Fact Sheet

A General Relational Model to Organize Systems Water Management Data (WaM-DaM)

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➢ Purpose

WaM-DaM is a relational data model that can be used as a database in SQL Server, SQLite, MySQL, or PostgreSQL to:

- permanently store and integrate water management data
- potentially be used to serve data to models

➢ Principles and attributes of WaM-DaM

Principle	How could it represent your data?
Flexible and extensible modular design	Build objects for models then create instances
Networks	Create vector networks of nodes and links to represent connectivity and interaction between water system components
Scenarios	Represent changes in networks through topology, metadata, and data values
Relational	Supports querying subsets of data and metadata for models and independent RDBMS technologies
Extensible controlled vocabulary	Keep native terms and provide the option to register them against controlled terms
Reusable descriptive a explicit metadata	Support sources, methods, units, and people and organizations
Multiple data formats for systems models	Supports binary, parameters, seasonal parameter, text controlled, text free, file based, rule, time series, and multi-column arrays
and open-source environment	Source code, schemam and documentation available to the public

➢ Test Use Case

- Integrated Dams, Waterbodies, Stream Network for the United States, time series, and WEAP models data for the Bear River Watershed, Utah. Using WaM-DaM SQLite database, we answered data questions across these data sources about infrastructure connectivity, metadata, and data values for attributes.

➢ Next

- Design and test the WaM-DaM Data Loader (GUI)

➢ Questions

- How could we move forward towards using controlled vocabulary in water management data?
- How could WaM-DaM be used to share and publish water management data?

➢ Further Info

- WaM-DaM documentation, and source code is available on GitHub @ https://github.com/amabdallah/WaM-DaM
- Please go to the address below to leave feedback about WaM-DaM https://goo.gl/vnTqLl