# Are the Number of Extreme Precipitation Events Increasing at the Northern Great Plains Research Laboratory? (A03-liebig110700-Poster)

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## Abstract:

Climate change models have projected increases in the number of extreme precipitation events. The objective of this study was to evaluate whether the number of extreme precipitation events has increased over time at the Northern Great Plains Research Laboratory, USDA-ARS at Mandan, North Dakota, USA. Long-term monthly precipitation averages were computed using weather records dating back to 1914. Extreme precipitation events were considered as 24-hour precipitation events equal or greater than 50, 100, or 150% of the long-term monthly average. Numbers of events were grouped by 10-year time intervals starting in 1921 and continuing to 2000. Data were analyzed using the Cox-Stuart test for trend. The total number of extreme precipitation events for the 50 and 100% of the monthly mean was highest from 1991-2000 (66 and 14 for 50 and 100%, respectively) followed by 1941-1950 (66 and 11 for 50 and 100%, respectively). There were seven events equal to or greater than 150% of the monthly mean from 1991-2000 while the remaining time periods contained three or fewer events of the same magnitude. Although the total number of extreme precipitation events was greatest in the 1990s, the Cox-Stuart test did not reveal a significant upward trend in number of extreme events over time.

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