RiverWare Direct Data Connections

- Allow RiverWare to connect directly to databases

- First database is Corps of Engineers Data Storage System (DSS)

- Part of the integration of RiverWare into the Corps Water Management System (CWMS)

Highlights

➢ Extensible architecture

➢ Database-neutral front end

➢ One or more database-specific back ends

➢ All configuration through the user interface

Three Main Components
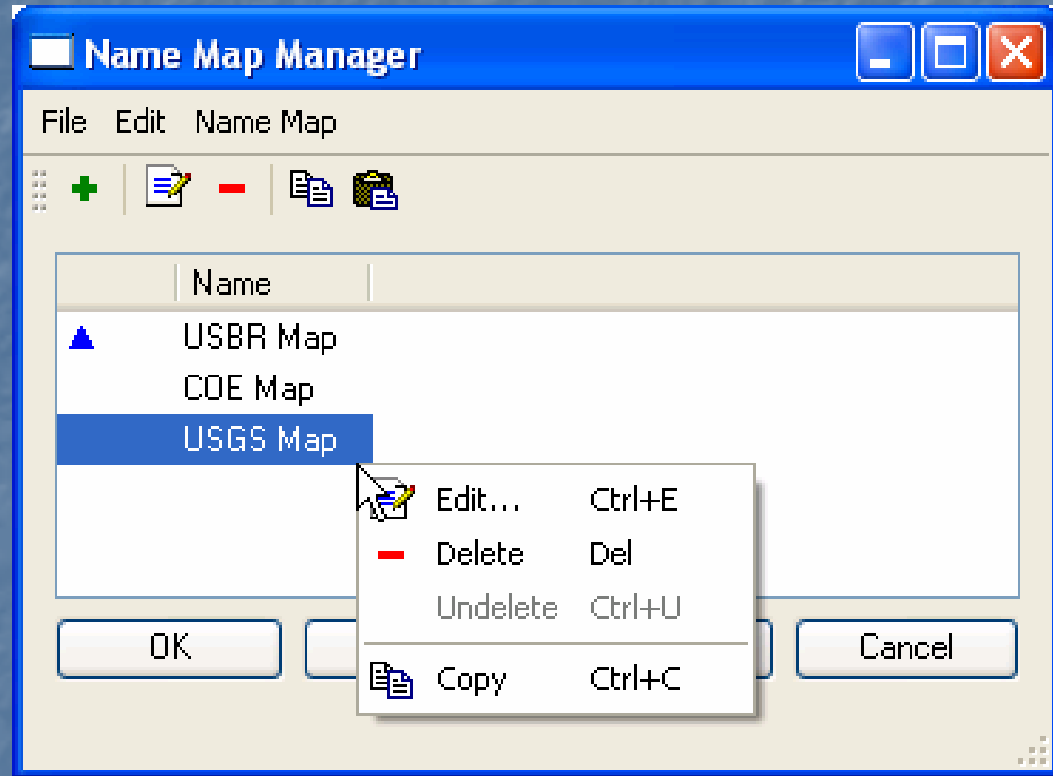
➢ Name Maps

➢ Datasets

➢ Database DMI

Name Maps

➢ RiverWare entities (Simulation Object, Account, Slot, etc.) quite possibly have different names in the model than in the database

