**Use cases to guide the API design in WaDE 2.0**

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1. Query the water allocation API and return a CSV file for water allocations data and metadata within an area of interest. Input parameters: geometry (i.e., area of interest to search within, or a specific allocation of interest (i.e., Allocation identifier), primary beneficial use.

Either the geometry or the allocation identifier is needed (provide one at least) and then optionally provide the primary beneficia use.

Not sure if we want to be more specific in the search to also allow filtering based on allocation legal status, allocation basis, allocation type.

Not sure either if we want to filter based on allocation priority date. (I think this one is important and we probably should include as optional)

1. Create a water rights visualization dashboard in Tableau for the Upper Colorado River Basin States (Utah, Wyoming, Colorado, and New Mexico).

Use a mix of pic and bar charts, US states map, sites as circles with gradual size based on amount, color based on beneficial use, shape based on water source type (groundwater or surface water), and a time slider for the allocation priority in years. Visualize water allocation categories of interest and amounts over space and time across state boundaries.

**Information of interest:** water allocation amount, maximum allocation amount, beneficial uses (s), allocation priority date, location (log. and lat.), water source type, allocation legal status, allocation basis, organization intensifier.

1. What are the senior appropriated water rights amounts in the Upper Colorado River Basin sorted by date? (e.g., senior rights of interest here are appropriated by the year 1900)
2. What are the percentages of allocated water amounts in Cache County, Utah per each beneficial use category? See this example visualizations for water rights data in WaDE 1.0 <http://wade.westernstateswater.org/how-wade-works/#CaseStudies>
3. Who owns the highest allocation water amounts for each beneficial use category in Cache County?
4. What are the allocated water amounts and their beneficial use in the Upper Colorado basin?