**VIII. Content Innovation**

**Glossary Viewer**

Each of the following words will have an associated text bubble that appears when hovering to provide an explanation of the term.

**cfs** - cubic feet per second.  A common measurement of stream flow, and the units by which our USGS data was first given.

**acre-feet** - the amount of water required to cover one acre of land in water 1 foot deep.  USGS data was converted from cubic feet per second to million acre-feet to summarize discharge in 1 month.

**snow water equivalent** - the amount of water, in millimeters or inches, standing after an amount of snow is melted down, in our case theoretically.  Because snowpack varies in density, snow water equivalents are used a measure of potential water in snow that will contribute to runoff during spring thaw.

**average maximum snow water equivalent** - because snow accumulates with consecutive snowstorms throughout the winter, maximum snow water equivalent is one way of measuring snowpack over a time period.  Our study found maximum SWE at every pixel during every month for the 33-year study period.  To summarize months and years, average maximum SWE was calculated - or, on average, the maximum SWE found over that period of time at that pixel.

**kg/m2** - the measurement of water by weight in a space of soil used to summarize soil moisture content.  Soil moisture content is an averaged over the first meter of soil depth.

**MRB** - Missouri River Basin, covering 529,300 square miles and containing the largest reservoir system (by storage) in the United States

**Study area** - see MRB

**Focus area** - within our study area, our focus was the overlap of the Upper Missouri River Basin above Fort Randall and the Great Plains.  Referred to as the upper Great Plains Region or the Northern Plains, lack of ground stations in this region led it to be the focus of our study.

**Water year** - in accordance with the USGS, a water year describes the months by which surface-water supply is gained and lost, from October 1st to September 30th.  For example, the winter from 1979-1980 is part of the water year 1980.

**Featured Multimedia**

The following section will include links to featured videos with explanations of the floods of 2011 and other additional information.

Missouri River Climate VPS video (to be published after term if it cannot be embedded)

This link/embedded video will be at the end of the technical paper abstract.

Climate cast video explaining 2011 floods:

This link will be placed in intro during discussion of 2011 flooding events.

<https://www.climate.gov/news-features/videos/missouri-river-flooding-2011-responding-climate-extreme>

Department of Defense – U.S. Army Corps of Engineers footage assessing 2011 floods

This link will be placed in intro during discussion of 2011 flooding events while discussing the U.S. Army Corps of Engineers efforts to combat flooding damage.

<https://www.youtube.com/watch?v=QSo3Ka49TTU>

**Animated illustration**

The monthly climatologies will be presented in an individual animated gif of each variable that portrays the changing seasonal patterns.