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Data-Driven Documents and Data Visualization in Kentucky

Kentucky Farm Bureau

November 18, 2015

U.S. Department of the Interior
U.S. Geological Survey

Data-Driven Documents or “D3” is a simple way to interactively visualize data (all kinds) and reach people in a modern manner. It is open source and allows us great flexibility.

“D3.js is a JavaScript library for manipulating documents based on data. **D3** helps you bring data to life using HTML, SVG, and CSS. D3’s emphasis on web standards gives you the full capabilities of modern browsers without tying yourself to a proprietary framework, combining powerful visualization components and a data-driven approach to document object model (DOM) manipulation.”

Most main-line pubs – newspapers, journals, etc. - now use this platform in some manner.

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It’s easier to simply show this!

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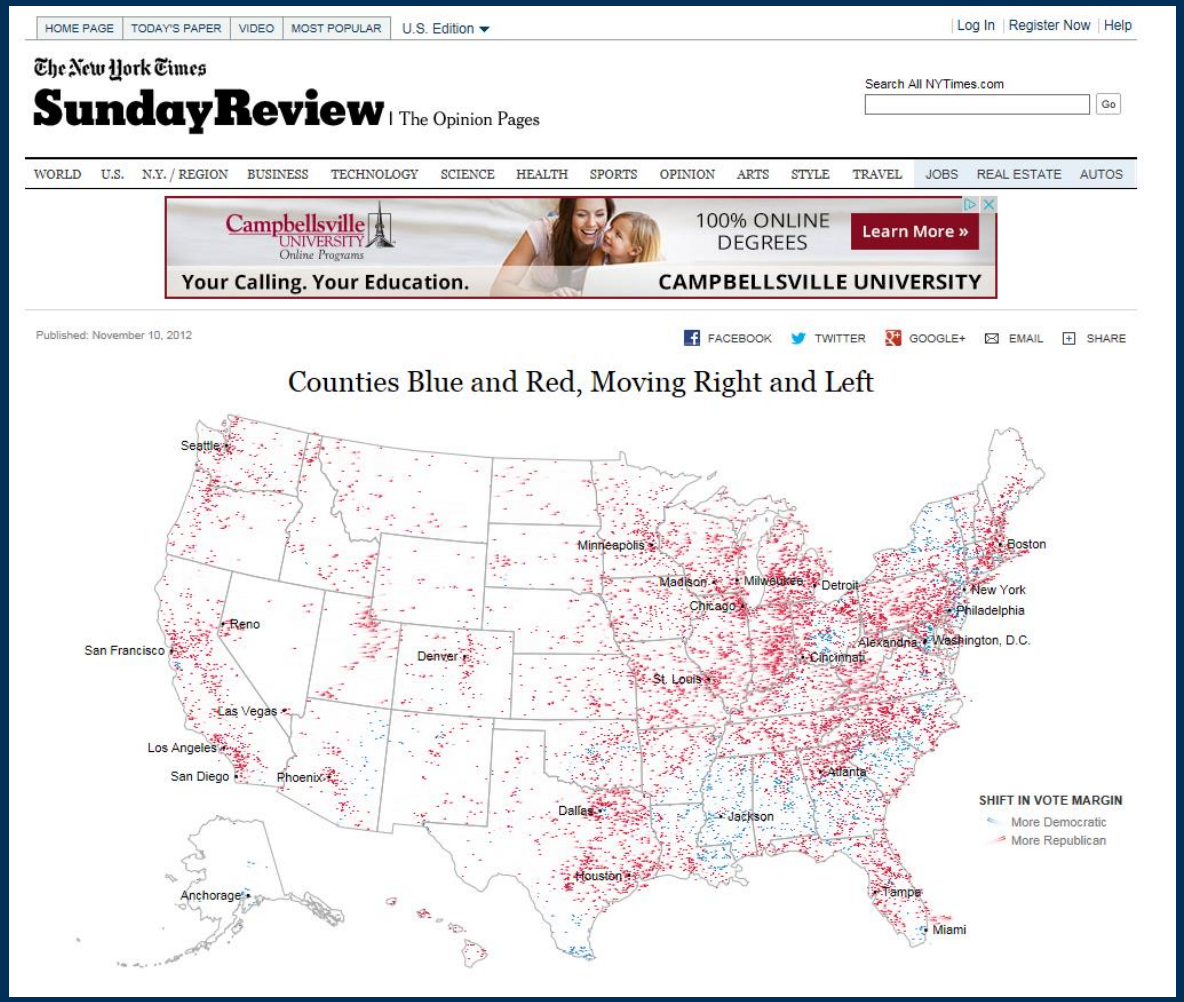
http://d3js.org/

