

# HuRLOs: Definitions & Methodology



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<u>NOTICE FOR DEMO ACCOUNTS</u>: A Demo Account offers a simulating trading experience. Demo Account trading does not take place on a real exchange and does not involve the use of real money. Each Demo Account will display a simulated Authorized Purchase Limit. All orders placed, trades executed, settlements and balances displayed are for demonstration purposes only. Fees are applied for demonstration purposes only. Demo Account trading performance is not indicative of future trading performance on an exchange. The liquidity represented in the simulated trading environment may differ from the liquidity on an exchange. WRS may use a source other than Eqecat to provide total damage estimates for Demo Account trading.

#### A. Introduction

Weather Risk Solutions, LLC ("WRS") has developed Hurricane Risk Landfall Options<sup>TM</sup> – HuRLO<sup>TM</sup> – to address the risk posed by Hurricanes to property and businesses on the U.S. Coast. HuRLOs will trade on an Exchange via the Platform and will be cleared by a Clearing House. Based on the methodology set forth herein, WRS will determine whether a Hurricane makes Landfall on the U.S. Coast, the First Landfall Location, and whether the Damage Threshold has been met. (Capitalized terms are defined below.)

#### B. <u>Definitions</u>

(1) <u>"Automatic Exercise</u>" means the process by which after the expiration date for each HuRLO series, the market participant holding a HuRLO for the county or region in the applicable HuRLO series, which is the First Landfall Location (or the No Landfall outcome, if applicable) receives from the Clearing House its Pro-Rata-Share for the applicable HuRLO series.

(2) "<u>CFTC</u>" means the U.S. Commodity Futures Trading Commission.

(3) "<u>Clearing House</u>" means the CFTC registered derivatives clearing organization the Exchange designates to provide clearing and settlement services to the Exchange.

(4) "Damage Threshold" means the minimum amount of total economic damage a landfalling hurricane is estimated to have caused in the county or region that experienced landfall first, as estimated by Eqecat, Inc., necessary for HuRLOs for the particular county or region to be subject to automatic exercise and settlement. The Damage Threshold for each HuRLO county or region is \$1,000,000.00. If the Damage Threshold is not met or exceeded, trading in the then suspended HuRLO series may resume, as provided in the HuRLO contract specifications.

(5) "<u>Demo Account</u>" means a demonstration account used to trade HuRLOs in a simulated environment. All orders placed, trades executed, settlements and balances displayed are for demonstration purposes only. No real money is used.

(6) "<u>Eqecat</u>" means Eqecat, Inc., a leading catastrophe risk modeling firm that provides state-of-the-art products and services to the global property and casualty insurance, reinsurance and financial markets.

(7) "<u>Exchange</u>" means the CFTC registered designated contract market on which HuRLOs trade.



(8) "<u>First Landfall Location</u>" means the geographic location on the U.S. Coast where WRS determines that a Hurricane made Landfall first based on the methodology in Part C below.

(9) "<u>Hurricane</u>" means a Tropical Cyclone in which the maximum sustained surface wind is 64 kt (74 mph or 119 km/hr) or more.

(10) "<u>Hurricane Warnings</u>" are issued by the NHC when the NHC determines Hurricane conditions (maximum sustained surface winds of 64 kt or higher) are possible in a specified U.S. coastal area within 36 hours or less. The NHC may leave a Hurricane Warning 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.

(11) "<u>Hurricane Watches</u>" are issued by the NHC when the NHC determines Hurricane conditions (maximum sustained surface winds of 64 kt or higher) are possible in a specified U.S. coastal area within 48 hours or less.

(12) "Landfall" means that the Surface Center of a Hurricane passes from over the ocean onto land on the U.S. Coast. (Because the strongest winds in a Hurricane are not located precisely at the Surface Center, a Hurricane's strongest winds may impact land even if Landfall does not occur according to the NHC. Similarly, it is possible for a Hurricane to make Landfall according to the NHC and have its strongest winds remain over the ocean.)

