

**PUBLIC MEETING NOTICE
KENDALL COUNTY
KENDALL COUNTY BOARD**

Notice is hereby given that the Kendall County Board will hold a public hearing on May 18, 2021, at 9:00 a.m., in the County Board Room (Rooms 209 & 210), located in the Kendall County Office Building, 111 W. Fox Street, Yorkville, IL. The purpose of this public hearing is to receive comments on the following item:

1. Petition 21-18-Request from the Kendall County Planning, Building and Zoning Committee for Amendments to Sections 104, 202.2, 202.6, and 203.3 of the Kendall County Stormwater Management Ordinance by Incorporating Bulletin 75 into the Kendall County Stormwater Management Ordinance

Questions can be directed to the Kendall County Planning, Building and Zoning Department telephone number: (630) 553-4139 Fax: (630) 553-4179. All interested persons may attend and be heard.

If special accommodations or arrangements are needed to attend this County meeting, please contact the Administration Office at 630-553-4171, a minimum of 24-hours prior to the meeting time.

For your safety and others, please attend the hearing by phone or computer, if possible. The meeting room will have limited seating available. Masks are required when social distancing is not possible. If you plan to attend the meeting in person, please follow all social distancing requirements. Remote attendance information will be posted on the Kendall County website approximately one week prior to the hearing.

***Scott R Gryder, Chairman
Kendall County Board***



DEPARTMENT OF PLANNING, BUILDING & ZONING

111 West Fox Street • Room 204

Yorkville, IL • 60560

(630) 553-4141

Fax (630) 553-4179

MEMORANDUM

To: Kendall County Board
From: Matthew H. Asselmeier, AICP, CFM, Senior Planner
Date: April 19, 2021
Re: Proposed Update to the Stormwater Management Ordinance Related to Bulletin 70/75

Bulletin 70 was a document used by the Illinois State Water Survey (ISWS) to evaluate rainfall frequency in Illinois.

In March 2019, Bulletin 70 was updated and the County Board adopted the update to Bulletin 70 on October 15, 2019, through Ordinance 2019-26.

In March 2020, the ISWS updated Bulletin 70 again and changed its name to Bulletin 75.

WBK Engineering reviewed the revision and offered additional changes to the Kendall County Stormwater Management Ordinance caused by the update. The redlined version of changes to the Stormwater Management Ordinance are attached.

If the County does not update to the most current version of Bulletin 70/75, then the County would be utilizing outdated rainfall figures when designating and evaluating stormwater infrastructure. A copy of the change in rainfall tables is attached.

Accordingly, Staff recommends that the Kendall County Stormwater Management Ordinance be updated to reflect the changes proposed by WBK Engineering.

Pursuant to Section 808 of the Kendall County Stormwater Management Ordinance, no amendments to the Stormwater Management Ordinance can occur without a public hearing by the County Board.

At their meeting on April 12, 2021, the Planning, Building and Zoning Committee voted to initiate these amendments to the Stormwater Management Ordinance.

Information regarding this proposal was sent to the municipalities and townships on April 19, 2021

If you have any questions, please let me know.

Thanks,

MHA

ENC: Proposed Redline Changes
Change in Rainfall Tables

Bulletin 75 Update-Kendall County Stormwater Management Ordinance

December 2020

Sec. 104 Definitions

~~Bulletin 70. "Frequency Distributions of Heavy Precipitation in Illinois: Updated Bulletin 70" by James Angel and Momcilo Markus (2019).~~ Bulletin 75. "Precipitation Frequency Study for Illinois" by James R. Angel and Momcilo Markus with Contributing Authors Kexuan Ariel Wang, Brian M. Kerschner, and Shailendra Singh, dated March 2020.

202.2 Minor Stormwater System Criteria (Site Runoff Requirements)

Minor stormwater systems shall be sized to convey runoff from the tributary watershed under pre-development or fully developed conditions as may create the greatest amount of runoff. The recurrence frequency for design purposes shall be the 10-year event. The rainfall data shall be from ISWS Bulletin ~~70~~ 75. Inlet capacity shall generally be provided such that depth of ponding does not exceed 6 inches to facilitate the 10-year event. Pipe capacity shall generally be provided such that the calculated hydraulic grade line does not exceed the top of pipe elevation. The extent and determination of minor (and major) stormwater systems shall be at the discretion of the permitting authority based on project conditions.

202.6 Design Rainfall

Any design runoff rate calculation shall use Illinois State Water Survey Bulletin ~~71 isohyetal~~ 75 rainfall data to calculate flow from all tributary area upstream of the point of design. Peak discharges for conveyance design purposes shall be based on the critical duration event considering the appropriate rainfall distribution. Rational method design of conveyance systems ~~may~~ shall use Illinois State Water Survey Bulletin ~~70~~ 75 sectional rainfall data based intensity-duration- frequency curves.

203.3 Design Methods (Site Runoff Storage Requirements)

Event hydrograph routing methods shall be used to calculate runoff storage volume requirements for stormwater management basins with total tributary areas greater than five acres. The hydrograph routing shall be HEC-1, (SCS methodology), HEC-HMS, TR-20, or TR-55 tabular method or as otherwise approved by the Administrator. Event hydrograph methods shall incorporate the following assumptions:

- a. Antecedent moisture condition = 2; and
- b. Appropriate Huff rainfall distribution; and
- c. 24-hour duration storm with a 1% probability (100-year frequency) of occurrence in any one year as specified by Illinois State Water Survey Bulletin ~~71 isohyetal~~ 75 rainfall data **multiplied by a correction factor of 1.13 to account for Bulletin 75 rainfall data.**

Runoff storage volume requirements for stormwater management basins with total tributary areas equal to or less than five acres may utilize the % *Impervious to unit Area Detention* nomograph developed by NIPC (now known as CMAP) depicted in Table 203.

