



**Missouri Climate Center
The School of Natural Resources
Department of Soil and Atmospheric Sciences**

www.mcc.missouri.edu

University of Missouri-Columbia

100 Gentry Hall
Columbia, MO 65211
Phone: (573) 882 - 8599
Fax: (573) 884 - 5133

October 30, 2000

The Honorable Donald W. Summers
State Representative
State Capitol Building, Room 101-B
Jefferson City, MO 65101

Dear Representative Summers:

I am writing this letter in response to your request to support constructing a new lake in Sullivan County as a supplemental water source during future droughts such as the drought of 1999-2000 when the shortage threatened public drinking water facilities.

Unlike Southern Missouri where ground water supplies are resourceful and annual average rainfall totals range from 44" to 52", Northern Missouri mostly relies on surface water supply, which is fed by an annual total rainfall ranging from 31" to 40". On average, 37.28 inches of rainfall occurs annually according to 30-yr National Climatic Data Center records in the City of Milan, Sullivan County. In 1999, 28.42 inches of rainfall (8.86" below normal) was observed in Milan. As of October 30, Milan weather station recorded 29.85 inches of precipitation since the beginning of 2000 while the 30-yr average rainfall amount suggests that this period's total should have been 2.78 inches more. The precipitation deficit becomes more significant (11.04" below normal) when the actual total rainfall since July 1999 (41.24") is compared with the 30-yr average (52.28") for the period from July 1, 1999 to October 30, 2000. Furthermore, the long-term forecast does not suggest above normal precipitation for the next 3 months to make up the difference. Even if 11.04 inches (equivalent to the total rainfall deficit since July 1999) above normal precipitation fell in November 2000, hydrological drought would prevail since most water would be lost by surface runoff unless adequate facilities exist to regulate the excessive water.

Climatology of Missouri shows that the probability of severe summer drought in Missouri is 20% or once every 5 years. Thus, Northern Missouri is more susceptible to drought than the rest of the state. In fact, it has been noted during each Drought Assessment Committee, formed by the request of the honorable Mel Carnahan, that the public water system in Sullivan County has been problematic since July 1999 when the current drought first began.

Because of the issues mentioned above, I endorse any action to construct a new water supply lake in Sullivan County to serve as a regional public water supply source.

Please do not hesitate to contact me if you have any questions regarding climates of the area. I wish you good luck in your mission and congratulate you for your dedication.

Sincerely,



F. Adnan Akyüz, Ph.D.
Missouri State Climatologist
E-mail: AkyuzF@missouri.edu

c: J. Staake, DNR
S. McIntosh, WRP
D. Hammer, UMC
A. Vogt, UMC