(13) "<u>NHC</u>" means the U.S. National Hurricane Center. The NHC is a U.S. National Weather Service Specialized Center. The National Weather Service is a component of the National Oceanic and Atmospheric Administration, which is an operating unit of the U.S. Department of Commerce.

(14) "<u>NHC Advisory</u>" or "<u>NHC Advisories</u>" refer collectively to NHC Forecast Advisories and NHC Public Advisories. NHC Advisories contain official information issued by the NHC describing all Tropical Cyclone watches and warnings in effect along with details concerning Tropical Cyclone locations, intensity and movement.

(15) "<u>Platform</u>" means the WRS Electronic Trading Platform; the proprietary order entry and execution system operated by WRS and used by the Exchange for the placement and execution of orders or the collection and transmission of information relating to HuRLOs. Participants will access the Platform directly via the Internet.

(16) "Post-Storm Report" means a report issued by a local National Weather Service office summarizing the impact of a Tropical Cyclone on its forecast area. The report includes information on observed winds, pressures, storm surges, rainfall, tornadoes, damage and casualties.

(17) "<u>Primary Market</u>" means a market where qualifying participants may purchase HuRLOs on each of seventy-five different outcomes in a given HuRLO series.

(18) "<u>Pro-Rata-Share</u>" means the amount a participant would receive from the Clearing House, less applicable fees, based upon the following calculation: the number of HuRLOs in a particular HuRLO series held by the participant which are eligible for Automatic Exercise divided by the total number of outstanding HuRLOs in such HuRLO series that are eligible for Automatic Exercise, times the aggregate premia held by the Clearing House as of the expiration date for the



applicable HuRLO series.

(19) "<u>Secondary Market</u>" means a market where qualifying participants that own HuRLOs may sell HuRLOs to other qualifying participants. [Note: The purchase of HuRLOs in the Secondary Market does not increase the number of outstanding HuRLOs for purposes of Settlement and Automatic Exercise. Sellers in the Secondary Market must own the HuRLO they are attempting to sell – no short selling is allowed.]

(20) "<u>Surface Center</u>" means the center of circulation of a Tropical Cyclone at the surface as determined by NHC.

(21) "<u>Tropical Cyclone</u>" means a warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters, with organized deep convection and a closed surface wind circulation about a well-defined center. In the Atlantic Ocean, Caribbean Sea and Gulf of Mexico, the term Tropical Cyclone refers to Tropical Depressions, Tropical Storms and Hurricanes.

(22) <u>"Tropical Cyclone Report</u>" means a report published by the NHC summarizing the life history and effects of every Tropical Cyclone in the South Atlantic and Pacific Oceans. The report contains a summary of the Tropical Cyclone's life cycle and pertinent meteorological data, including the post-analysis best track table and other meteorological statistics. The report also contains a description of damage and casualties the system produced, as well as information on forecasts and warnings associated with the Tropical Cyclone. The NHC publishes a Tropical Cyclone Report on every Tropical Cyclone in the North Atlantic and Eastern Pacific Oceans.

(23) "<u>Tropical Depression</u>" means 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.

(24) "<u>Tropical Storm</u>" means 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).

(25) "<u>U.S. Coast</u>" means the U.S. Gulf Coast and U.S. East Coast between the U.S./Mexican border and U.S./Canadian border. The term, as used herein, is limited to the coastline segments for the seventy-four distinct coastal counties or regions enumerated in Schedule A.

