New RiverWare GUI and I/O Features

RiverWare User Group Meeting
February 10-11th, 2010

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GUI and I/O – Outline

- Overview: New GUI features in RiverWare 5.1
- Overview: GUI and I/O in RiverWare 5.2
  - Slot dialog enhancements: RPL Expression / List Slot
- Demos
  - Find Inputs dialog … SCT
  - Notes on Series Slots (redesigned)
  - Plotting enhancements … Tabular Series Slot Report
  - Background Images
- Upcoming: Geo-referencing Simulation Objects … GIS Integration Features

Overview: New GUI in RiverWare 5.1

- May 2009 Release of RiverWare:
  - New Qt4 Simulation Workspace:
  - … Hand Drag … Locator Modes
  - … Support for a Background Image
  - … Close All Dialogs function
  - New Dialog: Find Series Slots with Inputs
  - Plot Page Selection List, other plotting enhancements
  - SCT Run Status Panel
  - Open Series Slots: Optionally shows Rule Priorities
  - Improved Model Run Analysis Dialog

Overview: GUI and I/O in RiverWare 5.2

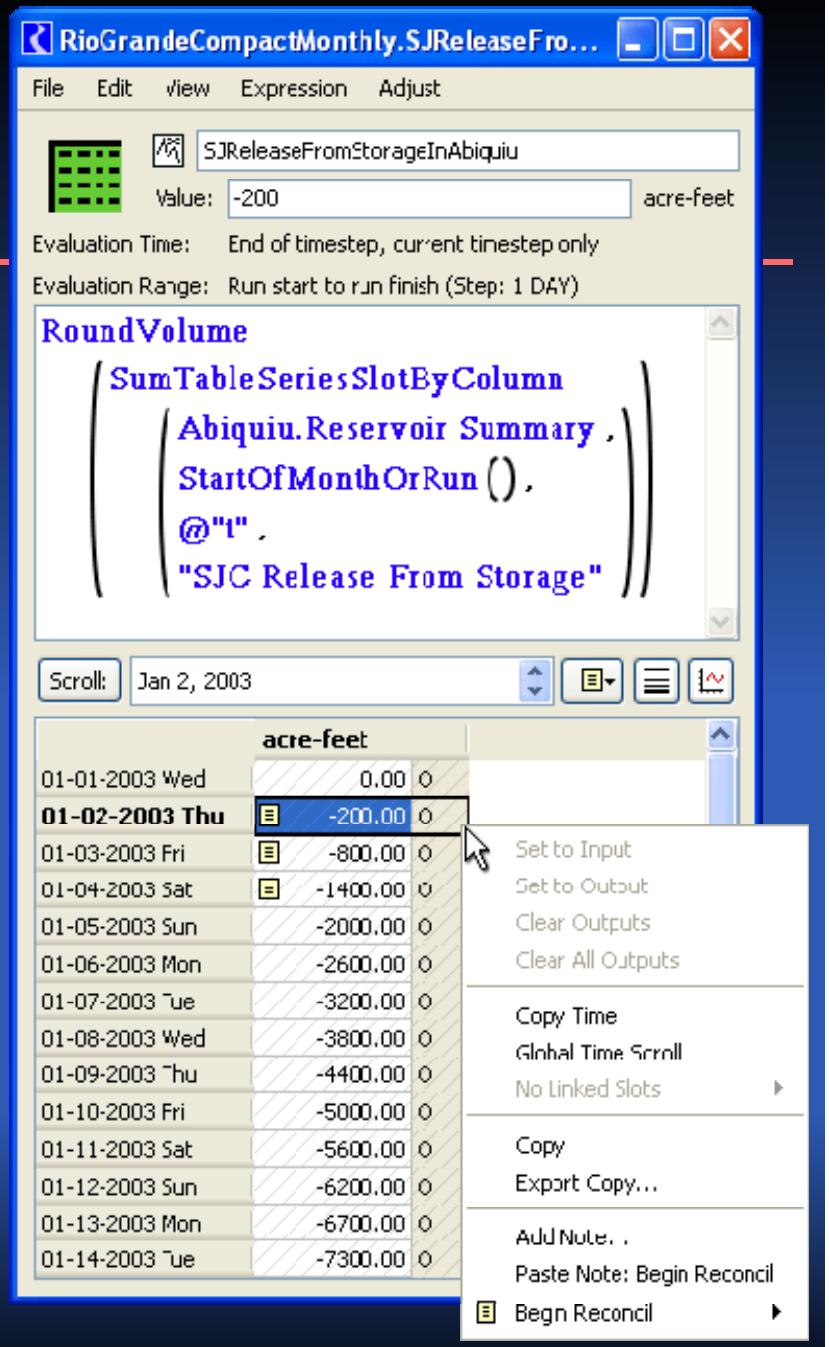
- Redesign of Notes on Series Slots
- SCT Enhancements, various
- Slot Dialog Enhancements
  - Expression Slot Dialog reimplementation
  - Periodic Slot: Row (time) Headers for Regular Intervals
  - List Slot Dialog
- New Output Device: Tabular Series Slot Report
- User Settable Font (for all of RiverWare)
  … experimental / not persistent.

