TEAM KENTUCKY
ENERGY AND ENVIRONMENT CABINET

MONTHLY WATER RESOURCE REPORT

Kentucky Division of Water
Water Supply Section

September 2026

Precipitation

September was a dry month for Kentucky, with much of the Commonwealth experiencing below normal precipitation. Only areas of northeastern Kentucky saw above normal precipitation. Most of the precipitation during the month occurred from two different systems that came through during the second and third weeks of the month. The precipitation was scattered in nature for both events.

The Commonwealth averaged 1.92 inches of precipitation for September, 1.32 inches below normal. It was the 26th driest September on record. For the year, Kentucky has averaged 33.79 inches of precipitation, 2.73 inches below normal, making it the 38th driest January through September on record.

As of the September 29th U.S. Drought Monitor, drought had returned to the Commonwealth with Moderate Drought (D1) located in west central Kentucky. Abnormally Dry (D0) was depicted across most of western and southern parts of the state along with a small area across the river from Cincinnati.

According to the Kentucky Mesonet, Letcher County recorded the highest monthly rainfall for September at 3.91 inches, while Laurel County had the lowest at 0.56 inches.

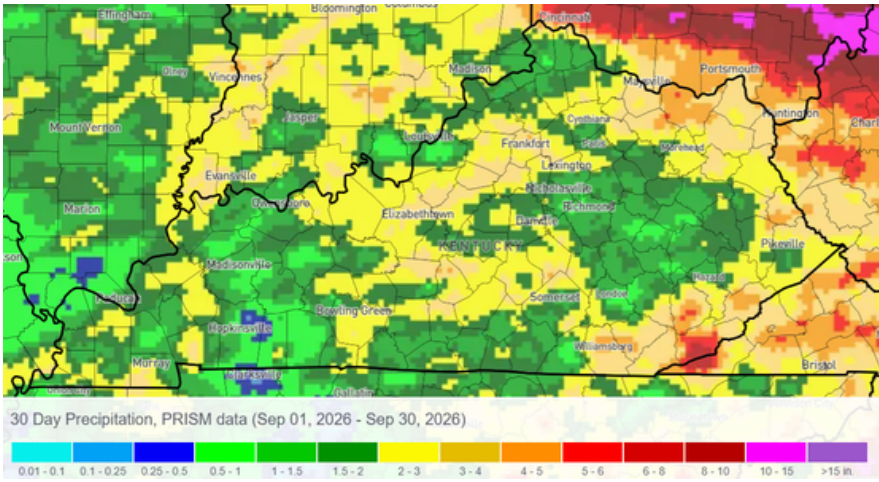


Figure 1. *Monthly precipitation map.*

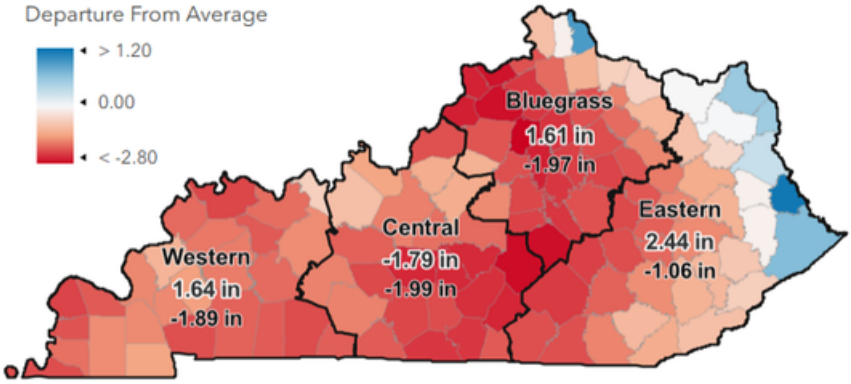


Figure 2. *Departure from normal precipitation by county and climate division.*

Table 1. *Regional precipitation patterns.*

Climate Region	Departure From Normal (inches)					Palmer Drought Severity Index*
	This Month	Past 2 Mos.	Past 3 Mos	Past 6 Mos	Past 12 Mos	
Western	-1.89	-2.25	0.34	1.06	-9.19	-0.58
Central	-1.99	-2.42	-0.57	-0.22	-7.06	0.59
Bluegrass	-1.97	0.24	-0.19	2.16	-1.51	1.64
Eastern	-1.06	-0.09	-0.69	-2.27	-7.97	-1.25

