Glossary

A

Alluvial Soils: Fine-grained sediment, especially of mud or clay particles at the bottom of a river or lake.

ARC: American Red Cross

ASOS: Automated Surface Observing System (NWS & FAA)

ATM: Abbreviated Transportation Model

Average Error Affected List: Lists those counties and/or parishes affected by the currently displayed Average Error Swath. These are the areas that the storm center could cross, given the average forecast error.

Average Error Swath: Represents the potential location of the eye of the storm along the 120-hour forecast period based on the NHC's statistical analysis for their average forecast errors during past storms. This area represents the average uncertainty in the forecast and is represented by along-track (the forward movement of the storm may speed up or slow down) and across-track (the direction of the storm may vary from the forecast track) errors. Technically, according to NHC, there is approximately 60% confidence that the storm's in the future will be somewhere in the swath.

B

Bathymetry: The measurement of the depth of large bodies of water, for example, lakes, oceans, and seas.

Behavioral Analysis: Determines the expected response of the population threatened by various hurricane events in terms of the percentage expected to evacuate, probable destinations of evacuees, public shelter use, and utilization of available vehicles.

C

CD: Compact Disk

CDEMHS OEM: Connecticut Department of Emergency Management and Homeland Security Office of Emergency Management

CEMA: Connecticut Emergency Management Association

Glossary

CHART: Coordinated Highways Action Response Team

Clearance Time: The time required to clear the roadways of all evacuating vehicles. It is expressed in hours before the arrival of sustained 34-knot winds, necessary for an evacuation. Clearance times are based on five variables: 1) hurricane category; 2) expected evacuee response; 3) tourist occupancy situation (where applicable); 4) background traffic; and 5) traffic control measures.

ConnDOT: Connecticut Department of Transportation

CPHC: Central Pacific Hurricane Center

Critical Facilities: Facilities that may need assistance of special consideration and planning if they are to be evacuated.

CVI: Coastal Vulnerability Index

D

DAE: Disaster Assistance Employee (FEMA)

Decision Arc Method: Assists officials in making evacuation decisions prior to the time at which the radius of sustained 34-knot winds touches the appropriate Decision Arc (Decision Point). For example, with a clearance time of 15 hours, and a hurricane forward speed of 10 knots, the evacuation should be initiated before the sustained 34-knot winds get within 150 nautical miles (15 hours x 10 knots = 150 nautical miles) of the area being evacuated.

Decision Arcs: Clearance times converted to distance by accounting for the forward speed of the hurricane.

DEM: Digital Elevation Model

DHS: Department of Homeland Security

E

EOC: Emergency Operations Center

Evacuation: People leaving their residence to go from a perceived dangerous place to a perceived safer place.

Evacuation Timing: Appropriate start and end times of an evacuation based on storm and traffic conditions.

Evacuation Zone: Designated by local officials and based on the surge inundation maps used in the transportation model. Surge inundation areas are divided up into zones for modeling purposes and evacuation notice dissemination.

Extreme Wind Warning: Alert issued by the NHC that indicates extreme sustained winds of a major hurricane (115 mph or greater), usually associated with the eyewall, are expected to begin within an hour.

F

Fathom: A unit of length equal to 1.83 m (6 ft), used mainly in nautical contexts for measuring the depth of water.

FEMA: Federal Emergency Management Agency

FHWA: Federal Highway Administration

FIRM: Flood Insurance Rate Map

G

Geology: The study of the structure of the Earth or another planet, in particular its rocks, soil, and minerals, and its history and origins.

GIS: Geographic Information Systems

GOES: Geostationary Operational Environmental Satellite

H

HAR: Highway Advisory Radio

Hazards Analysis: Determines the timing and magnitude of wind and storm surge hazards that can be expected from hurricanes of various categories, tracks, and forward speeds.

HAZUS: Hazards United States (Software Program)

HES: Hurricane Evacuation Study

HESE: Hurricane Evacuation Shelter Evaluation

HLT: Hurricane Liaison Team

HURREVAC: HURRicane EVACuation Tracking and Analysis Software

I

ICCOH: Intergovernmental Coordination Committee on Hurricanes

IFLOWS: Integrated Flood Observing and Warning System

Inland Wind Model: Applies a simple two parameter decay equation to the hurricane wind field at landfall to estimate the maximum sustained surface wind as a storm moves inland. This model can be used for operational forecasting of the maximum winds of land falling tropical cyclones. It can also be used to estimate the maximum inland penetration of hurricane force winds (or any wind threshold) for a given initial storm intensity and forward storm motion.

ITS: Intelligent Transportation Systems

J

K

L

LIDAR: Light Detection And Ranging technology used for determining land elevation.

Loam Soils: According to the proportions of sand, silt, and clay, soils are broadly classified into several arbitrarily defined textural groups. The texture of a soil greatly affects its productivity. Soils with a high percentage of sand are usually incapable of storing sufficient water to provide the best plant growth and lose large amounts of plant-nutrient minerals by leaching to the subsoil. Soils containing a larger percentage of finer particles, for example, the clays and loams are excellent reservoirs for water and contain readily available mineral materials.

M

MEOW: Maximum Envelope of Water; stores the maximum water surface elevation in each SLOSH grid cell for all the hurricane tracks in one direction for a particular forward speed, and storm intensity.

MEOW Affected List: Lists those counties and/or parishes affected by the currently displayed Decay Model MEOW. These lists are typically long, since this is a hypothetical list for all those sufficiently close to the coast to be affected, no matter where the storm strikes.

