



JEO CONSULTING GROUP



Levee Data Certification

ARKANSAS CITY, KANSAS

THE FACTS

- ▶ The city is the sponsor of over nine miles of levee embankment.
- ▶ The Federal Emergency Management Agency (FEMA) is completing floodplain mapping work in the Walnut Watershed. This mapping work will affect the regulatory floodplain elevations along the levee.
- ▶ FEMA requires documentation from a professional engineer that the levee meets several requirements per Title 44 Code of Federal Regulations (CFR) Section 65.10.
- ▶ A phased approach is being undertaken to identify available levee design data and identify what might be necessary to certify that the levee data meets FEMA requirements (certification).
- ▶ If adequate data is not already available, investigations and analyses will be completed to certify the levee meets FEMA requirements.
- ▶ With a full data certification package, the levee will be accredited by FEMA and continue to be shown as providing risk reduction from exterior river levels on Flood Insurance Rate Maps (FIRM). If the levee data is not certified in full to FEMA, the mapping process will assume the benefits of the levee are reduced or negligible—this may result in the mapping of regulatory FEMA floodplain areas on the landward side of the levee.
- ▶ *Why is this needed now?* FEMA policies have evolved since the data certification requirement was set in 1986 (44 CFR 65.10) and scrutiny of data submittals has increased.
- ▶ Unless the evaluation finds that an improvement is necessary, this process will not change the level of protection provided by the levee, nor will it change the U.S. Army Corps of Engineers' (USACE) involvement in inspections, flood fight activities, and levee rehabilitation assistance.
- ▶ FEMA and the USACE will be coordinated with in this process to collect and leverage available information.

44 CFR 65.10 Checklist:

Design Criteria

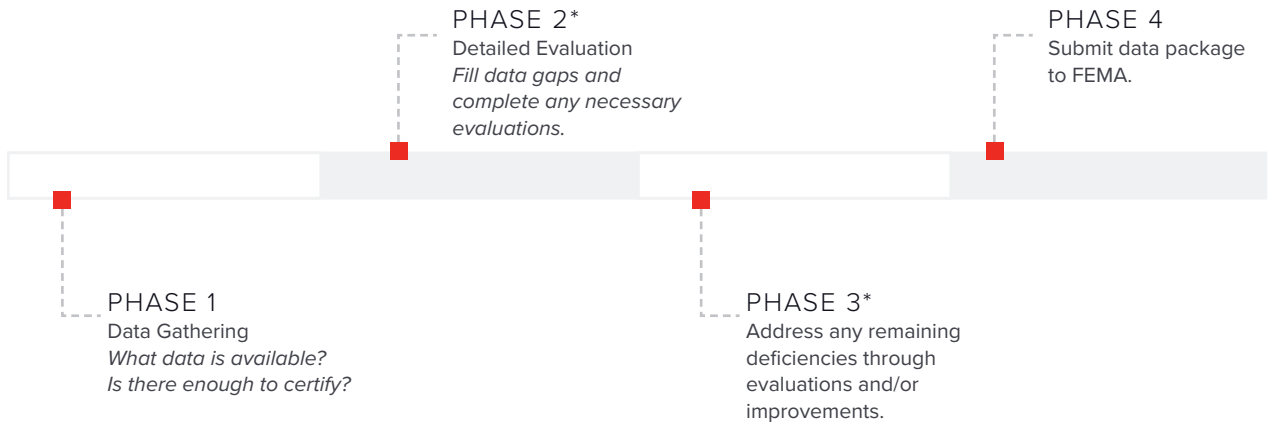
- Freeboard (*levee height relative to the 100-year flood elevation*)
- Closure Structures (*road and railroad crossings, pipes, etc.*)
- ✓ Embankment Protection (*adequate erosion protection*)
- Embankment and Foundation Stability, Underseepage, and Settlement (*geotechnical performance*)
- Interior Drainage (*flooding caused by rain that collects inside the levee*)

