hazardous Weather Outlook (HWO) to inform the emergency managers, trained SKYWARN spotters, the public, and the media of the potential for hazardous weather events. Some of these events include severe thunderstorms, flooding, tropical storms, hazardous marine conditions, winter storms and high winds.**

**Hazardous weather outlooks will describe in concise non-technical terms the specific hazards for the first and second forecast periods. HWOs will also briefly discuss any weather hazards in the Day Two through Seven time period.**

EXAMPLE HAZARDOUS WEATHER OUTLOOK (HWO/FLUS44)

FLUS44 KCRP 311200  
HWOCR

HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
600 AM CST SUN OCT 31 2010

GMZ230-235-250-255-270-275-TXZ229>234-239>247-010000-  
BAYS AND WATERWAYS FROM BAFFIN BAY TO PORT ARANSAS BAYS-  
AND WATERWAYS FROM PORT ARANSAS TO PORT O'CONNOR COASTAL-  
WATERS BAFFIN BAY TO PORT ARANSAS OUT 20 NM-  
COASTAL WATERS PORT ARANSAS TO MATAGORDA SHIP CHANNEL OUT 20 NM-  
WATERS BAFFIN BAY TO PORT ARANSAS 20 TO 60 NM-  
WATERS PORT ARANSAS TO MATAGORDA SHIP CHANNEL 20 TO 60 NM-  
ARANSAS-BEE-CALHOUN-DUVAL-GOLIAD-JIM WELLS-KLEBERG-LA SALLE-LIVE OAK-  
MCMULLEN-NUECES-REFUGIO-SAN PATRICIO-VICTORIA-WEBB-  
600 AM CST SUN OCT 31 2010

THIS HAZARDOUS WEATHER OUTLOOK IS FOR SOUTH TEXAS.

.DAY ONE...TODAY AND TONIGHT

SCATTERED TO NUMEROUS SHOWERS AND THUNDERSTORMS WILL DEVELOP ACROSS THE RIO GRANDE PLAINS LATE THIS EVENING THEN MARCH TO THE COASTAL BEND AND VICTORIA CROSSROADS REGION LATE TONIGHT. SOME OF THE THUNDERSTORMS MAY BECOME SEVERE AND PRODUCE DAMAGING WINDS AND LOCALLY HEAVY RAIN. SMALL CRAFT ADVISORY CONDITIONS ARE EXPECTED ACROSS THE WATERS THROUGH TONIGHT AS GUSTS APPROACH GALE FORCE. WIND GUSTS WILL OCCASIONALLY PEAK BETWEEN 30 AND 40 MPH THIS AFTERNOON AND TONIGHT OVER THE COASTAL BEND...VICTORIA CROSSROADS REGION AND PORTIONS OF THE COASTAL PLAINS.

.DAYS TWO THROUGH SEVEN...MONDAY THROUGH FRIDAY

SCATTERED TO NUMEROUS SHOWERS AND THUNDERSTORMS ARE EXPECTED MONDAY AS AN UPPER LEVEL DISTURBANCE AND AN ADVANCING COLD FRONT MOVE INTO SOUTH TEXAS. WITH A VERY UNSTABLE AIRMASS AND STRONG WIND PROFILE THROUGH THE ATMOSPHERE...SOME OF THE THUNDERSTORMS MONDAY MAY BE SEVERE. THE THUNDERSTORMS WILL BE CAPABLE OF PRODUCING DAMAGING WINDS...FREQUENT DANGEROUS LIGHTNING AND LOCALLY HEAVY RAINS.

A COLD FRONT WILL MOVE THROUGH THE AREA MONDAY NIGHT AND WILL USHER IN COOLER WEATHER AND WINDY CONDITIONS. STRONG ONSHORE FLOW WILL CONTINUE THROUGH MONDAY BEFORE SWITCHING THE NORTHWEST ON MONDAY EVENING. VERY STRONG OFFSHORE FLOW WILL PROVIDE GALE FORCE WINDS OVER THE GULF WATERS LATE MONDAY NIGHT THROUGH TUESDAY.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION MAY BE REQUIRED TONIGHT.

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# Severe Weather Products

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## TORNADO / SEVERE THUNDERSTORM WATCH

**This product is prepared by the Storm Prediction Center in Norman, Oklahoma and is accompanied by the Watch Outline Update (WOU) which is a complete listing of counties included in the watch. The WOU product is updated every hour until the watch is cancelled.**

EXAMPLE TORNADO / SEVERE THUNDERSTORM WATCH (SEL/WWUS20)

WWUS20 KWNS 061255  
SEL6  
SPC WW 061255  
TXZ000-CWZ000-061800-

URGENT - IMMEDIATE BROADCAST REQUESTED  
TORNADO WATCH NUMBER 46  
NWS STORM PREDICTION CENTER NORMAN OK  
755 AM CDT TUE APR 6 2010

THE NWS STORM PREDICTION CENTER HAS ISSUED A  
TORNADO WATCH FOR PORTIONS OF

MIDDLE TEXAS GULF COAST  
COASTAL WATERS

EFFECTIVE THIS TUESDAY MORNING AND AFTERNOON FROM 755 AM UNTIL 100 PM CDT.

TORNADOES...HAIL TO 2 INCHES IN DIAMETER...THUNDERSTORM WIND GUSTS TO 70 MPH...AND DANGEROUS  
LIGHTNING ARE POSSIBLE IN THESE AREAS.

THE TORNADO WATCH AREA IS ALONG AND 65 STATUTE MILES EITHER SIDE OF A LINE FROM 20 MILES WEST  
NORTHWEST OF BEEVILLE TEXAS TO 60 MILES SOUTHEAST OF COLLEGE STATION TEXAS.

REMEMBER...A TORNADO WATCH MEANS CONDITIONS ARE FAVORABLE FOR TORNADOES AND SEVERE THUNDERSTORMS  
IN AND CLOSE TO THE WATCH AREA. PERSONS IN THESE AREAS SHOULD BE ON THE LOOKOUT FOR THREATENING  
WEATHER CONDITIONS AND LISTEN FOR LATER STATEMENTS AND POSSIBLE WARNINGS.

DISCUSSION...SEVERE THUNDERSTORMS EXPECTED TO DEVELOP RAPIDLY AHEAD OF OLD CONVECTIVE BOUNDARY IN  
A MODERATELY UNSTABLE WARM SECTOR. VEERING SHEAR PROFILES AND STEEP MID LEVEL LAPSE RATES SUPPORT  
SUPERCELLS ALONG WITH TORNADO POTENTIAL.

AVIATION...TORNADOES AND A FEW SEVERE THUNDERSTORMS WITH HAIL SURFACE AND ALOFT TO 2 INCHES. EX-  
TREME TURBULENCE AND SURFACE WIND GUSTS TO 60 KNOTS. A FEW CUMULONIMBI WITH MAXIMUM TOPS TO 500.  
MEAN STORM MOTION VECTOR 25030.

..HALES

;291,0983 304,0961 291,0950 274,0972;

WWUS30 KWNS 061252  
SAW6  
SPC AWW 061255  
WW 46 TORNADO TX CW 061255Z - 061800Z  
AXIS..65 STATUTE MILES EITHER SIDE OF LINE..  
20WNW NIR/BEEVILLE TX/ - 60SE CLL/COLLEGE STATION TX/  
.AVIATION COORDS.. 55NM EITHER SIDE /45NW CRP - 16W IAH/  
HAIL SURFACE AND ALOFT..2 INCHES. WIND GUSTS..60 KNOTS.  
MAX TOPS TO 500. MEAN STORM MOTION VECTOR 25030.

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# Severe Weather Products

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## TORNADO WARNING

**Tornado warnings are issued by a local weather forecast office when a tornado is occurring, is imminent, or has a very high probability of occurrence. Warnings are used for conditions posing a threat to life or property. Tornado warnings are typically issued for 30- 45 minutes at a time.**

EXAMPLE TORNADO WARNING (TOR/WFUS54)

WFUS54 KCRP 061500  
TORCRP  
TXC297-210045-  
/O.NEW.KCRP.TO.W.0035.050721T0020Z-050721T0045Z/

BULLETIN - EAS ACTIVATION REQUESTED  
TORNADO WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
720 PM CDT WED JUL 20 2010

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A

\* TORNADO WARNING FOR...  
NORTHERN LIVE OAK COUNTY IN TEXAS

\* UNTIL 745 PM CDT

\* AT 717 PM CDT...THE PUBLIC REPORTED A TORNADO NEAR GEORGE WEST...  
MOVING WEST AT 25 MPH.

\* THE TORNADO IS EXPECTED TO BE NEAR...  
SIMMONS BY 735 PM CDT  
9 MILES SOUTH OF CHOKE CANYON BY 740 PM CDT

THE SAFEST PLACE TO BE DURING A TORNADO IS IN A BASEMENT. GET UNDER A  
WORKBENCH OR OTHER PIECE OF STURDY FURNITURE. IF NO BASEMENT IS  
AVAILABLE...SEEK SHELTER ON THE LOWEST FLOOR OF THE BUILDING IN AN  
INTERIOR HALLWAY OR ROOM SUCH AS A CLOSET. USE BLANKETS OR PILLOWS TO  
COVER YOUR BODY AND ALWAYS STAY AWAY FROM WINDOWS.

IF IN MOBILE HOMES OR VEHICLES...EVACUATE THEM AND GET INSIDE A  
SUBSTANTIAL SHELTER. IF NO SHELTER IS AVAILABLE...LIE FLAT IN THE  
NEAREST DITCH OR OTHER LOW SPOT AND COVER YOUR HEAD WITH YOUR HANDS.

LAT...LON 2829 9833 2831 9834 2860 9834 2878 9810  
2869 9801 2867 9808 2864 9809 2838 9794  
2832 9794 2821 9833

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# Severe Weather Products

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## SEVERE THUNDERSTORM WARNING

**This product is issued by the local weather forecast office when a severe thunderstorm is occurring, is imminent, or has a very high probability of occurrence. Warnings are used for conditions posing a threat to life or property. Severe Thunderstorms are typically issued for 30 to 45 minutes at a time.**

EXAMPLE SEVERE THUNDERSTORM WARNING (SVR/WUUS54)

WUUS54 KCRP 061522  
SVRCRP  
TXC479-090045-  
/O.NEW.KCRP.SV.W.0062.050708T2349Z-050709T0045Z/

BULLETIN - EAS ACTIVATION REQUESTED  
SEVERE THUNDERSTORM WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
649 PM CDT FRI JUL 8 2010

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A

\* SEVERE THUNDERSTORM WARNING FOR...  
SOUTHEASTERN WEBB COUNTY IN TEXAS

\* UNTIL 745 PM CDT

\* AT 647 PM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING PENNY SIZE HAIL...AND DESTRUCTIVE WINDS IN EXCESS OF 70 MPH. THIS STORM WAS LOCATED NEAR BRUNI...OR ABOUT 12 MILES NORTHWEST OF HEBBRONVILLE...AND MOVING WEST AT 20 MPH.

\* THE SEVERE THUNDERSTORM WILL BE NEAR...  
OILTON BY 700 PM CDT  
MIRANDO CITY BY 705 PM CDT  
AGUILARES BY 735 PM CDT

LAT...LON 2729 9882 2753 9882 2758 9927 2729 9930

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Severe thunderstorms on the evening of June 2, 2010 flipped trailers, downed trees and produced an EF2 tornado.

# Severe Weather Products

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## SEVERE WEATHER STATEMENT

**Severe Weather Statements are issued by the local forecast office as a follow up to warnings and include the latest position of the storm and projected threatened path.**

EXAMPLE SEVERE WEATHER STATEMENT (SVS/WWUS54)

WWUS54 KCRP 241123  
SVSCR

SEVERE WEATHER STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
522 AM CST THU FEB 24 2010

TXC469-241145-  
/O.CON.KCRP.SV.W.0005.000000T0000Z-050224T1145Z/  
VICTORIA-  
522 AM CST THU FEB 24 2010

...A SEVERE THUNDERSTORM WARNING CONTINUES UNTIL 545 AM CST FOR  
VICTORIA COUNTY...

AT 517 AM CST...NATIONAL WEATHER SERVICE DOPPLER RADAR CONTINUED TO  
INDICATE A SEVERE THUNDERSTORM CAPABLE OF PRODUCING PENNY SIZE  
HAIL...AND DAMAGING WINDS OF 60 MPH. THIS STORM WAS LOCATED NEAR  
THE CITY OF VICTORIA AND WAS MOVING MOVING EAST AT 30 MPH.

THIS IS A DANGEROUS STORM. IF YOU ARE IN ITS PATH...PREPARE  
IMMEDIATELY FOR DAMAGING WINDS...DESTRUCTIVE HAIL...AND DEADLY CLOUD  
TO GROUND LIGHTNING. PEOPLE OUTSIDE SHOULD MOVE TO A SHELTER...  
PREFERABLY INSIDE A STRONG BUILDING BUT AWAY FROM WINDOWS.

LAT...LON 2887 9724 2888 9723 2887 9731 2888 9731  
2906 9708 2906 9691 2905 9686 2894 9680  
2888 9673 2871 9668 2870 9681 2852 9694  
2857 9715 2883 9719

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# Severe Weather Products

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## SPECIAL WEATHER STATEMENT

The Special Weather Statement is issued for strong thunderstorms, or storms that are not expected to become severe, but are nonetheless significant.

### EXAMPLE SPECIAL WEATHER STATEMENT (SPS/WWUS84)

WWUS84 KCRP 301036  
SPSCRP

SPECIAL WEATHER STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
534 AM CDT SAT APR 30 2010

TXZ239-301115-  
WEBB-  
534 AM CDT SAT APR 30 2010

...A STRONG THUNDERSTORM IS AFFECTING NORTHWEST WEBB COUNTY...

AT 529 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR WAS TRACKING A STRONG THUNDERSTORM 35 MILES SOUTHWEST OF CARRIZO SPRINGS...MOVING EAST AT 35 MPH.

THIS STORM WILL HAVE THE POTENTIAL TO PRODUCE WINDS UP TO 55 MPH AND HAIL AT LEAST MARBLE SIZE.

STAY TUNED TO NOAA WEATHER RADIO FOR ADDITIONAL INFORMATION.

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## LOCAL STORM REPORT

### EXAMPLE LOCAL STORM REPORT (LSR/NWUS54)

NWUS54 KCRP 162049  
LSRCRP

PRELIMINARY LOCAL STORM REPORT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
349 PM CDT MON MAY 16 2010

..TIME....	...EVENT...	...CITY LOCATION...	...LAT.LON...
..DATE...	...MAG....	..COUNTY LOCATION..ST..	...SOURCE....
..REMARKS..			

1214 PM	WATER SPOUT	5 NE FULTON	28.12N 96.98W
05/16/2010		ARANSAS TX	LAW ENFORCEMENT

1215 PM	TORNADO	5 NE FULTON	28.12N 96.98W
05/16/2010		ARANSAS TX	LAW ENFORCEMENT

PUBLIC AND LAW ENFORCEMENT REPORTED TORNADO NEAR GOOSE ISLAND STATE PARK.

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# **Marine Weather**

## **Terminology Climatology Products**

**Marine Weather Message  
Marine Watches/Warnings/Advisories  
Special Marine Warning  
Marine Weather Statements  
Coastal Waters Forecast  
Offshore Waters Forecast  
Tide Report  
Coastal Flood Watch  
Coastal Flood Warning  
Coastal Flood Advisory  
Coastal Flood Statement  
Surf Zone Forecast**

# Marine Weather Terminology

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**Coastal Waters** - Waters out to 60 nautical miles from the coast.

**Dense Fog** - Fog restricting visibility to 1 SM or less.

**Fetch** - The across wave distance over which waves are generated by winds having an approximately constant direction and speed.

**Gale Force Winds** - Wind speeds from 34 to 47 knots(40 to 54 mph).

**Knot** - One nautical mile per hour (1.15 mph).

**Marine Layer** - A moist shallow layer of air of marine origin that has drier air above it.

**Nearshore waters** - Generally the waters from the barrier islands out to 60 nautical miles offshore, however sometimes NWS Coastal Waters Forecasts and Marine Statements refer to the 0 to 20 nautical mile zone as the nearshore waters.

**Offshore Waters** - Generally the waters from 60 nautical miles to 250 nautical miles, however sometimes NWS Coastal Waters Forecasts and Marine Statements refer to the 20 to 60 nautical mile zone as the offshore waters.

**Seas** - Combination of swell and wind waves.

**Significant Wave Height** - Reported by NOAA buoys and included in NWS marine forecasts. Equals approximately the average of the highest one-third of the wave heights.

**Small Craft Advisory** - Long fused advisory issued when conditions hazardous for small craft exist or are forecast to occur for two or more hours during a forecast period. Specifically wind speeds of 20 to 33 knots and/or wave heights of 7 feet or more.

**Storm Force Winds** - Wind speeds greater than 47 knots (54 mph).

**Swell** - Wind generated waves that have traveled out of the generation area, of regular and longer duration than wind waves.

**Tsunami** - Seismic sea wave caused by an earthquake, undersea landslide or volcanic eruption. Typically arrives onshore as a series of surges.

**Wave Period** - Time, in seconds, between the passage of consecutive wave crests past a fixed point.

**Wave Height** - Distance between wave crests and troughs.

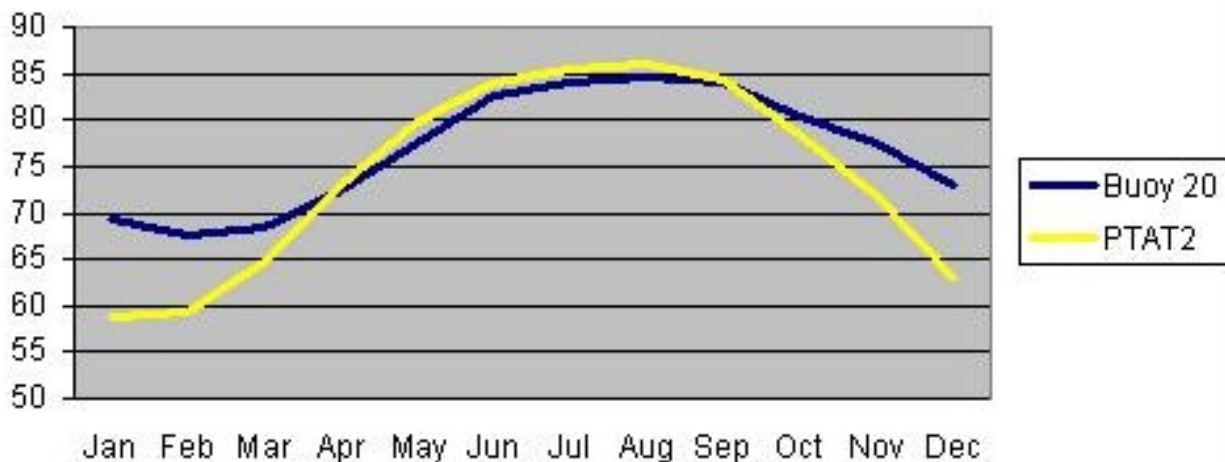
**Wind Waves** - Short period, irregular waves caused by the wind.

# Marine Weather Climatology

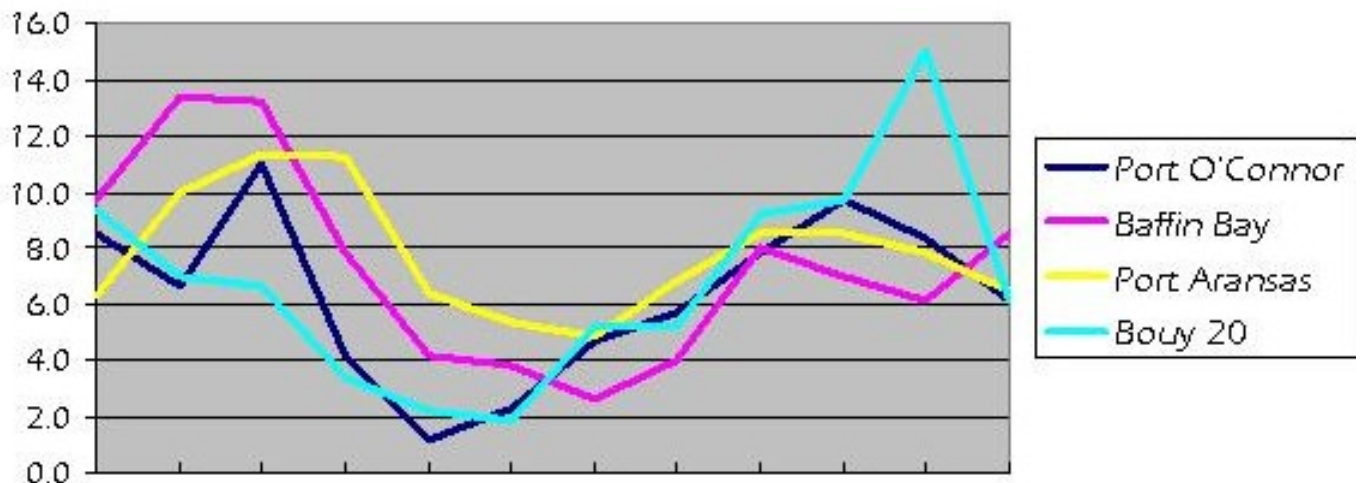
The Gulf of Mexico plays a major role in the weather across the Coastal Bend region. Temperatures over land heat up and cool off much faster than the water, thus immediate coastal locations will be highly influenced by the adjacent water temperature.

Water temperatures in the offshore waters of the Gulf of Mexico dip to a low of 60 degrees in February and rise to a peak of around 85 degrees in August. Water temperature greatly affect the amount of wind that mixes down to the ocean water surface. In the early spring, southerly winds begin to increase, however due to the cool water temperatures, the stronger wind speeds never reach the ocean surface. By late spring, water temperatures are warm enough to mix the strong winds down to the ocean surface creating windy conditions that last until the beginning of summer. As the chart indicates below, Small Craft Advisory Conditions are most common in the Apr-May and Dec-Jan time periods. In the spring time, these winds are commonly from a southeasterly direction. In the winter these winds are from the north in the wake of cold fronts.

**Annual Water Temperatures**  
1999-2004

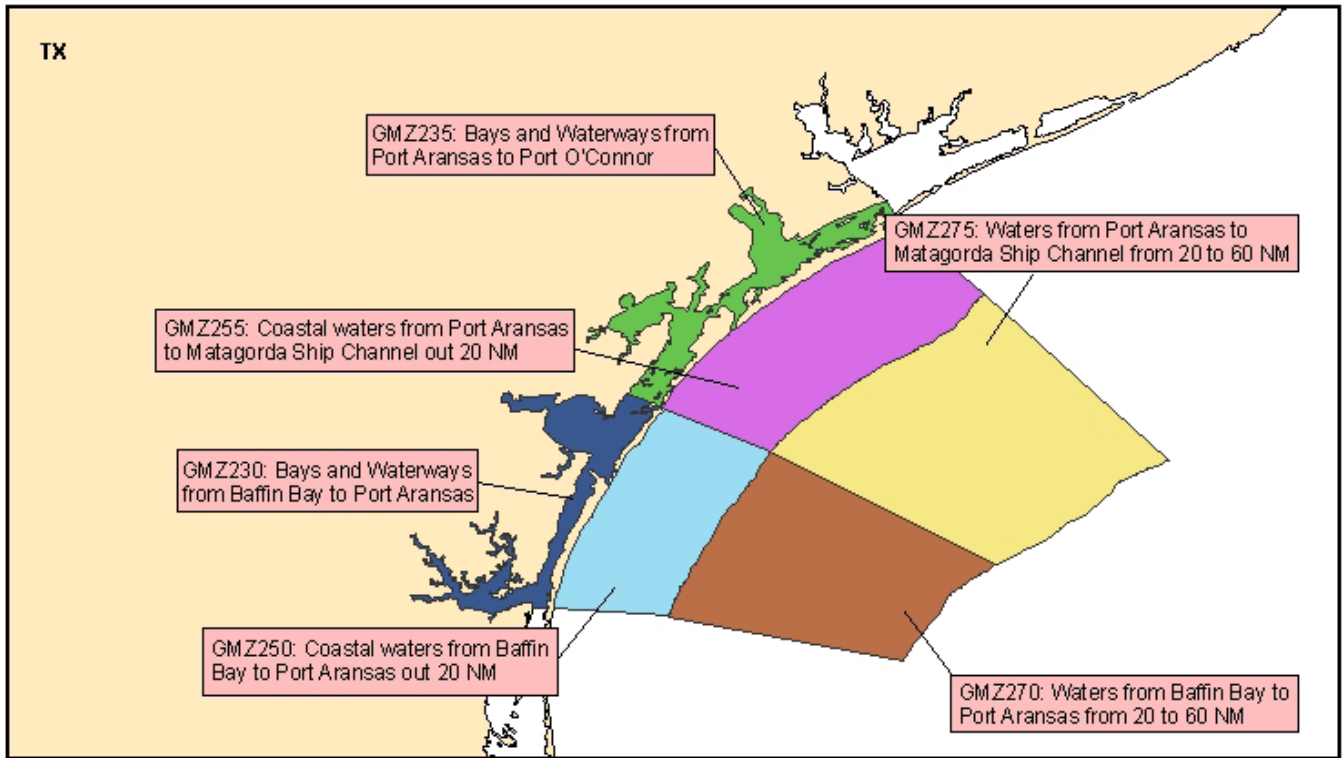


**Average Number of Days**  
with  
Small Craft Advisory Conditions (winds >20 knots)

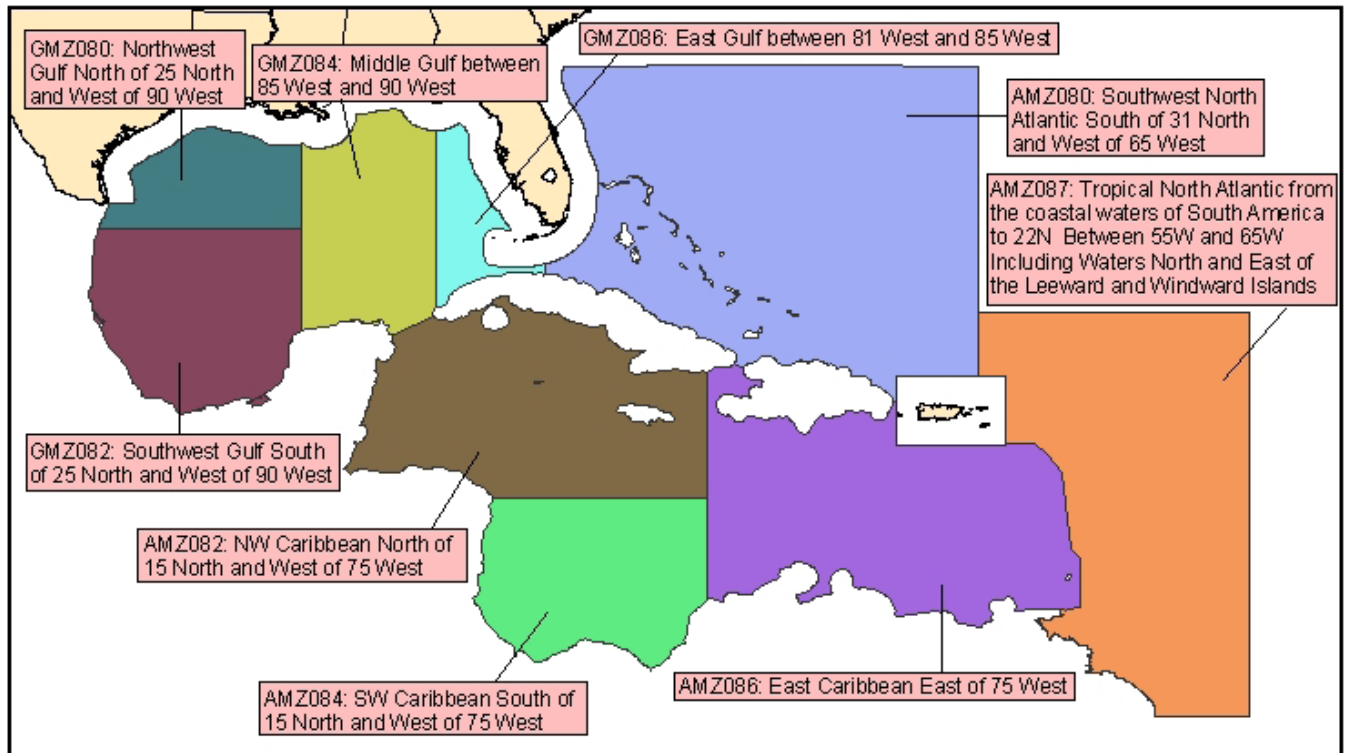


# Marine Zones

## Nearshore Marine Forecast, Watch, Warning, and Advisory Zones



## Offshore Marine Forecast, Watch, Warning, and Advisory Zones



# Marine Weather Products

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## MARINE WEATHER MESSAGE

The Marine Weather Message (SATMWWCRP) is used to disseminate and update marine watches, warning and advisories for long fused events (lasting more than 2 hours) . The most common of these is the Small Craft Advisory, however a complete list of watches, warnings and advisories issued through this product and their criteria are provided on the following page. The Marine Weather Message is event driven product and is typically updated every six hours throughout the duration of the event, or as needed.

