

Statewide seamless compilation of detailed geologic mapping

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NGAC September 2018

MINNESOTA
GEOLOGICAL SURVEY



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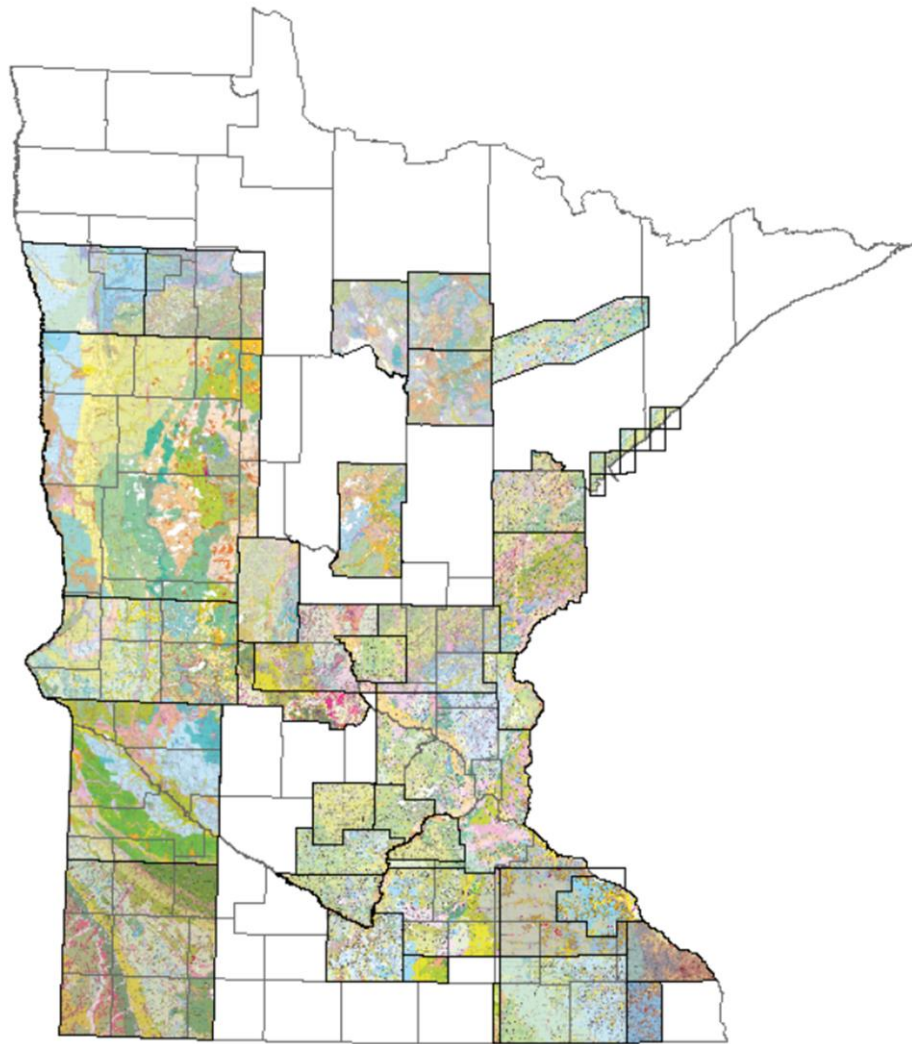