The New York Times uses D3 applications:



http://www.nytimes.com/interactive/2012/11/11/sunday-review/counties-moving.html?_r=0

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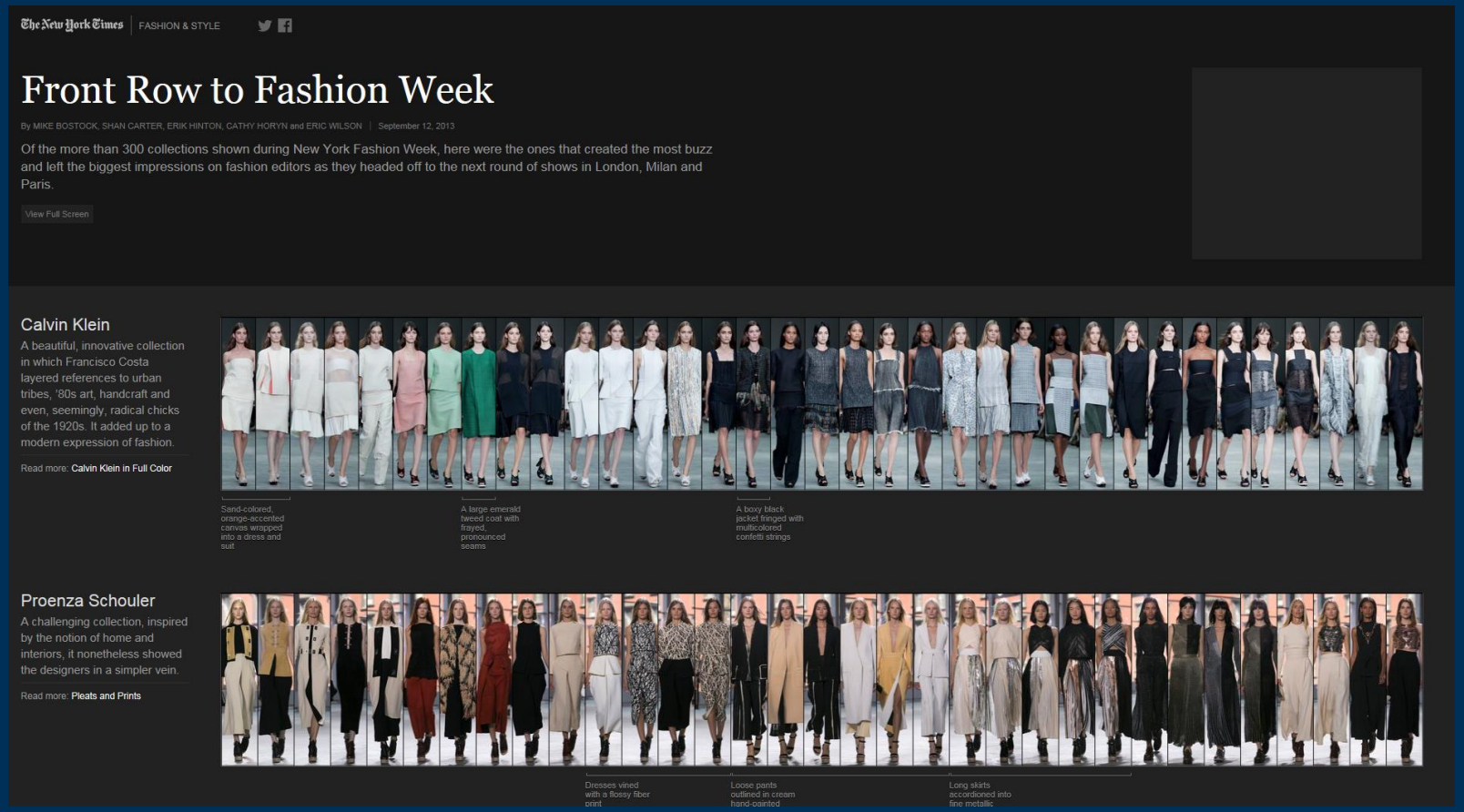

