PROGNOSTIC DISCUSSION FOR LONG-LEAD OUTLOOKS
CLIMATE PREDICTION CENTER NCEP
NATIONAL WEATHER SERVICE WASHINGTON DC
3 PM EST THURSDAY MARCH 16 2000

PROGNOSTIC DISCUSSION OF SST FORECASTS

CURRENT CONDITIONS IN THE EAST-CENTRAL EQUATORIAL PACIFIC (120-170W LONGITUDE AND 5S TO 5N - ALSO CALLED NINO 3.4) INDICATE THAT A STRONG LA NINA CONTINUES. SST ANOMALIES IN THE NINO 3.4 AREA CURRENTLY AVERAGE AROUND -1.5 C. IN THE PAST MONTH SST ANOMALIES HAVE DECLINED SLIGHTLY EAST OF 120W. ANOMALIES OF AT LEAST -1 C STRADDLE THE EQUATOR FROM ABOUT 125W WESTWARD TO 160E. WITHIN THIS REGION ANOMALIES OF AT LEAST 2 C LIE SCATTERED ALONG THE EQUATOR. EAST OF 125W A RELATIVE WARM POOL LIES ALONG THE EQUATOR FLANKED BY COOLER WATER MAINLY TO THE NORTH. THE TRADE WINDS CONTINUE AT ABOVE AVERAGE STRENGTH OVER MOST OF THE WESTERN AND CENTRAL PACIFIC - AND AT NEAR NORMAL STRENGTH EAST OF 140W. FEBRUARY MEAN 850 HPA WIND ANOMALIES IN THE WESTERN PACIFIC BASIN WERE STRONGER THAN IN ANY OF THE THREE PRIOR MONTHS. THERE IS STILL A SUBSTANTIAL AMOUNT OF COLDER THAN NORMAL SUB-SURFACE WATER BETWEEN THE DATE LINE AND 90W. LA NINA CONDITIONS ARE EXPECTED TO LAST THROUGH THE SPRING AND POSSIBLY WELL INTO THE SUMMER. WARMER THAN NORMAL SUB-SURFACE WATER RESIDING IN THE WESTERN PACIFIC IS GRADUALLY STRENGTHENING AND EXPANDING EASTWARD - THOUGH THE POOL ITSELF REMAINS CENTERED IN THE WEST. WITH THE EXCEPTION OF THIS SOMEWHAT STRONGER WARM SUB-SURFACE POOL - CURRENT CONDITIONS IN THE TROPICAL PACIFIC ARE STRIKINGLY SIMILAR TO THOSE OBSERVED ONE YEAR AGO.

ALL MODEL FORECASTS WERE AVAILABLE - INCLUDING A DYNAMICAL FORECAST FROM THE ATMOSPHERIC COMPONENT OF THE NCEP COUPLED MODEL AS WELL AS THE ECHAM-3 GENERAL CIRCULATION MODEL. THE OCEAN FORECAST FROM THE NCEP COUPLED MODEL AND THE CCA PREDICT THE SSTS IN THE NINO 3.4 REGION TO REMAIN BELOW NORMAL THROUGH MAY OR JUNE 2000 -- WEAKENING TO NEAR NEUTRAL BY ABOUT JUNE OR JULY. CCA THEN PREDICTS A CLIMB TO A 0.8 C ANOMALY BY DECEMBER. THE CONSTRUCTED ANALOG (CA) SST FORECAST PREDICTS A RETURN TO ZERO ANOMALY BY JUNE OR JULY WITH ANOMALIES RISING BARELY ABOVE ZERO BY JANUARY 2001. THE NINO 3.4 ANOMALY WAS ABOUT -1.6 FOR DJF. A CONSOLIDATION OF THE THREE SST FORECASTS PREDICTS A VERY RAPID DECLINE IN SST ANOMALIES - TO AROUND -.25 C BY AMJ 2000 - REACHING ZERO BY JULY OR AUGUST AND THEN MOVING TO POSITIVE VALUES BUT WITH HIGH UNCERTAINTY. WITH THE LA NINA STILL GOING STRONG NOW - IT SEEMS UNLIKELY THAT IT WILL DISAPPEAR COMPLETELY BY JUNE OR JULY. UNCERTAINTY IN THE SST FORECAST WILL DIMINISH FOR FORECASTS ISSUED IN APRIL AND MAY.

PROGNOSTIC DISCUSSION OF OUTLOOKS - AMJ 2000 TO AMJ 2001

THE FORECASTS FOR AMJ THROUGH JAS 2000 ARE BASED HEAVILY ON DYNAMICAL MODEL GUIDANCE. AVAILABLE TO FORECASTERS WERE THE ATMOSPHERIC GCM RUN OF THE NCEP COUPLED MODEL AND THE ECHAM-3 GCM. THE CCA - OCN - SOIL MOISTURE TOOL - ENSO COMPOSITES AND SCREENING MULTIPLE LINEAR REGRESSION TOOL WERE USED ONLY FOR AUXILIARY GUIDANCE FOR THESE FIRST FOUR LEAD TIMES BUT WERE RELIED UPON MORE HEAVILY AT LONGER LEADS. THE DYNAMICAL MODELS STRONGLY AND UNANIMOUSLY INDICATED ABOVE NORMAL TEMPERATURES OVER MUCH OF THE U.S. DURING THE INITIAL FOUR SEASONS.