URGENT - MARINE WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1237 PM CST WED JAN 28 2009

GMZ230-235-250-255-270-275-282100-  
/O.CON.KCRP.SC.Y.0009.000000T0000Z-090128T2100Z/  
BAYS AND WATERWAYS FROM BAFFIN BAY TO PORT ARANSAS-  
BAYS AND WATERWAYS FROM PORT ARANSAS TO PORT O`CONNOR-  
COASTAL WATERS BAFFIN BAY TO PORT ARANSAS OUT 20 NM-  
COASTAL WATERS PORT ARANSAS TO MATAGORDA SHIP CHANNEL OUT 20 NM-  
WATERS BAFFIN BAY TO PORT ARANSAS 20 TO 60 NM-  
WATERS PORT ARANSAS TO MATAGORDA SHIP CHANNEL 20 TO 60 NM-  
1237 PM CST WED JAN 28 2009

...SMALL CRAFT ADVISORY REMAINS IN EFFECT UNTIL 3 PM CST THIS  
AFTERNOON...

A SMALL CRAFT ADVISORY REMAINS IN EFFECT UNTIL 3 PM CST THIS  
AFTERNOON FOR THE BAYS AND WATERWAYS FROM BAFFIN BAY TO  
PORT O`CONNOR AND OFFSHORE TO 60 NM.

MODERATE NORTH WINDS WILL CONTINUE THIS AFTERNOON WITH SEAS FROM  
5 TO 7 FEET OFFSHORE. THE WIND WILL DIMINISH AND TURN TO THE  
NORTHEAST DURING THE MID AND LATE AFTERNOON HOURS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A SMALL CRAFT ADVISORY MEANS THAT WIND SPEEDS OF 20 TO 33 KNOTS  
ARE EXPECTED TO PRODUCE HAZARDOUS WAVE CONDITIONS TO SMALL CRAFT.  
INEXPERIENCED MARINERS...ESPECIALLY THOSE OPERATING SMALLER VESSELS  
SHOULD AVOID NAVIGATING IN THESE CONDITIONS.



# Marine Weather Message

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## MARINE WEATHER WATCH / WARNING / ADVISORY CRITERIA

Marine Watches, Warnings and Advisories are issued for long fused events, which means conditions are expected to persist for 2 or more hours during a forecast period.

- **Marine Watches:** Generally issued when conditions are favorable to be met in 12 to 48 hours.
- **Marine Warnings:** Generally issued when the criteria are expected to be meet in the next 24 hours. Warnings can be issued for events during the 24 to 36 hour time frame when confidence is high and the event is expect to have high impact.
- **Marine Advisories:** Generally issued when the criteria are expected to be meet in the next 12 hours. Advisories can be issued for events during the 12 to 24 hour time frame when confidence is high and the event is expect to have high impact.

Hazard Name	Issuance Criteria
<b>Gale Watch</b>	Conditions are favorable for a gale force wind event to meet the Gale Warning criteria of sustained winds or frequent gusts of <b>34 knots (39 mph) to 47 knots (54 mph)</b> .
<b>Storm Watch</b>	Conditions are favorable for a storm force wind event to meet Storm Warning criteria of sustained winds or frequent gusts of <b>48 knots (55 mph) to 63 knots (73 mph)</b> .
<b>Hurricane Force Wind Watch</b>	Conditions are favorable for a hurricane force wind event to meet or exceed Hurricane Force Wind Warning criteria of sustained winds or frequent gusts of <b>64 knots (74 mph) or greater</b> .
<b>Gale Warning</b>	Sustained surface winds, or frequent gusts, in the range of <b>34 knots (39 mph) to 47 knots (54 mph)</b> inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.
<b>Storm Warning</b>	Sustained surface winds, or frequent gusts, in the range of <b>48 knots (55 mph) to 63 knots (73 mph)</b> inclusive, either predicted or occurring, and not directly associated with a tropical cyclone.
<b>Hurricane Force Wind Warning</b>	Sustained winds, or frequent gusts, of <b>64 knots (74 mph) or greater</b> , either predicted or occurring, and not directly associated with a tropical cyclone.
<b>Ashfall Advisory</b>	Airborne ash plume resulting in ongoing deposition at the surface. Ashfall may originate directly from a volcanic eruption or from the re-suspension (by wind) of a significant amount of relic ash.
<b>Dense Fog Advisory</b>	Widespread fog reducing visibilities to <b>1 nautical mile or less</b> .
<b>Dense Smoke Advisory</b>	Widespread smoke reducing visibilities to <b>1 nautical mile or less</b>
<b>Small Craft Advisory</b>	Sustained wind speeds or frequent gusts of <b>20 to 33 knots and/or seas or waves 7 feet and greater</b> for 2 or more hours.
<b>Small Craft Advisory for Hazardous Seas</b>	Wind speeds are lower than small craft advisory criteria, yet waves or seas reach <b>7 foot</b> SCA criteria.

# Marine Weather Products

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## SPECIAL MARINE WARNING

**A warning of potentially hazardous weather conditions usually of short duration (up to 2 hours). The criteria includes sustained marine thunderstorm winds or associated gusts of 34 knots or greater; and/or hail 3/4 or more in diameter; and/or waterspouts affecting areas included in a coastal waters forecast that is not adequately covered by existing marine warnings.**

EXAMPLE SPECIAL MARINE WARNING (SMW,WHUS54)

WHUS54 KCRP 201650  
SMWCRP  
GMZ250-270-201845-  
/O.NEW.KCRP.MA.W.0050.100920T1650Z-100920T1845Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED  
SPECIAL MARINE WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1150 AM CDT MON SEP 20 2010

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A

\* SPECIAL MARINE WARNING FOR...  
COASTAL WATERS BAFFIN BAY TO PORT ARANSAS OUT 20 NM  
WATERS BAFFIN BAY TO PORT ARANSAS FROM 20 TO 60 NM

\* UNTIL 145 PM CDT

\* AT 1141 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED A  
LINE OF THUNDERSTORMS...PRODUCING WIND GUSTS OF 35 TO 40 KNOTS  
FROM 26 NM SOUTHEAST OF PORT ARANSAS TO 11 NM NORTHEAST OF BAFFIN  
BAY...MOVING NORTHWEST AT 25 KNOTS. OTHER STRONG STORMS  
EXTEND WELL OFFSHORE TO BEYOND 60 NM EAST OF BAFFIN BAY. IN  
ADDITION TO THE GUSTY WINDS...SOME OF THESE STORMS COULD PRODUCE  
WATERSPOUTS WITH LITTLE OR NO WARNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

MARINERS CAN EXPECT GUSTY WINDS...HIGH WAVES...ISOLATED DANGEROUS  
LIGHTNING...AND HEAVY RAINS. BOATERS SHOULD SEEK SAFE HARBOR  
IMMEDIATELY...UNTIL THIS STORM PASSES.

&&

LAT...LON 2722 9704 2724 9737 2749 9728 2783 9704  
2736 9609 2729 9620 2709 9635  
TIME...MOT...LOC 1646Z 120DEG 23KT 2745 9690 2736 9736

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# Marine Weather Products

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## MARINE WEATHER STATEMENT

The Marine Weather Statement is used to update Special Marine Warnings. They also can be used to provide higher detail on significant or potentially hazardous conditions not otherwise covered in existing marine warnings or forecasts.

EXAMPLE MARINE WEATHER STATEMENT (MWS, FZU74)

FZUS74 KCRP 221641  
MWSCR

MARINE WEATHER STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1141 AM CDT WED SEP 22 2010

GMZ230-235-250-255-221649-  
/O.CAN.KCRP.MA.W.0051.000000T0000Z-100922T1700Z/  
1141 AM CDT WED SEP 22 2010

..SPECIAL MARINE WARNING CANCELLED

THE AFFECTED AREAS WERE...

BAYS AND WATERWAYS FROM BAFFIN BAY TO PORT ARANSAS  
BAYS AND WATERWAYS FROM PORT ARANSAS TO PORT O'CONNOR  
COASTAL WATERS BAFFIN BAY TO PORT ARANSAS OUT 20 NM  
COASTAL WATERS PORT ARANSAS TO MATAGORDA SHIP CHANNEL OUT 20 NM

THE STORMS THAT PROMPTED THE WARNINGS HAVE MOVED INLAND AND NO  
LONGER POSE A THREAT TO THE BAYS AND NEARSHORE WATERS. SOME GUSTY  
WINDS MAY CONTINUE ACROSS SOME AREAS FOR THE NEXT HOUR.

&&

LAT...LON 2823 9664 2813 9680 2808 9682 2819 9667  
2757 9718 2787 9752 2782 9720 2810 9703  
2796 9718 2805 9718 2803 9728 2807 9727  
2820 9704 2813 9698 2827 9692 2812 9694  
2823 9678 2841 9686 2846 9682  
TIME...MOT...LOC 1639Z 145DEG 7KT 2833 9684 2810 9709  
2780 9730

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# Marine Weather Products

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## COASTAL WATERS FORECAST

Coastal Waters Forecasts (CWF) are 5-day forecasts issued 4 times daily for the bays and nearshore waters out to 60 nautical miles. During the warm season they are issued at 430 AM/PM CDT and 1030 AM/PM CDT. During the cool season, the CWF is issued at 330 AM/PM CST and 930 AM/PM CST. Forecasts include information about wind, wave, swell and significant weather. Any advisories or warnings, such as Small Craft Advisories or Gale Warnings, will be headlined within this product. More information on warnings and advisories can be found in the Marine Weather Message.

EXAMPLE COASTAL WATERS FORECAST (CWF, FZUS54)

FZUS54 KCRP 051500  
CWFCRP

COASTAL WATERS FORECAST  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1000 AM CDT THU AUG 5 2010

MIDDLE TEXAS COASTAL WATERS FROM BAFFIN BAY TO MATAGORDA SHIP CHANNEL  
OUT TO 60 NAUTICAL MILES.

GMZ200-060400-  
1000 AM CDT THU AUG 5 2010

.SYNOPSIS FOR THE MIDDLE TEXAS COASTAL WATERS...  
A WEAK TO MODERATE ONSHORE FLOW IS EXPECTED TONIGHT THROUGH  
MONDAY...AS HIGH PRESSURE OVER THE NORTHERN GULF ALLOWS A GENERAL  
SEA BREEZE PATTERN TO CONTINUE.

\$\$

GMZ235-060400-  
BAYS AND WATERWAYS FROM PORT ARANSAS TO PORT O`CONNOR-  
1000 AM CDT THU AUG 5 2010

.REST OF TODAY...SOUTHWEST WIND AROUND 5 KNOTS SHIFTING SOUTHEAST  
IN THE AFTERNOON. BAYS SMOOTH. ISOLATED SHOWERS LATE IN THE  
MORNING.

.TONIGHT...SOUTHEAST WIND AROUND 10 KNOTS IN THE EVENING BECOMING  
SOUTH 5 TO 10 KNOTS. BAYS SMOOTH.

.FRIDAY...SOUTHWEST WIND 5 TO 10 KNOTS SHIFTING SOUTH IN THE  
AFTERNOON. BAYS SMOOTH. ISOLATED SHOWERS.

.FRIDAY NIGHT...SOUTH WIND 10 TO 15 KNOTS. BAYS SLIGHTLY CHOPPY  
TO OCCASIONALLY CHOPPY.

.SATURDAY...SOUTH WIND 5 TO 10 KNOTS INCREASING TO 10 TO  
15 KNOTS. BAYS SLIGHTLY CHOPPY TO OCCASIONALLY CHOPPY.

.SUNDAY...SOUTH WIND 10 TO 15 KNOTS. BAYS SLIGHTLY CHOPPY TO  
OCCASIONALLY CHOPPY.

.MONDAY...SOUTHEAST WIND 5 TO 10 KNOTS INCREASING TO 10 TO  
15 KNOTS. BAYS SLIGHTLY CHOPPY TO OCCASIONALLY CHOPPY.

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# Marine Weather Products

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## OFFSHORE FORECAST

Offshore Waters forecasts are 5-day forecasts issued 4 times daily at 430 AM/PM CDT and 1030 AM/PM CDT for the Gulf of Mexico beyond 60 nautical miles. These are issued by the Tropical Prediction Center in Miami, Florida. Forecasts include information about wind, wave, swell and significant weather. Any advisories or warnings, such as Small Craft Advisory or Gale Warning, will be headlined within this product. Graphical, 6 hour forecast of pressure, wind, wave height, swell, and period are now being issued on an experimental bases.

GMZ089-052130-  
SYNOPSIS FOR THE GULF OF MEXICO  
**1030 AM CDT THU AUG 05 2010**

**.SYNOPSIS...**A TROPICAL WAVE WILL MOVE THROUGH THE BAY OF CAMPECHE SAT AND SUN. AN E TO W RIDGE WILL EXTENDS ACROSS THE NORTHERN WATERS THROUGH THE WEEKEND. A WEAK FRONTAL BOUNDARY WILL DIP INTO THE NE GULF MON.

\$\$

SEAS GIVEN AS SIGNIFICANT WAVE HEIGHT...WHICH IS THE AVERAGE HEIGHT OF THE HIGHEST 1/3 OF THE WAVES. INDIVIDUAL WAVES MAY BE MORE THAN TWICE THE SIGNIFICANT WAVE HEIGHT.

GMZ080-052130-  
NW GULF N OF 25N W OF 90W  
INCLUDING THE FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY  
**1030 AM CDT THU AUG 05 2010**

**THIS AFTERNOON THROUGH MON**

W OF 95W SE TO S WINDS 10 TO 15  
KT. SEAS 1 TO 2 FT. E OF 95W VARIABLE WINDS 5 TO 10 KT. SEAS 1  
TO 2 FT.

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# Marine Weather Products

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## TIDE REPORT

The Tide report is issued twice daily at 4 am and 4 pm for Port Aransas and Port O'Connor.

EXAMPLE TIDE REPORT (TID, SOUS44)

SOUS44 KCRP 290816  
TIDCRP  
GMZ230-235-292030-

TIDE PREDICTION AND SEA WATER TEMPERATURES  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
316 AM CDT WED SEP 29 2010

PORT ARANSAS JETTY TIDES...

TODAY: HIGH AT 350 AM...LOW AT 114 PM.  
THURSDAY: HIGH AT 407 AM...LOW AT 218 PM.

SEA WATER TEMPERATURE AT PORT ARANSAS IS 82 DEGREES.

PORT O'CONNOR TIDES...

TODAY: HIGH AT 501 AM...LOW AT 419 PM.  
THURSDAY: HIGH AT 555 AM...LOW AT 531 PM.

SEA WATER TEMPERATURE AT PORT O'CONNOR IS 80 DEGREES.

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TM



# Coastal Flood Terminology

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**Beach Erosion** - The movement of beach materials by some combination of high waves, currents and tides, or wind.

**Coastal Flooding** - Inundation of coastal areas and beaches from waves and storm surge.

**Mean Higher High Water** - The average of the higher high water height of each tidal day observed over the National Tidal Datum Epoch.

**Mean High Water** - The average of all the high water heights observed over the National Tidal Datum Epoch.

**Mean Sea Level** - The arithmetic mean of hourly heights observed over the National Tidal Datum Epoch.

**Mean Low Water** - The average of all the low water heights observed over the National Tidal Datum Epoch.

**Mean Lower Low Water** - The average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch.

**National Tidal Datum Epoch** - The specific 19 year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values (e.g., Mean Lower Low Water, etc.) for tidal datum.

**Rip Currents** - A relatively small-scale surf zone current moving away from the beach. Rip currents form as waves disperse along the beach causing water to become trapped between the beach and a sandbar or other underwater feature. The water converges into a narrow, river-like channel moving away from the shore at high speed.

**Storm Surge** - An abnormal rise in sea level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the cyclone. Storm surge is usually estimated by subtracting the normal astronomical tide from the observed storm tide.

**Storm Tide** - The actual level of sea water resulting from the astronomic tide combined with the storm surge.

**Tidal Cycle** - The periodic changes in the range of tides caused primarily by varying relations among the earth, sun, and moon.

**Tidal Piling** - Abnormally high water levels from successive incoming tides that do not completely drain because of strong winds or waves persisting through successive tide cycles.

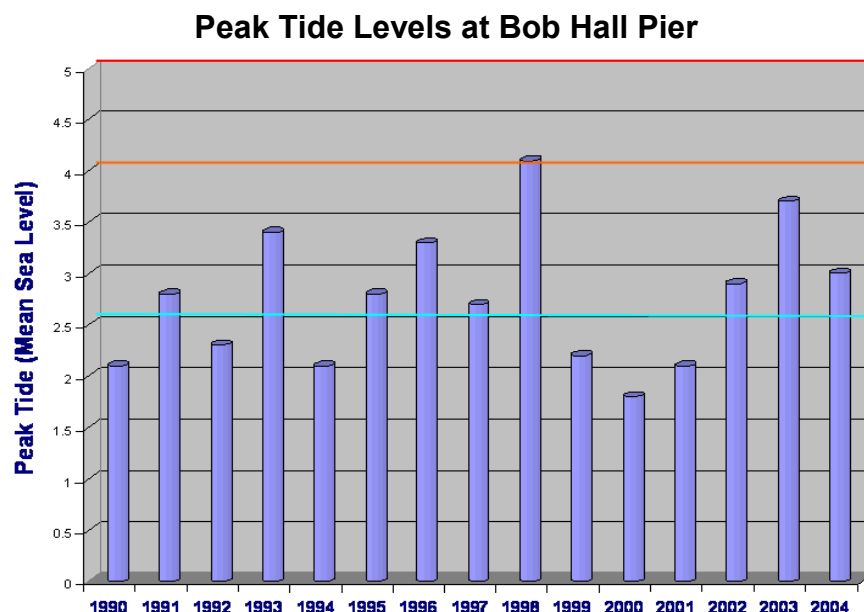
# Coastal Flood Climatology

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The Texas coastline is very gently sloped with a flat coastal plain that extends well inland. On average, daily tidal variations along the Texas coast are relatively minor, with water levels only changing by 1 to 3 feet between high and low tide along the barrier islands and even less in bays and intracoastal waterways. This has allowed the construction of many roads and buildings in areas that are only a few feet above mean sea level and because the coastline is very gently sloped there are many man made structures that are impacted by coastal flooding with water levels only 2 to 4 feet above mean sea level. Coastal flooding during an event first occurs across the barrier islands, but conditions must persist for several days to allow time for higher water levels to filter through narrow inlets into the bays (barring a sudden high storm surge associated with tropical systems).

Tidal overflow along the coastal bend can occur during any month, however the peak period for coastal flooding occurs in the fall with a minor peak in the spring. In general, coastal flooding occurs along the Coastal Bend when moderate to strong northeast to east flow develops along the Texas coast. This is because water is transported to the right of the mean wind due to a process known as Eckman transport. The amount of rise in water level is dependent on wind direction, wind speed and the duration of the event. Coastal flooding in the summer months can be entirely attributed to storm surge from hurricanes and strong tropical storms. The fall peak in coastal flooding is partly due to astronomical high tides which occur this time of year due to a change in the nearshore Gulf currents. Water levels may approach 2 feet above msl at time of high tide for several days during fall astronomical high tides leaving the region susceptible to tidal overflow. In addition, weather systems that produce moderate to strong northeast winds along the northern Gulf are most common in the fall. Some typical weather patterns that produce coastal flooding include:

- Persistent strong high pressure systems northeast of the Coastal Bend (typically over the mid west or central Mississippi River Valley behind early seasons cold fronts).
- Moderate to strong low pressure systems in the west to northwest Gulf of Mexico.
- A combination of high pressure to the north or northeast and low pressure over the western Gulf of Mexico.



# Coastal Zone Products

## COASTAL HAZARDS MESSAGE

The Coastal Hazards Message is used to disseminate and update Coastal Flood Watches, Warnings, Advisories and Statements. The product provides details regarding expected tide levels, timing of water rises and potential impacts. The criteria of each is provided below.

Product Name	Issuance Criteria
Coastal Flood Watch	A Coastal Flood Watch is issued to inform the public and cooperating agencies that coastal flooding is possible approximately 12 to 36 hours after issuance time.
Coastal Flood Warning	A Coastal Flood Warning is issued to inform the public and cooperating agencies that coastal flooding, posing a serious threat to life and property is occurring, is imminent, or is expected within the next 24 hours.
Coastal Flood Advisory	A Coastal Flood Advisory is issued to inform the public that minor or nuisance flooding is possible.
Coastal Flood Statement	A Coastal Flood Statement is used to provide details about minor tidal overflow that is below the Advisory Criteria.

EXAMPLE COASTAL FLOOD WARNING (CFW,WHUS42)

URGENT - IMMEDIATE BROADCAST REQUESTED  
 COASTAL HAZARD MESSAGE  
 NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
 439 AM CDT MON SEP 6 2010

TXZ242>247-061700-  
 /O.UPG.KCRP.CF.A.0001.100906T1800Z-100908T0000Z/  
 /O.NEW.KCRP.CF.W.0003.100906T0939Z-100908T0000Z/  
 KLEBERG-NUECES-SAN PATRICIO-ARANSAS-REFUGIO-CALHOUN-  
 439 AM CDT MON SEP 6 2010

...COASTAL FLOOD WARNING IN EFFECT UNTIL 7 PM CDT TUESDAY...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A  
 COASTAL FLOOD WARNING...WHICH IS IN EFFECT UNTIL 7 PM CDT  
 TUESDAY.

WATER LEVELS WILL CONTINUE TO RISE ACROSS THE MIDDLE TEXAS COAST  
 TODAY AND TUESDAY AS EASTERLY WINDS AND SEAS INCREASE WITH THE  
 APPROACH OF TROPICAL STORM HERMINE. DURING HIGH TIDE TODAY...TIDE  
 LEVELS WILL PEAK BETWEEN 2 AND 2.25 FEET MSL ALONG THE GULF FACING  
 BEACHES OF THE MIDDLE TEXAS COASTAL BARRIER ISLANDS. THE WILL  
 RESULT IN WATER REACHING THE DUNES ALONG AREA BEACHES.

WATER LEVELS WILL INCREASE FURTHER DURING HIGH TIDE EARLY TUESDAY  
 MORNING...INCREASING TO AROUND 3 FEET MSL ALONG THE GULF FACING  
 BEACHES. THIS WILL COMPLETELY INUNDATE GULF FACING BEACHES ON THE  
 BARRIER ISLANDS...WITH WATER REACHING WELL INTO MANY BEACH ACCESS  
 ROADS. IN THE BAYS...TIDE LEVELS WILL REACH AROUND 2 TO 2.5 FEET  
 MSL DURING HIGH TIDE ON TUESDAY. THIS WILL RESULT IN PORTIONS OF  
 NORTH BEACH IN CORPUS CHRISTI FLOODING. WATER WILL CROSS OVER  
 LAGUNA SHORES DRIVE IN FLOUR BLUFF...WITH THE LOWEST SECTIONS  
 BECOMING IMPASSABLE.



# Coastal Zone Products

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## SURF ZONE FORECAST

**A forecast product geared toward non-boating marine users issued for an area extending from the area of water between the high tide level on the beach and the seaward side of the breaking waves. The forecast is being issued on experimental bases as of March 1<sup>st</sup> 2009. During the experimental period, the Surf Zone Forecast will be issued once daily at 600 am with no updates.**

000  
FZUS54 KCRP 301039  
SRFCRP

SURF ZONE FORECAST  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
539 AM CDT MON AUG 30 2010

.FOR THE BEACHES FROM MALAQUITE BEACH TO PORT ARANSAS...

TXZ242-243-302245-  
KLEBERG-NUECES-  
539 AM CDT MON AUG 30 2010

FORECAST:

		TODAY	TUESDAY
MIN/MAX TEMP:		/ 89	83 / 90
SKY	MORNING:	PARTLY CLOUDY	PARTLY CLOUDY
	AFTERNOON:	PARTLY CLOUDY	PARTLY CLOUDY
	EVENING:	PARTLY CLOUDY	PARTLY CLOUDY
WEATHER	MORNING:	SHOWERS / TSTMS	SHOWERS / TSTMS
	AFTERNOON:	SHOWERS / TSTMS	SHOWERS / TSTMS
	EVENING:	NONE	NONE
PRECIP CHC	MORNING:	30%	30%
	AFTERNOON:	20%	20%
	EVENING:	10%	10%
WIND	MORNING:	SE 14-18 MPH	SE 10-14 MPH
	AFTERNOON:	SE 15-18 MPH	E 13-17 MPH
	EVENING:	SE 17-18 MPH	SE 17-17 MPH
RIP CURRENT RISK:*		LOW	LOW
LIGHTNING RISK:		LOW	MODERATE
UV INDEX:		VERY HIGH	VERY HIGH
SIG WAVE HEIGHT:*		4 FEET	4 FEET
DOMINANT WAVE PERIOD:*		6 SECONDS	6 SECONDS

\* A LOW RISK OF RIP CURRENTS MEANS THAT ANY RIP CURRENTS THAT DO FORM ARE LIKELY TO BE WEAK BUT STILL MAY POSE A DANGER TO POOR SWIMMERS. RESEARCH HAS SHOWN RIP CURRENTS ARE TYPICALLY MORE FREQUENT IN THE VICINITY OF JETTIES...INLETS...AND PIERS AND THESE CAN BE QUITE STRONG ON DAYS WHERE THE OVERALL RIP CURRENT THREAT IS LOW...ESPECIALLY IF STRONG SOUTHERLY OR NORTHEASTERLY WINDS EXIST.



# Tropical Weather

**Terminology  
Climatology  
Products**

**Tropical Storm or Hurricane Watch / Warning  
NHC Tropical Cyclone Public Advisory  
NHC Tropical Cyclone Forecast Advisory  
NHC Tropical Cyclone Strike Probability  
NHC Tropical Cyclone Discussion  
Hurricane Local Statement  
Inland Hurricane Wind Watch/Warning  
Post Storm Report**

# Tropical Weather Terminology

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**Post-tropical cyclone** - A former tropical cyclone. Can have heavy rains and high winds. Extra-tropical and remnant lows are 2 classes of post-tropical cyclones.

**Tropical Storm Warning** - A warning that sustained winds within the range of 34 to 63 kt (39 to 73 mph or 63 to 118 km/hr) associated with a tropical cyclone are expected in a specified coastal area within 24 hours or less.

**Tropical Storm Watch** - An announcement for specific coastal areas that tropical storm conditions are possible within 36 hours.

**Hurricane Warning** - A warning that sustained winds 64 kt (74 mph or 119 km/hr) or higher associated with a hurricane are expected in a specified coastal area in 36 hours or less. A hurricane warning can remain in effect when dangerously high water or a combination of dangerously high water and exceptionally high waves continue, even though winds may be less than hurricane force.

**Hurricane Watch** - An announcement for specific coastal areas that hurricane conditions are possible within 48 hours.

**Tropical Wave** - A trough or cyclonic curvature maximum in the trade-wind easterlies. The wave may reach maximum amplitude in the lower middle troposphere.

**Tropical Disturbance** - A discrete tropical weather system of apparently organized convection -- generally 100 to 300 nmi in diameter -- originating in the tropics or subtropics, having a non-frontal migratory character, and maintaining its identity for 24 hours or more. It may or may not be associated with a detectable perturbation of the wind field.

**Tropical Depression** - A tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) is 33 kt (38 mph or 62 km/hr) or less.

**Tropical Storm** - A tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 34 kt (39 mph or 63 km/hr) to 63 kt (73 mph or 118 km/hr).

**Hurricane / Typhoon** - A tropical cyclone in which the maximum sustained surface wind (using the U.S. 1-minute average) is 64 kt (74 mph or 119 km/hr) or more. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline.

**Extratropical** - A term used in advisories and tropical summaries to indicate that a cyclone has lost its "tropical" characteristics. The term implies both poleward displacement of the cyclone and the conversion of the cyclone's primary energy source from the release of latent heat of condensation to baroclinic (the temperature contrast between warm and cold air masses) processes. It is important to note that cyclones can become extratropical and still retain winds of hurricane or tropical storm force.

# Tropical Weather Terminology

**Subtropical Cyclone** - A non-frontal low pressure system that has characteristics of both tropical and extratropical cyclones.

The most common type is an upper-level cold low with circulation extending to the surface layer and maximum sustained winds generally occurring at a radius of about 100 miles or more from the center. In comparison to tropical cyclones, such systems have a relatively broad zone of maximum winds that is located farther from the center, and typically have a less symmetric wind field and distribution of convection.

A second type of subtropical cyclone is a mesoscale low originating in or near a frontolyzing zone of horizontal wind shear, with radius of maximum sustained winds generally less than 30 miles. The entire circulation may initially have a diameter of less than 100 miles. These generally short-lived systems may be either cold core or warm core.