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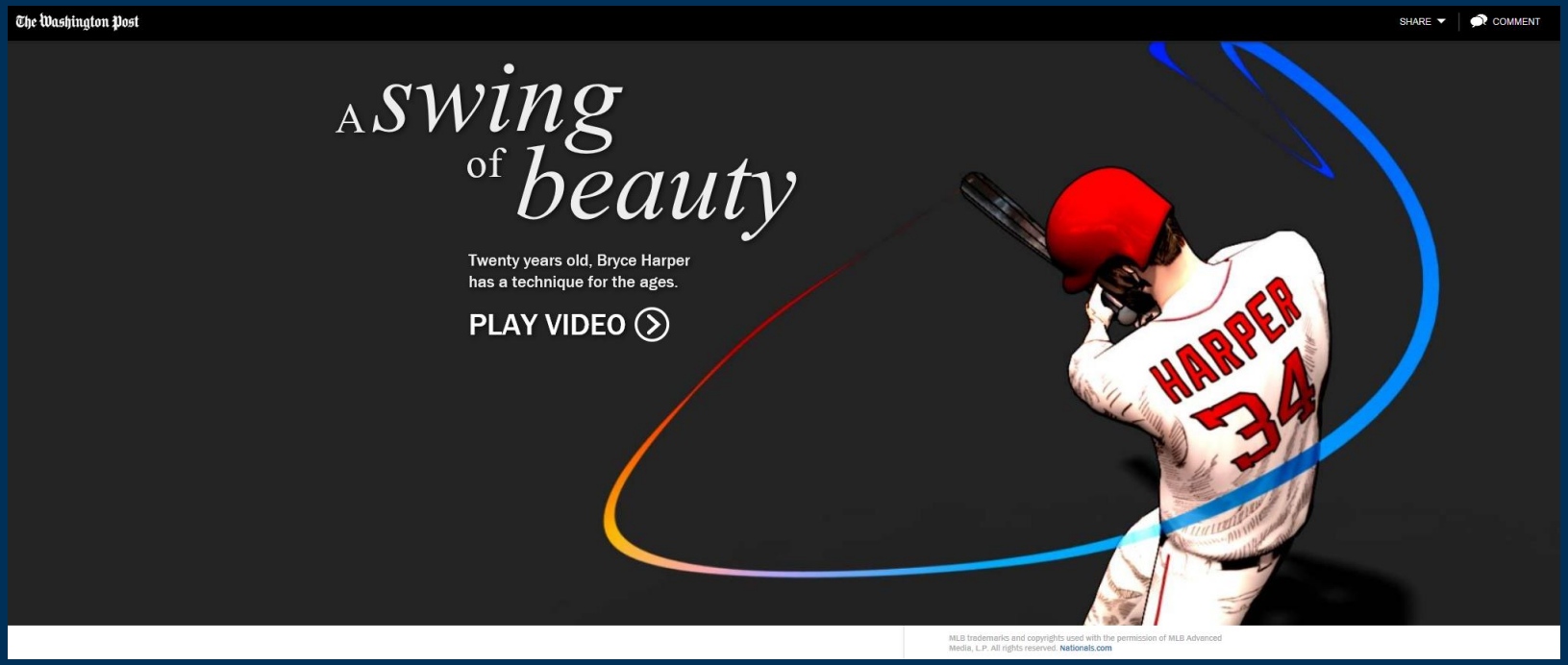
http://www.nytimes.com/newsgraphics/2013/09/13/fashion-week-editors-picks/

The Washington Post uses D3 applications:



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http://www.washingtonpost.com/wp-srv/special/sports/bryce-harper-swing-of-beauty/

USGS also uses D3 in our newer applications

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Groundwater Resources Program

Hydrologic Budget and Conditions of Permian, Pennsylvanian, and Mississippian Aquifers in the Appalachian Plateaus Physiographic Province