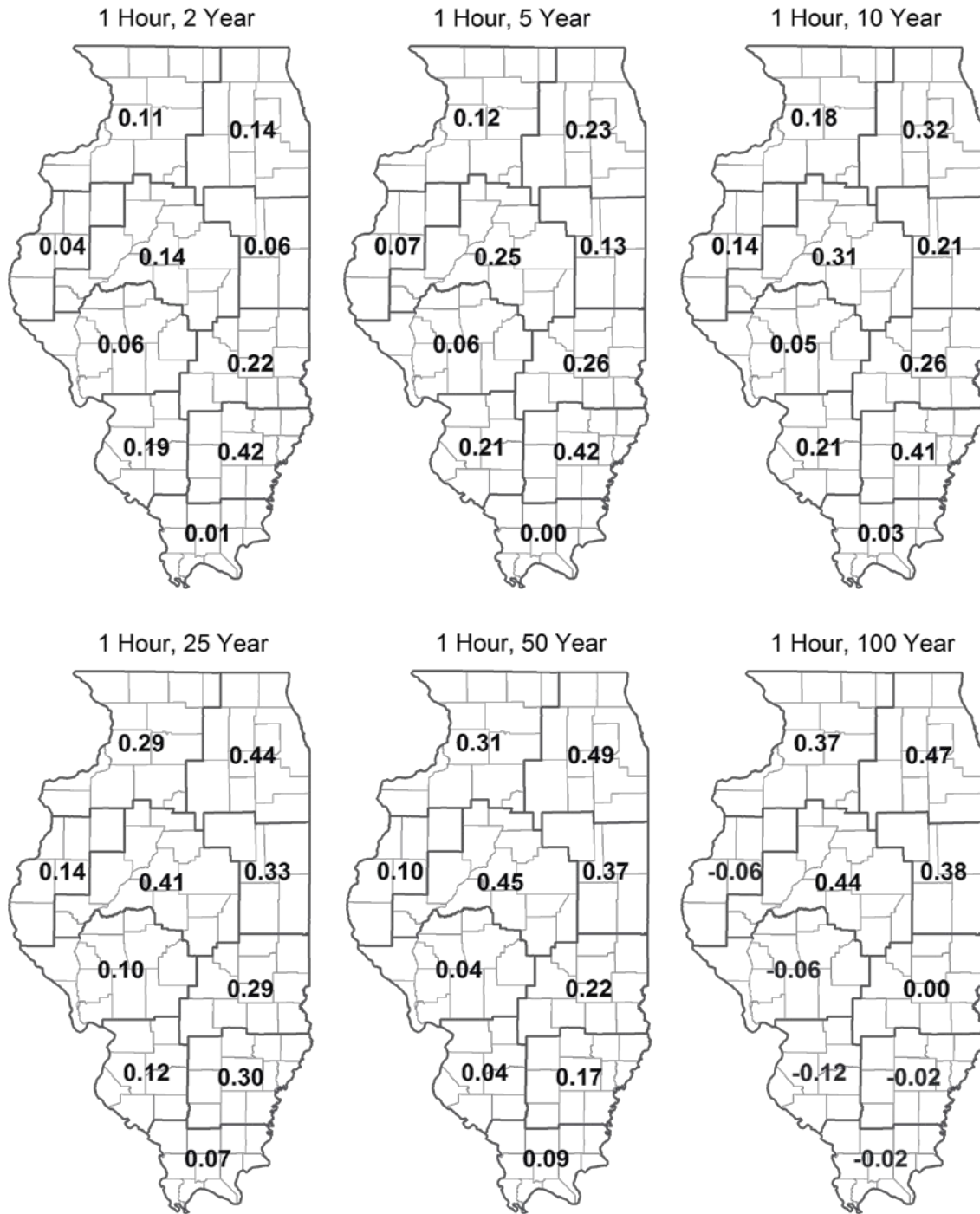


Figure 19. Differences in inches between this study and Bulletin 70 for a 1-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

