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Official 90-day Outlooks are issued once each month near mid-month at 8:30am Eastern Time. Please consult the schedule of 30 & 90-day outlooks for exact release dates.

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More Outlooks
0.5mn DJF 2011
1.5mn JFM 2012
2.5mn FMA 2012
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4.5mn AMJ 2012
5.5mn MJJ 2012
6.5mn JJA 2012
7.5mn JAS 2012
8.5mn ASO 2012
9.5mn SON 2012
10.5mn OND 2012
11.5mn NDJ 2012
12.5mn DJF 2012
0.5mn Dec 2011

Tools Used (see Discussion for explanation)
CCA
OCN
CMP
SMT
POE

USA.gov Government Made Easy

PROGNOSTIC DISCUSSION FOR MONTHLY OUTLOOK
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
300PM EST WEDNESDAY NOV 30 2011

30-DAY OUTLOOK DISCUSSION FOR DECEMBER 2011

OCEANIC AND ATMOSPHERIC OBSERVATIONS THROUGHOUT THE PACIFIC BASIN INDICATE LA NINA CONDITIONS AT THE CURRENT TIME. THERE HAS BEEN LITTLE CHANGE IN EAST-CENTRAL PACIFIC SST ANOMALIES SINCE THE 30-DAY OUTLOOK WAS RELEASED IN MID-NOVEMBER. THE LATEST SEA SURFACE TEMPERATURE (SST) OBSERVATIONS CONTINUE TO SHOW ANOMALIES OF BETWEEN -0.5 C AND -1.0 C ALONG THE EQUATOR FROM THE DATE LINE EASTWARD TO ABOUT 100W, WITH LOCALIZED ANOMALIES AS MUCH AS -2 C NEAR 120W. SST ANOMALIES HAVE DECREASED TO NEAR THE SOUTH AMERICAN COAST, BUT CONSIDERING THE EXTENSIVE AMOUNT OF BELOW NORMAL SUB-SURFACE OCEAN TEMPERATURES, THIS IS LIKELY A TEMPORARY FLUCTUATION WITH LITTLE SIGNIFICANCE TO THE LARGE SCALE OCEANIC CONDITIONS IN THE EQUATORIAL PACIFIC. MONTHLY MEAN ATMOSPHERIC CONDITIONS OVER THE TROPICAL PACIFIC OCEAN CONTINUE TO BE CONSISTENT WITH LA NINA CONDITIONS, WITH A TENDENCY FOR SUPPRESSED CONVECTION NEAR THE EQUATOR OVER THE CENTRAL PACIFIC WITH ENHANCED LOW LEVEL EASTERLY WINDS AND UPPER LEVEL WESTERLY WINDS OBSERVED IN PARTS OF THE PACIFIC BASIN. THERE HAS BEEN A CONSIDERABLE AMOUNT OF VARIABILITY IN THE ATMOSPHERIC CONDITIONS OVER THE PACIFIC BASIN DUE TO AN ACTIVE MADDEN-JULIAN OSCILLATION (MJO) FOR THE PAST MONTH OR SO. THE MJO HAS REMAINED ACTIVE IN THE LAST FEW WEEKS AND ITS PHASE HAS ROUGHLY FOLLOWED THE PREDICTIONS FROM THE GFS FROM A FEW WEEKS AGO. THE GFS CONTINUES TO FORECAST AN ACTIVE MJO IN THE NEXT FEW WEEKS, AND THIS IS EXPECTED TO HAVE AN IMPACT ON THE MONTHLY MEAN CONDITIONS FOR THE U.S.