#### C. <u>The Event – Determining Landfall, the First Landfall Location and Whether the</u> <u>Damage Threshold Has Been Met</u>

(1) <u>Landfall Source Data</u>. WRS calculates the First Landfall Location objectively and automatically based on official U.S. Government information from two sources: the NHC and the U.S Census Bureau:

• <u>NHC Advisory Position Data</u>. Hurricane locations are defined by estimated positions of a Tropical Cyclone's Surface Center, as reported in real time by the NHC in NHC Advisories. Hurricane locations are reported in NHC Advisories as latitude-longitude pairs, each expressed to the nearest 0.1°. For purposes of determining the First Landfall Location, a Tropical Cyclone's storm center is considered to have traveled in a straight-line path on a latitude-longitude plane between consecutive NHC Advisory positions.



• <u>U.S. Census Bureau Data</u>. Boundaries for the coastal counties and regions are defined by the geographic county outlines contained in the 2000 U.S. Census Bureau data.<sup>1</sup> The 2000 U.S. Census Bureau data consists of latitude-longitude pairs, which are listed at variable horizontal spacings. The nominal precision of the 2000 U.S. Census Bureau data is 1/1,000,000 of a degree, or roughly 4 inches. For purposes of determining the First Landfall Location, the coastline geography is regarded as being composed of the union of line segments defined by consecutive pairs of coastal points in the 2000 U.S. Census Bureau data.<sup>2</sup>

(2) <u>First Landfall Location</u>. The First Landfall Location shall be the first intersection of: (1) the line segment connecting two consecutive NHC Advisory positions of a given Hurricane's Surface Center showing the Hurricane made Landfall in the U.S. (*i.e.* the first pair of consecutive NHC Advisory positions reporting geographic positions for a Hurricane's Surface Center showing that the Hurricane made Landfall on the U.S. Coast); and (2) the line segment connecting two consecutive coastal boundary points in the 2000 U.S. Census Bureau database (*i.e.* the pair of coastal boundary points proximate to the earlier NHC Advisory position, between which the Hurricane's Surface Center has passed). WRS shall determine the coastal county or region where such intersection is located to be the First Landfall Location for purposes of HuRLOs. Any subsequent report or NHC Advisory from the NHC, a National Weather Service office, or any third party reporting a different location for such Landfall or geographic position for such Hurricane's Surface Center implying that the Hurricane made Landfall elsewhere shall be inapplicable to HuRLOs.

(3) <u>Damage Threshold</u>. WRS determines whether the Hurricane is estimated to have caused total economic damages in the First Landfall Location at or above the Damage Threshold objectively and automatically based on an estimate prepared for WRS by Eqecat shortly after the First Landfall Location is determined. Any other report by Eqecat or any third party implying that the Hurricane caused estimated (or actual) economic or other damages in the First Landfall Location or elsewhere shall be inapplicable to HuRLOs.

(4) <u>Finality</u>. All HuRLO market participants acknowledge that the First Landfall Location, as adopted herein, is final even though it may differ from the apparent location of a first Landfall from other sources, including real-time radar, satellite imagery, or the first Landfall location later published in a Post-Storm Report or a Tropical Cyclone Report or the best track table published therein. Market participants accept several possible explanations for potential discrepancies, including but not limited to: (1) the imprecision in the reported location of a Tropical Cyclone's Surface Center (*e.g.* the NHC estimates Surface Center locations to the nearest 0.1°); (2) an alternative data source may use a curving rather than straight-line path for the Tropical Cyclone's Surface Center; and/or (3) the curvature or other fine-scale features of the real coastline differ from its line-segment representation in the 2000 U.S. Census Bureau database. All HuRLO

<sup>&</sup>lt;sup>1</sup> 2000 Census Bureau data is available at www.census.gov/geo/www/cob/co2000.html (cartographic boundary files) and www.census.gov/geo/www/maps/stco\_02.htm (pdf map form).

<sup>&</sup>lt;sup>2</sup> The Florida Keys, from mainland Florida to Key West, are considered to be connected portions of Monroe County. However, small islands and other geographical features of the U.S. coastline may not be represented in the 2000 U.S. Census Bureau data and accordingly such locations are not considered part of U.S. Coast for purposes of determining the HuRLO Landfall Location. For example, the Dry Tortugas are not included in the 2000 U.S. Census Bureau data.



market participants acknowledge that the determination as to whether the Damage Threshold was met, as adopted herein, is final even though it may differ from other reports of estimated economic or other damage or subsequent reports of actual economic or other damage.