➢ Name maps map RiverWare names to their database names

Name Map Manager

Manage a collection
of name maps:
- Add
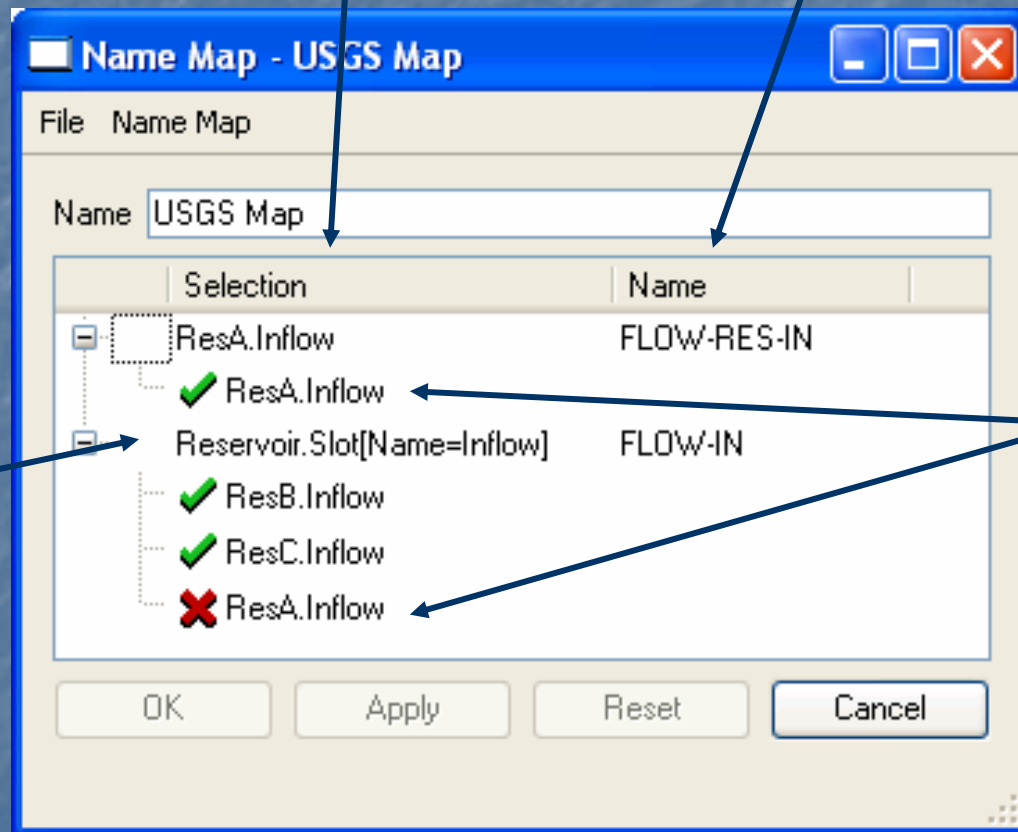- Delete
- Edit
- Copy
- Paste

Name Map Editor

RiverWare entity

Database name

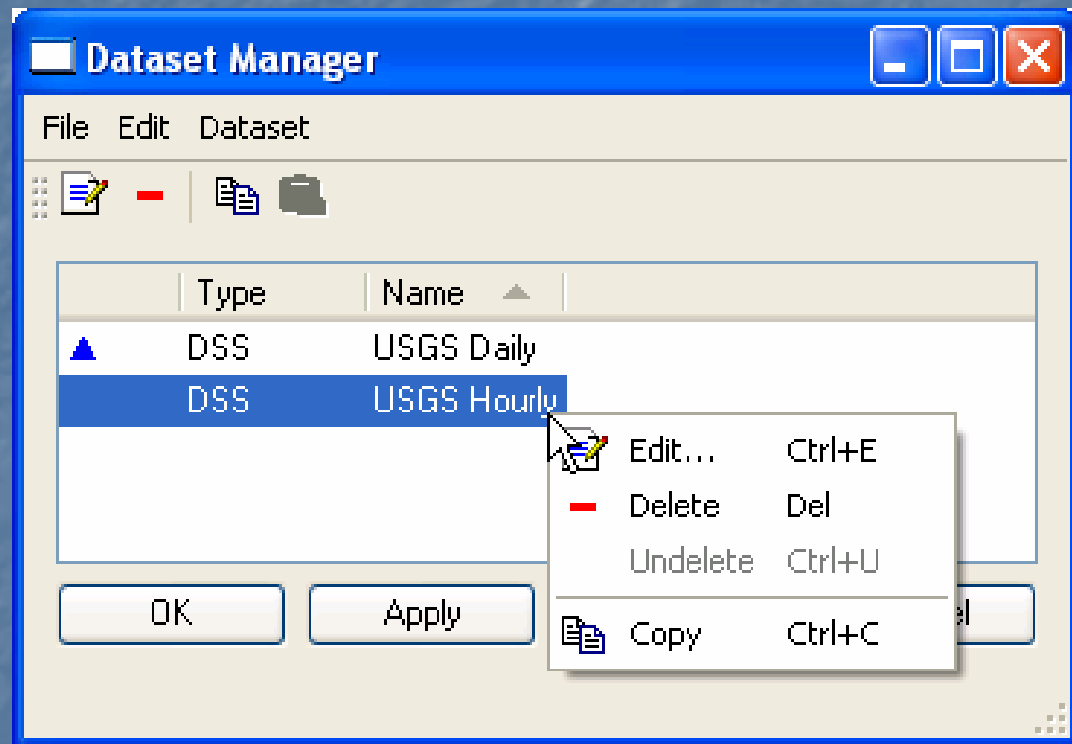Prioritized Selections

Wildcard selections

Datasets

➢ Database specific (e.g., DSS specific)