*4.0 and above (Extremely Moist)
3.0 to 3.9 (Very Moist Spell)
2.0 to 2.9 (Unusual Moist Spell)
-1.9 to 1.9 (Near Normal)
-2.0 to -2.9 (Moderate Drought)
-3.0 to -3.9 (Severe Drought)
-4.0 or less (Extreme Drought)

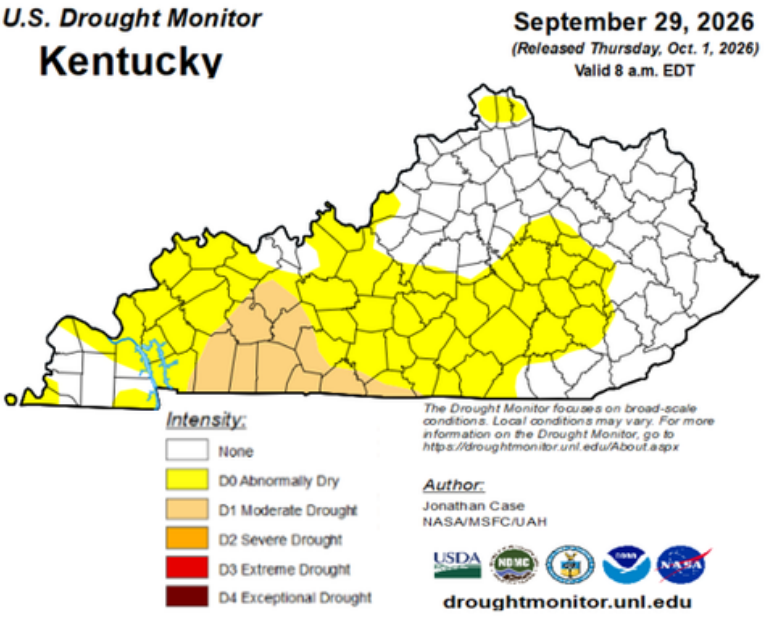


Figure 3. *Current US Drought Monitor Map.*

Streamflow

Streamflows in September started the month at or below normal in most areas. Areas that saw significant precipitation during the month saw spikes in flow that quickly returned to near normal levels. Areas in west central Kentucky missed much of the significant precipitation, resulting in flows that remained below normal for much of the month. This is expecially true in the Lower Green River and Barren River watersheds.

While flows in west central Kentucky were below normal, there are currently no immediate concerns with water supplies in the region. Flows will need to be watched closely, especially considering that the state had been in drought earlier in the year and base flows could still be lower than normal in the absence of precipitation.

The Division of Water's Water Supply Section will continue to monitor conditions closely.

Table 2. *Mean Stream Discharge select stream gages.*

River and Location	Drainage Area (mi2)	7 Day		28 Day	
		Average Flow (cfs)	% of Normal	Average Flow (cfs)	% of Normal
Levisa Fork at Pikeville	1,232	489	50	304	35
Tygarts Creek near Greenup	242	15	7	31	17
Licking River at Blue Lick Springs	1,785	162	7	168	8
North Fork Kentucky River at Jackson	1,101	490	61	250	35
Kentucky River at Lock 10	3,955	742	21	430	14
Elkhorn Creek near Frankfort	473	71	12	125	24
Cumberland River at Cumberland Falls	1,977	1,183	47	519	22
Beaver Creek near Monticello	43	3	8	3	9
Beech Fork at Maud	436	12	2	12	3
Barren River at Bowling Green	1,849	197	7	235	10
Green River at Lock 2	7,566	734	8	941	11
Pond River near Apex	194	13	5	13	6
Tradewater River at Olney	255	2	1	3	1
Bayou De Chien near Clinton	69	20	20	23	25
Ohio River at Greenup Dam	62,000	114,388	173	88,814	148
Ohio River at Louisville	91,170	184,713	190	112,707	129
Mississippi River at Thebes, IL	713200	254875	139	154990	86