(5) <u>First Landfall Location on Point Dividing Two Coastal Counties</u>. In the event that the intersection of the Hurricane-path line segment with the U.S. coastline line segment occurs exactly on a point dividing two coastal counties or regions, for purposes of HuRLOs, the First Landfall Location will be deemed to have occurred at the county or region to the right of such location, as viewed from the perspective of the landfalling Hurricane.

(6) <u>Hurricane Intensity at Landfall</u>. In determining whether a Hurricane remained at or above Hurricane strength at Landfall, WRS shall define such Tropical Cyclone's intensity at Landfall as the greater of the maximum sustained windspeeds reported in the last NHC Advisory before Landfall, and the first NHC Advisory after Landfall.

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(7) <u>Illustrative Example</u>. *Figure 1* below illustrates how WRS will determine the First Landfall Location, using the example of the August 25, 2005 Florida Landfall of Hurricane Katrina. Coastal portions of Palm Beach, Broward and Miami-Dade Counties are indicated by the small dots that are endpoints of county boundary segments taken from the U.S. Census Bureau data file for Florida. For the purpose of determining the First Landfall Location, the coastline is regarded as being defined by line segments that would connect consecutive pairs of these points. Spacings between the points are variable, and some of the points are separated by distances smaller than the size of the individual dots in the figure, so that in some places the plotted points overlap.



Figure 1: Florida Landfall of Hurricane Katrina

A portion of the South Florida coastline in relation to the Florida Landfall of Hurricane Katrina on August 25, 2005. Black dots indicate storm positions estimated and reported in real time by the NHC in NHC Advisories, indicating the First Landfall Location as Miami-Dade County. Grey circles are storm positions estimated and reported by the NHC in the NHC Tropical Cyclone Report for the storm 4 months later. The rectangle in the upper right indicates the 0.1° x 0.1° precision of the position estimates.

The solid black dots connected by the black line segments reflect the NHC's estimate of Hurricane Katrina's Surface Center locations that were issued in real time by the NHC in NHC Advisories. The line segment connecting two of these NHC Advisory locations intersects the Florida coastline in northern Miami-Dade County. Therefore, had HuRLOs been available in



2005 (and assuming the Damage Threshold was met), Miami-Dade County HuRLOs for that HuRLO Series would have been subject to Automatic Exercise and Settlement. All of the other HuRLOs for such HuRLO Series would have expired at no value. Since this information was available in real time, Automatic Exercise and cash Settlement, as discussed herein, could have been made promptly following the first Landfall event.

Figure 1 illustrates the possible contrast between the location of first Landfall first reported by the NHC in NHC Advisories and the location published in the NHC Tropical Cyclone Report for the storm 4 months later.<sup>3</sup> With the benefit of more complete data and more time for analysis, the revised location of first Landfall for this storm is estimated to be at the extreme southern portion of the Broward County coastline. Although the NHC Tropical Cyclone report would have indicated a different location of first Landfall than the NHC Advisory, the NHC Tropical Cyclone Report is legally inapplicable to HuRLOs. WRS relies on NHC Advisories for several reasons. First, prompt disbursement of funds is an important and positive attribute of HuRLOs. Second, the Tropical Cyclone Report position estimates, which are likely more accurate than the preliminary NHC Advisory positions, are still nevertheless expressed only to the nearest 0.1° of latitude and longitude. The Broward County Landfall location implied by the Tropical Cyclone Report position estimates is still within 0.05° of the Miami-Dade County border. Finally, any discrepancies between the locations of first Landfall as estimated in real time by the NHC in NHC Advisories and their true physical locations are small compared to the geographical scope of Hurricane-force winds and the associated storm surge. Thus, regardless of the actual path of Hurricane Katrina, property owners in the vicinity of its Florida Landfall would have been protected by purchasing HuRLOs in both Broward and Miami-Dade Counties, as well as in additional adjoining Counties.