Expression Slot Dialogs

Reimplementation using standard Slot dialog classes.

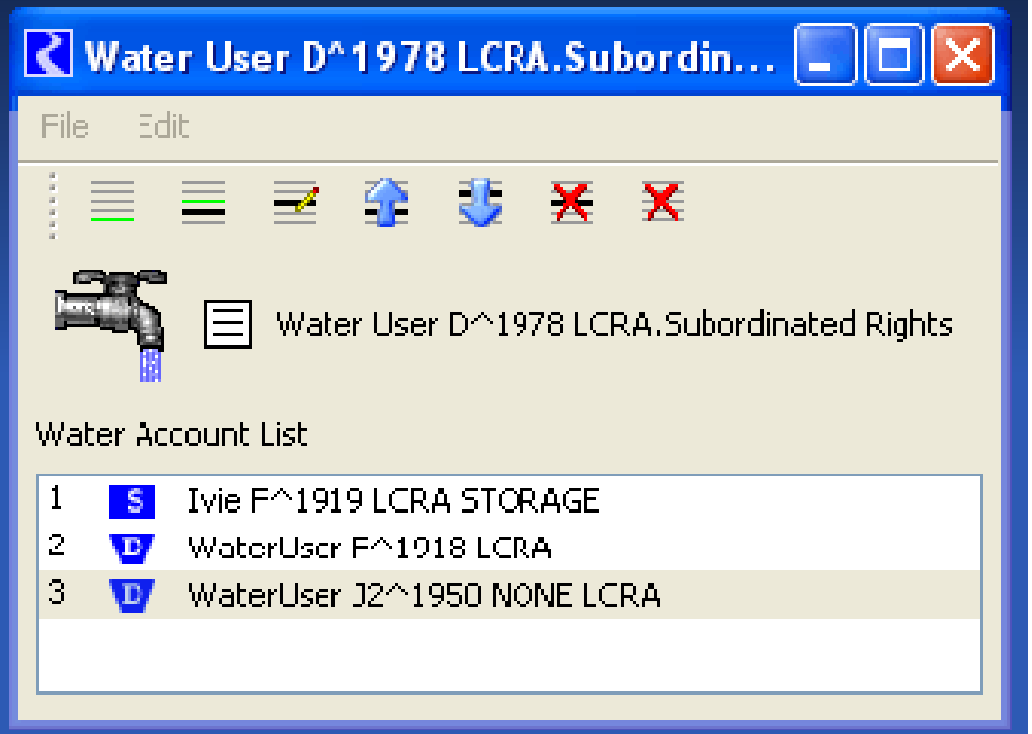
Supports:

- Copy Functions
- Series Annotations
- Time Navigation
- Series Display Compression