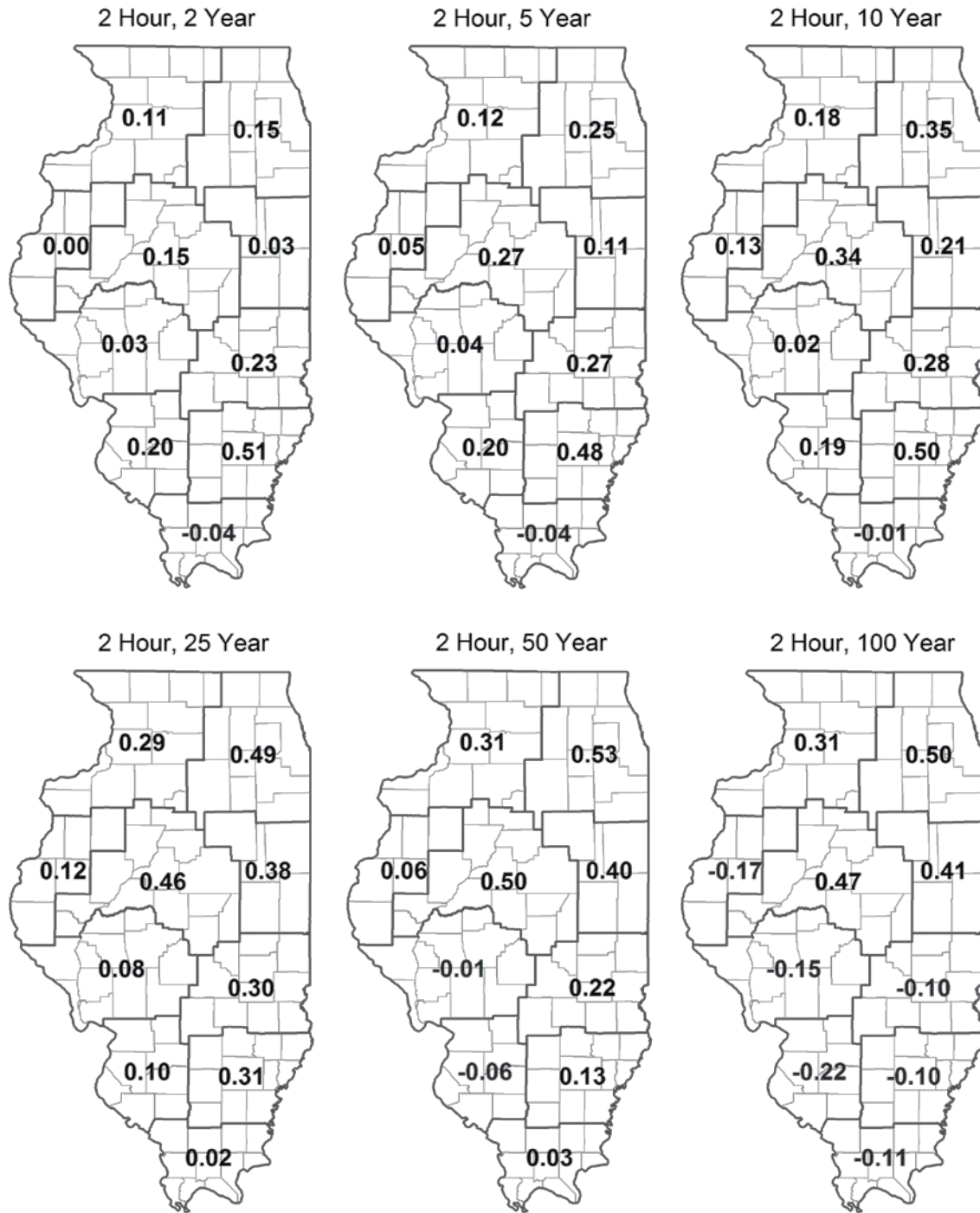


Figure 20. Differences in inches between this study and Bulletin 70 for a 2-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

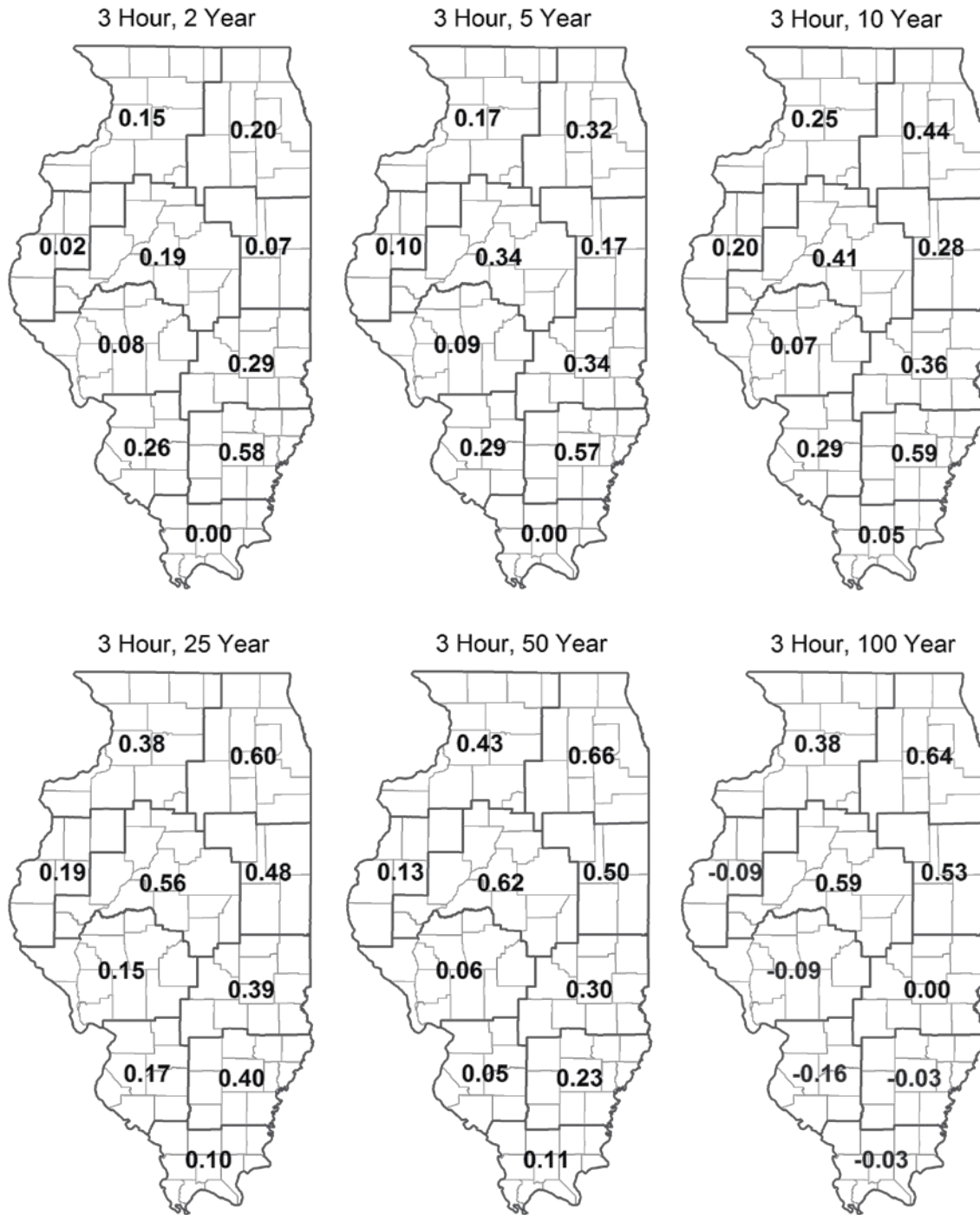


Figure 21. Differences in inches between this study and Bulletin 70 for a 3-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