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<sup>&</sup>lt;sup>3</sup> R.D. Knabb, J.R. Rhome, and D.P. Brown. Tropical Cyclone Report, Hurricane Katrina, 23-30 August 2005, 43 pp. Available at http://www.nhc.noaa.gov/2005atlan.shtml.



(8) <u>Multiple Simultaneous Hurricanes</u>. If multiple Hurricanes are identified by the NHC at the same time, the lowest numbered HuRLO series that is still being traded will correspond to the first of the coexisting Hurricanes to make first Landfall on the U.S. Coast that meets the Damage Threshold, and the next lowest numbered HuRLO series will correspond to the subsequent Hurricane to make first Landfall on the U.S. Coast that meets the Damage Threshold, regardless of which Hurricane formed first.

*Figure 2* below illustrates the above scenario where multiple Hurricanes are identified by the NHC at the same time. For purposes of this example, assume the NHC identified two fictitious Hurricanes: Hurricane Babar and Hurricane Cala.



### Figure 2: Multiple Hurricanes

As illustrated in *Figure 2* above, on August 31st the weather system that later developed into Hurricane Babar formed in the Atlantic Ocean. On September 2nd, the weather system that later developed into Hurricane Cala formed in the Caribbean. On September 6th, Hurricane Cala made Landfall on the U.S. Coast in Texas. On September 8th, Hurricane Babar made Landfall on the U.S. Coast in Florida. Hurricane Cala's Landfall would have triggered Automatic Exercise of a Texas county HuRLO in the lowest numbered HuRLO series then available (assuming the Damage Threshold was met), even though Hurricane Cala formed after Hurricane Babar. Hurricane Babar would have triggered Automatic Exercise of a Florida county HuRLO in the next lowest numbered HuRLO series then available (assuming the Damage Threshold was met).

(9) <u>Multiple Landfalls of a Single Hurricane</u>. A single Hurricane may trigger Automatic Exercise of more than one HuRLO series, to the extent additional HuRLO series are available



provided: (a) after a Hurricane makes Landfall on the U.S. Coast that triggers Automatic Exercise of a HuRLO series (this First Landfall Location is referred to as "Point A"); (b) the NHC reports in NHC Advisories that the Surface Center of such Hurricane travels across the U.S. Coast over the ocean; (c) such storm makes an additional Landfall on the U.S. Coast at or above Hurricane strength (the location of this Landfall is referred to as "Point B"); (d) WRS determines that the location of such additional Landfall on the U.S. Coast, (*i.e.* Point B) is at least 150 nautical miles, according to great-circle distance, from the prior First Landfall Location (*i.e.* Point A) (referred to as the "150 Nautical Mile Zone"); and (d) the Damage Threshold is met in the additional First Landfall Location. A Hurricane may make Landfall on the U.S. Coast (or multiple Landfalls on the U.S. Coast within the applicable 150 Nautical Mile Zone. In such case, the Hurricane Landfalls on the U.S. Coast within the 150 Nautical Mile Zone would not trigger Automatic Exercise of an additional HuRLO series; the first Hurricane Landfall beyond the 150 Nautical Mile Zone may trigger Automatic Exercise of an additional HuRLO series is available.

*Figure 3 and Figure 4* below illustrate how a single Hurricane can trigger Automatic Exercise of an additional HuRLO series, using Hurricane Katrina as an example. The Florida Landfall of Hurricane Katrina, illustrated in *Figure 1* above and *Figure 3* below, would have triggered Automatic Exercise of Miami-Dade County HuRLOs for HuRLO Series 3 (assuming the Damage Threshold was met) and as discussed below, the initial Louisiana Landfall of Hurricane Katrina would have triggered Automatic Exercise of Plaquemines Parish HuRLOs for HuRLO Series 4 (assuming the Damage Threshold was met and an additional HuRLO series had been issued).