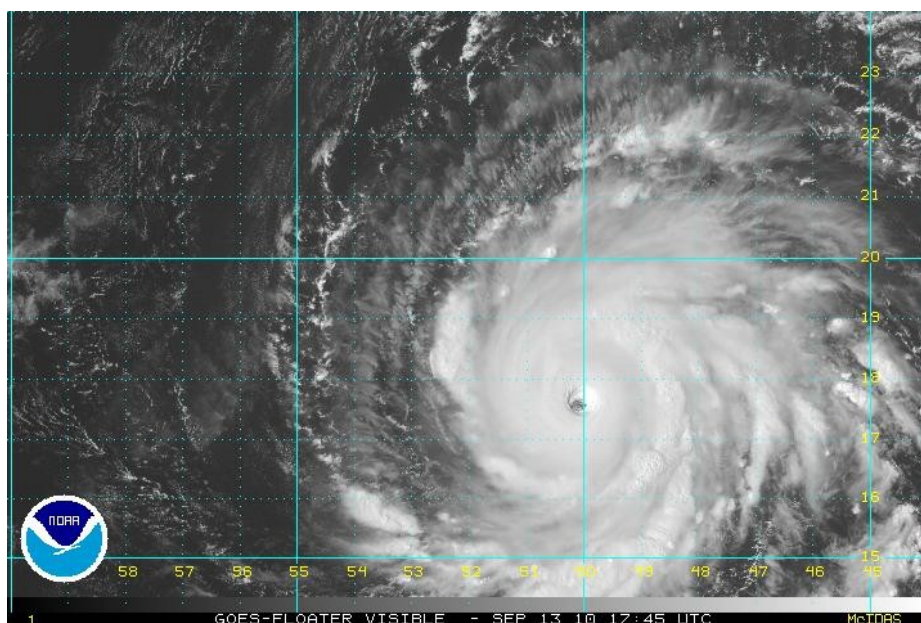
## TROPICAL CYCLONE WATCH / WARNING BREAKPOINTS



# Tropical Weather Terminology

## ATLANTIC NAMES

<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Alex	Arlene	Alberto	Andrea	Arthur	Ana
Bonnie	Bret	Beryl	Barry	Bertha	Bill
Colin	Cindy	Chris	Chantal	Cristobal	Claudette
Danielle	Don	Debby	Dorian	Dolly	Danny
Earl	Emily	Ernesto	Erin	Edouard	Erika
Fiona	Franklin	Florence	Fernand	Fay	Fred
Gaston	Gert	Gordon	Gabrielle	Gonzalo	Grace
Hermine	Harvey	Helene	Humberto	Hanna	Henri
Igor	Irene	Isaac	Ingrid	Isaias	Ida
Julia	Jose	Joyce	Jerry	Josephine	Joaquin
Karl	Katia	Kirk	Karen	Kyle	Kate
Lisa	Lee	Leslie	Lorenzo	Laura	Larry
Matthew	Maria	Michael	Melissa	Marco	Mindy
Nicole	Nate	Nadine	Nestor	Nana	Nicholas
Otto	Ophelia	Oscar	Olga	Omar	Odette
Paula	Philippe	Patty	Pablo	Paulette	Peter
Richard	Rina	Rafael	Rebekah	Rene	Rose
Shary	Sean	Sandy	Sebastien	Sally	Sam
Tomas	Tammy	Tony	Tanya	Teddy	Teresa
Virginie	Vince	Valerie	Van	Vicky	Victor
Walter	Whitney	William	Wendy	Wilfred	Wanda



Hurricane Igor 2010

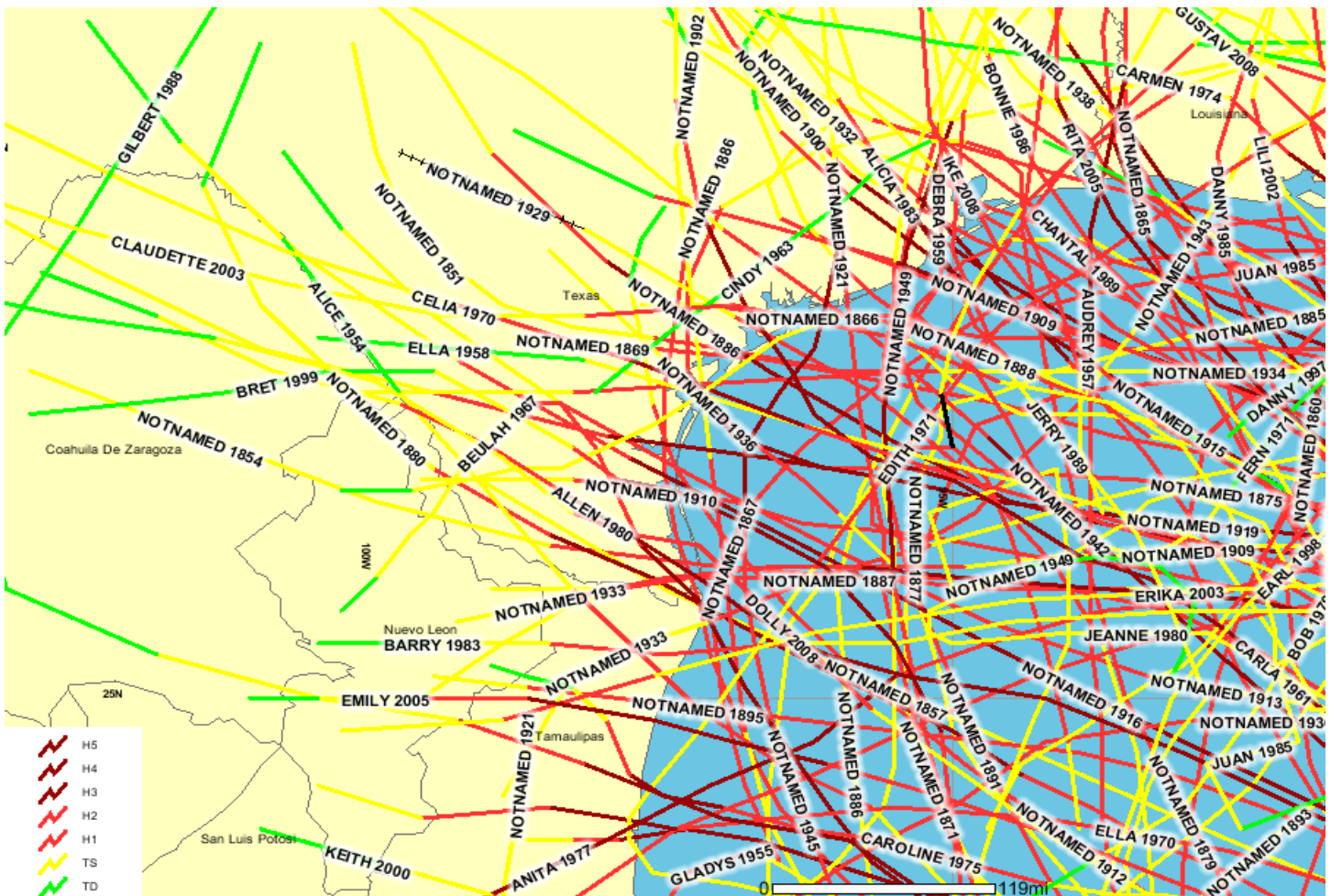


# Tropical Weather Climatology

Hurricanes have been part of Texas coastal history as long as the state has been inhabited. Since 1900, a total of 45 hurricanes have made landfall along the Texas coast, 16 were major hurricanes, classified as category 3 or greater on the Saffir-Simpson hurricane scale. On average, a hurricane will cross the Middle Texas coast about every 10 years. On average a major hurricane arrives every 35 years. The image below displays all hurricane tracks.

The Great Galveston Hurricane of September 8...1900...Remains the worst natural disaster in the United States in numbers of lives lost. The deaths can only be guessed at, but 8000 is the estimate most frequently used. In 1900 the population of Galveston was slightly over 20,000 Driven by winds in excess of 125 mph, gulf waters covered the island to a depth of up to 15 feet. Buildings made of wood floated off pilings and smashed into one another. As buildings collapsed and disintegrated, their occupants were thrust into the water to drown. The local weather office had sounded the alarm on the previous day, and over 10,000 people fled inland, an action that no doubt saved their lives. Of the 10,000 who did not evacuate, fewer than 2,000 survived.

The peak of the hurricane season for South Texas is late August and early September. However, Hurricane Alex in late June 2010 was a category 2 storm and the strongest in the Atlantic Basin since 1966. Therefore, hurricanes can strike at any time during the tropical season defined from June 1 to November 30th.



All hurricane tracks



# Tropical Weather Climatology

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In our early history, the Coastal Bend area felt a false sense of security against hurricanes. Corpus Christi, with its high bluff and the protective barrier island, felt particularly safe. Local newspapers as early as 1886 referred to Corpus Christi as “the only really safe place on the Texas coast.” This false sense of security proved to be disastrous. The great hurricane of September 14, 1919, moved inland some 25 miles south of Corpus Christi, putting the city in the dreaded right front quadrant where the strongest winds and highest storm surges normally occur. When the event had ended, the beaches were littered with debris and bodies. Nearly 300 persons died and damage exceeded 20 million dollars.

No list could be complete without Carla, which made landfall near Port Lavaca on September 11, 1961. Carla was among the largest hurricanes of historical record, with all of the damaging hurricane elements. It produced many tornadoes, peak winds estimated to 175 mph, torrential rains, and a storm surge of 22 feet at Port Lavaca. The death toll of only 34 persons can be attributed in part to what at the time was the largest peace time evacuation of an area in the history of the world. A quarter million people left the middle and upper Texas coasts for safety.



*Downtown Corpus Christi after the 1919 Hurricane*

Recent decades have seen dramatic shifts in number and intensity of hurricanes. After the devastating events of the 1960s, including hurricanes Carla, Cindy, and Beulah, the 1970s brought only two hurricanes. However, one of those was Celia, whose devastating winds cut a wide path of destruction from Corpus Christi westward into the mountains of Mexico. The 1980s brought with them five more hurricanes, a large number for any ten year period. Among those was gigantic hurricane Allen, which nearly covered the gulf as it tracked toward the Texas coast. Only a miraculous decrease in intensity as it moved onshore between Corpus Christi and Brownsville prevented a great loss of life.

Texans were fortunate in the 1990s when only one hurricane, Bret, crossed the state coastline during the ten year stretch. This very intense hurricane weakened as it crossed the coast south of Corpus Christi. In 2003, hurricane Claudette struck Texas and in 2005 Rita hit Beaumont. The most powerful cyclone of recent years was Hurricane Ike in 2008 which slammed into Galveston as a Category 2 storm but with a deadly 20-foot storm surge. Two other storms, Hurricane Dolly (2008) and Alex (2010) both clipped deep South Texas as they tracked into northern Mexico. Dolly did the most damage of the two from wind and tornadoes, and Alex resulted in record flooding on the Rio Grande after it stalled in Mexico dumping 10 to 20 inches of rain. Since we cannot prevent hurricanes, the next best thing is to know what they can do and be prepared. Remember that those who do not study history are doomed to repeat it.

# Tropical Weather Climatology

## Major (category 3 or higher) Texas Hurricanes (1900-2010)

Year	Name	Landfall Date	Landfall Location	Max Winds (mph)	Surge Height (feet)	Pressure in eye (inches)	Deaths
1900		Sep. 8	Galveston	145	20	27.64	8,000
1909		Jul. 21.	Velasco	115	10	28.32	41
1915		Aug. 17	Galveston	135	16	27.76	275
1916		Aug. 18	Baffin Bay	140	9+	27.52	20
1919		Sep. 14	Corpus Christi	115	16	28.05	284
1932		Aug. 13	Freeport	140	?	27.79	40
1933		Sep. 4	Brownsville	125	13	28.02	40
1941		Sep. 23	Texas City	115	10	28.29	4
1942		Aug. 30	Matagorda	115	13	28.05	8
1961	Carla	Sep. 11	Port O'Connor	145	22	27.49	46
1967	Beulah	Sep. 20	Near Brownsville	135	12	27.49	15
1970	Celia	Aug. 3	Port Aransas	125	9	27.91	11
1980	Allen	Aug. 10	Port Mansfield	115	12	27.91	7
1983	Alicia	Aug. 18	San Luis Pass	115	13	28.44	13
1999	Bret	Aug. 22	Mesquite Rincon	115	10	28.28	4





# NWS front page during Hurricane Alex in 2010 including hazard map and links to urgent information

weather.gov

## National Weather Service Weather Forecast Office

# Corpus Christi, TX


Home   Site Map   News   Organization   Search for:    NWS   All NOAA   Go

### Top News of the Day

- [Hurricane Alex Track Forecast](#)
- [Hurricane Alex Local Statement from NWS Corpus Christi](#)
- [We need your feedback! Take our weather survey](#)
- [Daily Weather Briefing \\*Updated\\* Noon Wednesday](#)


Watches & Warnings	Observations	Forecast Graphics	Rivers & Lakes	Climate	Submit a Storm Report
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Click on the map below for the latest forecast.



Last map update: Wed, Jun. 30, 2010 at 8:17:22 pm CDT

[Read watches, warnings & advisories](#)



Zoom  
Out


<a href="#">Flash Flood Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800000;"></span>
<a href="#">Hurricane Wind Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #c00000;"></span>
<a href="#">Hurricane Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ff0000;"></span>
<a href="#">Special Marine Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffa500;"></span>
<a href="#">Tropical Storm Wind Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800000;"></span>
<a href="#">Tropical Storm Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800000;"></span>
<a href="#">Coastal Flood Warning</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000;"></span>
<a href="#">Tornado Watch</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffff00;"></span>
<a href="#">Flash Flood Watch</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00ff00;"></span>
<a href="#">Small Craft Advisory</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #d3d3d3;"></span>
<a href="#">Flood Watch</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000;"></span>
<a href="#">Special Weather Statement</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffa500;"></span>
<a href="#">Hazardous Weather Outlook</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffff00;"></span>
<a href="#">Short Term Forecast</a>	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00ff00;"></span>

Latest Conditions in Corpus Christi, TX
Choose Your Front Page City

Jun 30

## 7:51 pm

Light Rain and Breezy



# 80°F

(27°C)

Select A City:

# Tropical Weather Products

## NHC TROPICAL WEATHER OUTLOOK

The Tropical Weather outlook discusses potential areas of tropical cyclone development and provides the probability a tropical depression will form during in the next few days. The product and graphic (see page 96) also lists and current depressions or named storms and refers to the forecast advisories for more details. There are graphical and text versions of this product.

ZCZC MIATWOAT ALL  
TTAA00 KNHC DDHHMM  
TROPICAL WEATHER OUTLOOK  
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL  
200 AM EDT SAT OCT 9 2010

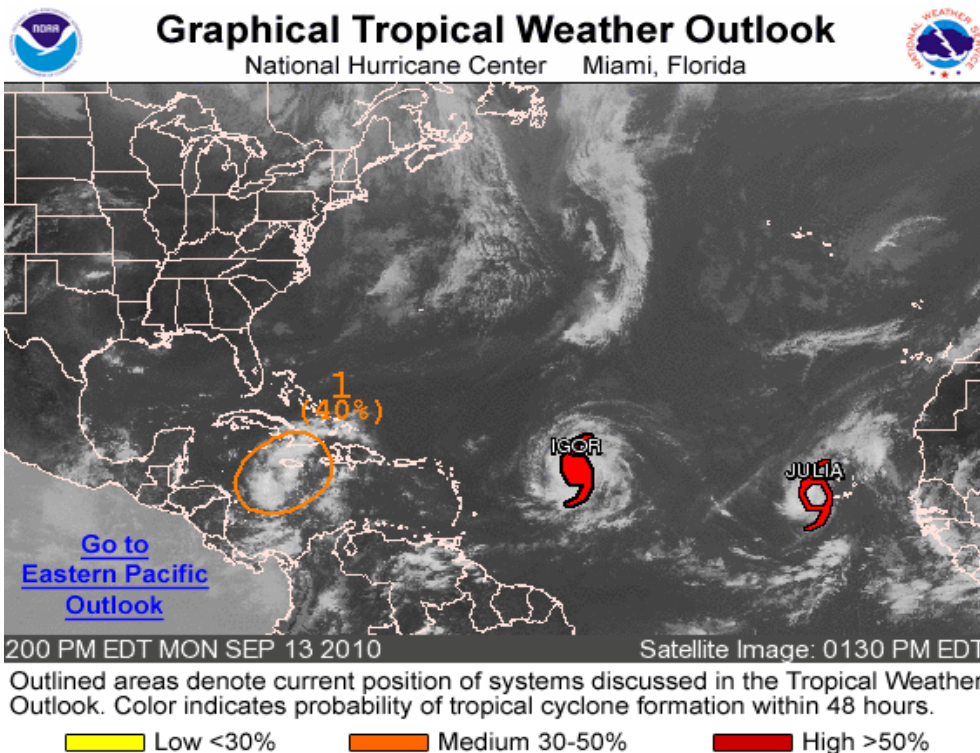
FOR THE NORTH ATLANTIC...CARIBBEAN SEA AND THE GULF OF MEXICO...

THE NATIONAL HURRICANE CENTER IS ISSUING ADVISORIES ON HURRICANE OTTO...LOCATED ABOUT 390 MILES SOUTHEAST OF BERMUDA.

1. A NEARLY STATIONARY AREA OF LOW PRESSURE LOCATED OVER THE SOUTHWESTERN CARIBBEAN SEA IS PRODUCING DISORGANIZED SHOWERS AND THUNDERSTORMS. SOME SLOW DEVELOPMENT OF THIS SYSTEM IS POSSIBLE OVER THE NEXT COUPLE OF DAYS...AND THERE IS A LOW CHANCE...20 PERCENT...OF TROPICAL CYCLONE FORMATION IN THE NEXT 48 HOURS.

ELSEWHERE...TROPICAL CYCLONE FORMATION IS NOT EXPECTED DURING THE NEXT 48 HOURS.

\$\$  
FORECASTER BRENNAN



# Tropical Weather Products

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## NHC TROPICAL CYCLONE PUBLIC ADVISORY

The Tropical Cyclone Public Advisory contains a list of all current watches and warnings on a tropical or subtropical cyclone. It also gives the cyclone position in terms of latitude and longitude coordinates and distance from a selected land point or island, as well as the current motion. The advisory includes the maximum sustained winds in miles per hour and the estimated or measured minimum central pressure in millibars and inches. The advisory may also include information on potential storm tides, rainfall or tornadoes associated with the cyclone, as well as any pertinent weather observations.

Public advisories are issued for all Atlantic tropical or subtropical cyclones that are threatening land. Public advisories are normally issued every six hours. They may be issued every two or three hours when coastal watches or warnings are in effect. Special public advisories may be issued at any time due to significant changes in warnings or in the cyclone.

EXAMPLE TROPICAL CYCLONE PUBLIC ADVISORY (TCPAT#,WTNT3#)

WTNT31 KNHC 291452

TCPAT1

BULLETIN

TROPICAL STORM NICOLE ADVISORY NUMBER 5

NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL AL162010

1100 AM EDT WED SEP 29 2010

...DEPRESSION BECOMES A TROPICAL STORM...CENTER STILL NEAR CENTRAL CUBA...

SUMMARY OF 1100 AM EDT...1500 UTC...INFORMATION

-----  
LOCATION...22.6N 80.6W

ABOUT 120 MI...195 KM ESE OF HAVANA CUBA

ABOUT 260 MI...420 KM SW OF NASSAU

MAXIMUM SUSTAINED WINDS...40 MPH...65 KM/HR

PRESENT MOVEMENT...NE OR 40 DEGREES AT 9 MPH...15 KM/HR

MINIMUM CENTRAL PRESSURE...996 MB...29.41 INCHES

WATCHES AND WARNINGS

-----  
CHANGES WITH THIS ADVISORY...

ALL TROPICAL STORM WARNINGS AND WATCHES FOR FLORIDA HAVE BEEN DISCONTINUED.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A TROPICAL STORM WARNING IS IN EFFECT FOR...

\* THE CAYMAN ISLANDS

\* THE PROVINCES OF CUBA FROM MATANZAS EASTWARD TO CIEGO DE AVILA

\* THE NORTHWESTERN AND CENTRAL BAHAMAS

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE. FOR STORM INFORMATION SPECIFIC TO YOUR AREA OUTSIDE THE UNITED STATES...PLEASE MONITOR PRODUCTS ISSUED BY YOUR NATIONAL METEOROLOGICAL SERVICE.

# Tropical Weather Products

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## NHC TROPICAL CYCLONE PUBLIC ADVISORY (CONTINUED)

### DISCUSSION AND 48-HOUR OUTLOOK

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AT 1100 AM EDT...1500 UTC...THE CENTER OF TROPICAL STORM NICOLE WAS LOCATED NEAR LATITUDE 22.6 NORTH...LONGITUDE 80.6 WEST. NICOLE IS MOVING TOWARD THE NORTHEAST NEAR 9 MPH...15 KM/HR. A MOTION TO THE NORTHEAST ACCOMPANIED BY A GRADUAL INCREASE IN FORWARD SPEED IS EXPECTED DURING THE NEXT 24 HOURS. ON THE FORECAST TRACK...THE CENTER OF NICOLE WILL MOVE OVER THE FLORIDA STRAITS LATER THIS AFTERNOON...AND MOVE NEAR OR OVER THE NORTHWESTERN BAHAMAS TONIGHT.

MAXIMUM SUSTAINED WINDS ARE NEAR 40 MPH...65 KM/HR...WITH HIGHER GUSTS. LITTLE CHANGE IN STRENGTH IS EXPECTED DURING THE NEXT 24 HOURS...BEFORE NICOLE IS ABSORBED BY AN EXTRATROPICAL LOW ON THURSDAY.

TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 345 MILES...555 KM FROM THE CENTER.

THE MINIMUM CENTRAL PRESSURE BASED ON SURFACE REPORTS FROM CUBA IS 996 MB...29.41 INCHES.

### HAZARDS AFFECTING LAND

-----

RAINFALL...NICOLE IS EXPECTED TO PRODUCE TOTAL RAIN ACCUMULATIONS OF 5 TO 10 INCHES OVER THE CAYMAN ISLANDS...JAMAICA...AND CUBA. ISOLATED MAXIMUM AMOUNTS OF 20 INCHES ARE POSSIBLE OVER THE HIGHER ELEVATIONS OF CUBA AND JAMAICA. THESE RAINS COULD CAUSE LIFE-THREATENING FLASH FLOODS AND MUD SLIDES. RAIN ACCUMULATIONS OF 4 TO 8 INCHES ARE POSSIBLE OVER PORTIONS OF SOUTHERN FLORIDA...THE FLORIDA KEYS...AND THE CENTRAL AND NORTHWEST BAHAMAS.

WIND...TROPICAL STORM CONDITIONS ARE EXPECTED IN THE WARNING AREAS TODAY AND TONIGHT.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE ALONG THE IMMEDIATE COAST OF SOUTHEASTERN FLORIDA AND THE FLORIDA KEYS TODAY.

### NEXT ADVISORY

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NEXT INTERMEDIATE ADVISORY...200 PM EDT.

NEXT COMPLETE ADVISORY...500 PM EDT.

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FORECASTER BROWN/PASCH

# Tropical Weather Products

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## NHC TROPICAL CYCLONE FORECAST ADVISORY

The Tropical Cyclone Forecast/Advisory contains a list of all current watches and warnings on a tropical or subtropical cyclone, as well as the current latitude and longitude coordinates, intensity, and system motion. The advisory contains forecasts of the cyclone positions, intensities, and wind fields for 12, 24, 36, 48, and 72 hours from the current synoptic time and position and intensity outlooks for 96 and 120 hours. The advisory may also include information on any pertinent storm tides associated with the cyclone. All wind speeds in the forecast advisory is given in knots (nautical miles per hour).

Forecast/Advisories are issued on all Atlantic tropical and subtropical cyclones every six hours. Special Forecast/Advisories may be issued at any time due to significant changes in warnings or in the cyclone.

EXAMPLE TROPICAL CYCLONE FORECAST ADVISORY (TCMAT#,WTNT2#)

WTNT21 KNHC 291452

TCMAT1

TROPICAL STORM NICOLE FORECAST/ADVISORY NUMBER 5

NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL AL162010

1500 UTC WED SEP 29 2010

CHANGES IN WATCHES AND WARNINGS WITH THIS ADVISORY...

ALL TROPICAL STORM WARNINGS AND WATCHES FOR FLORIDA HAVE BEEN DISCONTINUED.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A TROPICAL STORM WARNING IS IN EFFECT FOR...

\* THE CAYMAN ISLANDS

\* THE PROVINCES OF CUBA FROM MATANZAS EASTWARD TO CIEGO DE AVILA

\* THE NORTHWESTERN AND CENTRAL BAHAMAS

TROPICAL STORM CENTER LOCATED NEAR 22.6N 80.6W AT 29/1500Z

POSITION ACCURATE WITHIN 30 NM

PRESENT MOVEMENT TOWARD THE NORTHEAST OR 40 DEGREES AT 8 KT

ESTIMATED MINIMUM CENTRAL PRESSURE 996 MB

MAX SUSTAINED WINDS 35 KT WITH GUSTS TO 45 KT.

34 KT..... ONE 300SE 0SW 0NW.

12 FT SEAS.. ONE 360SE 300SW 0NW.

WINDS AND SEAS VARY GREATLY IN EACH QUADRANT. RADII IN NAUTICAL MILES ARE THE LARGEST RADII EXPECTED ANYWHERE IN THAT QUADRANT.

REPEAT...CENTER LOCATED NEAR 22.6N 80.6W AT 29/1500Z

AT 29/1200Z CENTER WAS LOCATED NEAR 21.9N 80.9W

FORECAST VALID 30/0000Z 24.7N 79.8W

MAX WIND 35 KT...GUSTS 45 KT.

34 KT...150NE 250SE 0SW 0NW.

FORECAST VALID 30/1200Z 29.4N 78.4W...POST-TROPICAL

MAX WIND 35 KT...GUSTS 45 KT.

34 KT...150NE 250SE 0SW 0NW.

FORECAST VALID 01/0000Z...DISSIPATED

# Tropical Weather Products

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## NHC TROPICAL CYCLONE FORECAST DISCUSSION

The Tropical Cyclone Discussion explains the reasoning for the analysis and forecast of a tropical or subtropical cyclone. It includes a table of the forecast track and intensity out to 5 days (120 hours). Tropical Cyclone Discussions are issued on all Atlantic and eastern Pacific tropical and subtropical cyclones every six hours. Special tropical cyclone discussions are issued every 6 hours, but may be issued at any time due to significant changes in warnings or in the cyclone.

EXAMPLE TROPICAL CYCLONE DISCUSSION (TCDAT#,WTNT4#)

WTNT41 KNHC 291453  
TCDAT1  
TROPICAL STORM NICOLE DISCUSSION NUMBER 5  
NWS TPC/NATIONAL HURRICANE CENTER MIAMI FL AL162010  
1100 AM EDT WED SEP 29 2010

BANDS OF THUNDERSTORMS HAVE FORMED CLOSER TO THE CENTER OVER THE SOUTHEASTERN PORTION OF THE CIRCULATION SINCE YESTERDAY. ALSO...THERE HAVE BEEN A FEW SHIP...BUOY...AND LAND OBSERVATIONS OF SUSTAINED TROPICAL STORM FORCE WINDS. BASED ON THE IMPROVED ORGANIZATION AND THE SURFACE DATA...THE SYSTEM IS UPGRADED TO TROPICAL STORM NICOLE.

SURFACE OBSERVATIONS FROM CUBA AND VISIBLE SATELLITE IMAGES INDICATE THAT THE CENTER OF NICOLE WAS LOCATED ALONG THE SOUTH-CENTRAL COAST OF CUBA AROUND 1200 UTC THIS MORNING. SURFACE DATA SHOW THAT THE CYCLONE CORE CONSISTS OF A LARGE AREA OF LIGHT WINDS...WITH THE STRONGEST WINDS STILL OCCURRING WELL TO THE SOUTH AND SOUTHEAST OF THE CENTER. THE OBSERVATIONS ALSO INDICATE THAT A SURFACE TROUGH EXTENDS NORTHWARD ALONG THE SOUTHEAST COAST OF FLORIDA. THE GLOBAL MODELS SUGGEST THAT EXTRATROPICAL DEVELOPMENT WILL OCCUR ALONG THE NORTHERN EXTENT OF THE TROUGH OFF THE EAST COAST OF CENTRAL OR NORTH FLORIDA LATER TODAY. THE EXTRATROPICAL LOW IS THEN FORECAST TO MOVE NORTHWARD ALONG THE U.S. EAST COAST DURING THE NEXT COUPLE OF DAYS. NICOLE IS FORECAST TO MOVE NORTHEASTWARD ACROSS CUBA AND THE NORTHWESTERN BAHAMAS...AND IS LIKELY TO DISSIPATE AS THE EXTRATROPICAL DEVELOPMENT BECOMES THE DOMINANT EVENT. THE NEW NHC TRACK IS A LITTLE EAST OF THE PREVIOUS ADVISORY AND SHOWS DISSIPATION OF THE TROPICAL CYCLONE MUCH SOONER THAN PREVIOUSLY PREDICTED. GIVEN THE COMPLEXITY OF THE SCENARIO...HOWEVER... UNCERTAINTY IN THIS FORECAST IS HIGHER THAN NORMAL.