➢ Encapsulate all RiverWare knowledge about the database

➢ Generally two types of knowledge:

- Configuration information
- Database interaction

Dataset Manager

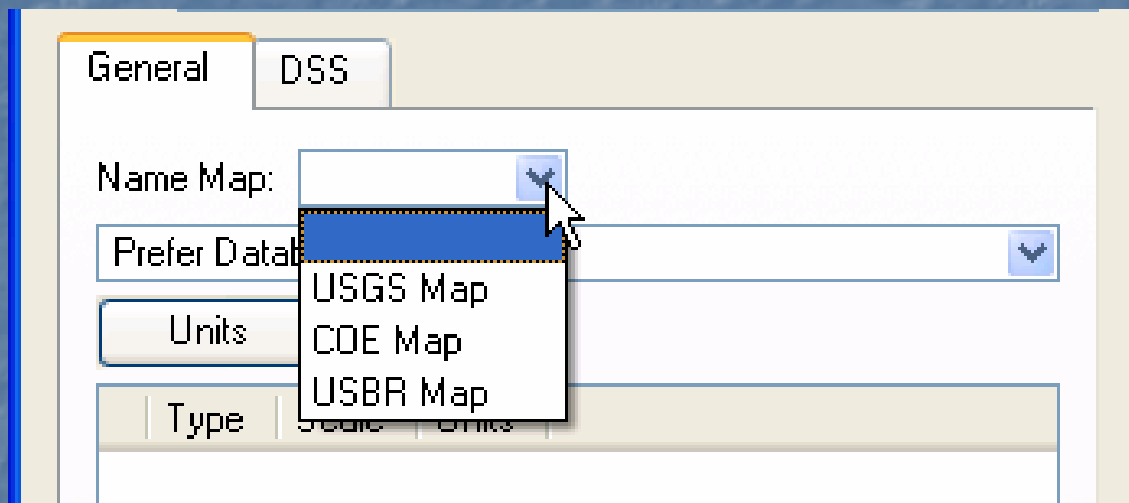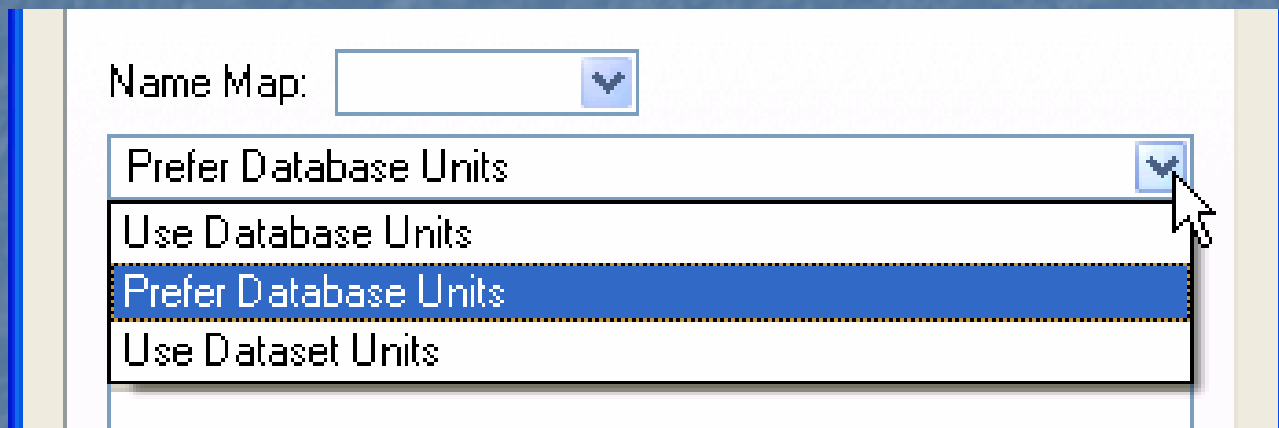Manage a collection of datasets:
- Add
- Delete
- Edit
- Copy
- Paste

