NOAA Research Grant – Klamath Basin
Requirements for Robust Climate, Weather and Water Supply Web Application

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- The native quality controlled or provisional data (not images, graphs) must be accessible electronically via the web in a known and time invariant format (e.g., SHEP, NWS text product).
- The data must be available through a data API and automatically updated for use in a server-side application.
- Making the data available must fit within the "normal workflow process" of the agency providing the data – there should not be an expectation for that the agency will "create something new" to serve the specific needs within the Klamath Basin.
- If there is a need to "create something new" resources may need to be made available from within the basin
- Automatic error checking and web master notification of the failure to find and access the data is required.
- The data can be categorized into specific types for use in standard data charting, analysis and reporting tools.
- A library is needed of standard data charting, analysis and reporting perhaps by data type.
- A user must be able to enter / upload / evaluate against specific resource metrics or criteria (i.e., decision criteria) they "upload" perhaps by data type (e.g., UKL lake levels).
- An understandable method of describing and understanding the data is needed. Perhaps separate "widgets" for forecast and measured data, that for any given location and type of data shows :
  - Present magnitude
    - Compared to historic / known years (specific previous time periods)
    - Categorized percentiles
    - Departure from normal (perhaps like above)
  - The direction of change (increasing, no change, decreasing)
  - The rate of change compared to historic (real years and percentiles)
  - Value compared to a criteria / metric
  - The probable final value (where will it end up)
- Need to increase value is the products by
  - Integrating the types an sources of data (e.g., rainfall and runoff graphs)
  - Comparison to metric / criteria