BASED ON THE UPDATED FORECAST TRACK...ALL WATCHES AND WARNINGS FOR FLORIDA HAVE BEEN DISCONTINUED. THE PRIMARY THREAT FROM NICOLE IS HEAVY RAINFALL...ESPECIALLY OVER MOUNTAINOUS AREAS OF JAMAICA AND CUBA.

### FORECAST POSITIONS AND MAX WINDS

INITIAL	29/1500Z	22.6N	80.6W	35 KT
12HR VT	30/0000Z	24.7N	79.8W	35 KT
24HR VT	30/1200Z	29.4N	78.4W	35 KT...POST-TROPICAL
36HR VT	01/0000Z	...DISSIPATED		

\$\$

FORECASTER BROWN/PASCH



# Tropical Weather Products

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## HURRICANE LOCAL STATEMENT

The Hurricane Local Statement is intended to provide information to assist in the preparation and implementation of necessary precautions for the protection of life and property as well as to minimize the economic losses as a result of tropical cyclones. HLSs are prepared and issued by local NWS in or near a threatened area giving specific details for its county/parish warning area on (1) weather conditions, (2) evacuation decisions made by local officials, and (3) other precautions necessary to protect life and property. HLS's will add localized details to the Tropical Cyclone Center's advisory releases.

EXAMPLE HURRICANE LOCAL STATEMENT (HLS,WTUS84)

WTUS84 KCRP 151155  
HLSCR  
TXZ230>234-241>247-151500-

HURRICANE LOCAL STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
650 AM CDT TUE JUL 15 2003

...HURRICANE CLAUDETTE APPROACHING THE MIDDLE TEXAS COAST...

...A HURRICANE WARNING IS IN EFFECT FROM BAFFIN BAY TO HIGH ISLAND...

...AREAS AFFECTED...

THIS STATEMENT RECOMMENDS ACTIONS TO BE TAKEN BY RESIDENTS IN THE FOLLOWING COUNTIES OF ARANSAS... CALHOUN...KLEBERG...NUECES...REFUGIO...SAN PATRICIO...BEE...GOLIAD...LIVE OAK...MCMULLEN...JIM WELLS AND VICTORIA.

...WATCHES/WARNINGS...

A HURRICANE WARNING IS IN EFFECT FOR THE TEXAS COAST FROM BAFFIN BAY TO HIGH ISLAND. A FLASH FLOOD WATCH IS IN EFFECT FOR TODAY FOR THE ENTIRE COASTAL BEND.

...STORM INFORMATION...

AT 6 AM CDT...THE CENTER OF HURRICANE CLAUDETTE WAS LOCATED NEAR LATITUDE 28.2 NORTH AND LONGITUDE 95.3 WEST...OR AROUND 125 MILES TO THE EAST-NORTHEAST OF CORPUS CHRISTI OR 70 MILES EAST-SOUTHEAST OF PORT O'CONNOR. MAXIMUM SUSTAINED WINDS ARE NEAR 75 MPH WHICH MAKES CLAUDETTE A CATEGORY ONE HURRICANE. CLAUDETTE CONTINUES TO MOVE WEST NEAR 12 MPH. A CONTINUED MOVEMENT TOWARDS THE WEST IS EXPECTED TODAY. GIVEN THIS FORECAST TRACK...CLAUDETTE IS EXPECTED TO MAKE LANDFALL BETWEEN ROCKPORT AND PORT O'CONNOR SHORTLY AFTER NOON TODAY.

...PRECAUTIONARY ACTIONS...

AT 1130 PM MONDAY EVENING...EMERGENCY MANAGEMENT OFFICIALS HAVE RECOMMENDED EVACUATIONS OF RESIDENTS OF ARANSAS COUNTY. ALSO...EVACUATIONS HAVE BEEN RECOMMENDED FOR RESIDENTS AND NON-RESIDENTS OF PORT ARANSAS. NO OTHER EVACUATIONS HAVE BEEN REPORTED TO THE NATIONAL WEATHER SERVICE AT THIS TIME. RESIDENTS OF SOUTH TEXAS...ESPECIALLY THOSE WHO LIVE IN THE COASTAL COUNTIES FROM KLEBERG TO CALHOUN... SHOULD BE COMPLETING ALL NECESSARY ACTIONS TO PROTECT LIFE AND PROPERTY.

...STORM SURGE AND TIDE IMPACTS...

AT 6 AM CDT...TIDES WERE AVERAGING AROUND 2 TO 2.5 FEET ABOVE NORMAL. AS CLAUDETTE CONTINUES TO APPROACH THE COASTLINE TODAY...TIDES WILL CONTINUE TO GRADUALLY INCREASE. TIDES ARE EXPECTED TO RISE TO AS HIGH AS 2 TO 3 FEET ABOVE NORMAL BETWEEN ROCKPORT AND BAFFIN BAY AND 3 TO 5 FEET ABOVE NORMAL BETWEEN ROCKPORT AND PORT O'CONNOR. COMBINING THIS STORM SURGE TO THE NORMAL ASTRONOMICAL TIDES WILL PRODUCE STORM TIDES GENERALLY BETWEEN 2 AND 4 FEET ABOVE MEAN SEA LEVEL SOUTH OF ROCKPORT...AND 4 TO 6 FEET ABOVE MEAN SEA LEVEL BETWEEN ROCKPORT AND PORT OCONNOR LATE THIS AFTERNOON.

# Tropical Weather Products

## HURRICANE LOCAL STATEMENT (CONTINUED)

### ...WIND IMPACTS...

AT 6 AM CDT...THE WINDS ACROSS THE COASTAL WATERS SOUTH OF PORT O'CONNOR WERE AVERAGING 35 TO 45 KNOTS FROM THE NORTH. FURTHER OFFSHORE WINDS WERE 45 TO 55 KNOTS WITH GUSTS OF 65 KNOTS. AT 6 AM CDT...THE BUOY 90 NAUTICAL MILES EAST OF PORT ARANSAS REPORTED SUSTAINED WINDS OF 48 KNOTS WITH GUSTS TO 62 KNOTS FROM THE WEST. INLAND LOCATIONS NORTHEAST OF CORPUS CHRISTI WERE REPORTING NORTHWEST WINDS AROUND 15 TO 20 MPH. AS CLAUDETTE APPROACHES SOUTH TEXAS...WINDS WILL GRADUALLY INCREASE ACROSS THE ENTIRE AREA FROM EAST TO WEST. TROPICAL STORM FORCE WINDS ARE EXPECTED TO SPREAD ACROSS THEREMAINDER OF THE COASTAL WATERS...PRIMARILY SOUTHEAST OF PORT ARANSAS...EARLY THIS MORNING. TROPICAL STORM FORCE WINDS WILL MOVE INTO PORT O'CONNOR BY 7 AM CDT. WINDS GUSTING TO HURRICANE FORCE WILL MOVE INTO CALHOUN...REFUGIO AND ARANSAS COUNTIES AROUND 10 AM CDT. THE TROPICAL STORM FORCE WINDS WILL ADVANCE SOUTHWEST DOWN THE COAST WITH TROPICAL STORM FORCE WINDS ENTERING THE COASTAL BEND NEAR CORPUS CHRISTI AROUND 10 AM CDT THIS MORNING. MINIMAL HURRICANE FORCE WINDS WILL BE LIKELY THIS AFTERNOON AND EVENING NEAR CORPUS CHRISTI BAY AND THE ADJACENT WATERS AND LAND AREAS TO THE NORTHEAST.

### ...SEAS AND RIP CURRENTS...

AT 6 AM CDT...SEAS WERE AVERAGING AROUND 8 TO 10 FEET OUT TO AROUND 20 NAUTICAL MILES...14 TO 18 FEET BEYOND 20 NAUTICAL MILES. SEAS WILL INCREASE EVEN FURTHER AS CLAUDETTE APPROACHES. SEAS WILL INCREASE TO 12 TO 17 FEET OUT TO 20 NAUTICAL MILES...15 TO 20 FEET BEYOND 20 NAUTICAL MILES OFFSHORE BY THIS AFTERNOON. THESE LARGE SEAS WILL CONTINUE TO PRODUCE VERY ROUGH SURF AND DANGEROUS RIP CURRENTS ACROSS ALL OF THE SOUTH TEXAS BEACHES. ENTERING THE SURF IS STRONGLY DISCOURAGED THROUGH AT LEAST WEDNESDAY.

### ...TORNADO IMPACTS...

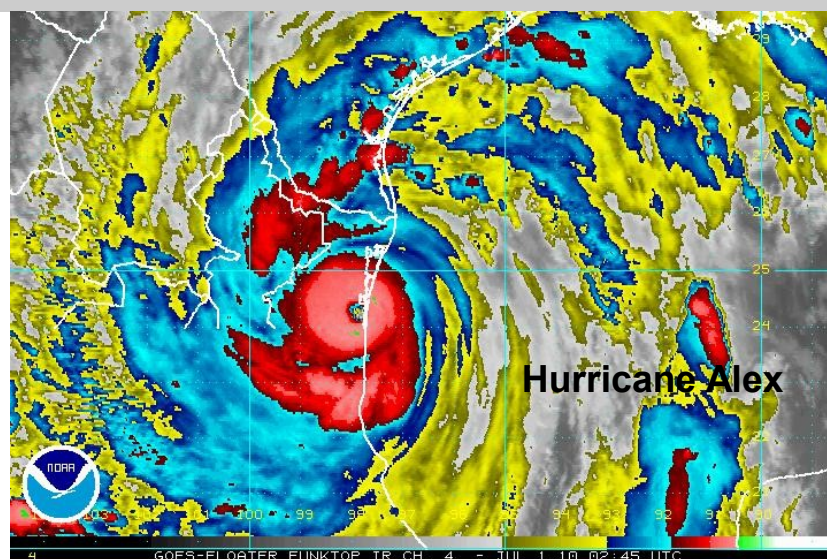
AS CLAUDETTE MAKES LANDFALL THIS AFTERNOON JUST NORTH OF ROCKPORT...THE POSSIBILITY OF ISOLATED TORNADOES WITHIN RAINBANDS WILL INCREASE ALONG THE COASTAL COUNTIES. THE POSSIBILITY OF ISOLATED TORNADOES WILL BE THE GREATEST THIS MORNING THROUGH EARLY WEDNESDAY MAINLY ACROSS CALHOUN... REFUGIO...ARANSAS...GOLIAD AND VICTORIA COUNTIES.

### ...FLOOD IMPACTS...

HEAVY RAINFALL WILL ACCOMPANY CLAUDETTE ESPECIALLY AFTER IT MAKES LANDFALL THIS EVENING. THE GREATEST POTENTIAL FOR HEAVY RAIN SHOULD BE THIS AFTERNOON THROUGH WEDNESDAY. TOTAL RAINFALL AMOUNTS OF 5 TO 8 INCHES WILL BE POSSIBLE MAINLY TO THE NORTH OF A ROCKPORT TO ENCINAL LINE...WITH 2 TO 4 INCHES POSSIBLE TO THE SOUTH OF THIS LINE. THESE RAINFALL AMOUNTS MAY NEED TO BE REVISED IF THE FORECAST TRACK CHANGES. THIS AMOUNT OF RAINFALL WILL HAVE THE POTENTIAL TO PRODUCE FLOODING OVER THE NORTHERN PORTIONS OF THE COASTAL BEND AND RIO GRANDE PLAINS AREA.

### ...NEXT UPDATE...

THE NEXT SCHEDULED STATEMENT WILL BE ISSUED AROUND 1000 AM CDT.



# Tropical Weather Products

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## TROPICAL STORM WIND and HURRICANE WIND WATCH / WARNING

**Tropical Storm or Hurricane Watches and Warnings will be issued for inland locations when conditions warrant. The Hurricane Local Statement (HLS) product will be used to disseminate, update, and cancel these products. A Tropical Storm Wind or Hurricane Wind Watch will be issued when tropical storm/hurricane force winds are possible within the watch area within 48 hours. A Tropical Storm Wind or Hurricane Wind Warning will be issued when tropical storm/hurricane force winds are expected within the warning area within 36 hours.**

EXAMPLE OF AN HLS SEGMENT WITH TROPICAL STORM WIND WARNING IN EFFECT (HLS,WTUS84)

```
TXZ240-241-071100-
/O.CON.KCRP.TI.W.0002.000000T0000Z-100908T0000Z/
DUVAL-JIM WELLS-
1146 PM CDT MON SEP 6 2010

...TROPICAL STORM WIND WARNING REMAINS IN EFFECT UNTIL 7 PM CDT
TUESDAY...

...NEW INFORMATION...
UPDATED TROPICAL STORM FORCE WIND PROBABILITIES.

&&

...PROBABILITY OF TROPICAL STORM/HURRICANE CONDITIONS...
THE CHANCE FOR TROPICAL STORM CONDITIONS AT THIS TIME IS UP TO 63
PERCENT. THIS REPRESENTS A GENERAL DOWNWARD TREND SINCE THE LAST
FORECAST.

...INLAND FLOODING...
A FLASH FLOOD WATCH IS IN EFFECT FOR THE ENTIRE AREA. EVENT
RAINFALL TOTALS OF 4 TO 8 INCHES WITH ISOLATED AMOUNTS TO
12 INCHES ARE EXPECTED IN THE AREA WITH MUCH OF THIS RAIN
OCCURRING TONIGHT THROUGH TUESDAY NIGHT. LISTEN FOR POSSIBLE
FLOOD WARNINGS FOR YOUR LOCATION...AND BE READY TO ACT IF
FLOODING RAINS OCCUR.

...WINDS...
AS TROPICAL STORM HERMINE APPROACHES...SUSTAINED TROPICAL STORM
FORCE WINDS ARE EXPECTED TO BEGIN AFTER MIDNIGHT TONIGHT.

MINOR DAMAGE MAY OCCUR TO OLDER MOBILE HOMES. RESIDENTS SHOULD
MOVE LOOSE ITEMS INDOORS...SUCH AS GARBAGE CANS AND OUTDOOR
FURNITURE...AS THEY WILL BE BLOWN AROUND. NEWLY PLANTED OR YOUNG
TREES AND SHRUBS MAY BE UPROOTED IF NOT SECURED PROPERLY.
ISOLATED POWER OUTAGES WILL BE POSSIBLE.

...TORNADOES...
ISOLATED TORNADOES ARE EXPECTED ACROSS THE REGION WITH THE MAIN
THREAT OCCURRING OVERNIGHT TONIGHT AND TUESDAY AFTERNOON.

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# Tropical Weather Products

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## EXTREME WIND WARNING

**Extreme Wind Warnings (EWW) are short duration products issued to provide the public with advance notice of the onset of extreme sustained winds of a major hurricane (category 3 - 115 mph or higher), usually associated with the eyewall of a major hurricane. Extreme Wind Warnings inform the public of the need to take immediate shelter in an interior portion of a well-built structure due to the onset of extreme tropical cyclone winds and are generally issued less than 2 hours in advance of the onset of the event. Extreme Wind Warnings will only be issued once per county and extensions and amendments will not be issued. Any updates to the product will be issued through Severe Weather Statements (SVS). A severe weather Statement may also be issued to inform the public when all portions of the EWW have been canceled or expired.**

```
WFUS52 KTBW 131938
EWWTBW
FLC015-071-132100-
/O.NEW.KTBW.EW.W.0013.040813T1938Z-040813T2100Z/
```

```
BULLETIN - EAS ACTIVATION REQUESTED
EXTREME WIND WARNING
NATIONAL WEATHER SERVICE TAMPA BAY - RUSKIN FL
338 PM EDT FRI AUG 13 2004
```

THE NATIONAL WEATHER SERVICE IN RUSKIN HAS ISSUED AN

\* EXTREME WIND WARNING FOR THE ONSET OF SUSTAINED WINDS OF 115 MPH OR GREATER FOR...  
CHARLOTTE COUNTY IN SOUTHWEST FLORIDA  
LEE COUNTY IN SOUTHWEST FLORIDA

\* UNTIL 500 PM EDT

\* AT 335 PM EDT...SURFACE OBSERVATIONS AND NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED EXTREME WINDS...ASSOCIATED WITH THE EYEWALL OF HURRICANE CHARLEY...WERE MOVING ONSHORE NEAR NORTH CAPTIVA ISLAND. SUSTAINED WINDS IN EXCESS OF 140 MPH...CAPABLE OF PRODUCING WIDESPREAD DESTRUCTION...CAN BE EXPECTED AS THE EYEWALL PASSES OVERHEAD. MOVEMENT WAS NORTH NORTHEAST AT 20 MPH.

\* THESE EXTREME WINDS WILL AFFECT...

ST. JAMES CITY BY 345 PM

BOKEELIA BY 350 PM

PUNTA GORDA BY 400 PM

THIS IS A DANGEROUS STORM! MOVE INTO AN INTERIOR ROOM AWAY FROM WINDOWS AND OUTER WALLS. COVER YOUR HEAD AND BODY WITH PILLOWS OR BLANKETS.

```
LAT...LON 2672 8226 2644 8213 2702 8174 2702 8207
TIME...MOT...LOC 1935 200DEG 17KT 2665 8210
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# Tropical Weather Products

## POST TROPICAL CYCLONE REPORT

The Post-Tropical Cyclone Report is issued by local NWS offices summarizing the impact of a tropical cyclone on its forecast area. These reports include information on observed winds, pressures, storm surges, rainfall, tornadoes, damage and casualties. The data is then used to formulate other post-event reports, news articles and historical records.

630  
ACUS74 KCRP 041805  
PSHCRP

**POST TROPICAL CYCLONE REPORT...HURRICANE ALEX  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
204 PM CDT SUN JUL 4 2010**

NOTE: THE DATA SHOWN HERE ARE PRELIMINARY....AND SUBJECT TO UPDATES AND CORRECTIONS AS APPROPRIATE.

THIS REPORT INCLUDES EVENTS OCCURRING WHEN WATCHES AND/OR WARNINGS WERE IN EFFECT FOR ALEX.

COUNTIES INCLUDED...VICTORIA...CALHOUN...GOLIAD...REFUGIO...  
ARANSAS...BEE...SAN PATRICIO...NUECES...JIM WELLS...KLEBERG...  
LIVE OAK...MCMULLEN...DUVAL...LASALLE...WEBB

### A. LOWEST SEA LEVEL PRESSURE/MAXIMUM SUSTAINED WINDS AND PEAK GUSTS

METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IS 10 METERS AND WIND AVERAGING IS 2 MINUTES

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)

KBEA-BEEVILLE							
28.49 -97.87		1008.7	30/2203	040/021	30/1945	040/030	30/1945

### B. MARINE OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)

BOB HALL PIER NOS							
27.58 -97.22		9999.0		080/039	30/1542	080/047	30/1542

### C. STORM TOTAL RAINFALL FROM 1200 UTC JUN 29 UNTIL 1200 UTC JUN 02

CITY/TOWN	COUNTY	ID	RAINFALL
LAT LON			(IN)
DEG DECIMAL			

8 WNW ORANGE GROVE	JIM WELLS	-JW-3	9.19
28.00 -98.06			

# Tropical Weather Products

## POST TROPICAL CYCLONE REPORT (CONTINUED)

### D. INLAND FLOODING...

JIM WELLS...SIGNIFICANT RAINFALL AMOUNTS ON THE ORDER OF 8 TO 12 INCHES WERE OBSERVED ACROSS JIM WELLS COUNTY BETWEEN JUL 1-2. MANY ROADS WERE FLOODED AND CLOSED NEAR ORANGE GROVE...BEN BOLT AND PREMONT. A FLOOD WAVE WAS OBSERVED IN AGUA DULCE CREEK FLOODING COUNTY ROADS FROM WEST OF ORANGE GROVE TO BANQUETE. STANDING WATER WAS OBSERVED IN FARM FIELDS AND RANCH PROPERTY ACROSS MUCH OF THE COUNTY.

### E. MAXIMUM STORM SURGE AND STORM TIDE...

OFFICIAL TIDE GAUGES NOTED WITH LEADING G

COUNTY	CITY/TOWN OR LOCATION	SURGE (FT)	TIDE (FT)	DATE/ TIME	BEACH EROSION
NUECES	G BOB HALL PIER	3.89	4.76	30/1712	MINOR
NUECES	PORT ARANSAS	2.97	3.05	30/2342	MINOR

REMARKS: STORM SURGE AND STORM TIDE ARE REFERENCED IN MLLW.

### F. TORNADOES...

(DIST) CITY/TOWN LAT LON (DEG DECIMAL) DESCRIPTION	COUNTY	DATE/ TIME (UTC)	EF SCALE (IF KNOWN)
11 SW TIVOLI 28.31 -97.01	REFUGIO	30/1646	EF0

A TORNADO WAS OBSERVED IN AN OPEN FIELD NORTHWEST OF THE ARANSAS WILDLIFE REFUGE BY PARK OFFICIALS. A NWS STORM SURVEY INDICATED THE TORNADO WAS ESTIMATED TO BE ON THE GROUND FOR 7 MILES AS IT MOVED WEST-SOUTHWEST OVER OPEN COUNTRY, JUST NORTH OF FM 774.

### G. STORM IMPACTS BY COUNTY...

COUNTY DESCRIPTION	DEATHS	INJURIES	EVACUATIONS
SAN PATRICIO	2	0	0

AT 527 PM JULY 3 A VEHICLE WAS FOUND OFF OF COUNTY ROAD 21 OLD SAN PATRICIO ROAD. 2 BODIES FOUND SHORTLY AFTERWARDS FROM APPARENT DROWNING. ESTIMATED DROWNING DATE WAS THURSDAY JULY 1. REPORT FROM SAN PATRICIO SHERIFF DEPARTMENT AND TEXAS DIVISION OF EMERGENCY MANAGEMENT.

#### LEGEND:

I-INCOMPLETE DATA  
E-ESTIMATED

METZ/TARDY/KENNEDY

# Tropical Weather Products - Graphical

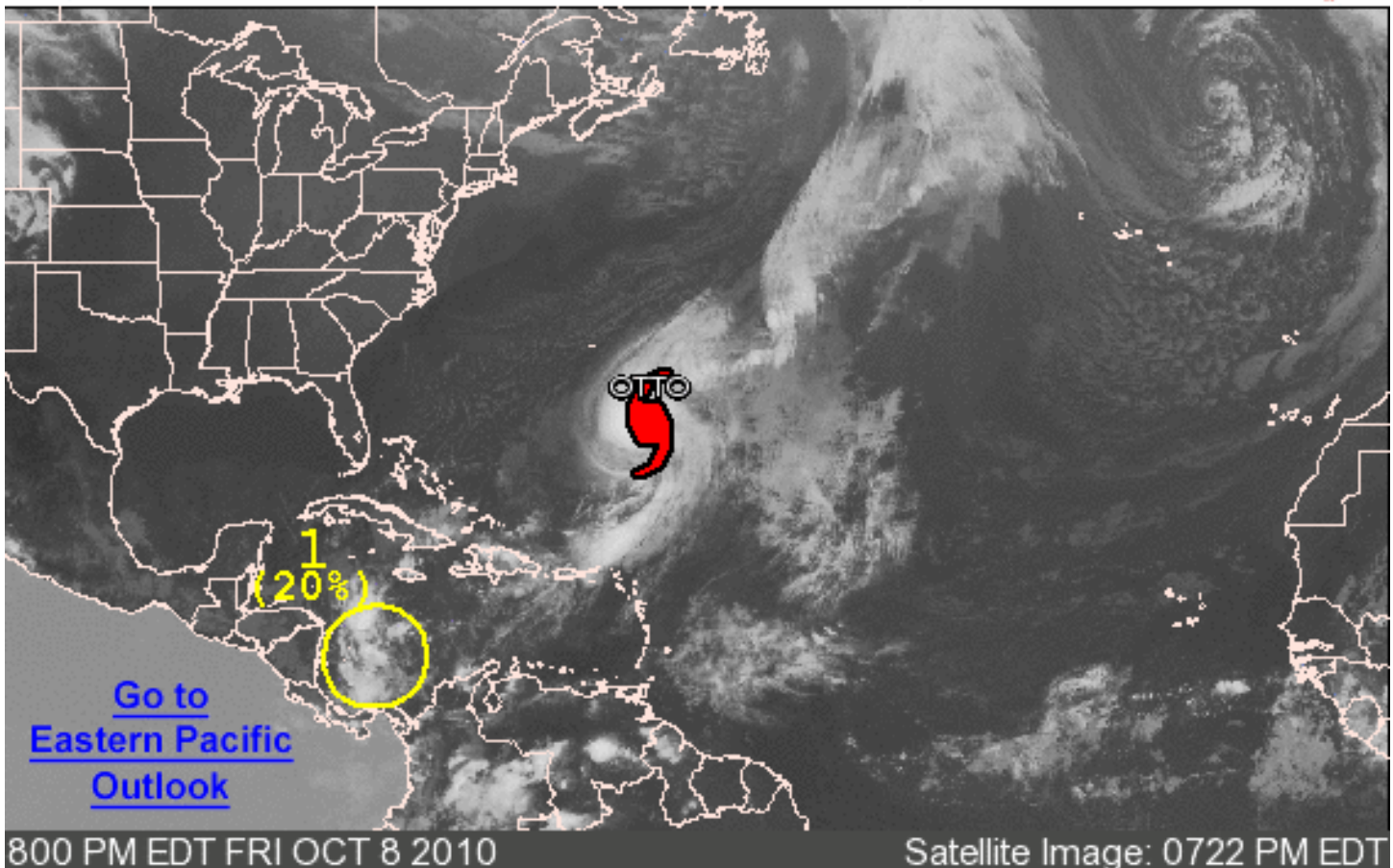
## NHC GRAPHICAL TROPICAL WEATHER OUTLOOK

The Graphical Tropical Weather outlook shows potential areas of tropical cyclone development and provides the probability a tropical depression will form during in the next few days. The product also shows any current depressions, tropical storms and hurricanes at the time of the outlook. Mousing over the storm will provide a quick summary of the storms status based on the last advisory. Clicking on any storm of interest will take you to the entire sweet of advisories and graphics for the given storm. Mousing over any highlighted are of disturbed weather will provide additional text description of the area of concern. All NHC graphics are all available on the internet at [www.hurricanes.gov](http://www.hurricanes.gov).



## Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

 Low <30%

 Medium 30-50%

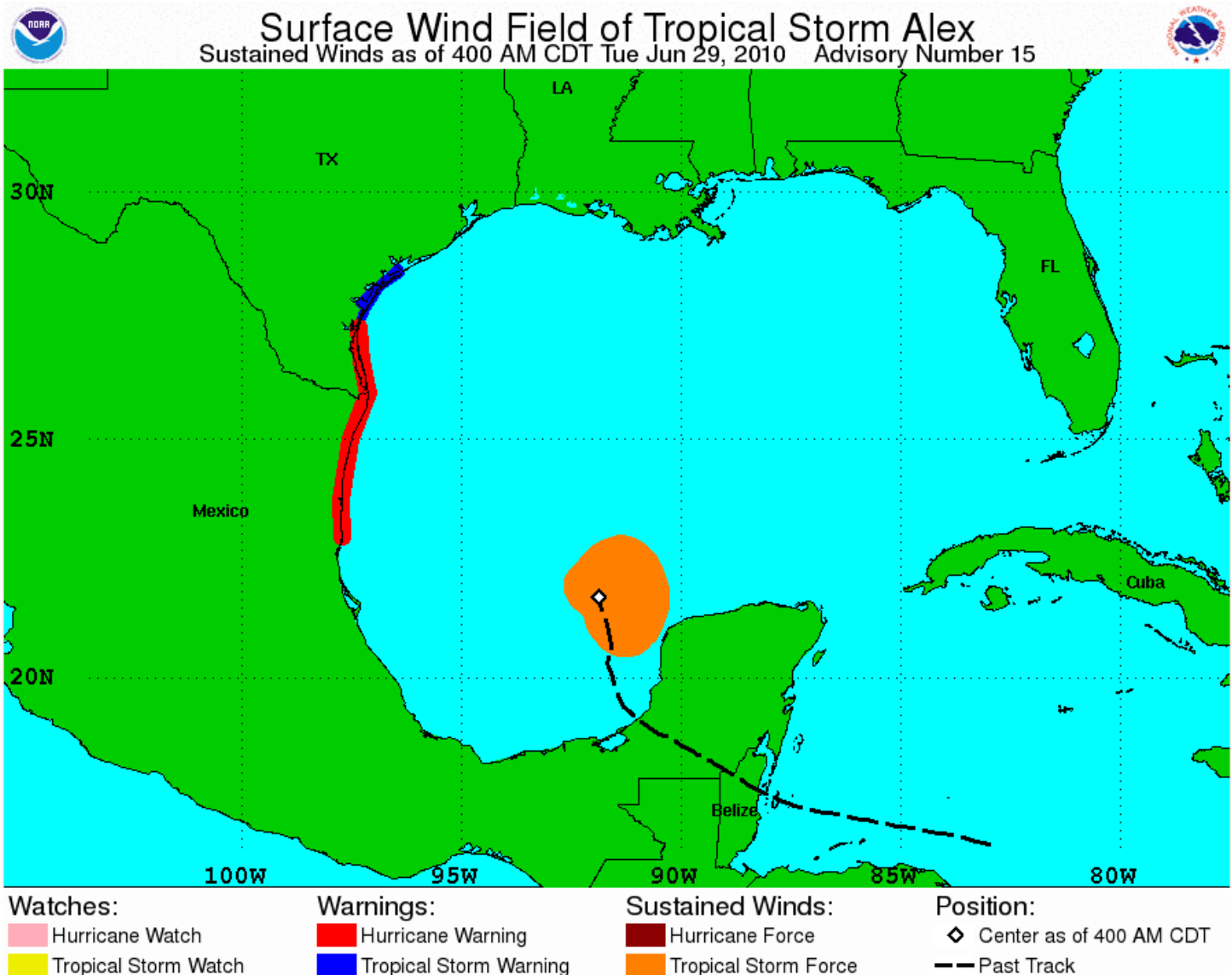
 High >50%



# Tropical Weather Products - Graphical

## NHC SURFACE WIND FIELD GRAPHIC

The Surface Wind Field Graphic provides the past track, current position, watches and warnings, and the current tropical storm and hurricane force wind footprint at the time of the advisory. The graphics are all available on the internet at [www.hurricanes.gov](http://www.hurricanes.gov). The fastest way to find the graphics is to click on the storm of interest on the front page and then choose the graphic you are interested in.

