

## ICWP Principle Statement on Extreme Precipitation Estimation—Including Atlas 14

Adopted by the ICWP Board of Directors on November 4, 2021; Sunset/Review December, 2024

### **Statement of the Issue:**

National Probable Maximum Precipitation (PMP) standards for extreme rainfall have long been used for the design and regulation of infrastructure including dams, roads and bridges, as well as thermal power facilities; and are used to promote consistency between federal and state agencies, as well as the private sector professional design community.

The National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS) first developed methodologies for estimating PMP in the 1940s, using historic data available at that time, and applied them across the United States through hydrologic and hydrometeorological studies. Many of these studies are now quite dated, do not incorporate recent severe events and are inconsistent across arbitrary political boundaries. The science and methods behind estimating PMP need a comprehensive review and PMP estimates into the future need to account for non-stationarity and contemporary modeling knowledge.

### **Why Important to ICWP membership:**

ICWP member organizations utilize precipitation estimates for a myriad of uses in planning, design, and safety of water infrastructure. The inconsistencies between minimum design criteria of adjacent states and between federal and state design/performance expectations within states are increasing, leading to unsafe situations and uncertainty for project sponsors. Decades of storm event data (the basis for calculating the standards) have been recorded since the existing standards were published, but these have never been officially updated to include new methods, technologies, and more recent storm data, leading to unreliable estimates of maximum events. Many of our members also see large differences at state lines and other non-hydrologic boundaries simply because the historical studies were completed regionally and due to the large time lapses between studies. The development of National Guidance Document on consistent methods for estimating precipitation is needed by both the public and private sectors. The results of the National Academies Study will drive the development of these improved forecasting/estimating tools.

### **ICWP Recommended Action/Position:**

--ICWP actively supports passage of the Providing Research and Estimates of Changes In Precipitation Act (PRECIP). (H.R. 1437-117<sup>th</sup> Congress)

--ICWP supports funding for the NOAA/NWS to complete the National Academies Study described in the PRECIP Act.

--ICWP supports funding and staffing levels at the NOAA/NWS to update Atlas 14 to a robust, modern modeling estimation product with national coverage to eliminate border differences between regions.