LA NINA IS EXPECTED TO HAVE AN IMPACT ON THE MONTHLY MEAN TEMPERATURE AND PRECIPITATION OVER MUCH OF NORTH AMERICA. THE GFS ENSEMBLE PREDICTIONS INDICATE AN ACTIVE MJO ENTERING AN AREA THAT MAY ENHANCE TYPICAL LA NINA TEMPERATURE TELECONNECTIONS IN THE EARLY AND MIDDLE PART OF DECEMBER. THIS RESULTS IN AN INCREASE IN THE AREA OF ENHANCED CHANCES OF BELOW NORMAL TEMPERATURES IN THE WEST AND ABOVE NORMAL TEMPERATURES IN PARTS OF THE EASTERN CONUS RELATIVE TO THE FORECAST ISSUED IN MID-NOVEMBER. THE ARCTIC OSCILLATION (AO) IS ALSO POSITIVE AND FORECAST TO REMAIN SO FOR THE NEXT WEEK, WITH ENHANCED CHANCES OF POSITIVE AO OUT TO AT LEAST TWO WEEKS. THIS ALSO FAVORS ABOVE NORMAL TEMPERATURES IN THE EAST. CONFIDENCE IS NOT HIGH, HOWEVER, BECAUSE THE CURRENT UPPER LEVEL FLOW PATTERN IS HIGHLY AMPLIFIED AND FORECAST TO REMAIN SO, WITH A MEAN TROUGH OVER THE CONUS. TEMPERATURES CRITICALLY DEPEND ON THE LOCATION OF THIS TROUGH. EVEN THOUGH MOST GFS ENSEMBLE MEMBERS FAVOR THE TROUGH STAYING OVER THE WESTERN PART OF THE CONUS, THERE SOME MEMBERS THAT MOVE THE TROUGH EASTWARD, SIGNIFICANTLY CHANGING THE TEMPERATURE ANOMALY PATTERNS. THE POSSIBILITY OF A CONTINUED ACTIVE MJO MAY INCREASE THE VARIABILITY IN ATMOSPHERIC CIRCULATION PATTERNS AFFECTING THE U.S. AS ITS PHASE SHIFTS EASTWARD DURING THE MONTH.

THE OUTLOOK FOR DECEMBER CALLS FOR ENHANCED CHANCES FOR ABOVE NORMAL TEMPERATURES FOR PARTS OF THE EASTERN CONUS AND ENHANCED CHANCES FOR BELOW NORMAL TEMPERATURES IN MOST OF THE WEST. BELOW NORMAL TEMPERATURES ARE ALSO FAVORED FOR SOUTHERN AND CENTRAL ALASKA. THESE ARE TYPICAL ENSO TELECONNECTIONS AND ARE SUPPORTED BY THE CFS. ABOVE NORMAL TEMPERATURES ARE FAVORED FOR NORTHERN ALASKA DUE TO TRENDS.

PRECIPITATION ANOMALIES FOR DECEMBER ARE EXPECTED BE CONSISTENT WITH LA NINA COMPOSITES, WHICH FAVOR BELOW MEDIAN PRECIPITATION AMOUNTS ALONG SOUTHERN PARTS OF THE CONUS FROM THE SOUTHERN ROCKIES TO THE SOUTHEASTERN CONUS. DECEMBER PRECIPITATION AMOUNTS TEND TO BE ABOVE MEDIAN FROM THE PACIFIC NORTHWEST TO THE NORTHERN ROCKY MOUNTAINS IN LA NINA YEARS. CONFIDENCE IN THE WET SIGNAL FOR THE PACIFIC NORTHWEST IS DIMINISHED SOMEWHAT DUE TO FORECAST BELOW MEDIAN PRECIPITATION AMOUNTS FOR THE FIRST PART OF THE MONTH. ENHANCED MJO ACTIVITY

DIMINISHES CONFIDENCE IN THE AREAS OF ENHANCED CHANCES OF DRY CONDITIONS, SINCE CERTAIN PHASES OF THE MJO CAN SOMETIMES RESTORE THE STRENGTH OF THE SOUTHERN JET, WHICH IS NORMALLY WEAKENED DURING LA NINA WINTERS. AREAS OF ENHANCED CHANCES FOR ABOVE MEDIAN PRECIPITATION AMOUNTS HAVE BEEN ADDED IN SOUTHERN ALASKA AND ALSO IN PARTS OF THE SOUTHERN GREAT PLAINS AND MIDDLE MISSISSIPPI VALLEY DUE TO SHORT TERM FORECASTS FROM THE GFS FOR THE FIRST TWO WEEKS OF THE MONTH.

FOR REMAINING AREAS THAT ARE NOT HIGHLIGHTED, THERE ARE EQUAL CHANCES (EC) FOR BELOW, NEAR, AND ABOVE-MEDIAN TOTAL PRECIPITATION DURING THE PERIOD AS THERE WERE NO STRONG AND CONSISTENT CLIMATE SIGNALS AMONGST THE AVAILABLE FORECAST TOOLS IN THESE AREAS.