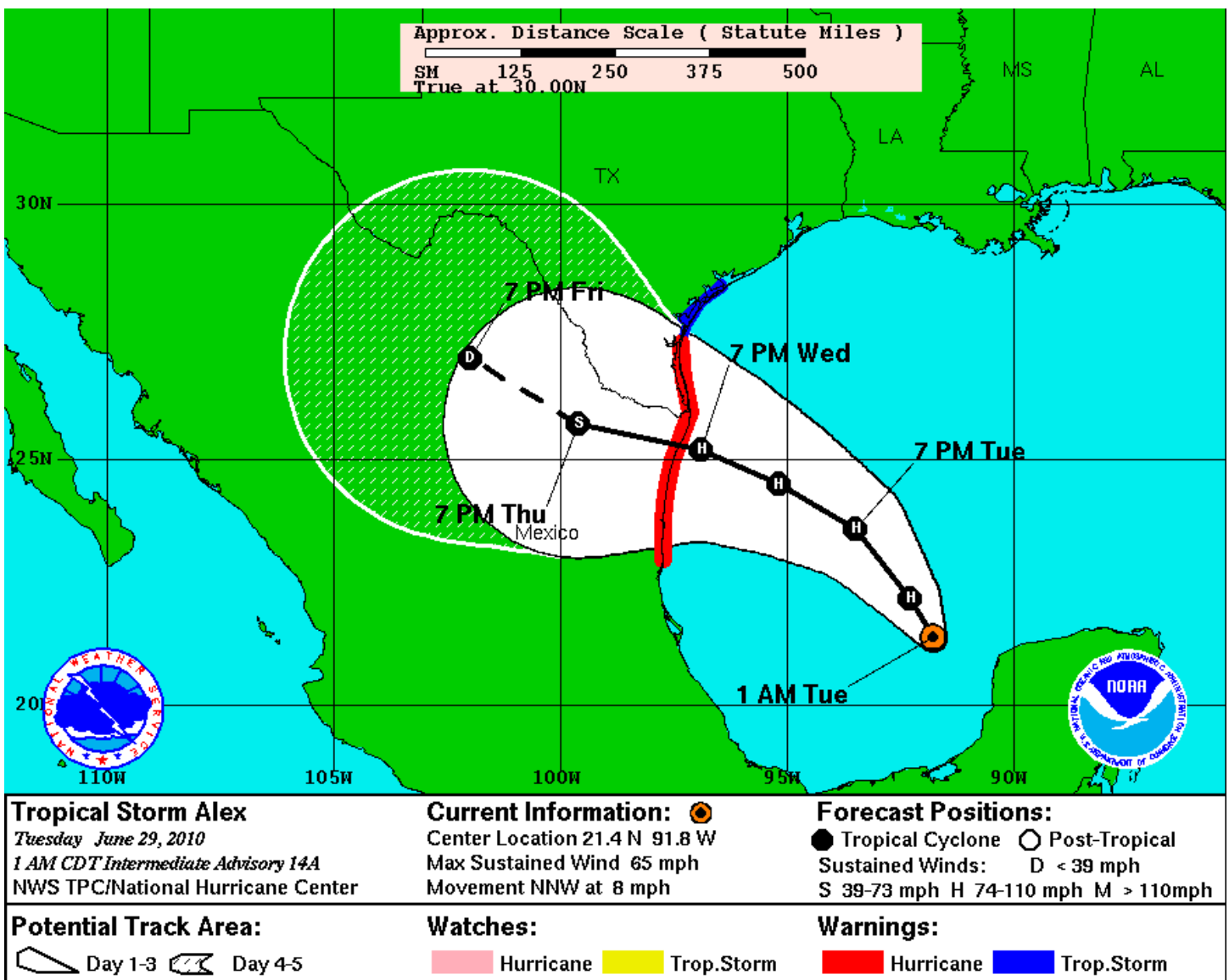




# Tropical Weather Products - Graphical

## NHC TROPICAL CYCLONE ADVISORY/FORECAST GRAPHIC

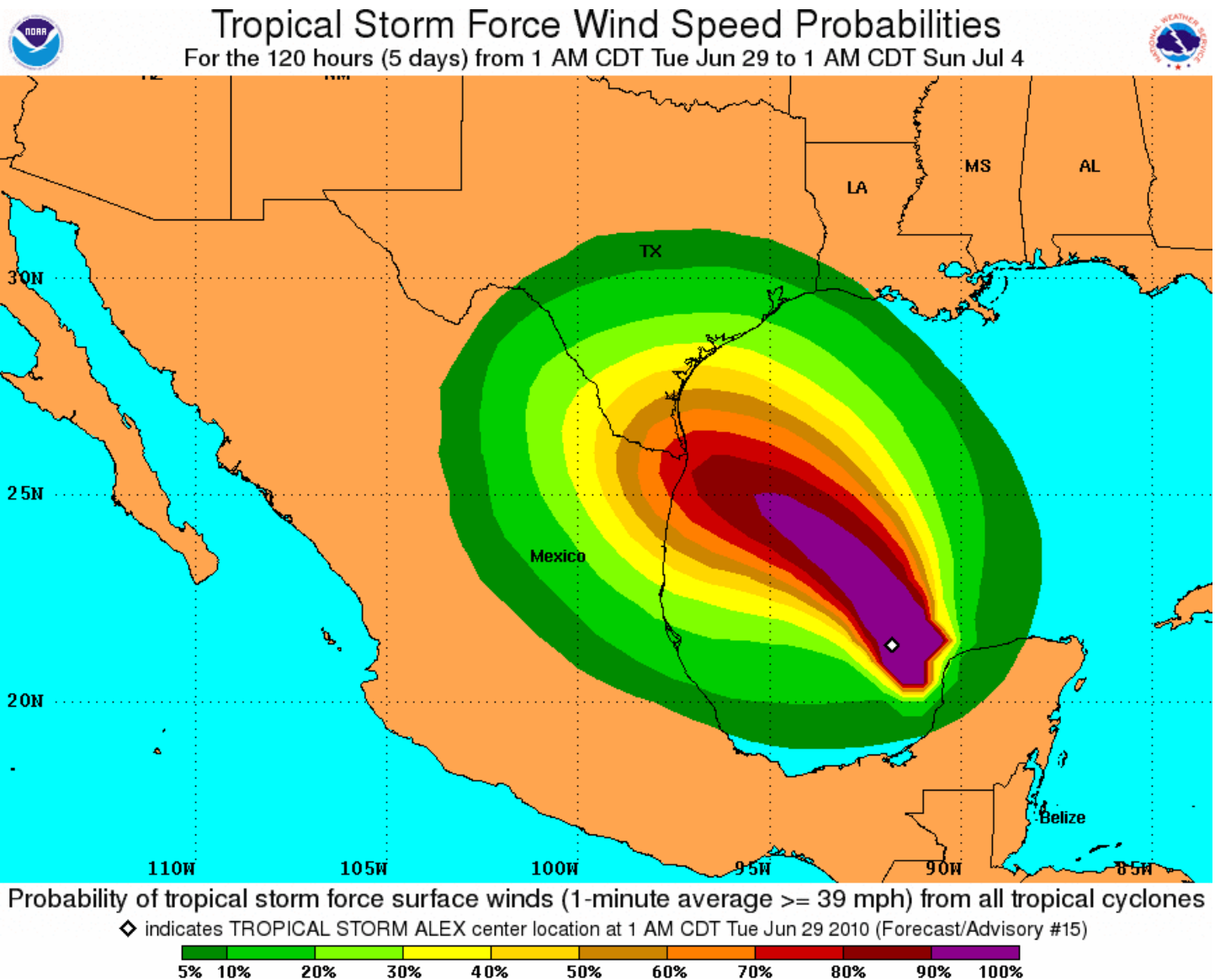
The Forecast/Advisory graphic (also called the Warnings/Cone Graphic) is produced with each advisory released by NHC. The graphic shows the current position, strength and movement of the system and forecast positions out to 5 days. The symbol at each forecast point indicates whether the system is forecast to be a depression (D), tropical storm (S), hurricane (H) or major hurricane (M) at that time. The white cone represents the average 5 year error of NHCs forecasts. Because this is an average error, storms can and will travel outside the error cone at times. Tropical Storm and Hurricane Watches and warnings in effect along the coastlines are also displayed. A 3 day version and a cone only (no exact forecast track) version are also available.



# Tropical Weather Products - Graphical

## NHC WIND SPEED PROBABILITIES

NHC provides three wind speed probability graphics - Tropical Storm Force Wind Speed Probability ( $\geq 34$  knots or 39 mph), 50-knot Wind Speed Probability ( $\geq 58$  mph), and Hurricane Force Wind Speed Probability ( $\geq 64$  knots or 74 mph). These are cumulative speed probabilities which means they to the total probability through the entire five day forecast. These probabilities take uncertainty of track and intensity of the storm into account. Because of this, the probabilities naturally decrease with time, but this does not necessarily mean the storm is weakening with time. These graphics should be used in conjunction with NHC forecast advisories. The example below is of a Tropical Storm Force Wind Speed Probability for Alex before it became a hurricane in June, 2010.



# Tropical Weather Products - Tabular

## NHC INTENSITY (MAXIMUM WIND SPEED) PROBABILITY TABLE

This table provides the probability a storm will be dissipated, a Tropical Depression, a Tropical Storm, a Hurricane, and a Category 1, 2, 3, 4, or 5 Hurricane during each forecast time out to 5 days (or 120 hours). The Forecast Maximum Wind along the bottom shows the current NHC intensity forecast for the given advisory. This product can be used to determine the chance a storm may be stronger or weaker than the current forecast advisory indicates.



Intensity (Maximum Wind Speed) Probability Table  
 Tropical Storm Alex Advisory Number 15  
 4:00 AM CDT Jun 29 2010

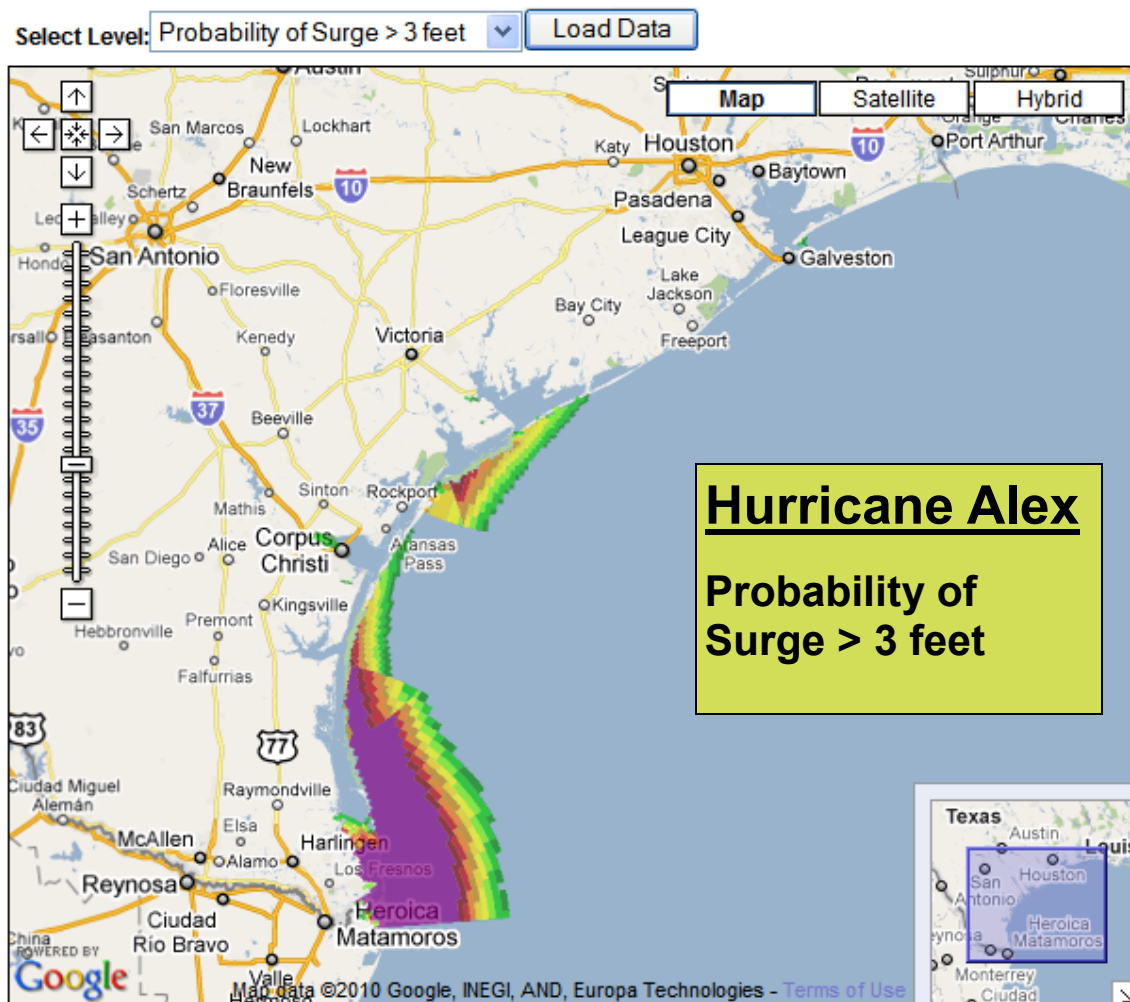


Wind Range (mph)	Forecast Time						
	12 hour for 1 PM Tue	24 hour for 1 AM Wed	36 hour for 1 PM Wed	48 hour for 1 AM Thu	72 hour for 1 AM Fri	96 hour for 1 AM Sat	120 hour for 1 AM Sun
Dissipated	<1%	<1%	<1%	3%	27%	59%	NA
Tropical Depression (<39)	<1%	<1%	1%	8%	34%	26%	NA
Tropical Storm (39-73)	52%	23%	20%	36%	29%	12%	NA
Hurricane (all categories)	48%	77%	79%	53%	11%	4%	NA
-- Category 1 (74-95)	45%	59%	50%	29%	6%	1%	NA
-- Category 2 (96-110)	3%	14%	21%	14%	2%	1%	NA
-- Category 3 (111-130)	<1%	3%	8%	8%	2%	1%	NA
-- Category 4 (131-155)	<1%	<1%	1%	1%	1%	<1%	NA
-- Category 5 (>155)	<1%	<1%	<1%	<1%	<1%	<1%	NA
Forecast Maximum Wind	75 mph	85 mph	90 mph	100 mph	40 mph	25 mph	NA

# Tropical Weather Products - Graphical

## MDL PROBABILISTIC STORM SURGE

The NWS Meteorological Development Laboratory (MDL) produces a Probabilistic Storm Surge graphic on an experimental bases. The Tropical Cyclone Storm Surge Probabilities graphics show the overall chances that the specified storm surge height will occur at each individual location on the map during the forecast period indicated. The probabilities are based on errors during recent years in the official track and intensity forecasts issued by the NHC. Variability in storm size is also incorporated. Storm surge values used in the calculations are produced by the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model. Users can choose surge levels of 2 to 25 feet to obtain the probability the surge will exceed the level chosen.



Lat: 28.1398 Lon: -95.8667

### Legend

Probability		
5% - < 10%	40% - < 50%	80% - < 90%
10% - < 20%	50% - < 60%	90% - 100%
20% - < 30%	60% - < 70%	
30% - < 40%	70% - < 80%	

### Disclaimer



Historical Data:  
NHC this storm  
NHC all storms  
MDL

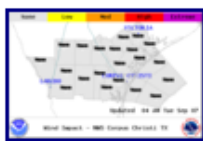
# Tropical Weather Products - Graphical

## TROPICAL CYCLONE IMPACTS GRAPHICS

This suite of products is the graphical version of the Hurricane Local Statement produced by local Weather Forecast Offices. The four impact or hazard graphics produced are: 1) Wind, 2) Coastal Flood (Surge), 3) Inland Flooding (Heavy rainfall), and 4) Tornadoes. These are cumulative graphics showing the expected impacts through complete tropical cyclone event. The impacts are separated into four categories: Low, Moderate, High, and Extreme. These are defined on the Tropical Cyclone Impacts web page located at:

[http://www.weather.gov/ghls/php/ghls\\_index.php?sid=CRP](http://www.weather.gov/ghls/php/ghls_index.php?sid=CRP)

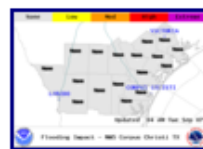
### Experimental TROPICAL CYCLONE IMPACTS - DECISION SUPPORT



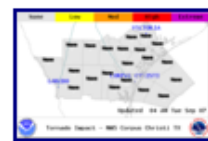
Wind



Coastal Flood



Inland Flooding



Tornadoes

Wind	Coastal Flood	Inland Flood	Tornadoes
<b>Wind Hazard - TROPICAL STORM HERMINE</b>			
Updated 04 AM Tue Sep 07			
Wind Impact - NWS Corpus Christi TX			
<input checked="" type="checkbox"/> Enable/Disable mouse-over text <a href="#">Link to NETCDF file download: CurrentFcst.crp.cdf</a>			

**Potential Impact**

Impact to Life and Property
None
Low
Moderate
High
Extreme

*Description:* The graphic depicts the potential impact from tropical cyclone winds across the specified area valid through the event. It is based on the likelihood of experiencing tropical cyclone force winds and wind gusts combined with the anticipated strength of the winds.

# Hydrology

## Terminology Products

**Hydrologic Terminology**  
**Flood Watch**  
**Flash Flood Warning**  
**Flash Flood Statement**  
**Areal Flood Warning**  
**Urban and Small Stream Flood Advisory**  
**River Flood Terminology**  
**River Forecasts Online**  
**Extended Streamflow Forecasts**  
**Flash Flood Potential**  
**River Flood Warning**  
**River Flood Statement**  
**Hydrologic Statement**  
**Turn Around Don't Drown**  
**Drought Information Statement**



# Hydrology Terminology

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The Hydrology Warning Program is divided into two principle parts: Flash Flood and River Flood.

**Flash Flood:** The Flash Flood Warning program is designed to address the rapid onset of flooding, in urban and rural areas, when intense rains occur in a short period of time. Rapid run off from these rains often results in flooding of roadways, small streams, creeks and low areas. These events can be life threatening.

**River Flood:** The River Flood Warning program is designed to address short and long term river flooding events. These events are often a result of intense rains that occur over river basins, and move slowly downstream to the Gulf of Mexico. These events can be life threatening.



Aerial photo from US Coast Guard along Agua Dulce Creek

Widespread flash and areal flooding April 16-17, 2010

# Flash Flood Terminology

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**Flood** - The inundation of a normally dry area caused by an increased water level in an established watercourse, such as a river, stream or drainage ditch; or may also be the ponding of water at or near the point where the rain fell.

**Flash Flood** - A flood which occurs within 6 hours or less of a heavy rainfall event. A dam failure may also cause a flash flood depending on the time period of the break.

**Urban and Small Stream Flooding** - Flooding of small streams, streets, or low-lying areas such as railroad underpasses and urban storm drains. This type of flooding is mainly an inconvenience and is generally not life threatening.



Flash flood event April 16, 2010



# Flash Flood Products

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## FLASH FLOOD WATCH

**This product is used to inform the public and cooperating agencies that current and developing conditions are such that there is a threat of flash flooding, but the occurrence is neither certain nor imminent. A Flood Watch should be issued if flooding is expected in the first 36 hours of the forecast period. Persons in the watch area are thereby advised to check flood action plans, keep informed, and be ready to take necessary actions if a warning is issued or flooding is observed.**

EXAMPLE FLASH FLOOD WATCH (FFA, WGUS64)

FFACRP  
TXZ229-239-292100-

URGENT - IMMEDIATE BROADCAST REQUESTED  
FLOOD WATCH  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
400 AM CDT SUN AUG 29 2005

...A FLOOD WATCH FOR FLASH FLOODING IS IN EFFECT THROUGH THIS  
AFTERNOON...

...THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A FLOOD WATCH FOR FLASH FLOODING  
FOR SOUTH TEXAS EFFECTIVE UNTIL 400 PM CDT SUNDAY AFTERNOON. THE WATCH INCLUDES THE FOLLOWING  
TEXAS COUNTIES...

LA SALLE AND WEBB

THE COMBINATION OF AN UPPER LEVEL DISTURBANCE...ABUNDANT MOISTURE AND A NEARLY STATIONARY FRONTAL  
BOUNDARY WILL PRODUCE CONTINUED SCATTERED TO NUMEROUS SHOWERS AND THUNDERSTORMS ACROSS THE RIO  
GRANDE PLAINS THIS MORNING. MUCH OF THIS REGION HAS RECEIVED ABUNDANT RAINFALL IN THE LAST WEEK  
AND SOME AREAS NEAR COTULLA AND LAREDO RECEIVED AS MUCH AS 4 TO 7 INCHES OVERNIGHT LAST NIGHT.  
THIS HAS PRODUCED SATURATED GROUNDS ACROSS MUCH OF LASALLE AND WEBB COUNTIES AND ADDITIONAL  
RAINFALL AMOUNT OF 1 TO 3 INCHES WILL BE POSSIBLE THROUGH TODAY.

A FLOOD WATCH MEANS THAT FLOODING OF SMALL STREAMS...CREEKS AND OTHER DRAINAGE AREAS IS POSSIBLE  
WITHIN THE WATCH AREA. PEOPLE IN THE WATCH AREA SHOULD KEEP AN EYE ON THE WEATHER AND BE  
PREPARED FOR IMMEDIATE ACTION SHOULD HEAVY RAINS AND FLASH FLOODING OCCUR OR IF A FLASH FLOOD  
WARNING IS ISSUED.

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# Flash Flood Products

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## FLASH FLOOD WARNING

**A flash flood warning is a public warning issued by the local NWS office. It is site specific, focusing on communities, streams or areas where flooding is imminent or in progress. Persons in the warning area will be advised to take necessary precautions immediately.**

EXAMPLE FLASH FLOOD WARNING (FFW, WGUS54)

BULLETIN - EAS ACTIVATION REQUESTED  
FLASH FLOOD WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
322 AM CDT THU OCT 14 2005

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A

\* FLASH FLOOD WARNING FOR...  
VICTORIA COUNTY IN TEXAS

\* UNTIL 615 AM CDT

\* AT 321 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED  
A LINE OF SHOWERS AND THUNDERSTORMS WITH VERY HEAVY RAINFALL  
APPROACHING VICTORIA COUNTY AHEAD OF A STRONG COLD FRONT.

\* TRAINING OF THESE THUNDERSTORMS IS EXPECTED TO PRODUCE ADDITIONAL  
RAINFALL OVER AREAS WHICH HAVE ALREADY RECEIVED HEAVY RAINFALL  
EARLIER THIS EVENING. RUNOFF FROM THIS EXCESSIVE RAINFALL WILL CAUSE  
FLOODING TO OCCUR. SOME LOCATIONS THAT WILL EXPERIENCE FLOODING  
INCLUDE...VICTORIA...BLOOMINGTON...INEZ...MCFADDIN...MISSION  
VALLEY...NURSERY...PLACEDO AND TELFERNER.

DOPPLER RADAR HAS ESTIMATED 1 TO 2 INCHES HAS ALREADY FALLEN  
OVER MUCH OF VICTORIA COUNTY...WITH ISOLATED POCKETS OF 2 TO 4  
INCHES. ADDITIONAL RAINFALL AMOUNTS OF 1 TO 2 INCHES IS POSSIBLE  
ACROSS THE WARNED AREA WITH THIS LINE OF SHOWERS AND THUNDERSTORMS  
ALONG THE COLD FRONT.

BE ESPECIALLY CAUTIOUS AT NIGHT WHEN IT IS HARDER TO RECOGNIZE THE  
DANGERS OF FLOODING. IF FLASH FLOODING IS OBSERVED ACT QUICKLY. MOVE  
UP TO HIGHER GROUND TO ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS  
SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

LAT...LON 2888 9723 2885 9730 2910 9698 2903 9684  
2872 9665 2867 9671 2861 9690 2857 9693  
2855 9691 2849 9692 2854 9706 2854 9715  
2860 9717 2879 9716

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# Flash Flood Products

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## FLASH FLOOD STATEMENT

The office issuing a flash flood watch or warning will issue follow-up statements to keep the public fully informed of the most current information. Flash Flood Statements are used to remove geographical areas covered by the original flash flood watch or warning when flooding is no longer a threat or has ended in that area.

EXAMPLE FLASH FLOOD STATEMENT (FFS, WGUS74)

FFSCR  
TXC479-301100-

FLASH FLOOD STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
451 AM CDT FRI JUL 30 2005

...THE FLASH FLOOD WARNING REMAINS IN EFFECT FOR SOUTHEASTERN WEBB COUNTY UNTIL 600 AM CDT FRIDAY MORNING...

AT 450 AM...WEATHER SERVICE RADAR INDICATED THAT THE HEAVIEST RAINFALL WAS EXITING SOUTHEASTERN WEBB COUNTY. HOWEVER...DOPPLER RADAR ESTIMATES INDICATE THAT 3 TO 4 INCHES OF RAINFALL HAS OCCURRED OVER SOUTHEASTERN WEBB COUNTY...INCLUDING ALONG FM 205...WITH NEARLY 2 INCHES OF RAINFALL NEAR THE COMMUNITY OF BRUNI. IT WILL TAKE TIME FOR THE WATERS TO RECEDE OVER THIS AREA.

EXCESSIVE RUNOFF FROM THIS STORM WILL CAUSE FLASH FLOODING OF SMALL CREEKS AND STREAMS...HIGHWAYS AND UNDERPASSES. ADDITIONALLY...COUNTRY ROADS AND FARMLANDS ALONG THE BANKS OF CREEKS AND STREAMS AND OTHER LOW LYING AREAS ARE SUBJECT TO FLASH FLOODING.

DO NOT DRIVE YOUR VEHICLE INTO AREAS WHERE WATERS COVERS THE ROADWAY. THE WATER DEPTH MAY BE TOO GREAT TO ALLOW YOUR CAR TO CROSS SAFELY. VEHICLES CAUGHT IN RISING WATER SHOULD BE ABANDONED QUICKLY. MOVE TO HIGHER GROUND IMMEDIATELY.