Scientific Investigations Report 2015–5106
Version 1.1, October 2015

U.S. Department of the Interior
U.S. Geological Survey

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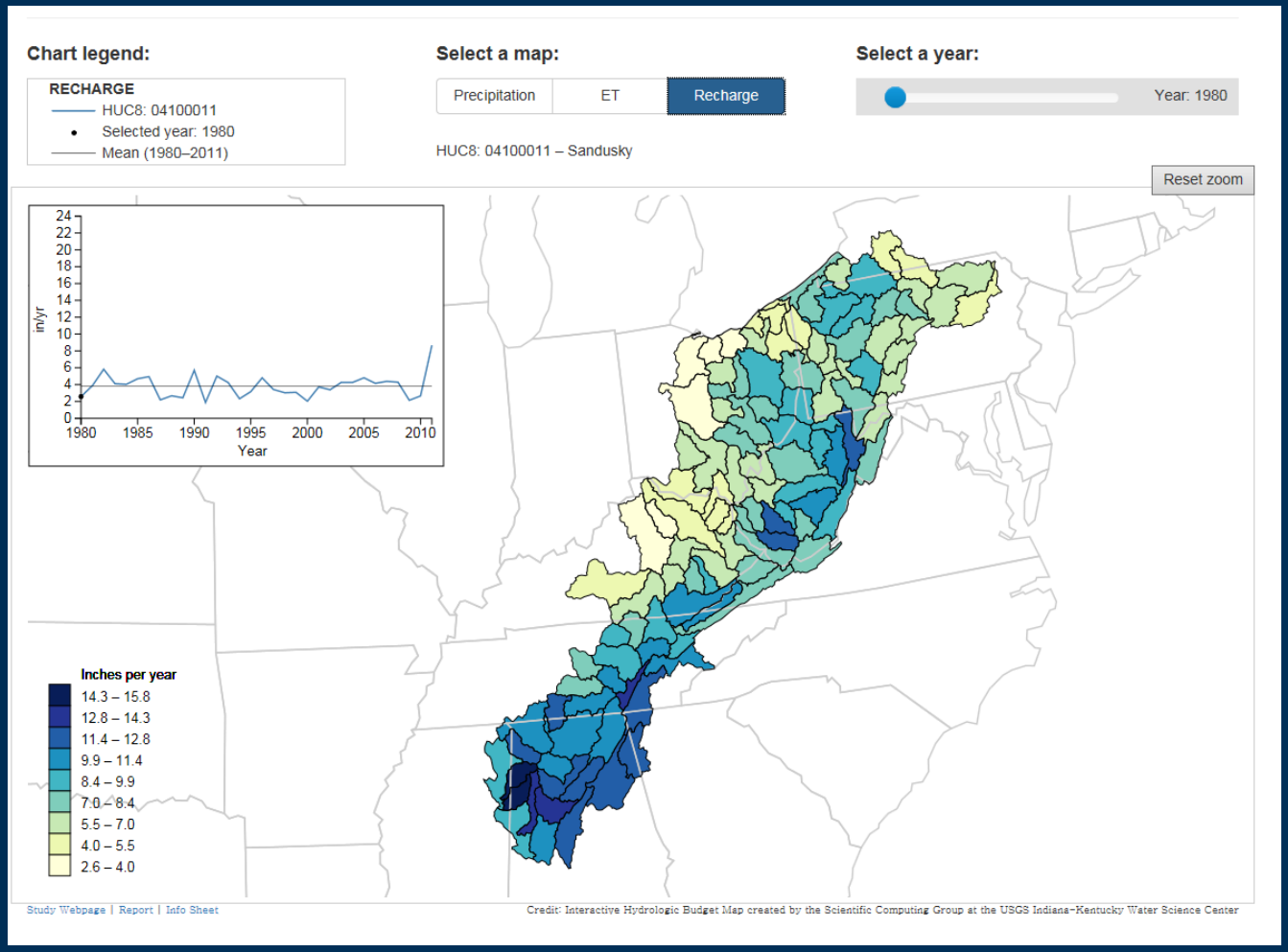
http://pubs.usgs.gov/sir/2015/5106/sir20155106.pdf

D3 Data viewer for USGS SIR 2015-5106:



