

Flood Risk in Paxico, Kansas: Assessments and potential solutions

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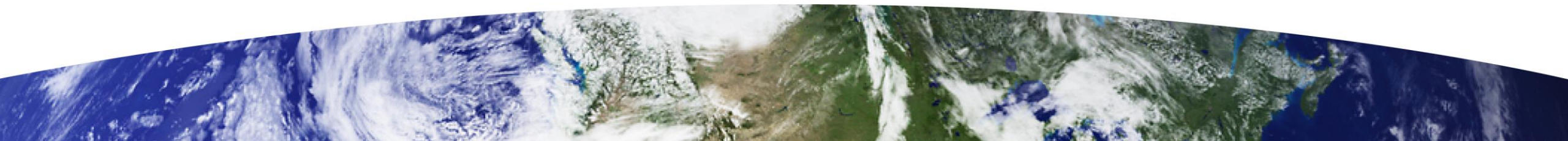
ADVANCING EARTH
AND SPACE SCIENCE

AGU THRIVING EARTH
EXCHANGE

Thriving Earth Exchange

- Bring resources of science to communities to address important issues
- To participate in, contribute to, and guide the use of scientific knowledge

- **>160** Projects Launched
- **426** Community Leaders
- **329** Scientists
- **66** Community Science Fellows
- **135** Unique cities/regions
- **39** States
- **10** Countries



Paxico's Science Team



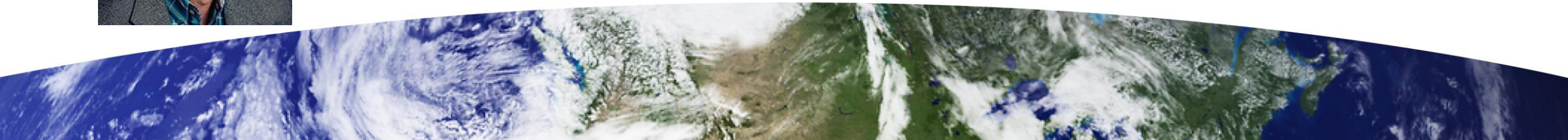
Kate Nelson, Assistant Professor, Dept. of Geography and Geospatial Sciences, Kansas State University



Brock Emmert, fluvial geomorphologist, Watershed Institute, Inc.

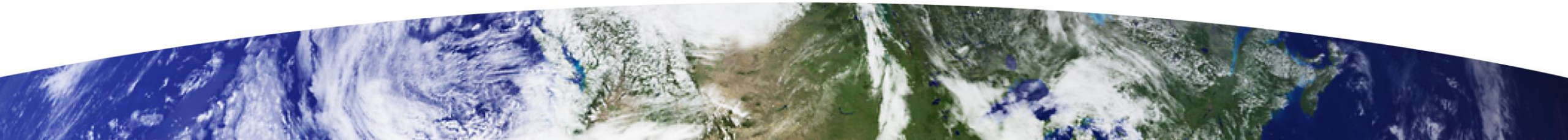


Tim Keane, Professor, Dept. of Landscape Architecture and Regional and Community Planning, Kansas State University



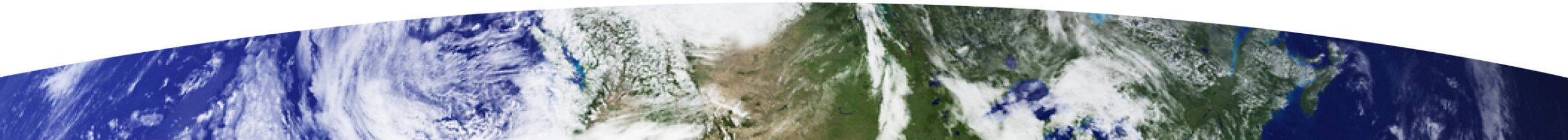
Project Goals


1. Scientific assessment of flooding and flood risk (ground-truth)
2. Identification of potential solutions



Project Data

- Visit during flood (tour, pictures)
- Conversations with city employee, residents
- Public records (historic data, existing assessments)
- Survey of residents
- Geospatial analyses