LAT...LON 2767 9920 2768 9881 2730 9881 2730 9920

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Record flooding on the Oso Creek in September 2010

# Flash Flood Products

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## AREAL FLOOD WARNING

**An areal flood warning is a public warning issued by the local NWS office. It is similar to a Flash Flood Warning (site specific, focusing on communities, streams or areas where flooding is imminent or in progress). However, the Areal Flood Warning will be issued for occasions when heavy rainfall has ceased but flooding is still occurring, or when persistent rainfall will continue to accumulate water over a specific area, essentially resulting in flooding.**

WGUS44 KCRP 150804

FLWCRP  
BULLETIN - EAS ACTIVATION REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
204 AM CST FRI JAN 15 2010

TXC007-057-151400-  
/O.NEW.KCRP.FA.W.0001.100115T0804Z-100115T1400Z/  
/00000.0.ER.000000T0000Z.000000T0000Z.000000T0000Z.OO/  
ARANSAS-CALHOUN-  
INCLUDING THE CITIES OF...PORT LAVACA...PORT OCONNOR...ROCKPORT...  
SEADRIFT  
204 AM CST FRI JAN 15 2010  
THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A

\* FLOOD WARNING FOR URBAN AREAS AND SMALL STREAMS IN...  
ARANSAS COUNTY IN SOUTH TEXAS  
CALHOUN COUNTY IN SOUTH TEXAS

\* UNTIL 800 AM CST

\* AT 200 AM CST DOPPLER RADAR INDICATED A LARGE AREA OF MODERATE TO HEAVY RAINFALL OVER MOST OF CALHOUN AND ARANSAS COUNTY. RAINFALL AMOUNTS OF 2 TO 4 INCHES HAVE ALREADY BEEN INDICATED BY RADAR. A LARGE AREA OF MODERATE TO HEAVY RAINFALL OVER THE GULF OF MEXICO WILL GRADUALLY MOVE INTO THE AREA FOR THE NEXT FEW HOURS...PRODUCING ANOTHER 1 TO 3 INCHES OF PRECIPITATION. THIS WILL RESULT IN WATER CONTINUING TO ACCUMULATE INTO AREAS ALREADY SATURATED AND HAVING CREEKS AND DITCHES FILLING UP. AS A RESULT...AREAL FLOODING IS ANTICIPATED.

A FLOOD WARNING MEANS THAT FLOODING IS IMMINENT OR HAS BEEN REPORTED. STREAM RISES WILL BE SLOW AND FLASH FLOODING IS NOT EXPECTED. HOWEVER...WATER WILL CONTINUE TO ACCUMULATE OVER HIGHWAYS AND ROADS AS WELL AS LOW LYING AREAS. ALL INTERESTED PARTIES SHOULD TAKE NECESSARY PRECAUTIONS IMMEDIATELY.

PRECAUTIONARY/PREPAREDNESS ACTIONS...  
MOST FLOOD DEATHS OCCUR IN AUTOMOBILES. NEVER DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROADWAY. FLOOD WATERS ARE USUALLY DEEPER THAN THEY APPEAR. JUST ONE FOOT OF FLOWING WATER IS POWERFUL ENOUGH TO SWEEP VEHICLES OFF THE ROAD. WHEN ENCOUNTERING FLOODED ROADS MAKE THE SMART CHOICE...TURN AROUND...DONT DROWN.  
BE ESPECIALLY CAUTIOUS AT NIGHT WHEN IT IS HARDER TO RECOGNIZE THE DANGERS OF FLOODING. IF FLOODING IS OBSERVED ACT QUICKLY. MOVE UP TO HIGHER GROUND TO ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

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# Flash Flood Products

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## URBAN AND SMALL STREAM FLOOD ADVISORY

**This product provides information on urban and small stream flooding, or flooding that is only an inconvenience to persons living in the affected area. Urban flooding refers to flooding of streets, low-lying areas and urban storm drains. Small stream flooding refers to natural streams in both urban and rural settings. This is generally a non life-threatening inconvenience event to those in the area.**

EXAMPLE URBAN AND SMALL STREAM FLOOD ADVISORY (FLS, WGUS84)

FLSCR  
TXC283-479-051800-

FLOOD STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1108 AM CDT TUE OCT 5 2005

...THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED AN URBAN AND SMALL STREAM FLOOD ADVISORY FOR THE COUNTIES OF LA SALLE AND WEBB EFFECTIVE UNTIL 100 PM CDT TUESDAY AFTERNOON...

AT 1105 AM CDT...NATIONAL WEATHER SERVICE DOPPLER RADAR SHOWED A CLUSTER OF SHOWERS AND THUNDERSTORMS STRETCHING ACROSS LA SALLE COUNTY AND CENTRAL AND EASTERN WEBB COUNTY...DRIFTING SLOWLY EAST. THE HEAVIEST RAINFALL WILL OCCUR BETWEEN ARTESIA WELLS AND COTULLA AND ACROSS EASTERN RURAL WEBB COUNTY...ALONG U.S. 59. THESE HEAVIER STORMS WILL BE CAPABLE OF PRODUCING RAINFALL AMOUNTS AVERAGING AROUND 1 INCH WITH ISOLATED TOTALS OF 2 TO 3 INCHES.

RUNOFF FROM THIS STORM WILL CAUSE MINOR FLOODING OF SMALL CREEKS AND STREAMS. RESIDENTS LIVING NEAR STREAMS OR CREEKS SHOULD CLOSELY MONITOR THESE WATER LEVELS. IN ADDITION...MOTORISTS SHOULD EXERCISE CAUTION AS PONDING OF WATER AND MINOR FLOODING MAY OCCUR ON SOME SECONDARY ROADS.

STAY TUNED TO NOAA WEATHER RADIO FOR THE LATEST HYDROLOGIC INFORMATION.

FOR ADDITIONAL WEATHER INFORMATION...CHECK OUR WEB SITE AT [WWW.SRH.NOAA.GOV/CRP](http://WWW.SRH.NOAA.GOV/CRP)

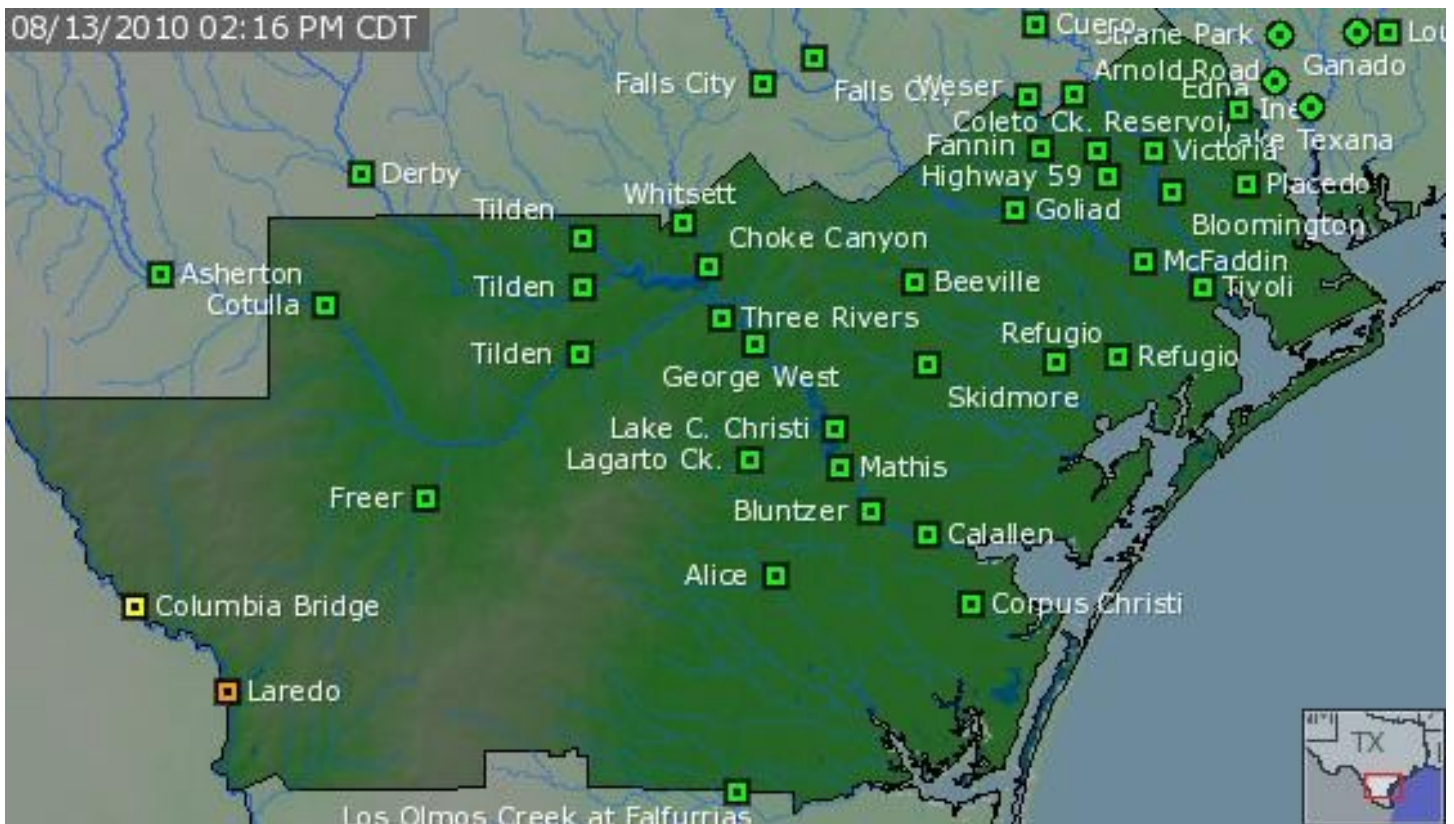
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# River Flood Terminology

**Flood** - any high flow, overflow, or inundation by water which causes or threatens damage.

**Bankfull/Caution Stage** - an established gauge height at a given location along a river or stream, above which a rise in water surface will cause the river or stream to overflow the lowest natural stream bank somewhere in the corresponding reach.

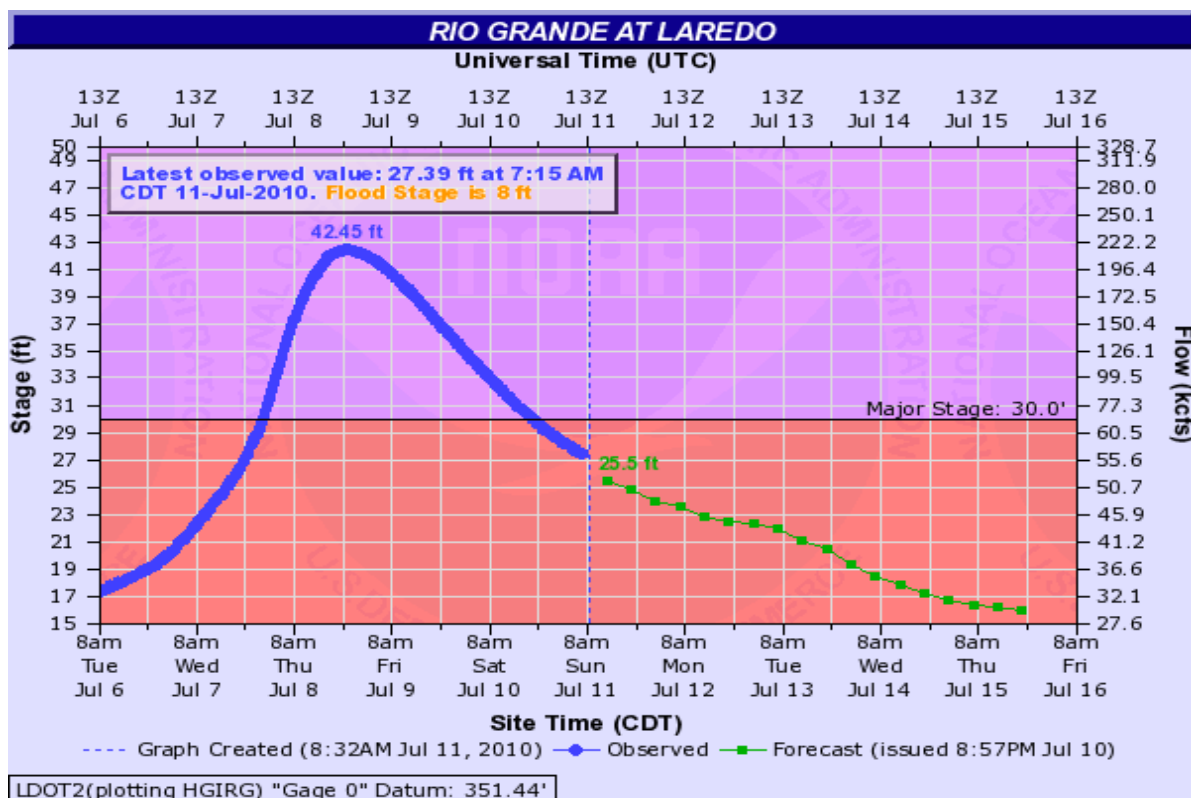
**Flood Stage** - an established gauge height at a given location above which a rise in water surface level is defined as a flood for the corresponding river or stream. Flood stage is usually set at a level where the river or stream begins to overflow its banks and create a potential hazard to lives, property, or commerce.



# River Flood Products

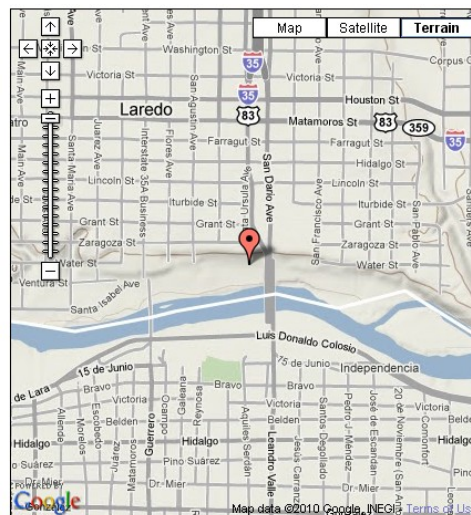
## RIVER FORECASTS ONLINE (AHPS)

On our Advanced Hydrologic Prediction Service (AHPS) website, you have continuous access to the latest river levels and forecasts for 22 river forecast points across the Rio Grande Plains and Coastal Bend. Clicking on an individual gauge will produce a graphic as seen below. The blue line indicates the latest observed river levels as received from the U.S. Geological Survey (USGS), or the International Boundary Water Commission (IBWC). If the river is forecast to be in flood or already in flood, a forecast will be generated for this forecast point by the River Forecast Center in Fort Worth, and overlaid in green. Flood stage is annotated in orange. The top 10 historical crests, flood impact statements, and a map of the site is also displayed on the webpage.



### Historical Crests

- (1) 62.48 ft on 01/01/1865
- (2) 61.35 ft on 06/30/1954
- (3) 42.45 ft on 07/09/2010
- (4) 38.98 ft on 06/30/1971
- (5) 35.02 ft on 08/27/1998
- (6) 33.14 ft on 07/01/1971
- (7) 32.05 ft on 07/21/1975
- (8) 31.63 ft on 10/06/1971
- (9) 27.66 ft on 09/27/1974
- (10) 21.23 ft on 06/05/1979

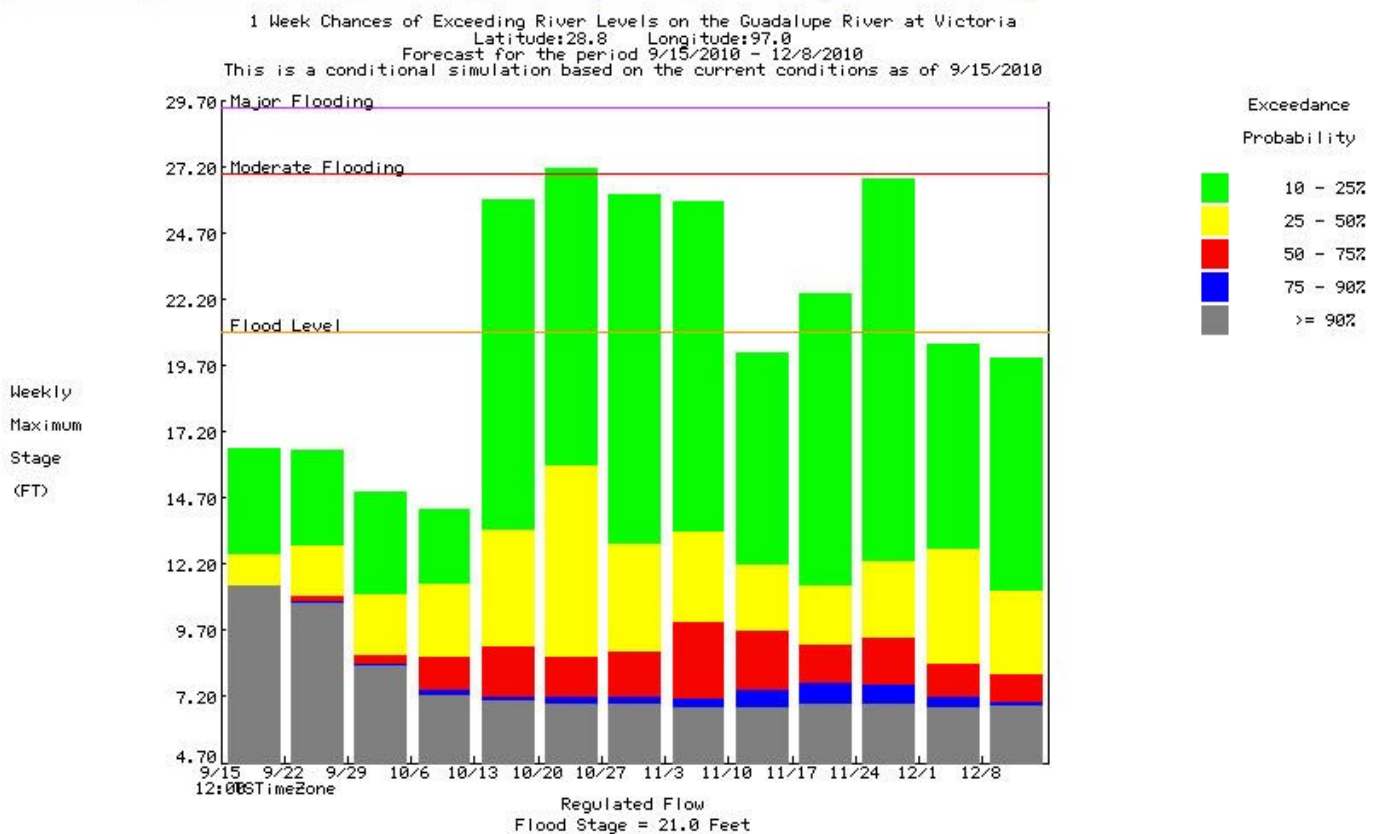




# Extended Streamflow Forecasts

On the third Thursday of each month, the West Gulf River Forecast Center (WGRFC) will issue their extended streamflow predictions for certain river locations in South Texas. These forecasts are based on current streamflow and basin conditions, and use historical data to base their forecasts. These forecasts provide the probability (or likelihood) that a particular river location will exceed a certain stage or flow during a three month period. These forecasts can be illustrated by either showing the weekly chance of exceeding a river level (as shown below), or the chance of exceeding a river level during the entire 3 month period. These graphs are available on our AHPS web page. A text version of these forecasts are also issued for the river locations.

- Hydrograph
- River at a Glance
- Download
- Weekly Chance of Exceeding Levels
- Chance of Exceeding Levels During Entire Period



CHANCE OF EXCEEDING STAGES AT SPECIFIC LOCATIONS  
 VALID [9/15/2010 - 12/14/2010]

LOCATION	FS (FT)	90%	80%	70%	60%	50%	40%	30%	20%	10%
GUADALUPE RIVER										
VICTORIA	21.0	10.3	12.6	13.0	14.8	17.8	20.0	25.7	28.3	29.3
BLOOMINGTON	20.0	20.9	22.2	22.4	23.6	24.8	25.7	26.6	27.1	27.7
COLETO CREEK										
ARNOLD ROAD CR.	15.0	4.7	4.7	7.4	8.5	10.1	11.0	11.5	13.2	17.5
HWY 59 VICTORIA	25.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6



# River Flood Products

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## HYDROLOGIC OUTLOOK

**This product provides information on long term conditions or events expected beyond 36 hours. Hydrologic Outlooks can include River Flood Outlooks, Drought Information Statements, Flood Potential Outlooks, and Spring Flood Outlooks. This product is designed to give enough lead time to consider response options, execute mitigation activities, and plan reservoir operations, thus helping to protect life and property and enhance the national economy.**

EXAMPLE OF HYDROLOGIC OUTLOOK (FLS, FGUS74)

ESFCRP

HYDROLOGIC OUTLOOK  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
822 PM CDT THU MAY 13 2005

...RIVER FLOOD OUTLOOK FOR PORTIONS OF SOUTH TEXAS...

MODERATE TO HEAVY RAINFALL THAT IS FORECAST OVER THE TEXAS GULF COAST DURING THE NEXT 24 HOURS WILL QUICKLY RUN OFF ALREADY SATURATED SOILS. WIDESPREAD BASIN-AVERAGED RAINFALL AMOUNTS IN EXCESS OF 2.00 INCHES WITH LOCALIZED AMOUNTS OF 3 TO 4 INCHES MAY CAUSE RIVERS AND STREAMS TO RISE TO LEVELS THAT RESULT IN FLOODING.

THIS RIVER FLOOD OUTLOOK IS IN EFFECT DUE TO THE POTENTIAL FOR...

- MINOR FLOODING ON THE GUADALUPE RIVER NEAR VICTORIA
- MODERATE FLOODING ON THE GUADALUPE RIVER NEAR BLOOMINGTON
- MODERATE FLOODING ON THE COLETO CREEK NEAR SCHROEDER
- MODERATE FLOODING ON THE ARANSAS RIVER NEAR SKIDMORE

A RIVER FLOOD OUTLOOK MEANS THERE IS A POTENTIAL FOR RIVER FLOODING...BUT IT IS NOT IMMIDENT. FORECAST RAINFALL MAY CAUSE RIVERS AND STREAMS TO RISE TO CRITICAL STAGES. PERSONS WITH INTERESTS ALONG THE AREAS MENTIONED ABOVE SHOULD REMAIN INFORMED OF THE LATEST WEATHER AND RIVER INFORMATION AND BE PREPARED TO TAKE ACTION AS NECESSARY. PLEASE REFER TO NATIONAL WEATHER SERVICE RIVER FLOOD WARNINGS AND STATEMENTS FOR THE LATEST INFORMATION IN YOUR AREA.

A GRAPHIC SHOWING THE COUNTIES...RIVER FORECAST POINT LOCATIONS... AND RIVER REACHES IN THE WATCH AREA IS AVAILABLE AT THE FOLLOWING WEB SITE /USE LOWER CASE/:

[HTTP://WWW.SRH.NOAA.GOV/WGRFC/RFO/CRPRFO.HTML](http://www.srh.noaa.gov/wgrfc/rfo/crprfo.html)

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# River Flood Products

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## RIVER FLOOD WARNING

**River Flood Warnings provide advanced notification of flooding at specific river forecast points. A river flood warning means flooding is imminent or occurring. This product provides information on the impacts of expected flooding at locations upstream and/or downstream from covered forecast points.**

728  
WGUS44 KCRP 081759  
FLWCRP  
BULLETIN - IMMEDIATE BROADCAST REQUESTED  
FLOOD WARNING  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1259 PM CDT THU JUL 8 2010

...FORECAST FLOODING CHANGED FROM RECORD TO RECORD SEVERITY FOR THE FOLLOWING RIVERS IN TEXAS...

RIO GRANDE AT COLUMBIA BRIDGE AFFECTING WEBB COUNTY

.RECENT HEAVY RAINFALL COMBINED WITH RELEASES FROM LAKE AMISTAD AND MEXICO WILL PRODUCE MAJOR FLOODING ON THE RIO GRANDE. NOTE INCREASED CHANGE IN FORECAST FOR COLUMBIA BRIDGE AS EARLIER GAGE READINGS APPEARED TO BE INACCURATE. NOTE INCREASED CHANGE IN FORECAST FOR LAREDO DUE TO CHANGE IN UPSTREAM FLOW.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

ALL PERSONS WITH INTERESTS ALONG THE RIVER SHOULD MONITOR THE LATEST FORECASTS...AND BE PREPARED TO TAKE NECESSARY PRECAUTIONS TO PROTECT LIFE AND PROPERTY. RIVER STAGE FORECASTS ARE BASED ON OBSERVED AND PREDICTED RAINFALL. IF ACTUAL RAINFALL VARIES FROM FORECAST VALUES...FORECAST RIVER STAGES WILL VARY ACCORDINGLY.

TXC479-091159-  
/O.CON.KCRP.FL.W.0039.000000T0000Z-000000T0000Z/  
/CBBT2.3.ER.100706T1248Z.100708T1600Z.000000T0000Z.NR/  
1259 PM CDT THU JUL 8 2010

THE FLOOD WARNING CONTINUES FOR  
THE RIO GRANDE AT COLUMBIA BRIDGE.

- \* UNTIL FURTHER NOTICE...OR UNTIL THE WARNING IS CANCELLED.
- \* AT 12:15 PM THURSDAY THE STAGE WAS 49.1 FEET...OR 15.0 METERS.
- \* RECORD FLOODING IS OCCURRING AND RECORD FLOODING IS FORECAST FOR THIS LOCATION. HOWEVER...HIGHER FLOWS HAVE BEEN OBSERVED ON THE RIO GRANDE.
- \* FLOOD STAGE IS 18.0 FEET...OR 5.5 METERS.
- \* FORECAST...THE RIVER WILL CONTINUE RISING AND CREST NEAR 49.1 FEET...OR 15.0 METERS BY THIS AFTERNOON THEN BEGIN TO SLOWLY FALL.