THE CANONICAL LA NINA IMPACTS - AS INDICATED BY THE CCA AND THE COMPOSITES OF PAST HISTORICAL DISTRIBUTIONS OF U.S. T AND P ASSOCIATED WITH MODERATE TO STRONG LA NINA CONDITIONS - SUPPORT THE MODELS IN THE SOUTHERN U.S.. IN THE NORTH THE FORECAST CALLS FOR WARMER AND DRIER CONDITIONS THAN LAST MONTHS FORECAST. IN ALASKA - A TRANSITION IS EXPECTED FROM COLD - DRY WINTER AND SPRING CONDITIONS TO WARMER TEMPERATURES IN SUMMER. AT LONGER LEADS MANY OF THE FORECASTS SHOW WARMTH. THIS IS FROM TRENDS THAT HAVE BEEN OCCURRING MORE RELIABLY OVER THE LAST SEVERAL YEARS. THIS WARMTH IS INDICATED BY MANY OF THE STATISTICAL TOOLS AT INCREASINGLY USABLE LEVELS OF ESTIMATED SKILL. WHEN THE BASE PERIOD USED TO DEFINE THE NORMAL CLIMATE ARE CHANGED FROM 1961-90 TO 1971-2000 NEXT YEAR - THIS COMPONENT OF THE FORECAST WILL PLAY A LESSER ROLE.

THE DYNAMICAL MODELS INDICATE DRYNESS FARTHER TO THE NORTH THAN IN THE CLASSIC LA NINA. OUR FORECASTS REFLECT THIS MARKED PRECIPITATION DEFICIENCY ACROSS LARGE PORTIONS OF THE COUNTRY IN AMJ - MJJ - JJA AND JAS. THIS FORECAST IMPLIES THAT THE CURRENT DRYNESS IN THE SOUTHERN U.S. - PARTS OF THE WEST - THE GREAT PLAINS AND THE MIDWEST - IS LIKELY TO WORSEN. THE SOUTHEAST AND MID-ATLANTIC AND SOUTH-CENTRAL REGIONS COULD EXPERIENCE SCANT RAINFALL UNTIL SUMMER. GRADUAL CLIMATE CHANGE IS IN THE DIRECTION OF HEAVIER BUT LESS FREQUENT RAINFALL - MEANING THAT EVEN AN END TO THE DRY EPISODE IN TERMS OF RAINFALL TOTALS MAY NOT NECESSARILY MEAN THE END TO THE DRY SOIL CONDITIONS AS A SIGNIFICANT PORTION OF THE WATER COULD RUN OFF.

IN JULY AND AUGUST ENHANCED SOUTHWEST MONSOON RAINFALL IS ANTICIPATED AS A RESULT OF THE LA NINA - WITH ABOVE MEDIAN RAINFALL IN ARIZONA - NEW MEXICO AND SOUTHERN COLORADO AND UTAH - AND DRYNESS LIKELY IN A SURROUNDING CRESCENT FROM TEXAS THROUGH THE DAKOTAS TO THE PACIFIC NORTHWEST. THE HEAVIER THAN NORMAL RAIN WILL INHIBIT THE NORMALLY EXPECTED ABOVE-NORMAL TEMPERATURES IN THE DESERT SOUTHWEST ASSOCIATED WITH THE LONG-TERM TREND THERE. NOTE THAT EVEN IF THE LA NINA HAS DISSIPATED BY SUMMER - A SUBSTANTIAL PART OF THE IMPACT ON THE MONSOON IS BUILT INTO LAND-ATMOSPHERE PROCESSES THAT ARE A RESULT OF THE LA NINA DURING THE PREVIOUS WINTER AND SPRING.

SIGNIFICANT CHANGES IN THE FORECASTS FROM LAST MONTHS SET ARE NUMEROUS BECAUSE OF THE HEAVIER WEIGHTING GIVEN TO THE DYNAMICAL MODELS.

FOR A DESCRIPTION OF THE STANDARD FORECAST TOOLS - THEIR SKILL - AND THE FORECAST FORMAT PLEASE SEE OUR WEB PAGE AT:HTTP://WWW.CPC.NCEP.NOAA.GOV/PRODUCTS/PREDICTIONS/MULTI-SEASON/13_SEASONAL_OUTLOOKS/TOOLS

NOTE - THESE CLIMATE OUTLOOKS ARE INTENDED FOR USE PRIOR TO THE START OF THEIR VALID PERIODS. WITHIN ANY GIVEN VALID PERIOD OBSERVATIONS AND SHORT AND MEDIUM RANGE FORECASTS SHOULD BE CONSULTED. ALSO - THIS SET OF OUTLOOKS WILL BE SUPERSEDED BY THE ISSUANCE OF THE NEW SET NEXT MONTH ON THURSDAY APR 13 2000.

NNNN
NNNN