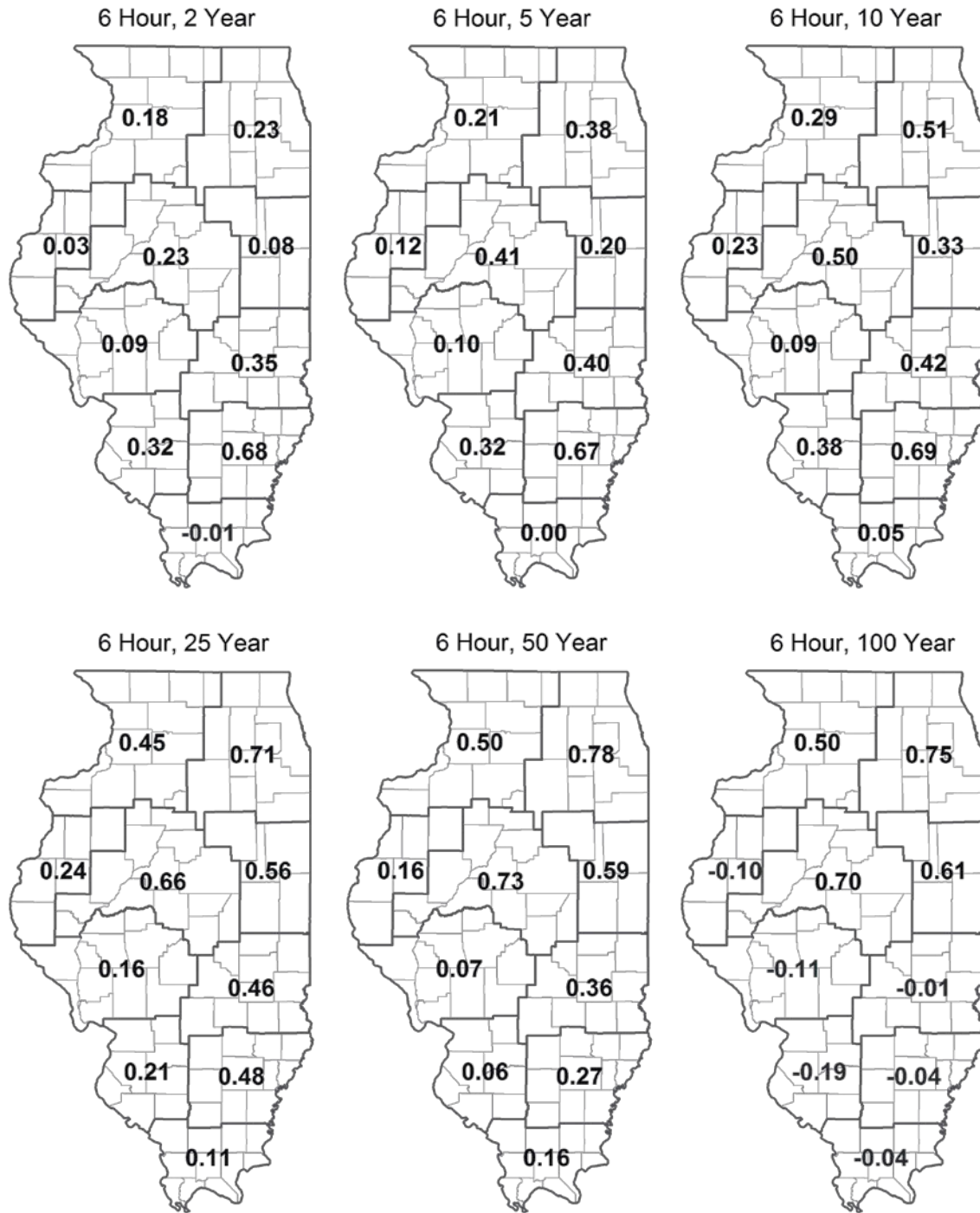


Figure 22. Differences in inches between this study and Bulletin 70 for a 6-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

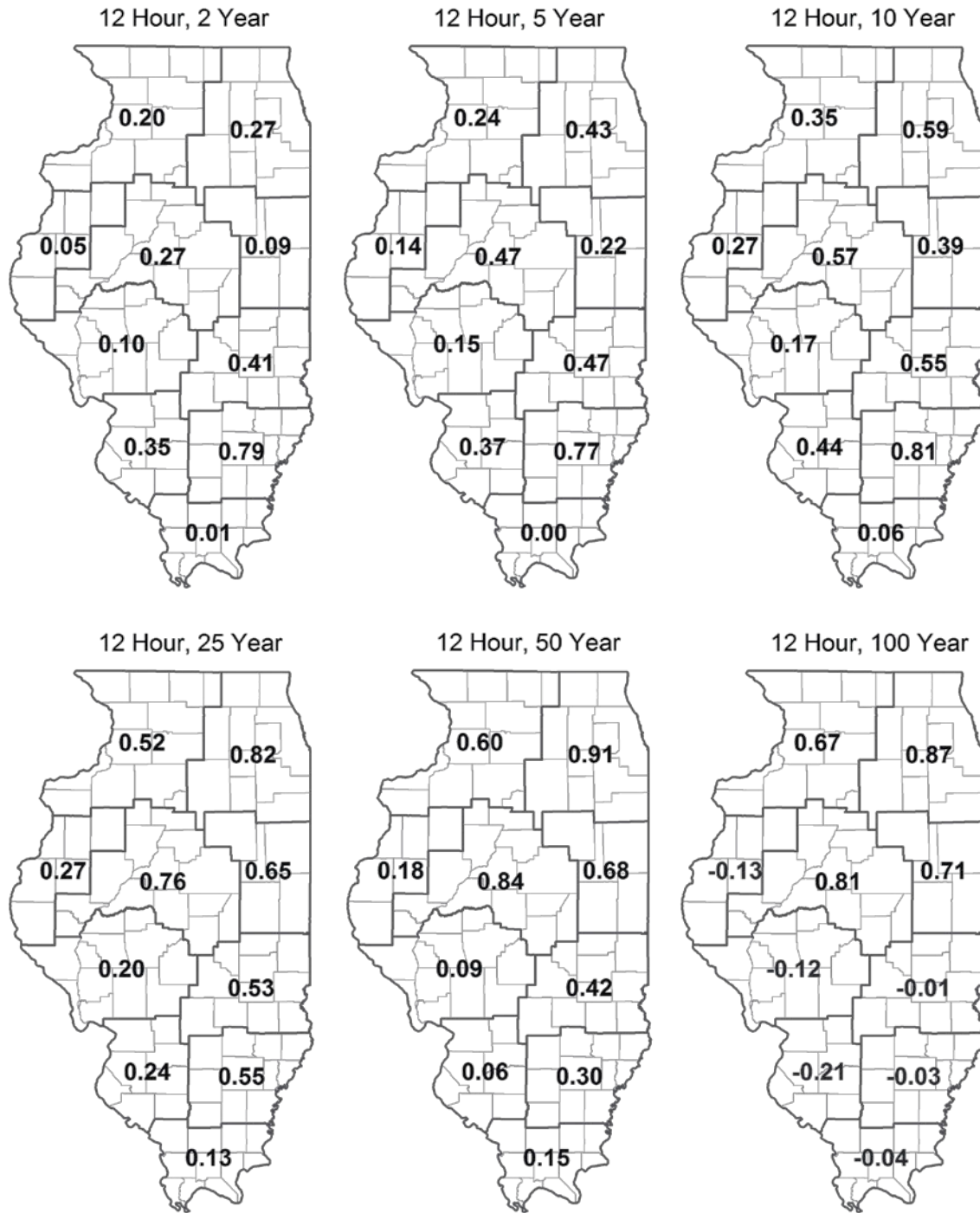


Figure 23. Differences in inches between this study and Bulletin 70 for a 12-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