BELOW ARE THE LATEST RIVER STAGES AND STAGE FORECASTS:

LOCATION	FLD LATEST				FORECAST 6 AM LST				
	STG	STG	DAY	TIME	FRI	SAT	SUN	MON	TUE
RIO GRANDE COLUMBIA BRIDGE	18	49.1	THU	12 PM	44.2	37.8	32.6	29.2	27.1

# River Flood Products

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## RIVER FLOOD STATEMENT

**This product provides a follow up to river flood warnings and contains supplemental information on previously issued flood warnings, such as updated observations and impact information.**

```
FLOOD STATEMENT
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX
938 AM CDT FRI AUG 13 2010

...THE FLOOD WARNING CONTINUES FOR THE FOLLOWING RIVER IN TEXAS..

RIO GRANDE AT LAREDO AFFECTING WEBB COUNTY

.UPSTREAM RESERVOIR RELEASES WILL KEEP THE AFOREMENTIONED RIVER
ABOVE FLOOD STAGE FOR THE NEXT SEVERAL DAYS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

STAY TUNED TO NOAA WEATHER RADIO...LOCAL TV AND RADIO
STATIONS...OR CABLE TV OUTLETS...FOR THE LATEST WEATHER
INFORMATION...AS ADDITIONAL RAINFALL COULD AFFECT CREST
FORECASTS.

FOR THE LATEST RIVER STAGES AND FORECASTS VISIT OUR WEB PAGE AT
WWW.SRH.NOAA.GOV/CRP. IN THE BLUE MENU SECTION ON THE LEFT OF
OUR HOME PAGE...UNDER THE "CURRENT WEATHER" SUBMENU...CLICK
ON "RIVERS/LAKES" WHICH TAKES YOU TO OUR AHPS WEB PAGE.

&&

TXC479-140838-
/O.CON.KCRP.FL.W.0032.000000T0000Z-000000T0000Z/
/LDOT2.3.ER.100702T0824Z.100709T0245Z.000000T0000Z.NO/
938 AM CDT FRI AUG 13 2010

THE FLOOD WARNING CONTINUES FOR
THE RIO GRANDE AT LAREDO.
* UNTIL FURTHER NOTICE...OR UNTIL THE WARNING IS CANCELLED.
* AT 9:15 AM FRIDAY THE STAGE WAS 8.3 FEET...OR 2.5 METERS.
* MINOR FLOODING IS OCCURRING AND MINOR FLOODING IS FORECAST.
* FLOOD STAGE IS 8.0 FEET...OR 2.4 METERS.
* FORECAST...THE RIVER WILL REMAIN NEAR 8.3 FEET...OR SLIGHTLY ABOVE
FLOOD STAGE FOR THE NEXT SEVERAL DAYS AS RELEASES CONTINUE UPSTREAM
FROM AMISTAD RESERVOIR.

* AT 8.0 FEET OR 2.4 METERS...MINOR LOWLAND FLOODING OCCURS. FLOW
REACHES THE LOWER SECTIONS OF THE CUSTOMS PARKING LOT IN LAREDO.

$$

BELOW ARE THE LATEST RIVER STAGES AND STAGE FORECASTS:

LOCATION                FLD LATEST          FORECAST 6 AM LST
STG  STG  DAY  TIME  SAT  SUN  MON  TUE  WED
RIO GRANDE
LAREDO                8    8.3  FRI 09 AM  8.3  8.2  8.2  8.2  8.1

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# River Flood Products

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## HYDROLOGIC STATEMENT

**This product provides hydrologic forecast information for specific river forecast points that are anticipated to go above bankfull stage but remain below flood stage.**

000  
FGUS84 KCRP 131442  
RVSCR  
TXC479-140542-

HYDROLOGIC STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
942 AM CDT FRI AUG 13 2010

...NOTABLE BUT BELOW RIVER FLOOD LEVELS EXPECTED ON  
THE RIO GRANDE...

FOR THE RIO GRANDE AT COLUMBIA BRIDGE.  
\* LATEST STAGE: 14.0 FEET...OR 4.3 METERS AT 9 AM FRIDAY.  
\* FLOOD STAGE: 18.0 FEET...OR 5.5 METERS.  
\* BANKFULL STAGE: 16.0 FEET...OR 4.9 METERS.  
\* CAUTION STAGE: 10.0 FEET...OR 3.0 METERS.  
\* FORECAST: NO FLOODING IS EXPECTED...WITH LITTLE CHANGE IN THE LEVEL  
OF THE RIVER. THE RIVER WILL REMAIN ABOVE ACTION STAGE THROUGHOUT THE  
FORECAST PERIOD.

STAY TUNED TO NOAA WEATHER RADIO...LOCAL TV AND RADIO  
STATIONS...OR CABLE TV OUTLETS...FOR THE LATEST WEATHER  
INFORMATION...AS ADDITIONAL RAINFALL COULD AFFECT CREST  
FORECASTS.

&&

BELOW ARE THE LATEST RIVER STAGES AND STAGE FORECASTS:

LOCATION	FLD LATEST				FORECAST 6 AM LST				
	STG	STG	DAY	TIME	SAT	SUN	MON	TUE	WED
RIO GRANDE COLUMBIA BRIDGE	18	14.0	FRI	09 AM	14.0	14.0	13.9	13.9	13.9

\$\$

# Turn Around Don't Drown

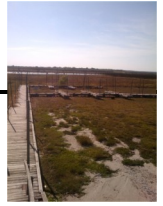
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Flash Flooding kills more people than any other weather hazard. Thus the NWS has instituted a program to educate people about the hazards of flooding and how to protect themselves. The Turn Around Don't Drown slogan originated in South Texas and is recognized nationally. If you are in an automobile and come to a flooded roadway, Turn Around Don't Drown. Bumper stickers and signs can be purchased for your community. Emergency Managers, the Media and local communities are encouraged to print and distribute bumper stickers, posters, or road barricade signs in your flood prone areas. For high resolution images check the following web site. [www.srh.noaa.gov/tadd/](http://www.srh.noaa.gov/tadd/)



Staples Street (FM 2444) Road at Oso Creek on September 20th 2010

# Hydrologic Products



## DROUGHT INFORMATION STATEMENTS

Drought Information Statements are issued when any portion of the County Warning Area (CWA) is considered to be in a moderate drought state or higher by the Drought Monitor product. The Drought Monitor product is created through a consensus of state, federal, and academic scientists, and is issued weekly. From this, a Drought Information Statement, containing information specific to the CWA, including a synopsis/summary of recent weather, hydrologic and agricultural impacts, fire danger hazards, state and local actions or restrictions, a climate summary, and a temperature and precipitation outlook.

000  
AXUS74 KCRP 111555  
DGTCRP  
TXZ229>234-239>247-121600-

DROUGHT INFORMATION STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1055 AM CDT THU JUN 11 2009

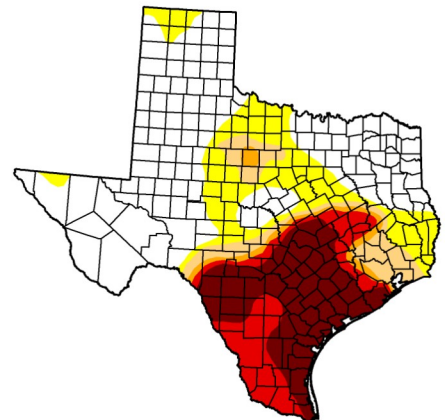
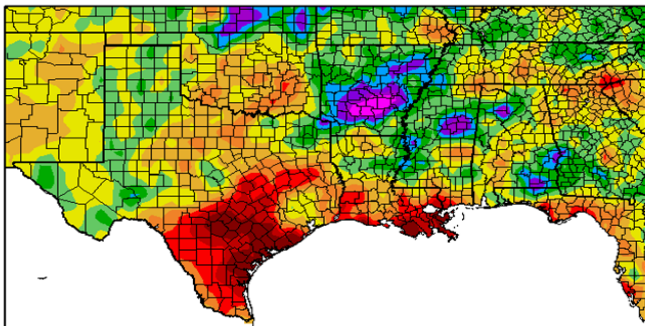
...DROUGHT CONDITIONS IMPROVE SLIGHTLY OVER THE RIO GRANDE PLAINS  
BUT CHANGE LITTLE ELSEWHERE OVER SOUTH TEXAS...

SYNOPSIS...THE END OF MAY AND THE FIRST PART OF JUNE BROUGHT MORE  
BENEFICIAL RAINFALL TO SOUTH TEXAS. APPARENTLY...THE END OF LA  
NINA CONDITIONS OVER THE EASTERN PACIFIC SEEMS TO HAVE HELPED TO  
BRING MORE RAIN TO THE HYDROLOGIC SERVICE AREA (HSA) DURING THE  
PAST MONTH THAN WHAT HAS BEEN OBSERVED FOR MORE THAN A FEW MONTHS.  
DURING THE PAST TWO WEEKS...MANY LOCATIONS OVER THE HSA RECEIVED  
AT LEAST ONE INCH OF RAIN. THE MOST WIDESPREAD AND HEAVIEST  
PRECIPITATION OCCURRED OVER WESTERN PORTIONS OF WEBB COUNTY...AND  
OVER PORTIONS OF SOUTHERN VICTORIA... ARANSAS AND CALHOUN  
COUNTIES...WHERE SCATTERED TWO TO FIVE INCH RAINFALL AMOUNTS WERE  
OBTAINED. HOWEVER...THE REMAINDER OF SOUTH TEXAS HAS BEEN  
SO DRY FOR SO LONG THAT EVEN AN INCH OR MORE OF PRECIPITATION HAS  
BEEN INSUFFICIENT TO ALLEVIATE THIS HISTORIC DROUGHT.

THE LATEST DROUGHT MONITOR PRODUCT...VALID FOR JUNE 9 2009 SHOWS  
THE FOLLOWING CONDITIONS OVER THE CORPUS CHRISTI HYDROLOGIC  
SERVICE AREA...

EXCEPTIONAL DROUGHT CONDITIONS EXIST GENERALLY SOUTH AND EAST OF A  
NELL TO ESSEVILLE TO SIMMONS LINE (ALL IN LIVE OAK COUNTY)...WITH

Departure from Normal Precipitation (in)  
9/1/2008 - 8/31/2009



Generated 9/11/2009 at HPRCC using provisional data. NOAA Regional Climate Centers

# **Fire Weather**

## **Terminology Products**

**Fire Weather Forecasts  
Point Forecast Matrices  
Spot Forecast  
Fire Weather Watch  
Red Flag Warning  
Fire Danger Statement  
Fire Warning**



# Fire Weather Terminology

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Weather is one of the most significant factors in determining the severity of wildland fires. The spread rate and intensity of fires is directly related to the wind speed, temperature and relative humidity. Weather also plays a critical role in the controlling and smoke management of pre-scribed burns. The trajectories and dispersions of substances in HAZMAT incidents are also heavily correlated to weather conditions. Accurate and timely weather information is vital to the planning and execution strategies for suppressing wildfires, controlled burns and HAZMAT incidents.

The Corpus Christi NWS office provides fire weather services to all of South Texas, which include the counties of Aransas, Bee, Calhoun, Duval, Goliad, Jim Wells, Kleberg, La Salle, Live Oak, McMullen, Nueces, Refugio, San Patricio, Victoria and Webb. Land management agencies which are served by the Corpus Christi NWS office include the National Park Service, Texas Forest Service, and the U.S. Fish and Wildlife Service.

**Red Flag Event** - The combination of dry fuels and weather conditions (low humidity and wind) which support extreme fire danger and/or fire behavior. These conditions alert land management agencies to the potential for widespread new ignitions or control problems with existing fires, both of which could pose a threat to life and property.

**Red Flag Criteria for South Texas** -

When fuels are cured: 20-ft winds must be sustained or frequently gusting to 25 mph or greater AND relative humidity is 30% or less (40% or less for coastal counties)

When fuels are no longer cured: Weather conditions above are met AND fuel dryness is considered Dry, Critically Dry, or Extremely Dry per the Texas Forest Service fuel dryness maps (<http://twc.tamu.edu/dfs/rawsd/dryness.png>)

**Fire Weather Watch** - Issued when there is a high potential for the development of a Red Flag event. Issued 12 to 96 hours in advance of the expected onset of criteria.

**Red Flag Warning** - Used to warn of an impending or occurring Red Flag Event. Issuance denotes a high degree of confidence that local Red Flag Criteria will occur in 24 hours or less.

**Fire Danger Statement** - Issued to alert land management agencies of weather conditions which are not quite Red Flag, but may have a significant impact to the area within 24 hours.

**Fire Warning** - Issued at the request of an approved emergency management official, a warning of a spreading structural fire or wildfire that threatens a populated area. Evacuation of areas in the fire's path may be recommended by authorized officials according to state law or local ordinance.

**Texas Fire Weather Operating Plan** - Document which serves as the Fire Weather Annual Operating Plan (AOP) for the state of Texas. This document can be found at:

<http://www.srh.noaa.gov/images/crp/docs/TXFWOP2009.pdf>

# Fire Weather Products

## FIRE WEATHER PLANNING FORECAST

This product provides detailed fire weather forecast conditions for the next 36 hours and an outlook out to 7 days. This product is issued by 630 AM every morning. (This product is also produced at 4 PM every afternoon between Oct 1st and Apr 30th)

FNUS54 KCRP 111127  
FWFCRP

FIRE WEATHER PLANNING FORECAST FOR SOUTH TEXAS  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
627 AM CDT WED AUG 11 2010

.DISCUSSION...ISOLATED TO SCATTERED SHOWERS AND THUNDERSTORMS POSSIBLE TODAY AND ON THURSDAY AS MOISTURE INCREASES THROUGH THURSDAY AFTERNOON. RELATIVE HUMIDITY VALUES AND WIND SPEEDS ARE NOT EXPECTED CAUSE ANY FIRE WEATHER CONCERNS. ABOVE NORMAL AFTERNOON TEMPERATURES AND HUMIDITIES CAN BE EXPECTED THROUGH THE EARLY PART OF NEXT WEEK...WITH NEAR TO SLIGHTLY ABOVE NORMAL MORNING LOW TEMPERATURES. ADEQUATE MOISTURE AND AN UPPER LEVEL LOW WILL PROVIDE A LIMITED CHANCE FOR SHOWERS AND THUNDERSTORMS FRIDAY AND SATURDAY...BEFORE AN UPPER LEVEL RIDGE BUILDS BACK INTO SOUTH TEXAS. THE UPPER RIDGE WILL BRING DRIER AIR TO THE REGION AND PRECLUDE THE CHANCE FOR RAIN SUNDAY AND MONDAY. A WEAK FRONTAL BOUNDARY WILL APPROACH NORTHERN PORTIONS OF SOUTH TEXAS ON TUESDAY WHICH MAY PROVIDE ANOTHER SLIGHT CHANCE FOR SHOWERS AND THUNDERSTORMS.

TXZ234-112230-  
VICTORIA-  
INCLUDING THE CITIES OF...VICTORIA  
627 AM CDT WED AUG 11 2010

	TODAY	TONIGHT	THU
CLOUD COVER	PCLDY	MCLEAR	MCLDY
PRECIP TYPE	TSTMS	NONE	TSTMS
CHANCE PRECIP (%)	20	0	40
TEMP	97	75	97
RH %	43	94	46
20FT WND MPH (AM)	LGT/VAR		LGT/VAR
20FT WND MPH (PM)	E 5	SE 6	E 5
MIXING HGT (FT-AGL)	6300		6800
TRANSPORT WND (MPH)	E 10		SE 13
LAL	2	2	3
HAINES INDEX	3	3	3

REMARKS...NONE.

.FORECAST FOR DAYS 3 THROUGH 7...

.FRIDAY...PARTLY CLOUDY. A 30 PERCENT CHANCE OF SHOWERS AND THUNDERSTORMS. LOWS IN THE MID 70S. HIGHS IN THE UPPER 90S. SOUTH WINDS AROUND 10 MPH.

.SATURDAY...PARTLY CLOUDY. A 20 PERCENT CHANCE OF SHOWERS. LOWS IN THE UPPER 70S. HIGHS IN THE UPPER 90S. SOUTH WINDS AROUND 10 MPH.

.SUNDAY THROUGH MONDAY...PARTLY CLOUDY. LOWS IN THE UPPER 70S. HIGHS IN THE UPPER 90S. SOUTH WINDS AROUND 10 MPH.

.TUESDAY...PARTLY CLOUDY. A 30 PERCENT CHANCE OF SHOWERS AND

# Fire Weather Products

## Fire Weather Point Forecast Matrices

This product provides detailed 3 and 6 hour forecasts of fire weather parameters out to 7 days. This product is produced twice daily, by 4 AM and 4 PM.

000  
FOUS54 KCRP 300846  
PFWCRP

FIRE WEATHER POINT FORECAST MATRICES  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
346 AM CDT MON AUG 30 2010

TXZ245-302230-  
ARANSAS NATIONAL WILDLIFE REFUGE RAWS-ARANSAS COUNTY TX  
28.30N 96.82W ELEV. 20 FT  
346 AM CDT MON AUG 30 2010

DATE	MON 08/30/10								TUE 08/31/10								WED 09/01/10																							
UTC 3HRLY	09	12	15	18	21	00	03	06	09	12	15	18	21	00	03	06	09	12	15	18	21	00																		
CDT 3HRLY	04	07	10	13	16	19	22	01	04	07	10	13	16	19	22	01	04	07	10	13	16	19																		
MAX/MIN	92								81								93																							
TEMP	82	81	87	91	92	89	85	83	82	81	87	92	93	87	84	82	81	80	86	91	91	87																		
DEWPT	78	78	78	77	76	78	78	79	78	77	77	78	77	78	78	78	78	77	76	76	76	77																		
MIN/MAX RH	61								91								61																							
RH	88	92	75	64	61	71	82	88	89	91	73	65	61	75	83	87	89	90	73	62	62	72																		
WIND DIR	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	E	E	E	E	E	SE																		
WIND SPD	12	6	12	11	11	12	10	8	5	5	8	10	11	11	9	6	4	4	6	9	10	10																		
HEAT INDEX	90	85	99	105	104	102	96	93	90	85	99	108	107	99	94	91	89	87	96	103	103	98																		
CLOUDS	SC	SC	B1	SC	SC	SC	SC	SC	B1	B1	B1	B1	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC																		
CLOUDS (%)	50	50	53	40	40	40	40	50	55	55	57	60	47	43	40	41	45	45	47	50	50	49																		
POP 12HR	30								20								30																							
QPF 12HR	0.09								0.01								0.02																							
RAIN SHWRS	IS	SC	SC	SC	SC	IS	IS	IS	IS	IS	IS	SC	IS	IS	IS	IS	IS	SC	SC	SC	SC	SC																		
TSTMS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS																		
LAL	2				2				1				1				3				2				1				2				3				3			
HAINES	4				3				3				3				3				4				4				3				3				4			
MIXING HGT	4400				4300				2800				2700				5600				5600				2200				2000				3200				3500			
T WIND DIR	SE				SE				SE				SE				SE				SE				SE				SE				SE							
T WIND SPD	19				20				18				10				13				18				18				11				11				13			

DATE	THU 09/02/10				FRI 09/03/10				SAT 09/04/10				SUN 09/05/10			
UTC 6HRLY	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00
CDT 6HRLY	01	07	13	19	01	07	13	19	01	07	13	19	01	07	13	19

MIN/MAX	80				92				80				92				79				92				78				91															
TEMP	82	80	91	87	82	80	91	86	82	79	91	86	81	78	90	85	82	80	91	86	82	79	91	86	81	78	90	85	82	80	91	86	82	79	91	86	81	78	90	85				
DEWPT	76	75	76	76	76	75	75	75	75	75	74	73	74	74	73	72	76	75	76	76	76	75	75	75	75	74	73	72	76	75	76	76	76	75	75	75	75	74	73	72				
MAX/MIN RH	85				61				85				60				86				57				88				57															
RH	81	85	62	71	80	85	61	69	80	86	58	66	79	88	59	65	81	85	62	71	80	85	61	69	80	86	58	66	79	88	59	65	81	85	62	71	80	85	61	69	80	86	58	66
PWIND DIR	SE				E				E				E				E				E				E				SE															
WIND CHAR	<15				<15				<15				<15				<15				<15				<15																			
AVG CLOUDS	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC	B1	B1	B1	B1	SC	SC	SC	SC	SC	SC	SC	SC	SC	B1	B1	B1	B1	SC	SC	SC	SC	SC	SC	SC	SC	SC	SC				
POP 12HR	20				20				20				30				20				40				20				40															
RAIN SHWRS	IS	IS	IS	IS	IS	SC	SC	IS	SC	SC	IS	IS	IS	IS	SC	SC	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS					
TSTMS	IS	IS	IS	IS	IS	SC	SC	IS	SC	SC	IS	IS	IS	IS	SC	SC	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS					

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# Fire Weather Products

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## SPOT FORECAST

This product provides detailed fire weather forecast conditions for a specific point. These are produced by request only.

EXAMPLE SPOT FORECAST (FWS,FNUS74)

FNUS74 KCRP 271249  
FWSCR

SPOT FORECAST FOR G-2A...ARANSAS NWRC, USFWS  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
731 AM CST WED FEB 24 2010

IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER SERVICE.

.DISCUSSION...SUNNY AND DRY WEATHER WILL PERSIST TODAY AS HIGH PRESSURE BUILDS INTO THE REGION. AFTERNOON HUMIDITIES WILL BE NEAR 25 PERCENT OUT WEST TO UPPER 30S ALONG THE COAST...HOWEVER 20-FOOT WINDS WILL BE LIGHT. MOISTURE BEGINS TO INCREASE THURSDAY AS ONSHORE FLOW RETURNS. AN UPPER LEVEL DISTURBANCE WILL MOVE QUICKLY THROUGH SOUTH TEXAS ON FRIDAY BRINGING A CHANCE OF RAIN TO THE EASTERN PORTIONS OF SOUTH TEXAS. DRIER CONDITIONS WILL DEVELOP BY FRIDAY AFTERNOON AS THE DISTURBANCE EXITS TO THE EAST AND NORTHWEST WINDS DEVELOP. DRY AND COOL CONDITIONS WILL PERSIST ON SATURDAY. RAIN CHANCES WILL ONCE AGAIN INCREASE ON SUNDAY AND PEAK LATE SUNDAY NIGHT INTO MONDAY MORNING AS A STRONG UPPER LEVEL DISTURBANCE APPROACHES FROM THE NORTHWEST. COOLER AND DRIER CONDITIONS ARE EXPECTED ON TUESDAY AS CHILLY HIGH PRESSURE PUSHES INTO SOUTH TEXAS.

.TODAY...

TIME (CST)	7 AM	9 AM	11 AM	1 PM	3 PM	5 PM
CLOUD COVER.....	PCLDY	MCLEAR	MCLEAR	CLEAR	CLEAR	CLEAR
WEATHER COV.....						
WEATHER TYPE....	NONE	NONE	NONE	NONE	NONE	NONE
TEMP.....	40	42	50	55	56	54
RH.....	89	80	55	42	40	47
20 FT WIND.....	NNW 13	NNW 14	NNW 12	NNW 10	NNW 9	NW 8
20 FT WIND GUST..	20	20	20	15	15	15
EYE LEVEL WIND..	NNW 10	NNW 11	NNW 10	NNW 8	NNW 7	NW 6
EYELVL WND GUST..	20	20	20	15	15	15
MIX HGT (FT)....	1500	1600	3200	4500	4600	4200
TRANSPORT WIND..	N 25	NNW 22	NNW 20	NNW 17	NNW 16	NNW 15
SMOKE DISPER....	FAIR	FAIR	GOOD	V GOOD	GOOD	GOOD
MIX HGT (FT)....	1500	1600	3200	4500	4600	4200
POP.....	0	0	0	0	0	0
LAL.....	1	1	1	1	1	1
HAINES INDEX....	2	3	4	4	4	4

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# Fire Weather Products

## FIRE WEATHER WATCH

This product is issued 12 to 96 hours in advance when there is a high potential for the development of a Red Flag event.

### EXAMPLE FIRE WEATHER WATCH (RFW,WWUS84)

WWUS84 KCRP 210224  
RFWCRP

URGENT - FIRE WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
509 AM CDT SAT MAR 20 2010

TXZ229>234-239>247-261400-  
/O.NEW.KCRP.FW.A.0003.100321T1700Z-100322T0000Z/  
ARANSAS-BEE-CALHOUN-DUVAL-GOLIAD-JIM WELLS-KLEBERG-LA SALLE-  
LIVE OAK-MCMULLEN-NUECES-REFUGIO-SAN PATRICIO-VICTORIA-WEBB-  
509 AM CDT FRI MAR 20 2010

...FIRE WEATHER WATCH IN EFFECT SUNDAY AFTERNOON THROUGH SUNDAY EVENING FOR ALL OF SOUTH TEXAS DUE TO LOW RELATIVE HUMIDITY AND GUSTY WIND...

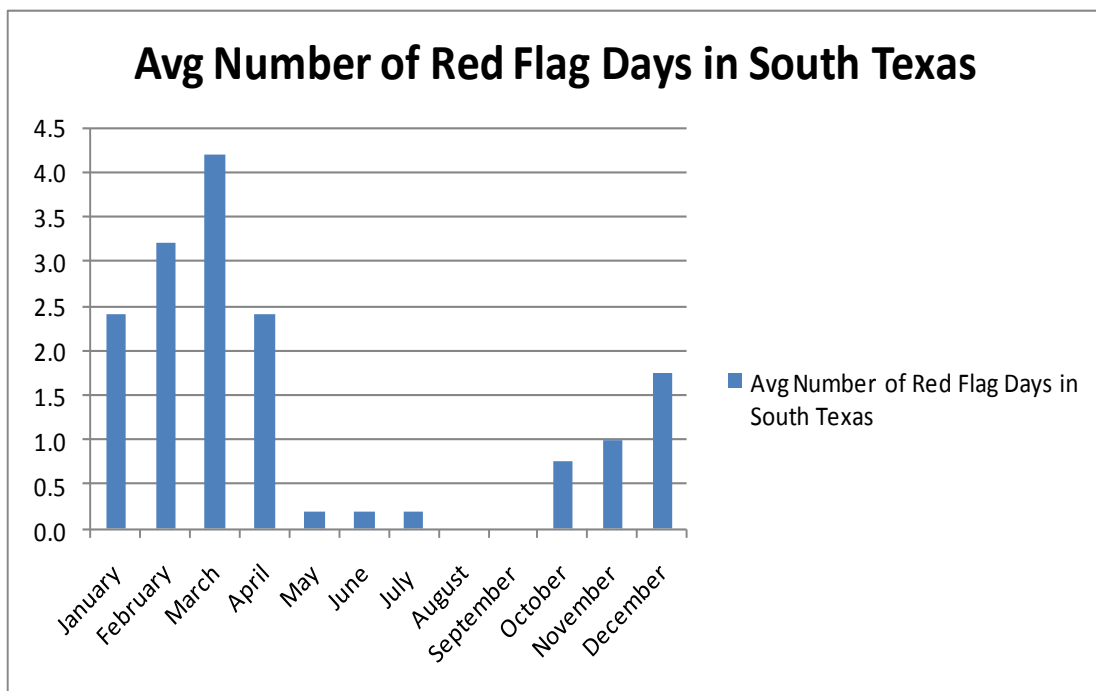
THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A FIRE WEATHER WATCH...WHICH IS IN EFFECT FROM SUNDAY AFTERNOON THROUGH SUNDAY EVENING.

ON SUNDAY...RELATIVE HUMIDITY WILL DROP INTO THE TEENS ACROSS THE RIO GRANDE PLAINS...INTO THE 20S ACROSS THE INLAND COASTAL PLAINS...AND AROUND 30 PERCENT ALONG THE COAST. THIS...ALONG WITH NORTH-NORTHWEST WINDS AROUND 25 MPH WILL RESULT IN AN EXTREME FIRE BEHAVIOR POTENTIAL.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

PLEASE ADVISE THE APPROPRIATE OFFICIALS AND FIRE CREWS IN THE FIELD OF THIS FIRE WEATHER WATCH.

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# Fire Weather Products

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## RED FLAG WARNING