**Future
Mapping**

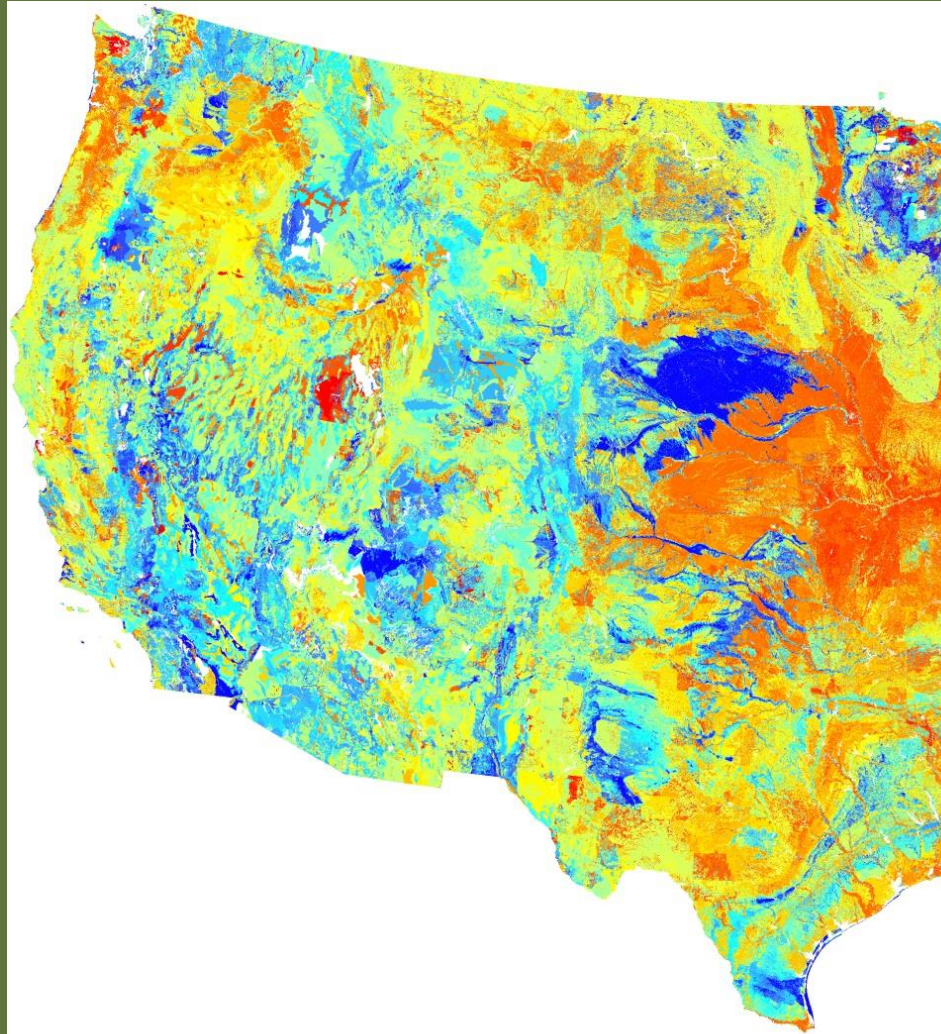
2016

2016

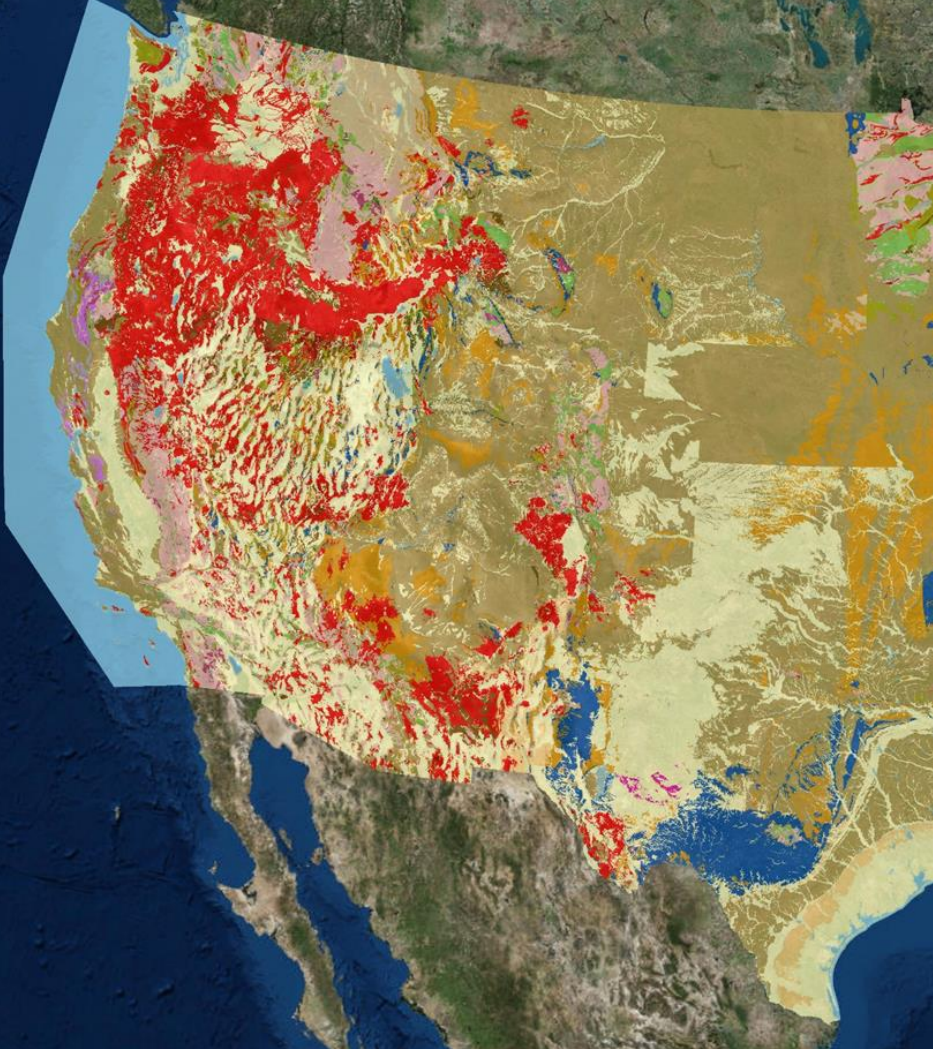
- We are committed to authored, peer-reviewed, innovative, paper geological maps, with a thorough legend, which are a durable format that will remain the foundation of our activity
- Concurrently, states are beginning to assemble geologic mapping more detailed than their state geological map, as a statewide compilation meant to eventually be complete and seamless
- We might publish an authored paper on the database design, but the permanent, ever-changing database might not have authors, or a series number, while undergoing regular audits, according to database protocols