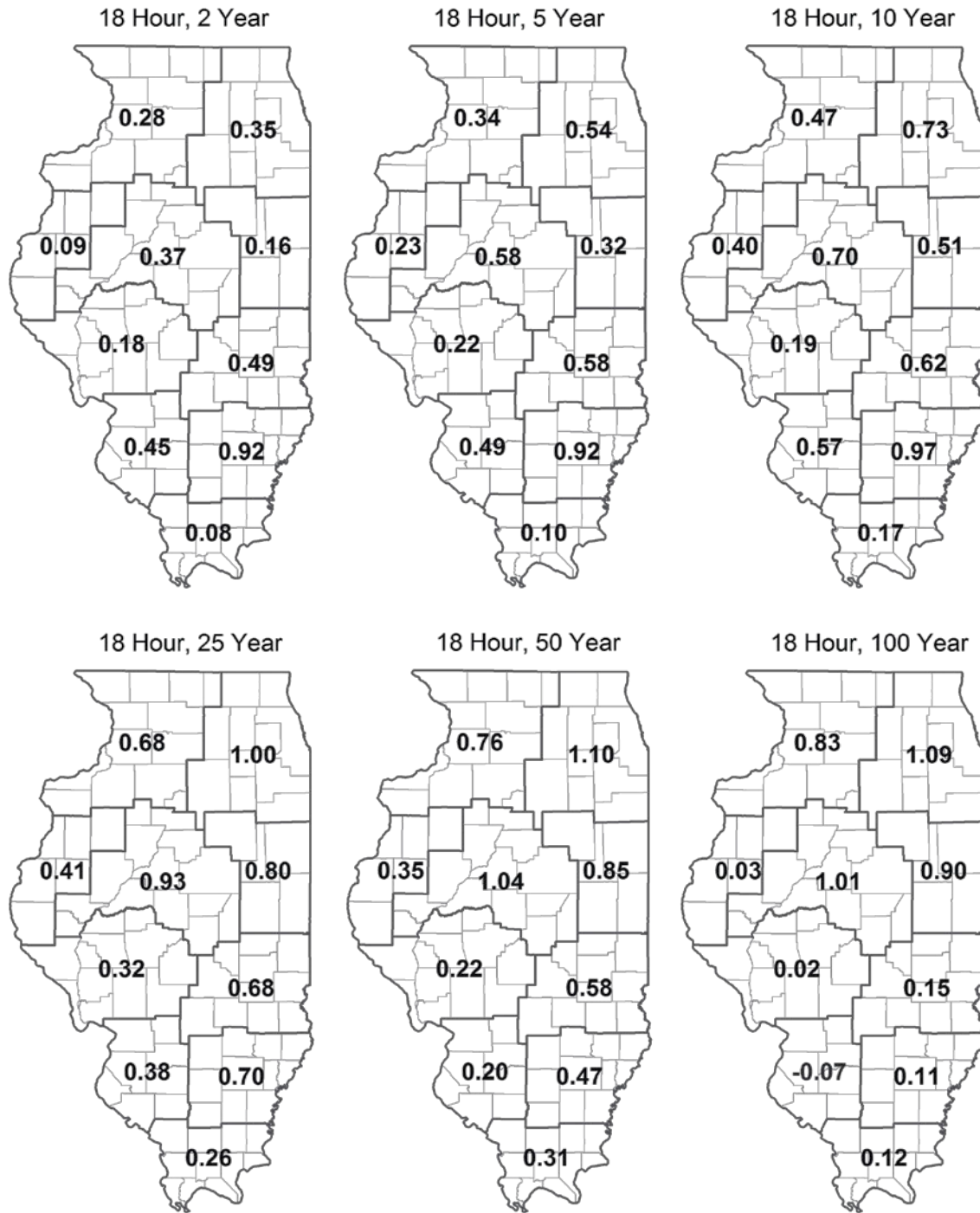


Figure 24. Differences in inches between this study and Bulletin 70 for an 18-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