#### Figure 3: Path of Hurricane Katrina





NHC between August 23, 2005 and August 31, 2005. The red line indicates the distance that Hurricane Katrina traveled from its First Landfall Location on the east coast of Florida to the location where Hurricane Katrina first made Landfall outside the 150 Nautical Mile Zone, as further illustrated in *Figure 4* below. The dashed red circle shows the 150 Nautical Mile Zone surrounding Hurricane Katrina's First Landfall Location in Florida. The subsequent Landfall by Hurricane Katrina on the U.S. Coast beyond this 150 Nautical Mile Zone, at Plaquemines Parish would have triggered Automatic Exercise of an additional HuRLO series was available.





A portion of the Louisiana coastline in relation to the Landfalls of Hurricane Katrina on August 29, 2005. Black dots indicate storm positions estimated and published in real time by the NHC in NHC Advisories.

In *Figure 4* Coastal portions of Plaquemines, St. Bernard, Orleans and St. Tammany Parishes are indicated by the small dots that are endpoints of county boundary segments taken from the U.S. Census Bureau data file for Louisiana. As illustrated in *Figure 3*, Hurricane Katrina made Landfall in Miami-Dade County Florida and would have triggered Automatic Exercise of Miami-Dade HuRLOs for HuRLO Series 3 (assuming the Damage Threshold was met). Hurricane Katrina then crossed the U.S. Coast on the west coast of Monroe County, Florida and re-emerged over the ocean. Days later, Hurricane Katrina made Landfall on the coast of Plaquemines Parish



Louisiana (29.3° latitude, 89.6° longitude). Hurricane Katrina's Landfall in Plaquemines Parish would have triggered Automatic Exercise of Plaquemines Parish HuRLOs for HuRLO Series 4 (assuming the Damage Threshold was met), to the extent such HuRLO series was available. WRS would have determined that the First Landfall Location on the coast of Plaquemines Parish was approximately 543 nautical miles, according to great-circle distance, from Hurricane Katrina's First Landfall Location in Miami-Dade County, Florida, as represented by the red line in *Figure 3* – well beyond the 150 Nautical Mile Zone illustrated in *Figure 3*.

Three subsequent Landfalls are also illustrated in Figure 4: one on the southern side of the peninsula separating Plaquemines Parish and St. Bernard Parish; one across the bay between this peninsula and St. Bernard Parish; and one in St. Tammany Parish. These three additional Landfalls would not have triggered Automatic Exercise of additional HuRLO series, if available (regardless of whether the Damage Threshold was met in each location). Once WRS determined an additional First Landfall Location for Hurricane Katrina in Plaquemines Parish Louisiana, a new 150 Nautical Mile Zone would have been created around the First Landfall Location in Plaguemines Parish Louisiana. Automatic Exercise of an additional HuRLO series would only be triggered if Hurricane Katrina made an additional Landfall beyond this new 150 Nautical Mile Zone, at or above Hurricane strength and the Damage Threshold was met in the additional First Landfall Location. Since Hurricane Katrina only traveled approximately 25, 31, and 49 nautical miles, respectively, from the Plaquemines Parish First Landfall Location to each additional Landfall location, these subsequent Landfalls would not have triggered Automatic Exercise of an additional HuRLO series. If instead of traveling due north, Hurricane Katrina made an additional Landfall on the U.S. Coast beyond the 150 Nautical Mile Zone surrounding Plaguemines Parish First Landfall Location, such additional Landfall would have triggered Automatic Exercise of an additional HuRLO series, provided the Damage Threshold was met in the additional First Landfall Location and an additional HuRLO series was available.