This product is issued when conditions warrant.

### EXAMPLE RED FLAG WARNING (RFW, WWUS84)

WWUS84 KCRP 210224  
RFWCRP

URGENT - FIRE WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
1107 AM CDT FRI MAR 12 2010

TXZ231>234-241>247-130000-  
/O.NEW.KCRP.FW.W.0005.100312T1707Z-100313T0000Z/  
LIVE OAK-BEE-GOLIAD-VICTORIA-JIM WELLS-KLEBERG-NUECES-  
SAN PATRICIO-ARANSAS-REFUGIO-CALHOUN-  
1107 AM CST FRI MAR 12 2010

...RED FLAG WARNING IN EFFECT UNTIL 6 PM CST THIS EVENING DUE TO LOW RELATIVE HUMIDITY AND GUSTY WIND...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A RED FLAG WARNING...WHICH IS IN EFFECT UNTIL 6 PM THIS EVENING.

RELATIVE HUMIDITY VALUES OF 20 TO 30 PERCENT ALONG WITH NORTHWEST WINDS GUSTING TO 25 MPH WILL PRODUCE RED FLAG CONDITIONS THIS AFTERNOON.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

PLEASE ADVISE THE APPROPRIATE OFFICIALS AND FIRE CREWS IN THE FIELD OF THIS FIRE WEATHER WATCH.

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Laureles Wildfire in 2008, south of Corpus Christi

# Fire Weather Products

## Fire Danger Statement

This product is issued when conditions warrant.

### EXAMPLE FIRE DANGER STATEMENT (RFD, FNUS64)

FNUS64 KCRP 061018  
RFD CRP  
TXZZ229>231-239>241-070000-

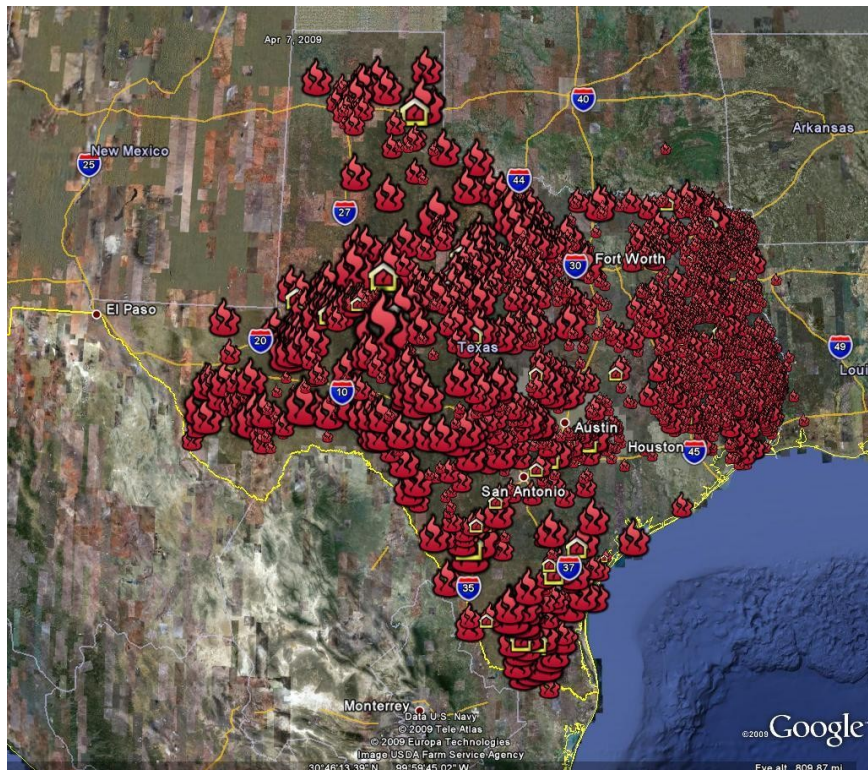
FIRE DANGER STATEMENT  
NATIONAL WEATHER SERVICE CORPUS CHRISTI TX  
518 AM CDT THU MAY 6 2010

...ELEVATED FIRE WEATHER CONDITIONS THIS AFTERNOON OVER THE RIO GRANDE PLAINS...

SOUTHEAST WIND WILL INCREASE TODAY OVER SOUTH TEXAS IN RESPONSE TO A DEVELOPING SURFACE LOW PRESSURE SYSTEM TO THE NORTHWEST. BY THIS AFTERNOON...WIND AT 20 FEET WILL RANGE FROM 15 TO 20 MPH WITH HIGHER GUSTS. IN ADDITION...RELATIVE HUMIDITIES WILL FALL TO BETWEEN 20 AND 35 PERCENT INCLUSIVE OVER THE RIO GRANDE PLAINS. THE COMBINATION OF THESE WIND AND RELATIVE HUMIDITY VALUES...AND FUEL DRYNESS LEVELS...WILL RESULT IN ELEVATED FIRE WEATHER CONDITIONS OVER THE RIO GRANDE PLAINS THIS AFTERNOON...GENERALLY WEST OF A PREMONT...GEORGE WEST...WHITSETT LINE.

RESIDENTS OVER THE RIO GRANDE PLAINS ARE URGED TO EXERCISE EXTREME CARE THIS AFTERNOON WITH RESPECT TO ALL OUTDOOR ACTIVITIES THAT COULD INADVERTENTLY CAUSE WILDFIRES. AVOID THE USE OF WELDING OR GRINDING EQUIPMENT NEAR WEEDS AND GRASS. IN ADDITION...AVOID PARKING VEHICLES IN TALL...DRY GRASS AND WEEDS THAT COULD BE IGNITED. FURTHER...DO NOT TOSS CIGARETTE BUTTS ON THE GROUND. REPORT WILDFIRES QUICKLY TO THE NEAREST FIRE DEPARTMENT OR LAW ENFORCEMENT OFFICE.

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2008-2009 Wildfires in Texas



# Fire Weather Products

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## Fire Warning

This product is issued when conditions warrant.

### EXAMPLE FIRE WARNING (FRW,WOUS44)

WOUS44 KFWD 092243  
FRWFD  
TXC237-100045-

URGENT-IMMEDIATE BROADCAST REQUESTED  
FIRE WARNING  
TEXAS DIVISION OF EMERGENCY MANAGEMENT  
RELAYED BY NATIONAL WEATHER SERVICE FORT WORTH TX  
543 PM CDT THU APR 9 2009

THE FOLLOWING MESSAGE IS TRANSMITTED THE REQUEST OF JACK COUNTY EMERGENCY MANAGEMENT.

TWO LARGE FIRES CONTINUE TO AFFECT POPULATED AREAS OF JACK COUNTY. THE FIRST LARGE FIRE IS LOCATED NEAR POST OAK AND ANOTHER IS LOCATED SOUTHEAST OF BRYSON EAST OF FARM TO MARKET ROAD 1191. RESIDENTS NEAR THE PATHS OF THESE FIRES SHOULD CONTINUE TO PROCEED WITH EVACUATIONS.

ALL RESIDENTS ARE URGED TO PAY CLOSE ATTENTION TO FURTHER INFORMATION FROM COUNTY OFFICIALS FOR ANY FUTURE EVACUATIONS

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Burn scar from the Lagarto Fire in 2009

# **Winter Weather**

## **Terminology Products**

**Winter Weather Advisory  
Winter Storm Watch  
Winter Storm Warning**

# Winter Weather Terminology

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**Winter Weather Events** are rare in South Texas. On average, measurable frozen precipitation occurs once every 8 years. Northern portions of the coastal plains are more likely to receive frozen precipitation than southern areas due to the close proximity to the warm waters of the Gulf of Mexico. The National Weather Service in Corpus Christi carries the primary responsibility for the issuance of winter storm advisories, watches, and warnings for the Rio Grande and Coastal Plains region of South Texas.

Winter-weather events are handled with the WSW (WWUS46) product in the form of a watch, advisory, or warning. The WSW product is used to discuss the structure of the storm and its impact on South Texas.

**Blizzard** - A storm where the following conditions prevail for three hours or more: sustained winds of 35 mph or more and considerable falling/blowing snow frequently reducing visibility to less than 1/4 mile.

**Heavy Snow** - An event that produces 2+ inches of snow in 12 hours, or an event that produces >6 inches of snow in 24 hours.

**Freezing Rain (or Drizzle)** - Rain or drizzle that freezes immediately upon striking an object. Formed by liquid rain falling through a sub-freezing layer of air and becoming super-cooled.

**Sleet** - Frozen raindrops that fall as ice pellets. Formed by liquid rain falling through a deep sub-freezing layer of air and freezing before striking the ground and not associated with a thunderstorm.

**Wind Chill Temperature** - The apparent temperature felt by exposed flesh from the effects of wind and temperature.



December 24, 2004 heavy snow on the Coastal Bend.

# Winter Weather Products

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## WINTER WEATHER ADVISORY

Like other advisories, these are issued for (winter weather) conditions that are not life threatening, but are hazardous and require user response to avoid a more critical scenario. Winter Weather Advisories would be issued for one of the following events:

**Snow:** <2 inches of snow accumulation but more than 1/2 inch accumulation,

**Freezing Rain:** <1/8 inch of ice accumulation, or

**Sleet:** <1/2 inch of sleet accumulation.

**Blowing Snow:** 1/4 mile or less visibility frequently occurring for 3+ hours and winds less than 35 mph.

**Mixed Events:** When more than one predominant precipitation type is expected but no one type meets the warning criterion and total accumulations are less than 2 inches.

EXAMPLE WINTER WEATHER ADVISORY (WSW, WWUS46)

SATWSWCRP

TTAA00 KCRP DDHMM

URGENT - WINTER WEATHER MESSAGE

NATIONAL WEATHER SERVICE CORPUS CHRISTI, TX

500 AM CST TUE DEC 28 2005

...DANGEROUS DRIVING CONDITIONS EXPECTED OVER MUCH OF SOUTH TEXAS TODAY...

.A STRONG COLD FRONT WHICH MOVED THROUGH SOUTH TEXAS EARLY THIS MORNING HAS BROUGHT MUCH COLDER AIR INTO THE REGION. ADDITIONALLY...AN UPPER LEVEL DISTURBANCE ALONG WITH A MOIST ATMOSPHERE WILL BRING OCCASIONAL RAIN OR DRIZZLE TO THE AREA. SOME OF THIS PRECIPITATION WILL FREEZE OVER NORTHERN AREAS OF THE COASTAL BEND...MAKING DRIVING VERY HAZARDOUS.

TXZ232>234-245>247-282000-

ARANSAS-BEE-CALHOUN-GOLIAD-REFUGIO-VICTORIA

INCLUDING THE CITIES OF...BEEVILLE...GOLIAD...PORT LAVACA...REFUGIO...ROCKPORT...VICTORIA

500 AM CST TUE DEC 28 2005

...WINTER WEATHER ADVISORY IN EFFECT TODAY...

OCCASIONAL LIGHT RAIN WILL CHANGE TO LIGHT FREEZING RAIN OR SLEET THIS AFTERNOON. ICE ACCUMULATIONS WILL REMAIN BELOW 1/4 INCH. SOME BRIDGES AND OVERPASSES MAY BECOME ICE-COVERED AND SLIPPERY DURING THE AFTERNOON HOURS.

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# Winter Weather Products

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## WINTER STORM WATCH

These are issued when conditions are favorable for a hazardous winter weather event to develop in the next 24 to 48 hours, but the occurrence is uncertain. A Probability of Precipitation (POP) of 50% or higher is forecast. Winter Weather Watches would be issued for one or more of the following events

**Blizzard Conditions:** Sustained wind or frequent gusts >35 mph, accompanied by falling and/or blowing snow reducing the visibility to 1/4 mile or less for 3+ hours.

**Heavy Snow:**  $\geq 2$  inches of snow accumulation (includes a forecast of 1 to 3 inches)

**Ice Storm:**  $\geq 1/8$  inch of ice accumulation in 12 hours.

**Sleet:**  $\geq 1/2$  inch of sleet accumulations in 12 hours.

**Mixed Events:** When more than one predominant precipitation type is expected but no one type meets the warning criterion and total accumulations are less than 2 inches.

EXAMPLE WINTER STORM WATCH (WSW, WWUS44)

SATWSWCRP  
TTAA00 KCRP DDHMM

URGENT - WINTER WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI, TX  
500 AM CST WED DEC 29 2005

.A STRONG CANADIAN COLD FRONT WILL MOVE INTO SOUTH TEXAS TONIGHT BRINGING FREEZING CONDITIONS TO MUCH OF THE REGION. AN UPPER LEVEL DISTURBANCE WILL MOVE ACROSS SOUTH TEXAS ON THURSDAY BRINGING A SURGE OF MOISTURE FROM THE GULF OF MEXICO. FROZEN PRECIPITATION IS EXPECTED TO SWEEP ACROSS THE NORTHERN COASTAL BEND THURSDAY AFTERNOON AND SIGNIFICANT ACCUMULATIONS OF ICE ARE POSSIBLE...MAKING TRAVEL EXTREMELY HAZARDOUS.

TXZ232>234-245>247-282000-  
ARANSAS-BEE-CALHOUN-GOLIAD-REFUGIO-VICTORIAINCLUDING  
THE CITIES OF...BEEVILLE...GOLIAD...PORT LAVACA...REFUGIO...ROCKPORT...VICTORIA  
500 AM CST TUE DEC 28 2005

...WINTER STORM WATCH IN EFFECT THROUGH THURSDAY...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A WINTER STORM WATCH. PRECIPITATION IS EXPECTED TO BEGIN EARLY THURSDAY AFTERNOON ACROSS THE COASTAL BEND...GENERALLY EAST OF INTERSTATE 37. PRECIPITATION WILL BEGIN AS LIGHT FREEZING RAIN...BUT COULD BECOME HEAVY IN THE AFTERNOON WITH ACCUMULATIONS OF 1-2 INCH OR MORE POSSIBLE. THERE IS STILL SOME UNCERTAINTY AS TO THE EXACT TRACK OF THE UPPER LEVEL DISTURBANCE...AND ACCUMULATION AMOUNTS COULD CHANGE. THE PRECIPITATION WILL END BY THURSDAY EVENING...HOWEVER TEMPERATURES WILL REMAIN BELOW FREEZING THROUGH FRIDAY MORNING. PREPARATIONS SHOULD BE MADE NOW FOR HAZARDOUS WINTER WEATHER CONDITIONS ON THURSDAY AND THURSDAY NIGHT.

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# Winter Weather Products

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## WINTER STORM WARNING

As the winter weather event becomes more certain (Probability of 50% or higher), a warning will be issued. Winter Weather Warnings would be issued for one or more of the following events.

**Blizzard Conditions:** Sustained wind or frequent gusts >35 mph, accompanied by falling and/or blowing snow reducing the visibility to 1/4 mile or less for 3+ hours.

**Heavy Snow:**  $\geq 2$  inches of snow accumulation (includes a forecast of 1 to 3 inches)

**Ice Storm:**  $\geq 1/8$  inch of ice accumulation in 12 hours.

**Sleet:**  $\geq 1/2$  inch of sleet accumulations in 12 hours.

**Mixed Events:** When more than one predominant precipitation type is expected but no one type meets the warning criterion and total accumulations are less than 2 inches.

EXAMPLE WINTER STORM WARNING (WSW, WWUS44)

SATWSWCRP  
TTAA00 KCRP DDHMM

URGENT - WINTER WEATHER MESSAGE  
NATIONAL WEATHER SERVICE CORPUS CHRISTI, TX  
500 AM CST WED DEC 29 2005

.A STRONG CANADIAN COLD FRONT MOVED INTO SOUTH TEXAS OVERNIGHT BRINGING FREEZING CONDITIONS TO MUCH OF THE REGION. AN UPPER LEVEL DISTURBANCE WILL MOVE ACROSS SOUTH TEXAS THIS AFTERNOON BRINGING A SURGE OF MOISTURE FROM THE GULF OF MEXICO. FROZEN PRECIPITATION WILL DEVELOP ACROSS THE COASTAL BEND THIS AFTERNOON AND SIGNIFICANT ACCUMULATIONS OF ICE ARE EXPECTED.

TXZ232>234-245>247-282000-  
ARANSAS-BEE-CALHOUN-GOLIAD-REFUGIO-VICTORIA  
INCLUDING THE CITIES OF...BEEVILLE...GOLIAD...PORT LAVACA...REFUGIO...ROCKPORT...VICTORIA  
500 AM CST TUE DEC 28 2005

...WINTER STORM WARNING IN EFFECT THROUGH TONIGHT...

THE NATIONAL WEATHER SERVICE IN CORPUS CHRISTI HAS ISSUED A WINTER STORM WARNING FOR THE NORTHERN COASTAL BEND. PRECIPITATION IS EXPECTED TO BEGIN THIS AFTERNOON ACROSS THE COASTAL BEND...GENERALLY EAST OF INTERSTATE 37 AND NORTH OF HIGHWAY 77. PRECIPITATION WILL BEGIN AS LIGHT FREEZING RAIN... BUT WILL BECOME HEAVY IN THE AFTERNOON WITH ACCUMULATIONS OF 1/2 INCH OR MORE EXPECTED. LIGHTER AMOUNTS ARE EXPECTED NEAR THE COAST. THE PRECIPITATION WILL END THIS EVENING...HOWEVER TEMPERATURES WILL REMAIN BELOW FREEZING THROUGH FRIDAY MORNING, THUS DANGEROUS ICING CONDITIONS WILL CONTINUE. ALL TRAVEL IS DISCOURAGED IN THE WARNING AREA.

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# Decision Support Services

## Products

**Mission**  
**Multi-Media Briefings**  
**Graphical Weather**  
**NWSchat and NWSBot**  
**Incident Support**



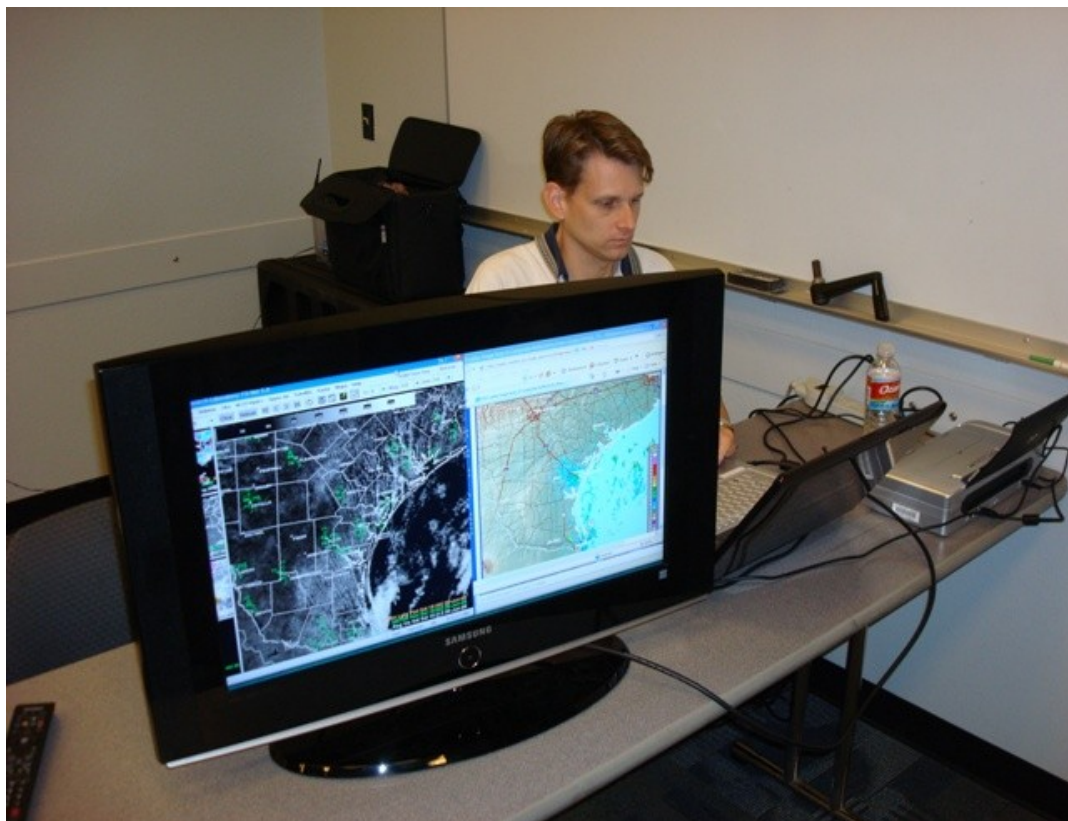
# Decision Support Services Mission

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Throughout its 140 year history, the National Weather Service (NWS) has been providing decision support services to carry out its mission of protecting lives and property. Improvements in the science of meteorology and hydrology, infusion of technological tools, and a renewed emphasis on homeland security, have reshaped the way we do business. Whether it is a localized forecast for wildfire support, a text message notification of a warning, a virtual briefing to emergency managers for an upcoming hurricane, on-site support at an Emergency Operations Center or Incident Command Post, or giving weather support at a major venue or event, the National Weather Service stands ready to provide the needed information to assist partners in making critical decisions.

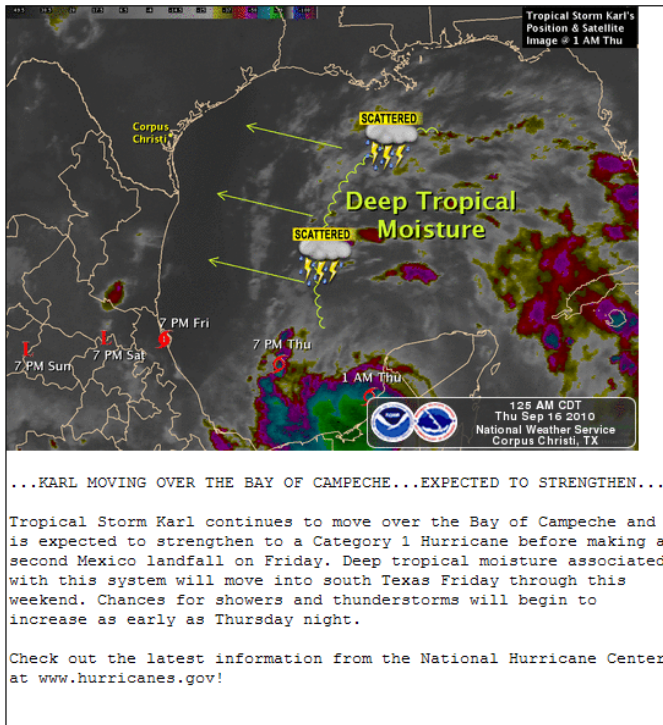
The purpose of this section of the Products and Services guide is to showcase the NWS emphasis on decision support to emergency managers, first responders, and community leaders - partners with a similar mission to ours - saving lives. In the following pages are a sample descriptions of initiatives related to on-site support, virtual GoToMeeting briefings, multimedia weather briefings, NWSChat, and Graphicasts technologies. Using briefing software such as videocasts, conference calls, chat, and text messaging/email, we strive to replicate the on-site support experience “virtually” to the best of our abilities. Advances in radar, and numerical modeling will continue to enhance the decision support services needed to protect the public.

Taking advantage of new technology and future advances in science, over time our method of delivery, as well as the products and services, will change. We will continue, however, to dedicate ourselves to providing the best decision support services possible.



# Graphiccasts / Multimedia Briefings

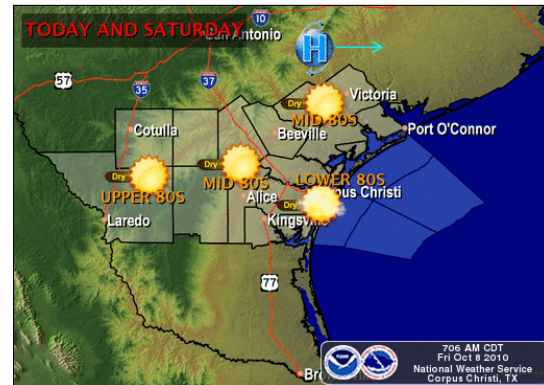
## Karl / Outlook



Graphiccasts are created by National Weather Service Forecast Staff to provide information concerning potential hazardous weather events. During tranquil weather, this graphical forecast is used to convey impact weather headlines for a given forecast period. Associated text gives emergency response partners and customers the forecaster's reasoning and thoughts behind the graphical forecast, while the image delivers the "big picture" at a glance.

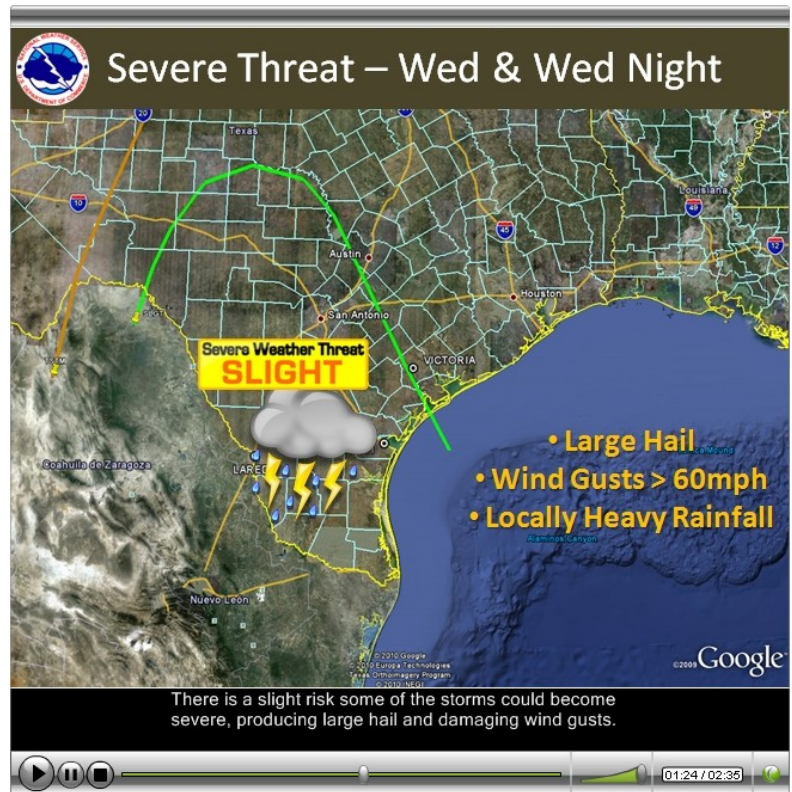
<http://www.srh.noaa.gov/graphiccast.php?site=crp>

## Today-Saturday



The Multimedia (audio and video) Weather Briefing is an Internet-accessible multimedia file that provides information concerning hazardous weather events in South Texas. The briefing provides a medium for supporting the planning activities of emergency response partners and customers by conveying the forecaster's reasoning and confidence concerning upcoming hazardous weather events in non-technical terms.

<http://www.srh.noaa.gov/crp/?n=briefing>



The purpose of GraphiCasts and the Multimedia Weather Briefing are to serve as a briefing tool that can be used by emergency managers, responders and decision-makers; media; local and state officials; law enforcement; school superintendents; spotters; and the general public. These products provide general information concerning the location, timing, and expected magnitude of weather impacts.

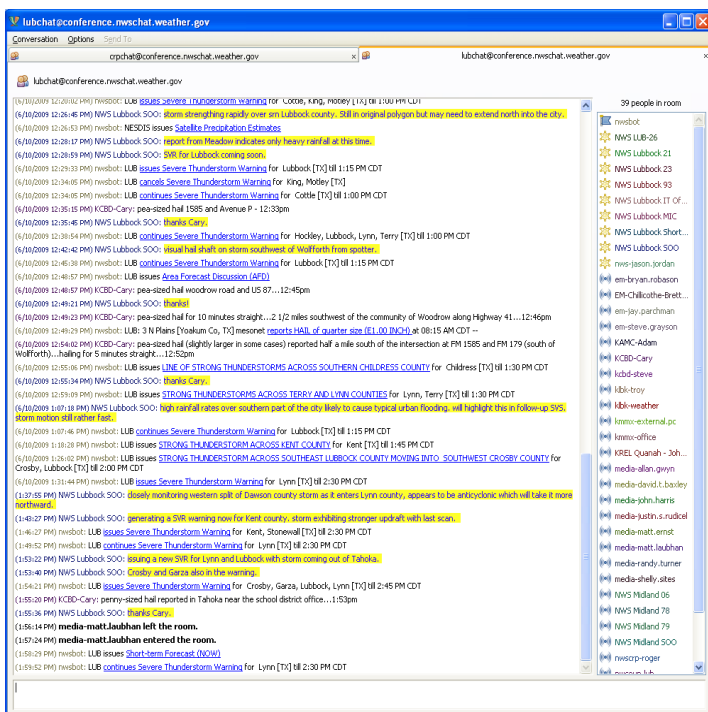


# NWSChat—Instant messaging



weather.gov

<https://nwschat.weather.gov/>



NWSChat is a secure Instant Messaging program utilized by NWS operational personnel to share critical warning decision expertise and other types of significant weather information essential to the NWS's mission of saving lives and property.

This information is exchanged in real-time with the media and emergency response community, who in turn play a key role in communicating the NWS's hazardous weather messages to the public.

NWSChat also provides media and emergency response partners with the ability to communicate significant event reports back to NWS operational personnel, who in turn utilize the information to make effective warning decisions.

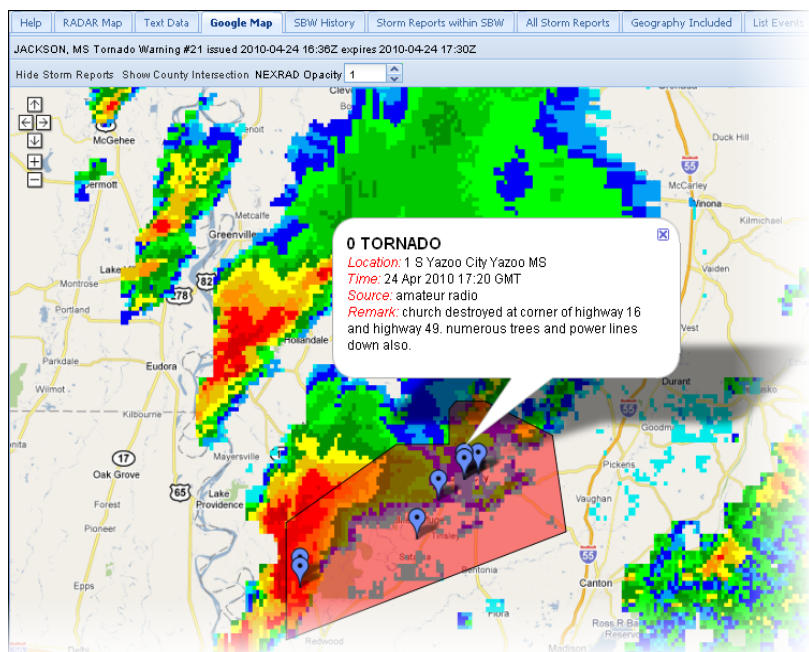
NWS partners can use NWSChat as an efficient means of seeking clarifications and enhancements to the communication stream originating from the NWS during a fast-paced significant weather or hydrologic event.

## NWSBOT

The *nwsbot* is an automated computer program that automatically sends out NWS products to the chat room. These products include warnings, watches, mesoscale convective discussions, public information statements, etc. The “bot” is always in each room and you don't need to do anything special to enable its functionality.

## INTERACTIVE MAPS

- II ✓ Available by clicking on *nwsbot* links in an NWSChat room.
- II ✓ Provides polygon warning depictions on Google™ Maps.
- II ✓ Displays “Storm Based Warning” history links including maps with storm reports.
- II ✓ Displays NWS RADAR data on Google™ Maps.
- II ✓ Pin-points and shows recent storm reports.
- II ✓ View text version of warnings, advisories and hazards.



# Incident Support

weather support for life's activities and accidents



NWS Corpus Christi operations



Marine and Aviation interests and safety



Chemical plants and oil refineries incidents



Wildfires



Onsite weather support at command post



Tropical Cyclones and Floods

# Product Cross Reference (NWS-to-WMO)

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The following is a NWS-to-WMO cross reference for a number of weather products issued by the NWS. The NWS identifier used is the middle three letters of the complete eight or nine digit identifier.

Air Quality Index Statement.....	AQI.....	FKUS7
Area Forecast Discussion.....	AFD.....	FXUS64
Area Forecast Product.....	AFP.....	FOUS54
Climatological Report (Misc).....	CLM.....	CXUS54
Climatological Report (Daily).....	CLI.....	CDUS44
Coastal Flood Warning/ Watch/ Statement.....	CFW.....	WHUS44
Coastal Waters Forecast.....	CWF.....	FZUS54
Coded Cities Forecast.....	CCF.....	FPUS44
Fire Weather Forecast.....	FWF.....	FNUS54
Flash Flood Warning.....	FFW.....	WGUS54
Flash Flood Watch.....	FFA.....	WGUS64
Flood Potential Outlook.....	ESF.....	FGUS74
Flood/Flash Flood Statement.....	FLS.....	WGUS84
Flood Warning.....	FLW.....	WGUS44
Marine Weather Statement.....	MWS.....	FZUS74

## Marine MWW

Non Precipitation Warnings/ Watches/ Advisories.....	NPW.....	WWUS74
Offshore Waters Forecast.....	OFF.....	FZNT24
Point Forecast Product.....	PFM.....	FOUS54
Public Information Statement.....	PNS.....	NOUS44
Record Event Report.....	RER.....	SXUS74
Red Flag Warning.....	RFW.....	WWUS84
Regional Weather Round-up.....	HRR.....	ASUS44
River Statement.....	RVS.....	FGUS84
Severe Local Storm Watch County Outline.....	WOU.....	WOUS64
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