* Base Period 1980-2023

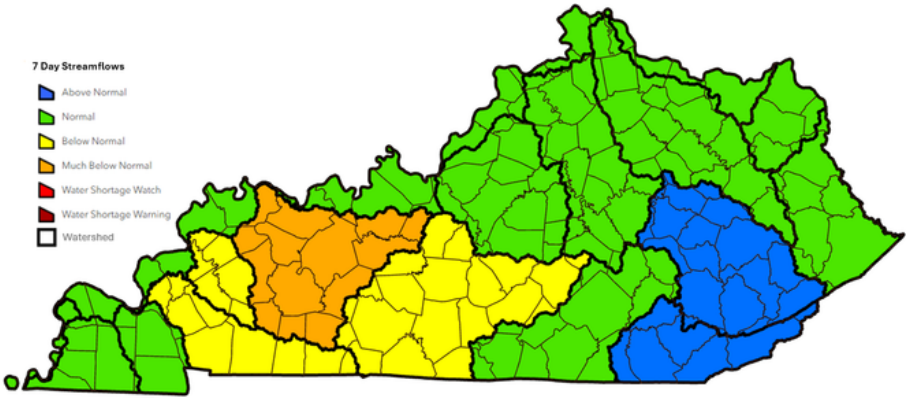


Figure 4. *Average streamflow by watershed over the past 7-days (September 24-30).*

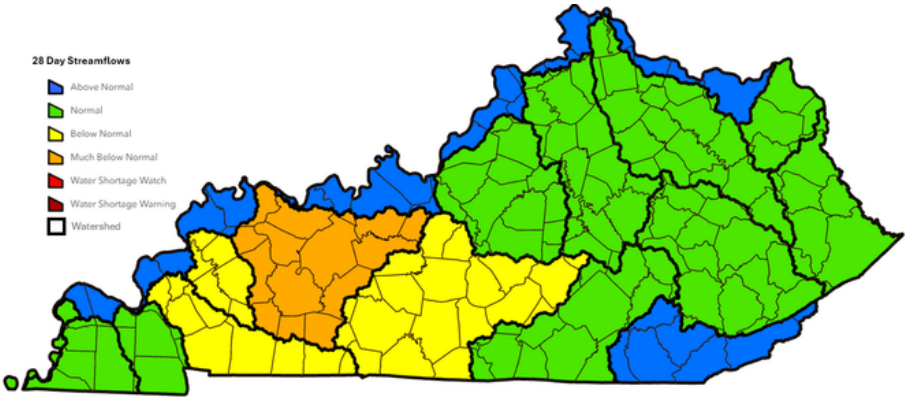


Figure 5. *Average streamflow by watershed over the past 28-days (September 3-30).*