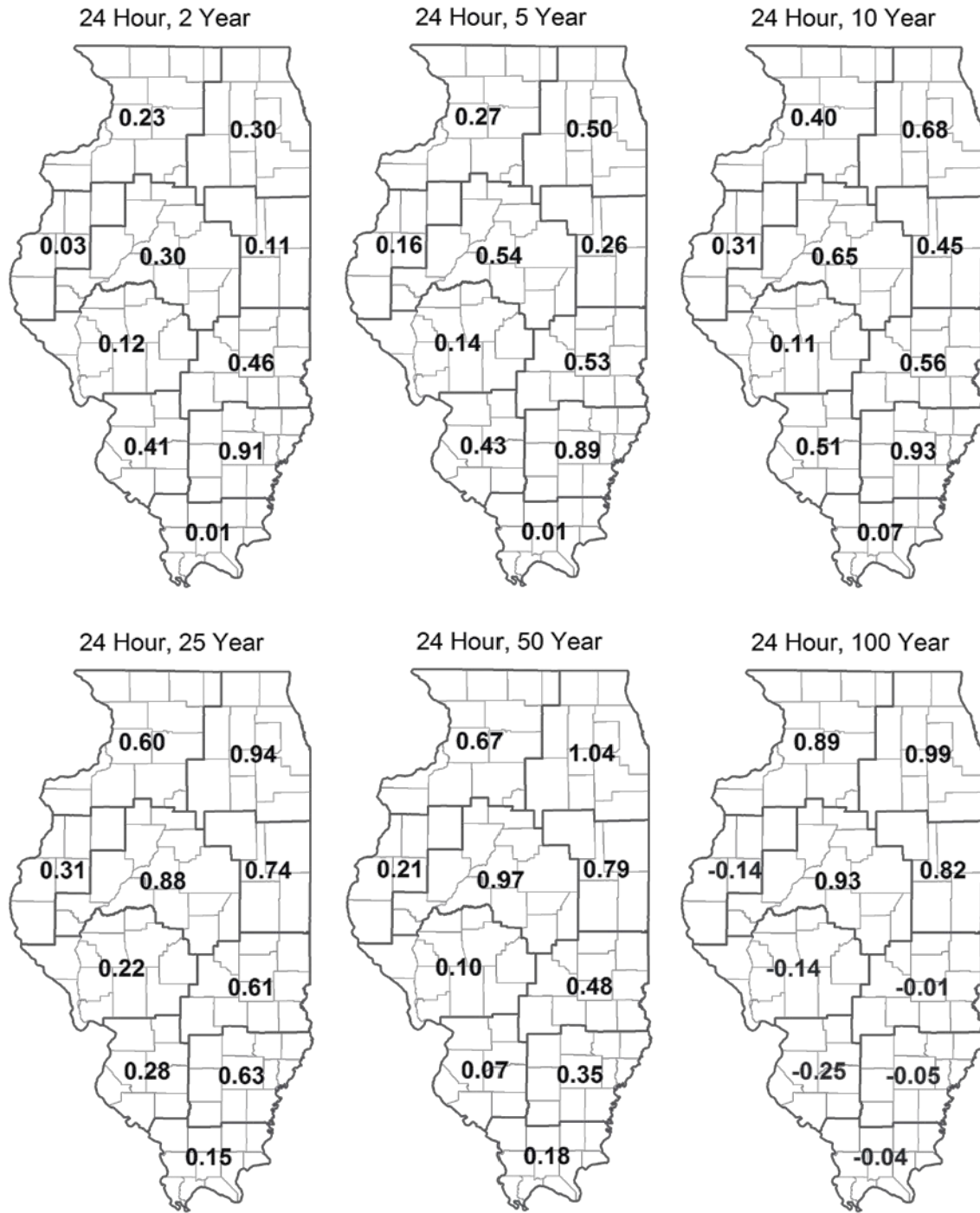


Figure 25. Differences in inches between this study and Bulletin 70 for a 24-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

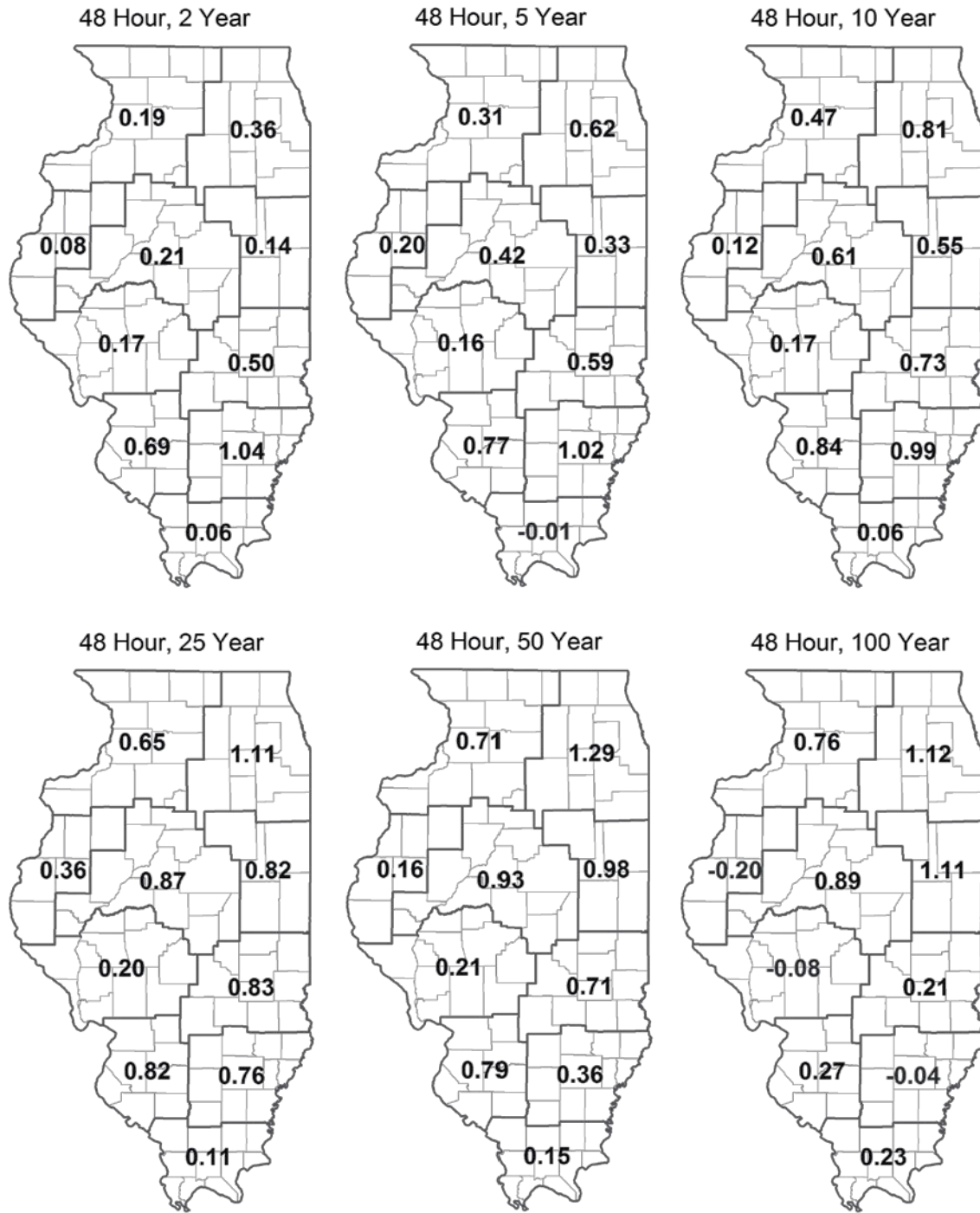


Figure 26. Differences in inches between this study and Bulletin 70 for a 48-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