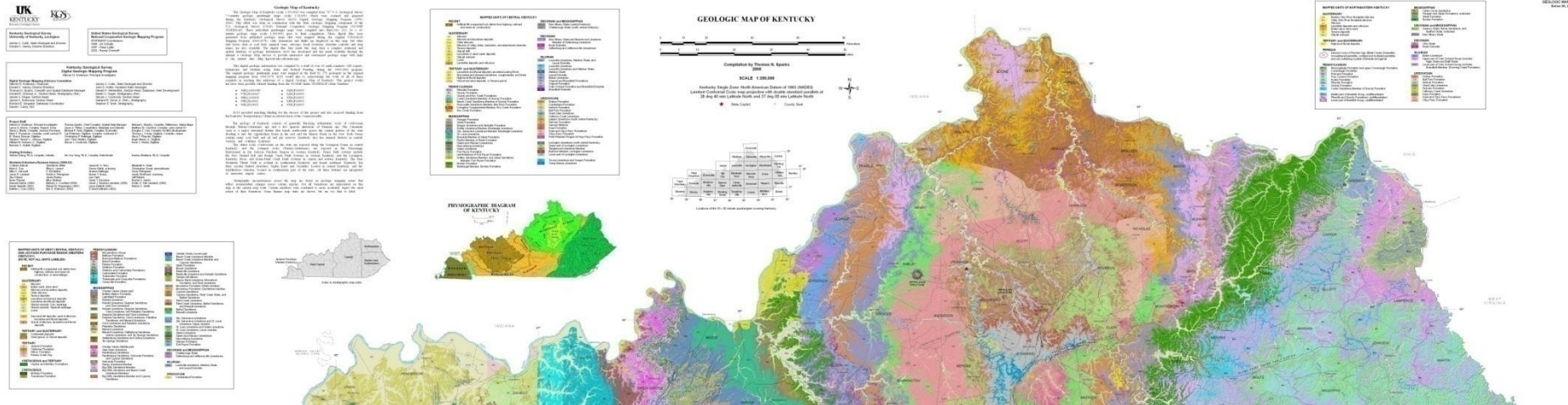


- **Rather than replacing paper maps, the seamless compilations of detail, while not necessarily capturing all information on the paper maps, will broaden use of our mapping, likely resulting in greater support**
- **Paper maps and their digital equivalents will remain the more information-rich documentation for the seamless database**
- **It might be best for us to work toward one layer more detailed than our state geologic map – 1:100,000 for most states, although for small states, detail might be the same as the state geological map**



- Many states will have a surficial layer showing uppermost sediments, and a bedrock layer showing uppermost rocks; in the future, we will incorporate additional 3D layering
- We thus are fulfilling the vision of the National Geologic Map Database Phase Three – a national database of vector geological mapping, as has been done by the soil mappers
- In this context, states will ideally start regularly delivering updates of the compilation, initially incomplete and unreconciled, and gradually, over a decade or two, more complete and seamless

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- A geological map of the western United States, showing various geological features and rock types. The map is overlaid on a satellite image of the region. The colors represent different geological units, with red and orange being prominent in the western part of the map, and blue and green in the eastern part. The map is tilted slightly to the left.
- This would be similar to the way that USGS is already working with 1:500,000 state bedrock geologic maps
 - GeMS database standard compliance might preferentially be applied to our statewide compilations, and not necessarily the maps, giving GeMS a justification more than ever – easing construction of a national database
 - The cost of the effort could potentially be covered under the Statemap compilation provision, and non-Statemap states would be welcome to contribute



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