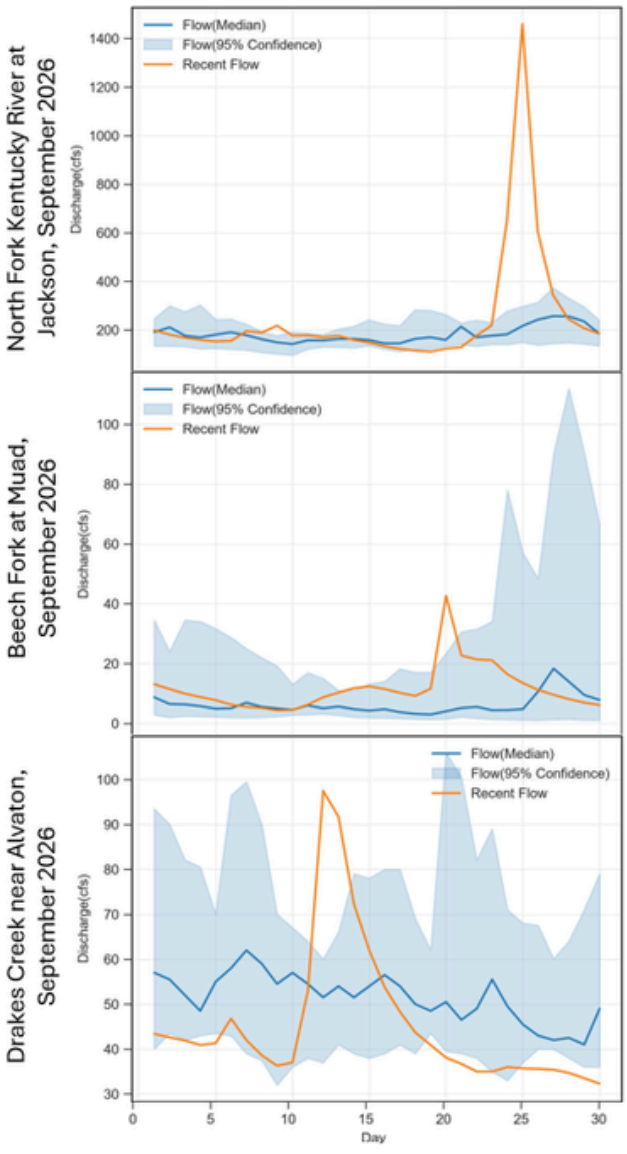


Figure 6. *Streamflows compared to median flows for the month.*

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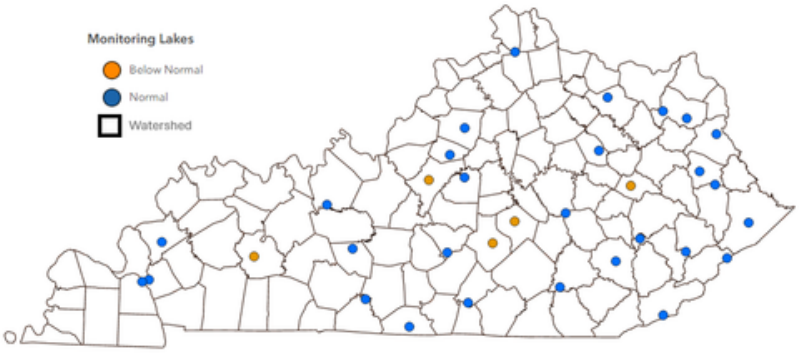
Kentucky Division of Water
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Reservoir Storage

Most reservoirs in the state remain near normal for this time of year. However, a few small water supply reservoirs remain below normal due to the historically low precipitation this past winter and spring, resulting in an inadequate supply for the rest of the year. The above normal precipitation this summer, along with conservation measures and alternative supplies, has helped slow the rate of decline of these reservoirs and prolong the supply. During the summer, evaporation and evapotranspiration typically outpace precipitation, resulting in most precipitation being taken up by soils. This makes it nearly impossible for reservoirs with small drainage areas to receive enough precipitation to refill this time of year. As we move into late fall and winter, and evaporative demand drops, the reservoirs will begin to refill, provided there is adequate precipitation.

Figure 7. *Locations of reference reservoirs across the state. Status of reservoir levels indicated by color.*



Groundwater

General Statement: Kentucky is a geologically, and hydrogeologically, diverse state. Groundwater data is limited in availability and where available may only be applicable to the immediate area given regional geologic variability. Local conditions may not be accurately reflected by the reference locations selected and local rainfall and surface water conditions may provide additional or more representative information. Current data is compared to a 30-year reference period (1980 – 2010) or the longest available period of continuous data.