MH: Mobile/Manufactured Home

Meteorology: The scientific study of the Earth's atmosphere, especially its patterns of climate and weather.

MLW: Mean Low Water

MLLW: Mean Low Low Water

MOMs: Maximums of Maximums; represents the maximum water surface elevation for each SLOSH grid cell regardless of approach direction, forward speed or track.

N

NAD: North American Datum

NAVD: North American Vertical Datum

NAWAS: National Warning System

NFIP: National Flood Insurance Program

NGVD: National Geodetic Vertical Datum

NHC: National Hurricane Center

NHMPP: National Hurricane Mitigation and Preparedness Program

NOAA: National Oceanographic and Atmospheric Administration

NHP: National Hurricane Program

NOS: National Oceanographic Service

NWS: National Weather Service

O

Overlay Mode: Allows the user to show several advisories for the same storm on the screen at once.

P

PIO: Public Information Officer

PSN: People with Special Needs

Pre-landfall Hazard Distance: The distance from the radius of tropical storm winds of an approaching hurricane to each jurisdiction.

Public Shelter Demand: The number of evacuees expected to seek public shelter.

Q

R

RAWS: Remote Automated Weather Stations

RMW: Radius of Maximum Winds

ROC: Regional Operation Center

ROLR: Refuge of Last Resort

S

Saffir-Simpson Hurricane Scale: Scale developed to describe the potential storm surge generated by hurricanes:

- **Category 1**. Winds of 74 to 95 miles per hour
- **Category 2**. Winds of 96 to 110 miles per hour
- **Category 3**. Winds of 111 to 130 miles per hour
- **Category 4**. Winds of 131 to 155 miles per hour
- **Category 5**. Winds greater than 155 miles per hour

SCO: State Coordinating Officer

Shelter Analysis: Presents an inventory of public shelter facilities, capacities of the shelters, vulnerability of shelters to storm surge flooding, and shelter demand for each county.

Shoals: An area of shallow water in a larger body of water.

SHP: State Highway Patrol

SLOSH Model: Acronym meaning Sea, Lake and Overland Surges (SLOSH) from hurricanes. SLOSH provides heights of storm surge for various combinations of hurricane strength, forward speed of storm, and direction of storm. SLOSH model is used for real-time forecasting of surges from approaching hurricanes within selected Gulf and Atlantic coastal basins.

SMA: Standard Metropolitan Area (from U.S. Census)

SOC: Statewide Operations Center

Storm Category: **Category 1**. Winds of 74 to 95 miles per hour
Category 2. Winds of 96 to 110 miles per hour
Category 3. Winds of 111 to 130 miles per hour
Category 4. Winds of 131 to 155 miles per hour
Category 5. Winds greater than 155 miles per hour

Storm Surge: The abnormal rise in water level caused by wind and pressure forces of a hurricane. Storm surge produces most of the flood damage and drowning associated with tropical systems - highest surges from a hurricane usually occur on the northeast quadrant of the storm's track.

T

TDR: Technical Data Report (part of Hurricane Evacuation Study)

TMC: Traffic Management Center

TPC: Tropical Prediction Center

Topography/ Topographic Features: Features on the surface of land, including natural features such as mountains and rivers and constructed features such as highways and railroads.

Traffic Analysis Zone (TAZ): Small sub-areas of the evacuation zone used by the transportation model to determine how many vehicles will use each roadway.

Transportation Analysis: To determine the time required to evacuate the threatened population (clearance times) under a variety of hurricane situations and to evaluate traffic control measures that could improve the flow of evacuating traffic.

Tropical Cyclones: Defined by the National Weather Service as non-frontal, low-pressure synoptic scale (large-scale) systems that develop over tropical or subtropical waters and have a definite organized circulation.

- Tropical depressions are < 33 knots (38 mph).
- Tropical storms are 34 to 63 knots (37-74 mph).
- Hurricanes are > 64 k Geographical areas affected by tropical cyclones are referred to as tropical cyclone basins knots (75 mph) Atlantic tropical cyclone basin is one of six in the world and includes much of the North Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico.

Official Atlantic hurricane season begins on June 1 and extends through November 30 of each year.

Tropical Storm Warning: An alert issued by the NHC that indicates tropical storm conditions are expected in the specified area within 36 hours

Tropical Storm Watch: An alert issued by the NHC that indicates tropical storm conditions are possible in the specified area within 48 hours.

TWC: The Weather Channel

U

USACE: United States Army Corps of Engineers

USGS: United States Geological Survey

UTC: Coordinated Universal Time (Greenwich Mean Time)

V

Vulnerability Analysis: Identifies those areas, populations, and facilities that are vulnerable to specific hazards under a variety of hurricane threats.

Vulnerable Population: Persons residing within the evacuation zones subject to storm surges, and the residents of mobile homes, which may be threatened by hurricane force winds.

W

Wave Setup: An increase in the mean water level on a beach due to the effects of waves running up the beach and breaking. Under some conditions the set-up can be large enough to contribute to local flooding and overtopping of sea defenses.

WFO: Weather Forecast Office

Wind Swath: A display of the NHC or CPHC projected swath of winds for the current advisory you have displayed. The colors follow the pattern for winds elsewhere in the program: blue for 34 knot (40 mph) or greater, yellow for 50 knot (58 mph) or greater, and red for 64 knot (74 mph) or greater. Note that there is no further distinction of winds beyond 64 knots since the NHC or CPHC does not project but the 3 wind groups noted above in their advisory.

X

Y

Z