General Configuration – Name Map
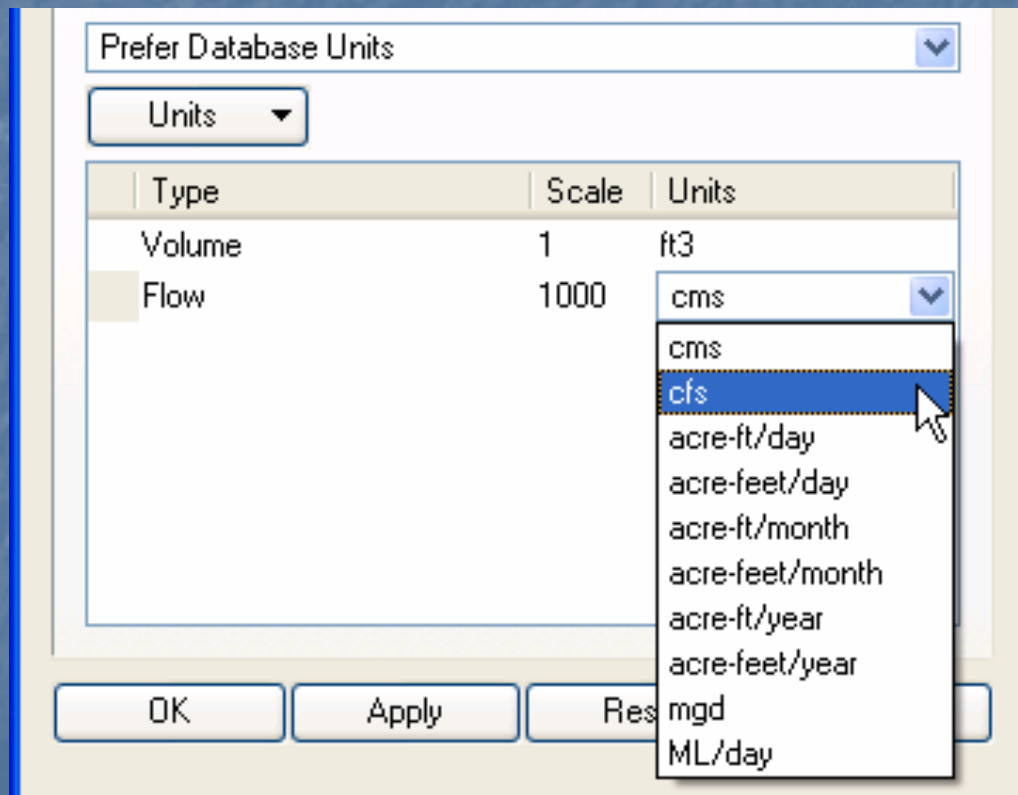
➢ Select the name map

General Configuration – Units

- ➢ Select the unit behavior
  - Get units from the database
  - Get units from the database or the dataset
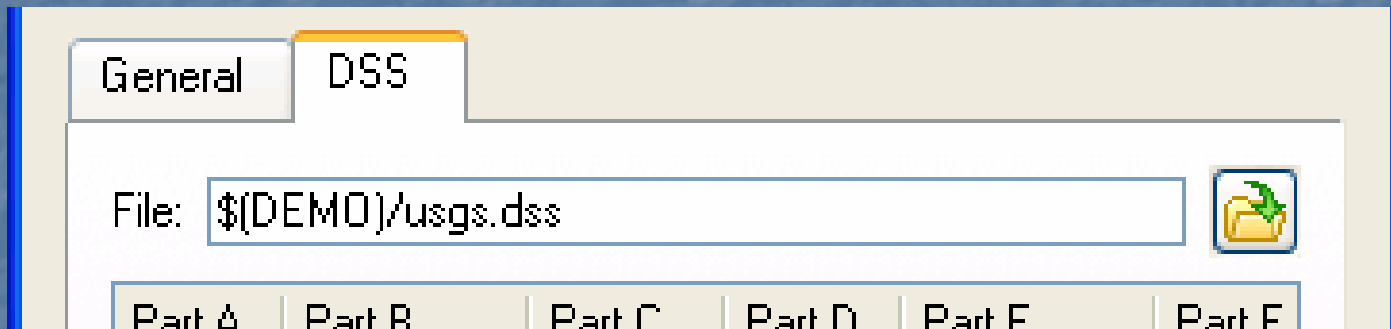 - Get units from the dataset