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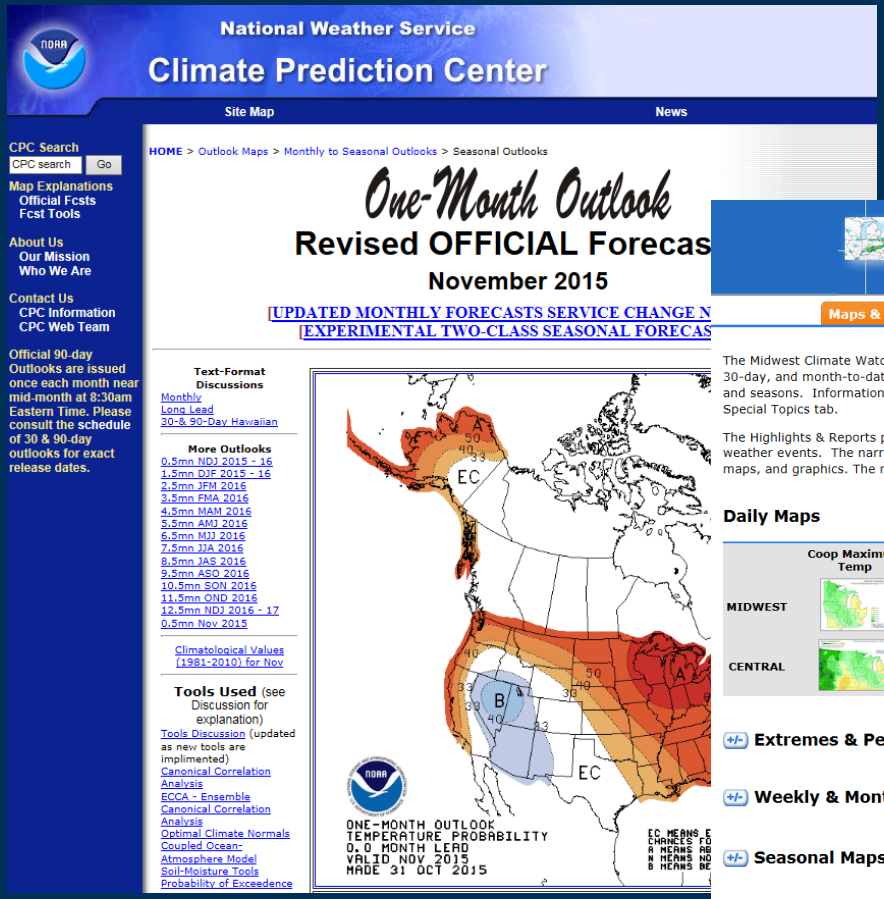
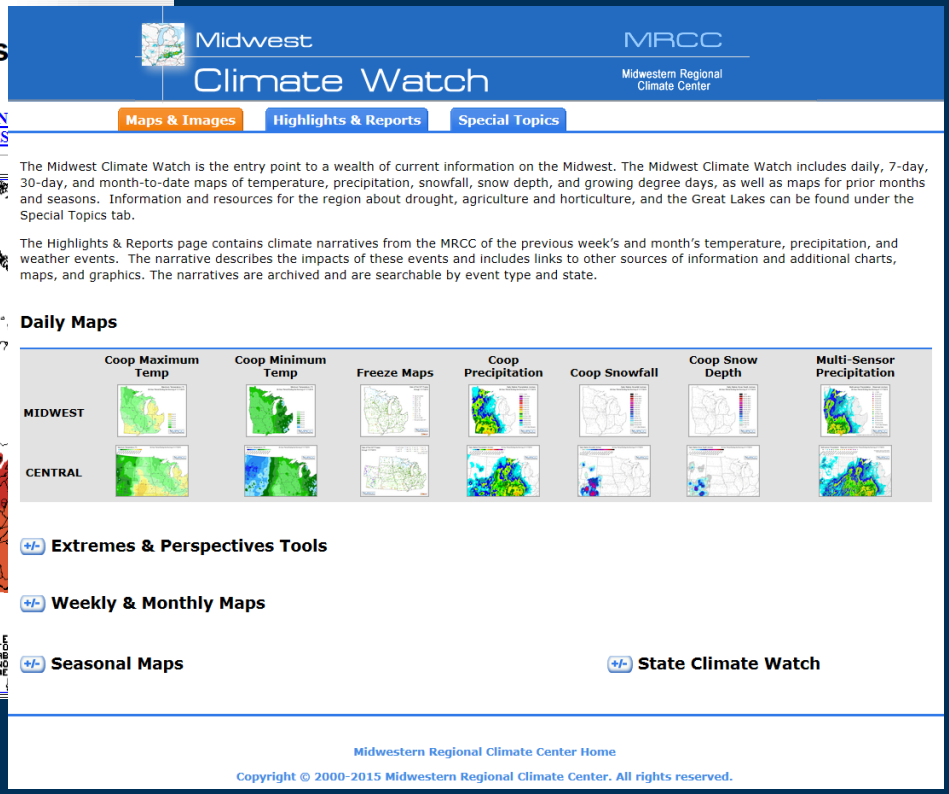
http://ky.water.usgs.gov/projects/Aquifer-Map-D3/index.html