Mitigating flood risk - draft

Mitigating flood risk - draft

Supporting small town economic and community development in Paxico, Kansas

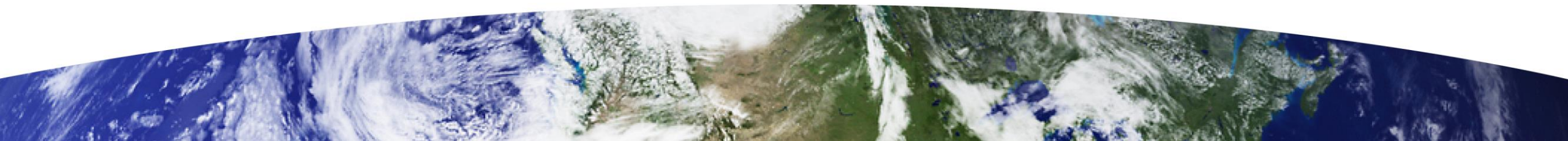
Katherine Nelson
December 2, 2021

[Site Visit](#) [Groundtruthing](#) [Damage Estimates](#)

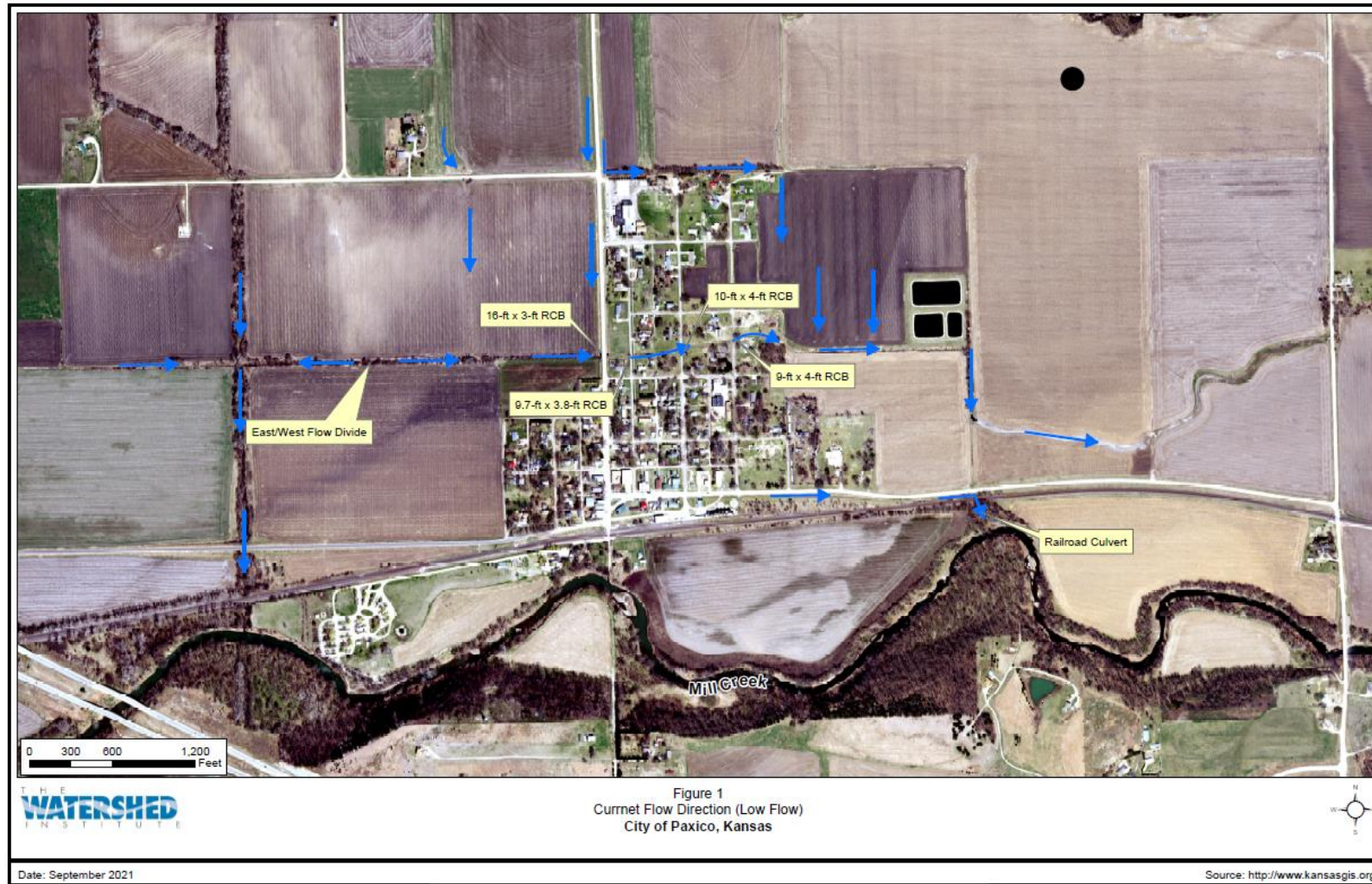
Paxico is a rural small town with just over 200 residents. The majority of the town lies in a high flood risk zone, which has experienced limited economic development for over a generation. Local watershed districts and community leaders have consulted an engineering firm to reduce the risk of flooding, but proposed solutions are cost-prohibitive for this small community. Organized via the [American Geophysical Union's Thriving Earth Exchange](#) program, a community science team composed of scientists, architects, and engineers familiar with federal flood risk programs and flood mitigation explored tangible steps that Paxico can take to reduce its flood risk.