Updated and Current Operation and Maintenance Plan

- ✓ (to ensure critical activities can and will occur)
 - Flood Warning System
 - Plan for Operation of Closures

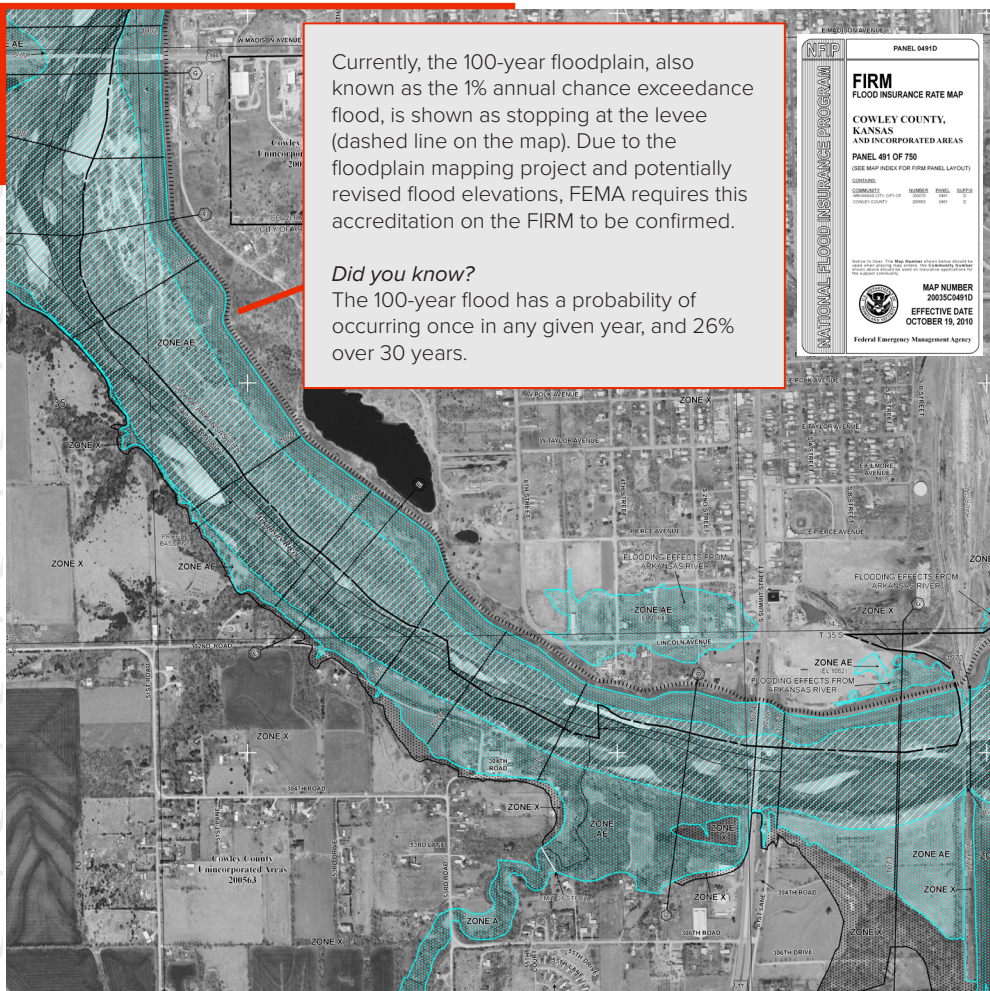
✓ Certification Data Submittal

LEVEE PHASING



**Phases 2 and 3 are to be completed as necessary, informed by prior phases.*

YOUR LEVEE AREA



FEMA requires the freeboard for the top of the levee to be a minimum of three-feet higher than the 100-year floodplain. The certification process will include review of this criteria.

Questions?



Jason Peek, PE, Ph.D.
Director of Kansas Operations
p: 785.224.9632
e: jpeek@jeo.com



Dan Fricke, PE, CFM
Senior Project Manager
p: 402.770.7361
e: dfricke@jeo.com