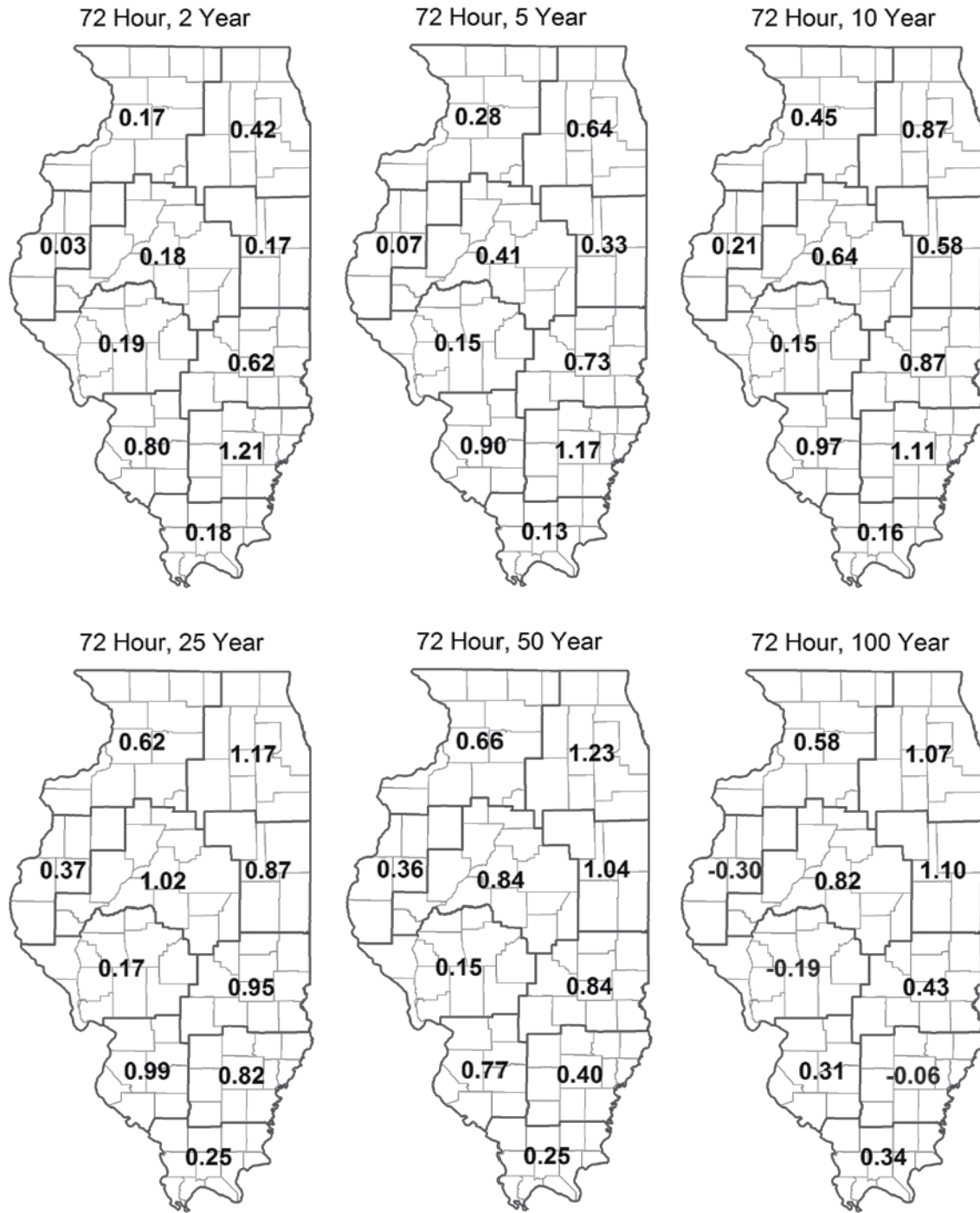


Figure 27. Differences in inches between this study and Bulletin 70 for a 72-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

