Water Resources Mission Area Integrated Data and Tools Catalog

THE PROBLEM

The WMA does not have an internal or public catalog of datasets, compatible tools, and example use cases to share and discover resources in use or in development by WMA projects. As a result, data management coordination between active projects, and public dissemination of data, tools, and workflow resources is handled through ad-hoc means that requires a large investment of time, includes redundancy and may be challenging to maintained in the long run.

WHAT IS THE CATALOG?

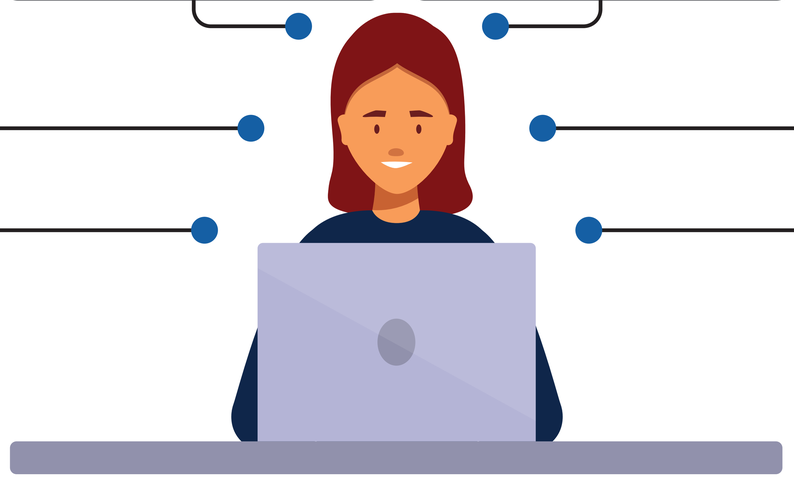
The catalog is a place to share and discover the data and tools that projects in WMA are developing or using as inputs to their project work. This information is stored in one cohesive information base that can be searched and filtered to serve a variety of data management and project planning needs.

The catalog is comprised of 3 resource types:

- **Datasets** — observed and modeled data
- **Tools** — software and workflows
- **</> Use Cases** — demos of datasets and tools

Some examples of the types of questions you could ask of the catalog (once fully operational) include:

- Which precipitation datasets are available for the years 1950-2000 with a spatial resolution of 4km?
- Which other projects are already using the same climate forcing dataset that my project is using?
- Where can I get access to the gridMET dataset?
- What tools are available to help me perform spatial aggregation to HUC12 units?
- What are all of the datasets that are actively being developed within WMA?
- How do I use gdptools to process my data?



WHAT ELSE CAN YOU DO WITH THE CATALOG?

- Discover new assets to be used for project work
- Share new information products
- Promote better data management
- Increase coordination among WMA projects

THE APPROACH

We have built just enough to test the need and functionality of the catalog. Usability studies and interviews have informed our path forward.

FY22 — **Concept of the catalog developed, static visual only**
purpose: socialize idea

FY23 — **Simple web interface, collection of csvs**
purpose: users could interact, projects contribute content as example, facilitate discussion as tool for planning

FY24 — **Web form, data validation and public endpoint**
purpose: improve entry into catalog, realistic view of what the catalog could become, prototype to green light efforts to scale.

CURRENT STATE

7	Project's Sample Inventory	248	Datasets
35	Tools/Services	39	Use Cases

- **Internal end point:** includes project information and in-dev products
- **Public end point:** includes only released science products
- No formal process or governance

FUTURE STATE

- Flexible content management system that real time updates and validates as entries into the catalog are made by users
- Just enough features developed to provide the right information to scientists and managers
- A lightweight process for entry and governance
- All project data/tools/etc exist in catalog

USGS

We want to hear from the larger community of modelers and managers about what functionality we should prioritize implementing in future versions. We welcome ideas to improve usability and integration of the site and its contents through the feedback.