THE MAIN FACTORS WHICH USUALLY INFLUENCE THE MONTHLY CLIMATE OUTLOOK INCLUDE:
1) EL NINO AND LA NINA - WHICH COMPRISE ENSO. IMPACTS OF THESE EVENTS ARE SUMMARIZED BY SEPARATING 3-MONTH OBSERVATIONS FROM 3 OR MORE DECADES INTO EL NINO, NEUTRAL, AND LA NINA SETS, AVERAGING EACH SEPARATELY, AND THEN COMPUTING ANOMALIES. THESE ARE CALLED "COMPOSITES", USED AT TIMES TO SUBJECTIVELY MODIFY THE FORECAST.
2) TRENDS - APPROXIMATED BY THE OCN TOOL AS THE DIFFERENCE BETWEEN THE MOST RECENT 10-YEAR MEAN OF TEMPERATURE OR 15-YEAR MEAN OF PRECIPITATION FOR A GIVEN LOCATION AND TIME OF YEAR AND THE 30-YEAR CLIMATOLOGY PERIOD (CURRENTLY 1981-2010).
3) THE TROPICAL 30-60 DAY OSCILLATION - SOMETIMES CALLED MADDEN JULIAN OSCILLATION (MJO) - AFFECTS CLIMATE VARIABILITY WITHIN SEASONS.
4) THE NORTH ATLANTIC OSCILLATION (NAO) AND THE PACIFIC NORTH AMERICAN (PNA) PATTERNS - WHICH AFFECT THE TEMPERATURE ANOMALY PATTERN ESPECIALLY DURING THE COLD SEASONS. THESE PHENOMENA ARE NOT PREDICTABLE BEYOND A WEEK OR TWO IN THE FUTURE.
5) THE PACIFIC DECADAL OSCILLATION (PDO) - AN ENSO-LIKE PATTERN OF CLIMATE VARIABILITY AFFECTING THE TROPICS AND THE NORTH PACIFIC AND NORTH AMERICAN REGIONS, BUT WHICH VARIES ON A MUCH LONGER TIME-SCALE THAN ENSO.
6) PERSISTENTLY DRY OR WET SOILS IN THE SPRING AND SUMMER AND SNOW AND ICE COVER ANOMALIES IN THE WINTER. THESE FACTORS TEND TO PERSIST FOR LONG PERIODS AND ACT AS A KIND OF MEMORY IN THE CLIMATE SYSTEM.
7) STATISTICAL FORECAST TOOLS - CANONICAL CORRELATION ANALYSIS (CCA), SCREENING MULTIPLE LINEAR REGRESSION (SMLR), CONSTRUCTED ANALOGUE (CA) AND ENSEMBLE CCA (ECCA).
8) DYNAMICAL FORECAST MODELS - INCLUDING THE GFS (FOR ZERO-LEAD UPDATE FORECASTS), THE NCEP CLIMATE FORECAST SYSTEM (CFS). THE UPGRADED PARALLEL VERSION OF THE CFS (CFSV2) BECAME OPERATIONAL IN LATE MARCH OF 2011. BOTH VERSIONS OF CFS ARE CURRENTLY RUN IN PARALLEL. AN EXPERIMENTAL MODEL, THE NATIONAL MULTI-MODEL ENSEMBLE, COMPRISED OF SEVERAL DYNAMICAL MODELS AND DESIGNATED NMME, MAY ALSO BE USED SUBJECTIVELY.

FORECASTER: DAVID UNGER

THE CLIMATIC NORMALS ARE BASED ON CONDITIONS BETWEEN 1981 AND 2010, FOLLOWING THE WORLD METEOROLOGICAL ORGANIZATION CONVENTION OF USING THE MOST RECENT 3 COMPLETE DECADES AS THE CLIMATE REFERENCE PERIOD. THE PROBABILITY ANOMALIES FOR TEMPERATURE AND PRECIPITATION BASED ON THESE NEW NORMALS BETTER REPRESENT SHORTER TERM CLIMATIC ANOMALIES THAN THE FORECASTS BASED ON OLDER NORMALS.

THE NEXT MONTHLY OUTLOOK...FOR JAN ... WILL BE ISSUED ON THU DEC 15 2011

THESE OUTLOOKS ARE BASED ON DEPARTURES FROM THE 1981-2010 BASE PERIOD.

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