(10) <u>Alternative Hurricane Data</u>. Notwithstanding the foregoing, if the NHC changes its procedures with respect to its reporting of Tropical Cyclone locations and/or intensities in its NHC Advisories, or if NHC Advisories become unavailable or unduly delayed, WRS may, in its sole discretion, rely on the first available alternative data reported by the U.S. National Weather Service concerning Tropical Cyclone locations and/or intensities in determining whether a Hurricane makes Landfall on the U.S. Coast and the First Landfall Location.

(11) <u>Alternative Damage Estimates</u>. Notwithstanding the foregoing, if Eqecat's economic damage estimates become unavailable or unduly delayed, WRS may, in its sole discretion, rely on an alternative source of data, provided the source is reliable and WRS provides participants with prior written notice on its website.

## Schedule A

# HuRLO™

Code	#	ST	Name
W*XLF	0		No Landfall
W*TCM W*TKL W*TNU W*TAR W*TCL W*TMA W*TBR W*TGA W*THE	1 2 3 4 5 6 7 8 9 10	TX TX TX TX TX TX TX TX TX TX	Cameron Willacy+Kenedy Kleberg Nueces+SanPatricio Aransas Calhoun+Refugio Matagorda+Jackson Brazoria Galveston+Chambers Jefferson
W*LCA W*LVE W*LIB W*LSM W*LTE W*LLA W*LJE W*LJE W*LPL W*LSB	11 12 13 14 15 16 17 18 19	LA LA LA LA LA LA LA	Cameron Vermilion Iberia St. Mary Terrebonne Lafourche Jefferson Plaquemines StBernard+Orleans+StTammany
W*MHA W*MJA	20 21	MS MS	Hancock+Harrison Jackson
W*AMO W*ABA	22 23	AL AL	Mobile Baldwin
W*FES W*FOK W*FOK W*FBA W*FGU W*FGU W*FTA W*FLV W*FCI W*FCI W*FPA W*FPA W*FPA W*FPI W*FSA W*FCH W*FCH W*FCH	24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40		Escambia Santa Rosa Okaloosa Walton Bay Gulf+Franklin Wakulla+Jefferson Taylor+Dixie Levy Citrus Hernando Pasco Pinellas Manatee+Hillsborough Sarasota Charlotte Lee
W*FCO W*FMO W*FMD	41 42 43	FL FL FL	Collier Monroe Miami-Dade

Code	#	ST	Name
W*FBW W*FPB W*FSL W*FSL W*FBV W*FVO W*FVO W*FFL W*FSJ W*FDU W*FNA	44 45 46 47 48 49 50 51 52 53 54	FL FL FL FL FL FL FL FL	Broward Palm Beach Martin St. Lucie Indian River Brevard Volusia Flagler St. Johns Duval Nassau
W*GCA	55	GA	Camden
W*GGL	56	GA	Glynn
W*GMC	57	GA	McIntosh
W*GLI	58	GA	Liberty+Bryan
W*GCH	59	GA	Chatham
W*SBE	60	SC	Beaufort+Jasper
W*SCO	61	SC	Colleton
W*SCH	62	SC	Charleston
W*SGE	63	SC	Georgetown
W*SHO	64	SC	Horry
W*NBR W*NNH W*NPE W*NON W*NCA	65 66 67 68 69	NC NC NC NC	Brunswick New Hanover Pender Onslow Carteret
W*GNC	70	Grou	p: Rest of NC and VA except Northampton+Accomack
W*GNJ	71	Grou	p: Northampton+Accomack VA; and MD, DE, NJ
W*GNY	72	Grou	p: NY and CT
W*GMA	73	Grou	p: RI, MA, NH, York+Cumberland+Sagadahoc ME
W*GME	74	Grou	p: ME, from Lincoln to Canadian border

Note: "\*" is a placeholder and will designate the HuRLO series (*i.e.* 1, 2, 3)