Dr. Nelson's maps and information can be found at:

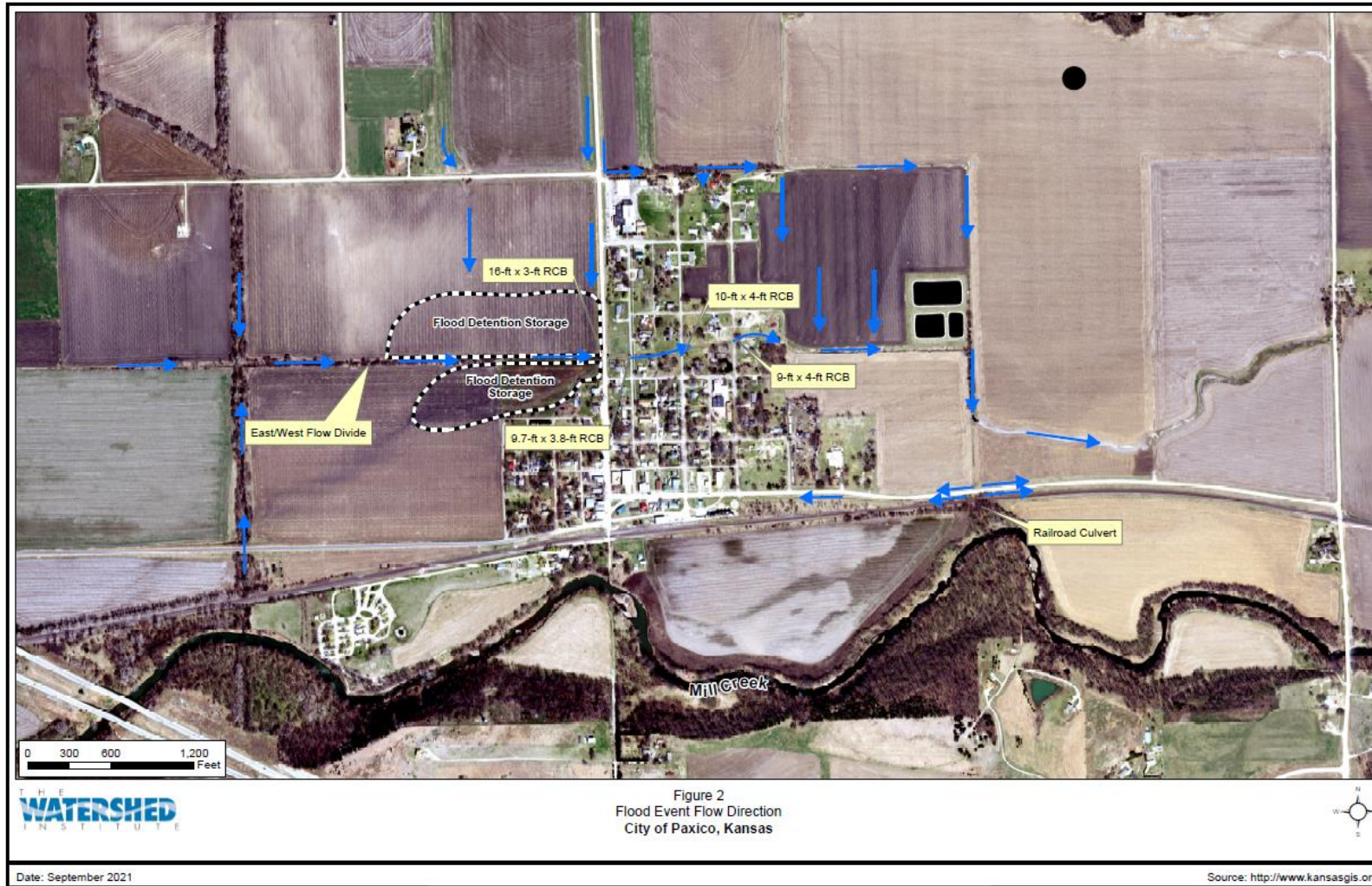
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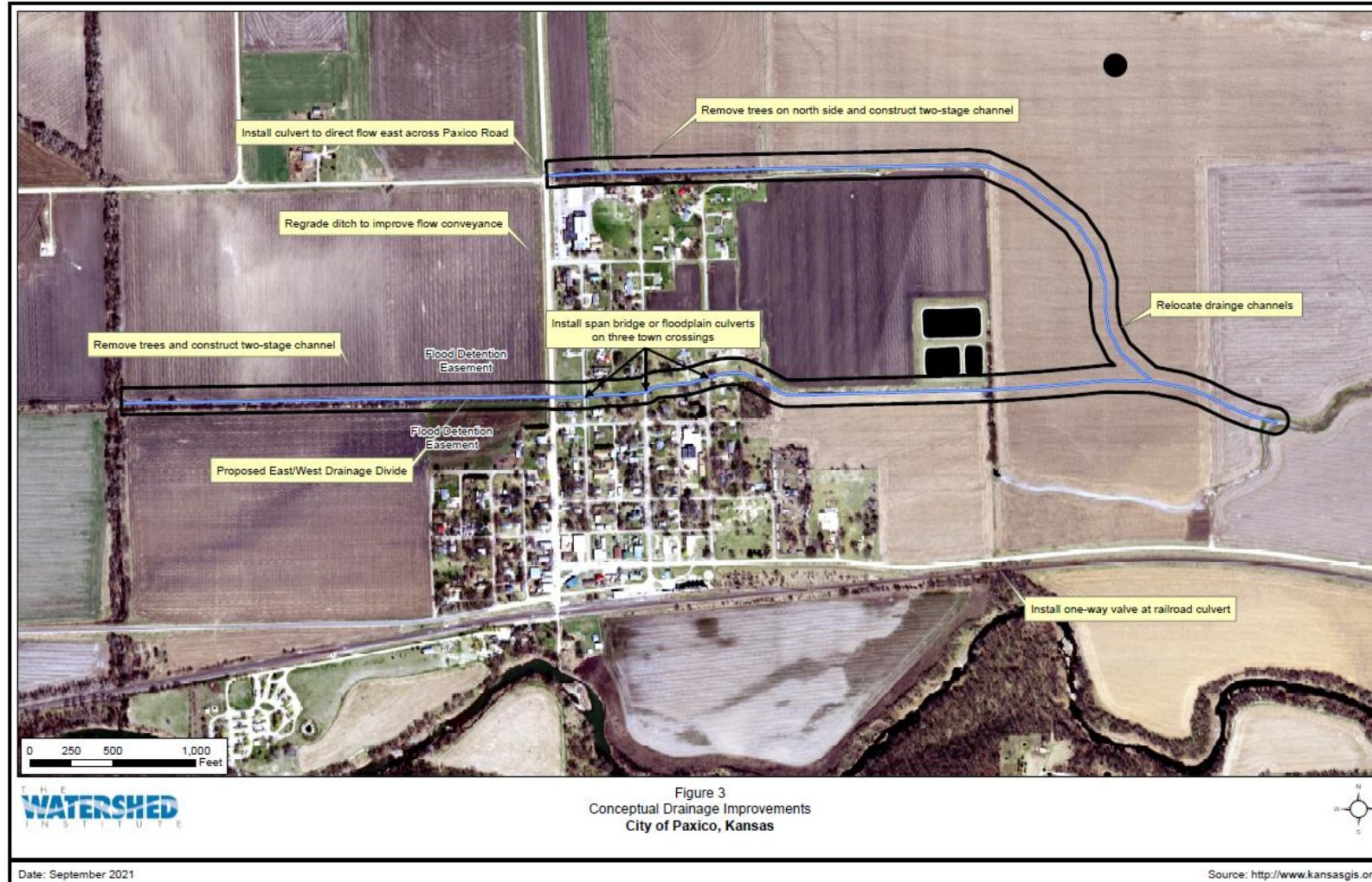
Brock's "low flow"
map



Brock's "flood flow"
map



Brock's potential Solutions map



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