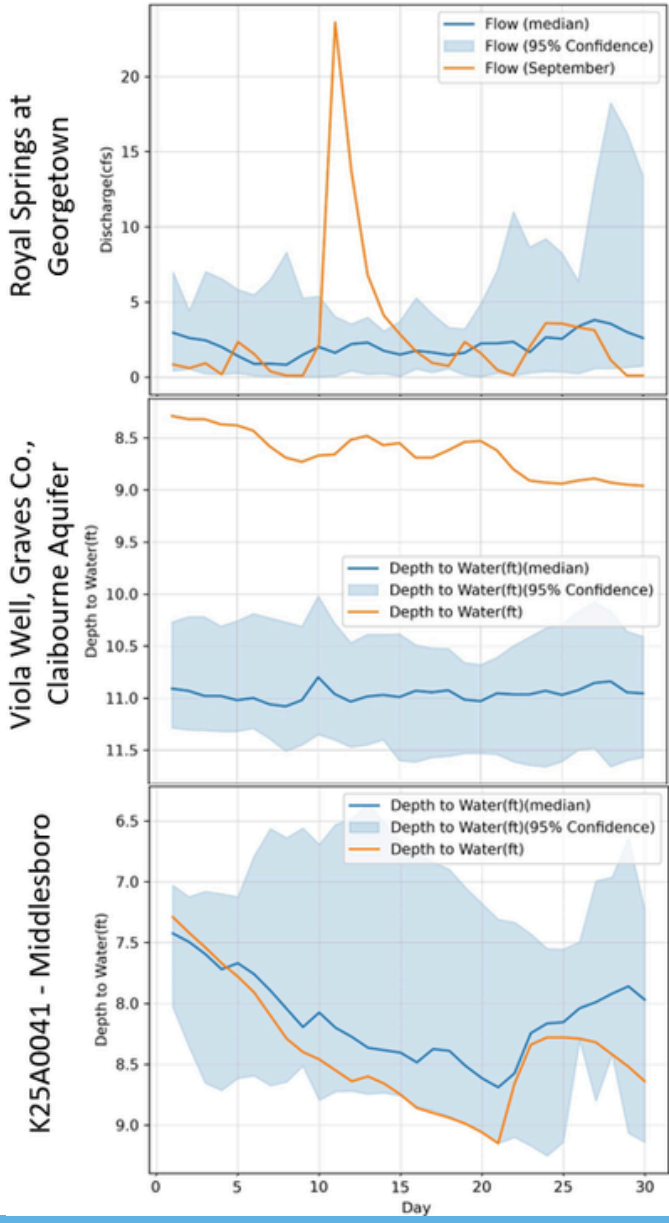
Inner Bluegrass: Flow at Royal Springs (Scott County) was within seasonal norms for most of September. One rain event generated peak flow above 20 cubic feet per second beginning on the 10th and returning to seasonal norms by the 15th. Moving into October, flows between 2 and 20 cubic feet per second are expected with higher flows possible following heavy rainfall. Flow is expected to trend towards a seasonal low over the fall and into the winter months.

Jackson Purchase: Water levels in the Viola Well (Graves County) remained 2 to 2.5 ft above the historical median across August. Water levels across the wells observed in the region (Marshall, Hickman, and Calloway counties) were mixed with deeper wells (Hickman and Calloway County) rising and shallower wells decreasing (Marshall, Hickman, and Calloway counties). For the month, historical levels are typically steady at Viola.

Middlesboro: Water levels within the Middlesboro well (Bell County) began close to the historic median but fell to or slightly below the historical normal range for September. Water levels rebounded following rainfall towards the end of the month. As in August, water levels trended down following historical patterns. Water levels are expected to continue to drop to a seasonal low as fall advances.

Additional data can be found at:
https://www.uky.edu/KGS/water/water-groundwater-monitoring.php

Figure 9. *Groundwater observations compared to normal for the month.*



Forecast

The Climate Prediction Center (CPC) is currently predicting above normal chances for above normal precipitation in southern Kentucky and equal chances for above normal and below normal precipitation for the rest of the state during October. For October through December, the entire Commonwealth is predicted to have equal chances for above normal and below normal precipitation with above normal chances for above normal precipitation located just south of Kentucky. This is a typical pattern during a strong El Niño. El Niño-Southern Oscillation outlooks show the strongest El Niño on record has already formed, with continued strengthening expected for the next 2 months. Short-term forecasts are predicting a dry start to the month but a more active pattern is expected to develop, including a potential tropical system from the Gulf of Mexico

The current U.S. Monthly Drought Outlook shows current drought conditions are predicted to improve in October for Kentucky.

Note: These forecasts do not provide the quantity above or below normal, just the probability it will occur.