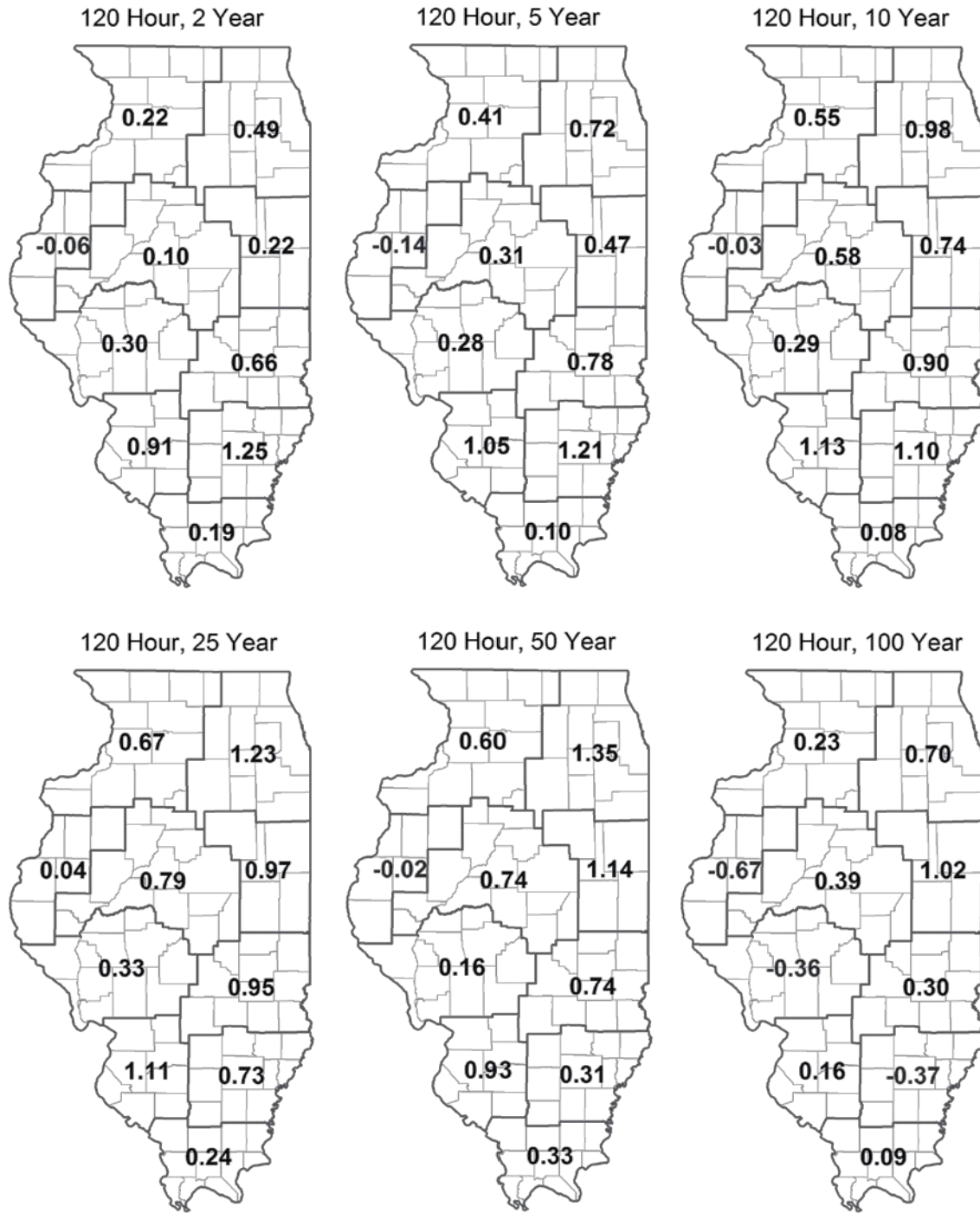


Figure 28. Differences in inches between this study and Bulletin 70 for a 120-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.

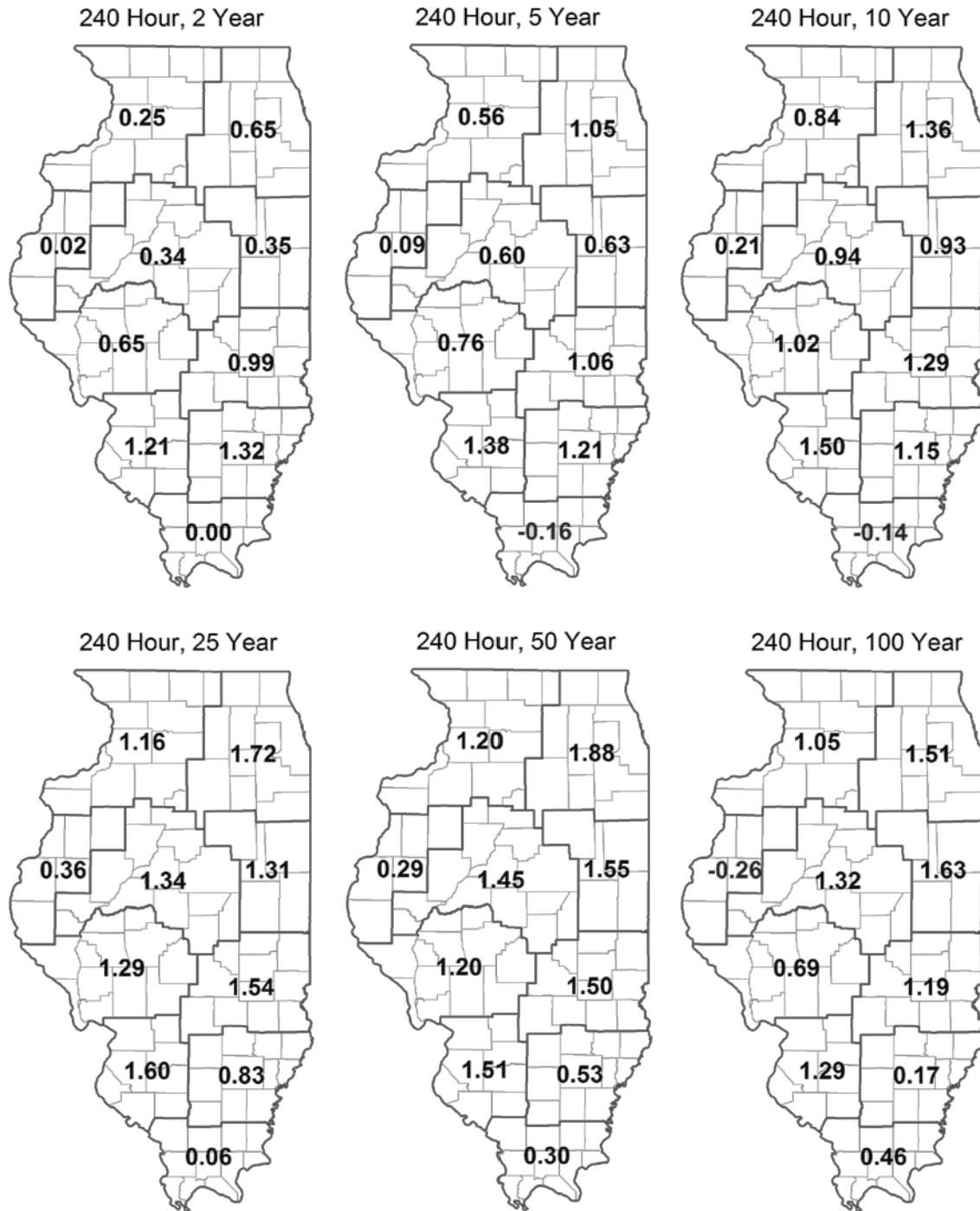


Figure 29. Differences in inches between this study and Bulletin 70 for a 240-hour duration and 2-, 5-, 10-, 25-, 50-, and 100-year frequencies for 10 sections in Illinois. Positive numbers denote an increase and negative numbers show a decrease compared with Bulletin 70.