Sources of data inputs / page designs -
there are many great sources out there with key pieces!





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Links on hand out are from 11/3/15 *National Integrated Drought Information System* (*NIDIS*) meeting

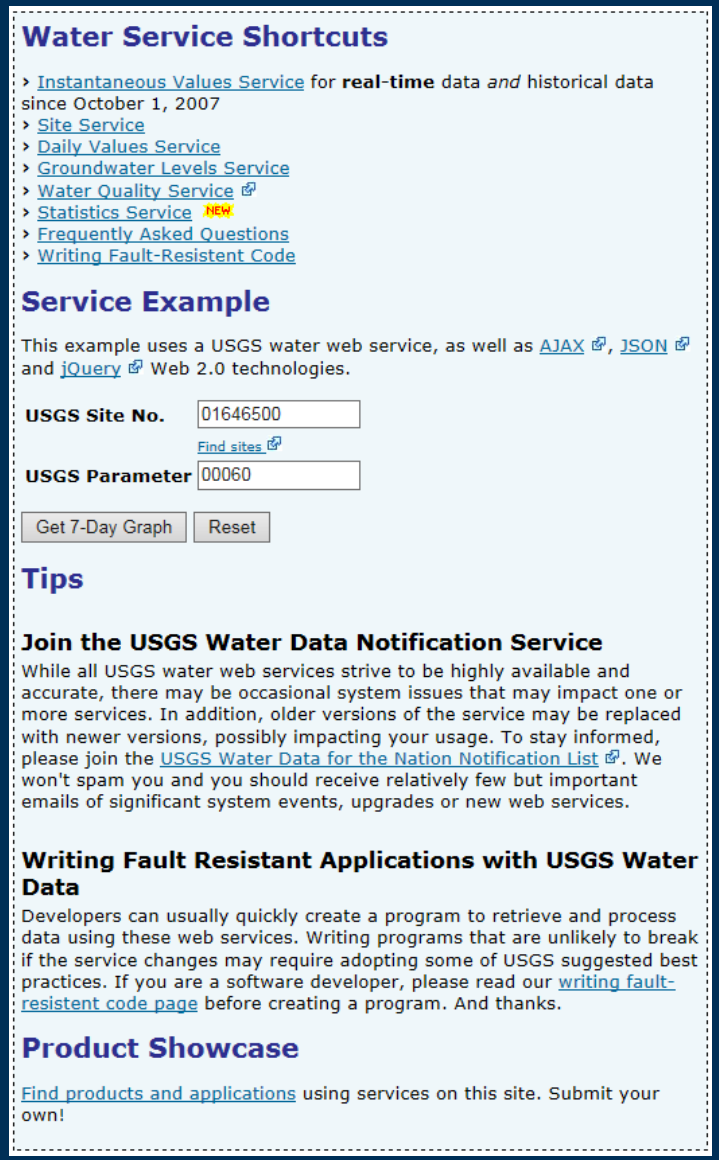
Summary:

D3 offers a very modern and cost-effective way to visualize data. It should work well for drought and other agricultural data / issues.

Data can be static or dynamic (live from web services) and includes most all types (spatial, numeric, etc.) – most agencies now offer web services with their data. For example, USGS has “Water Services” and offers free code as well.

NOAA / NWS and others also offer similar services that can be accessed easily. We just need to assemble the pieces.

An entry-level D3 application will run about $40K (with live data) and about $3K annually to maintain.



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http://waterservices.usgs.gov/

Questions?

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