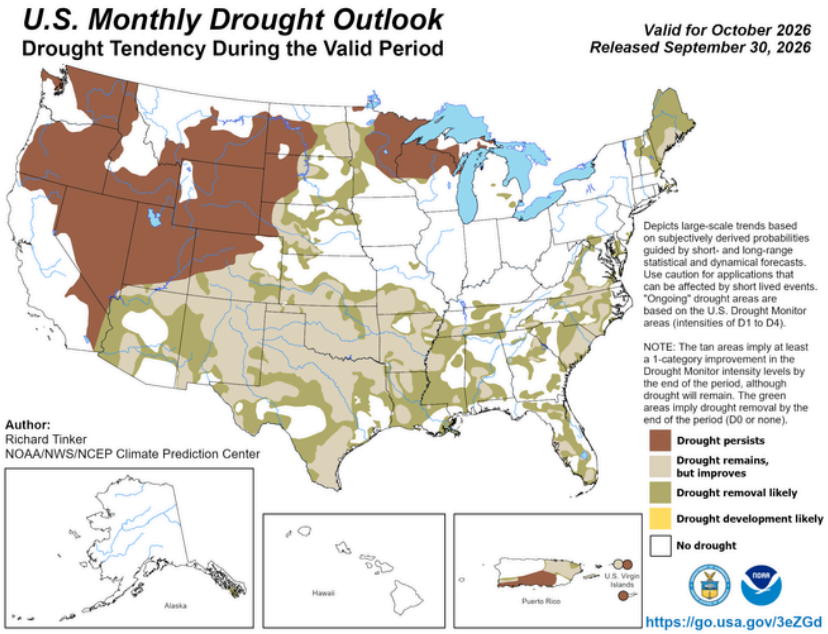


Figure 10. *Monthly drought outlook.*

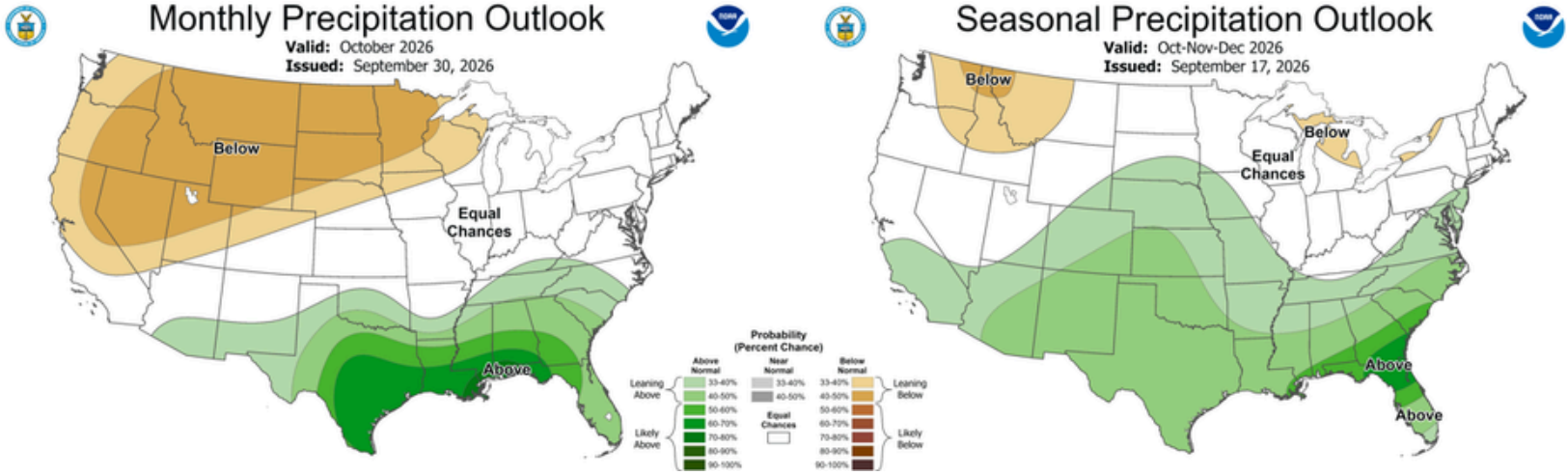


Figure 11. *Monthly and seasonal precipitation outlooks.*

Contact Us

Kentucky Division of Water
Water Supply Section
300 Sower Blvd
Frankfort, KY 40601
502-564-3410
water@ky.gov

Report Drought Conditions

Acknowledgments

Precipitation Data:
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Centers for Environmental Information; Kentucky Mesonet; Midwest Regional Climate Center; Southern Regional Climate Center.
Streamflow Data:
U.S. Geological Survey, Water Resources Division.
Reservoir Data:
U.S. Army Corps of Engineers, Huntington, Louisville, and Nashville Districts; Kentucky Division of Water, Water Supply Section.
Forecast Data:
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center.