General Configuration – Units

➢ If getting units from the dataset, select the units

DSS Configuration – File

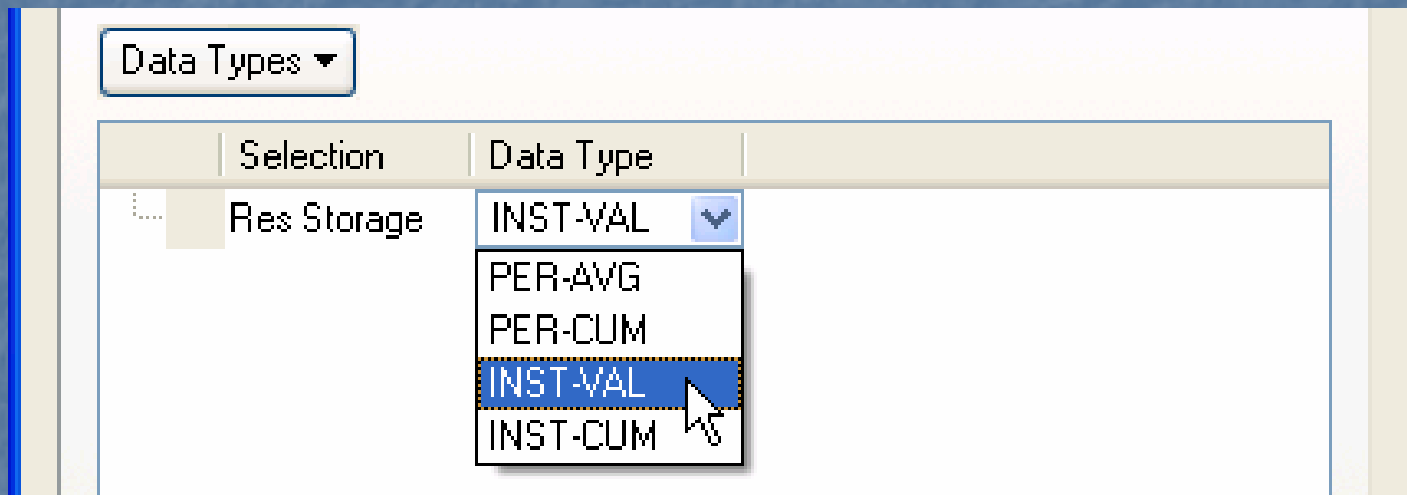➤ Select the path with a file chooser or enter it as text

DSS Configuration – Parts

➢ Enter A, F; RiverWare provides

- B – mapped object name
- C – mapped slot name
- E – slot timestep

Part A	Part B	Part C	Part D	Part E	Part F
Big Muddy	Mapped Object Name	Mapped Slot Name		Slot Timestep	OBS

DSS Configuration – Data Types

➢ Specify slot data types

Database DMI

➢ Specify slots to import or export data

➢ Specify time intervals to import or export data

➢ Associate slot and time interval pairs with datasets

Database DMI – Slots and Intervals

Select slots

Enter begin, end dates as symbolic date/times; common dates are on context menu
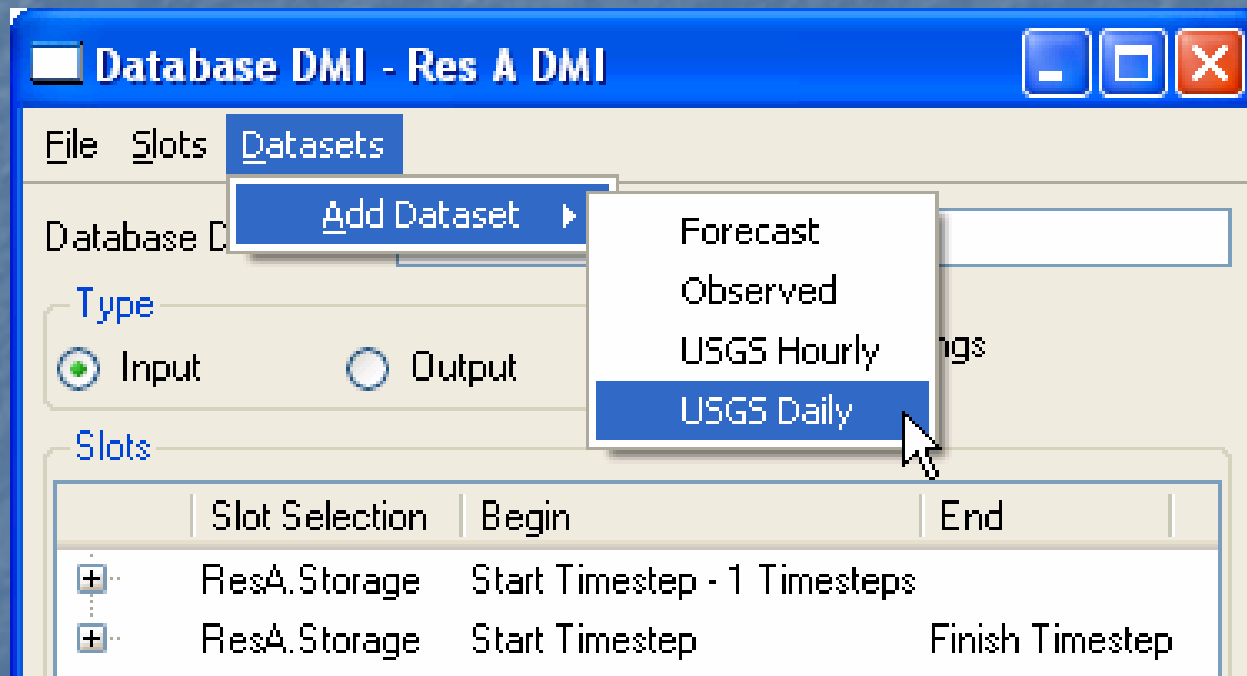
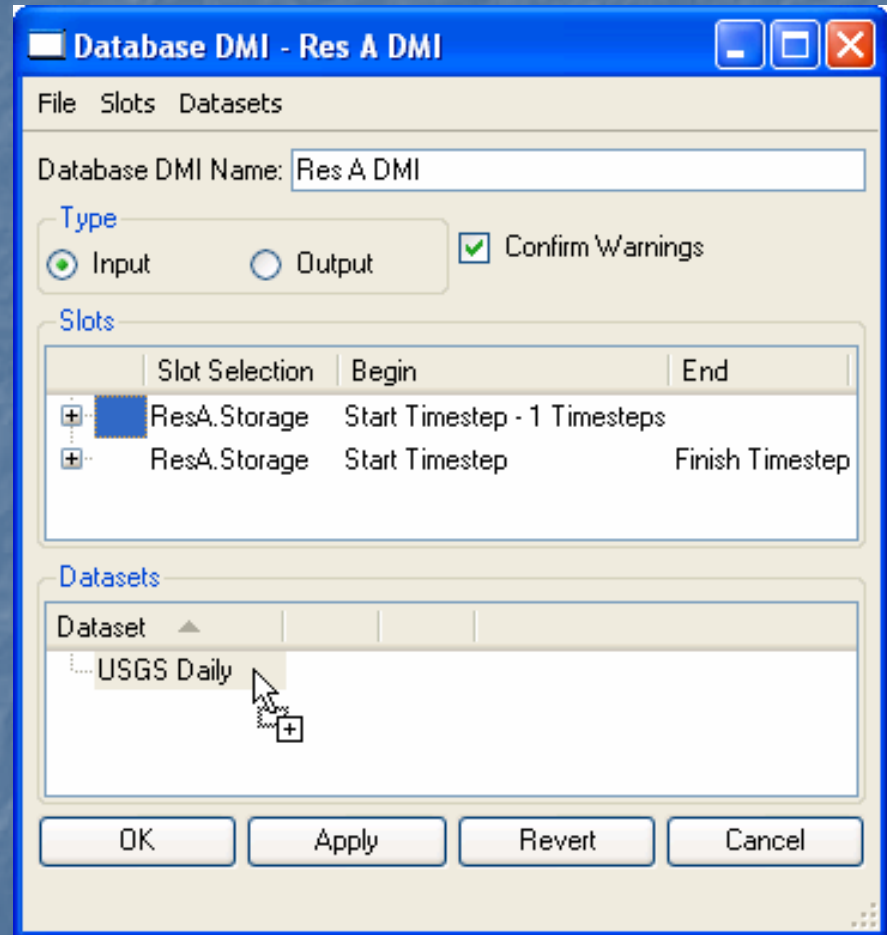Slot can have multiple time intervals

Database DMI – Datasets

Add datasets to the database DMI

Database DMI

Associate slot and
time interval pair
with a dataset by
dragging it
and
dropping it

Database DMI

Multiple slots can import or export data

Multiple datasets can import or export data for a slot