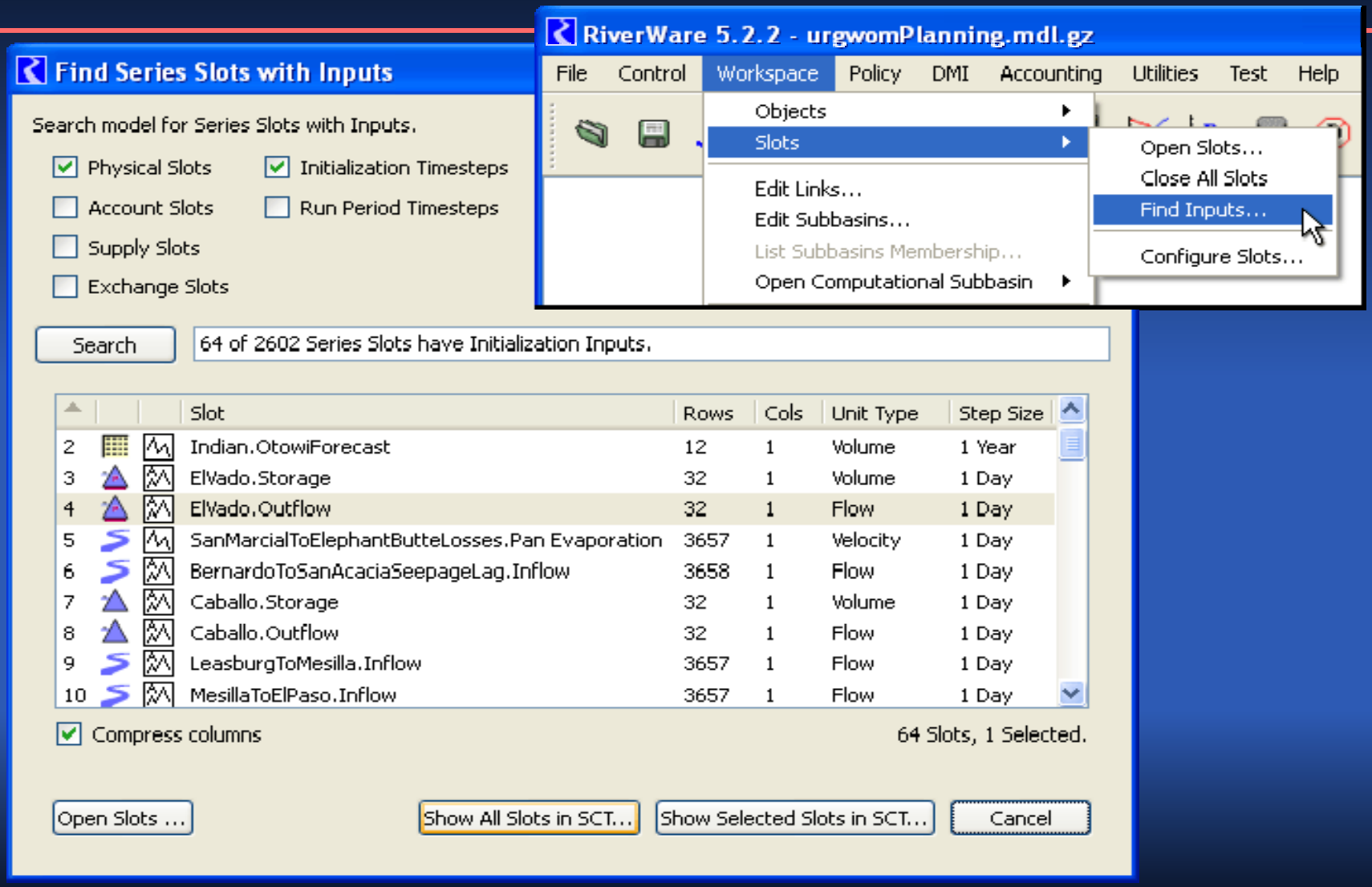


List Slot Dialog (RiverWare 5.2.1)

- Added type icons for the overall Slot and for Slot Items.
- Double clicking Slot Item opens that Item's dialog.
- Removal of Apply / Cancel paradigm (from Scalar Slot dialog too).

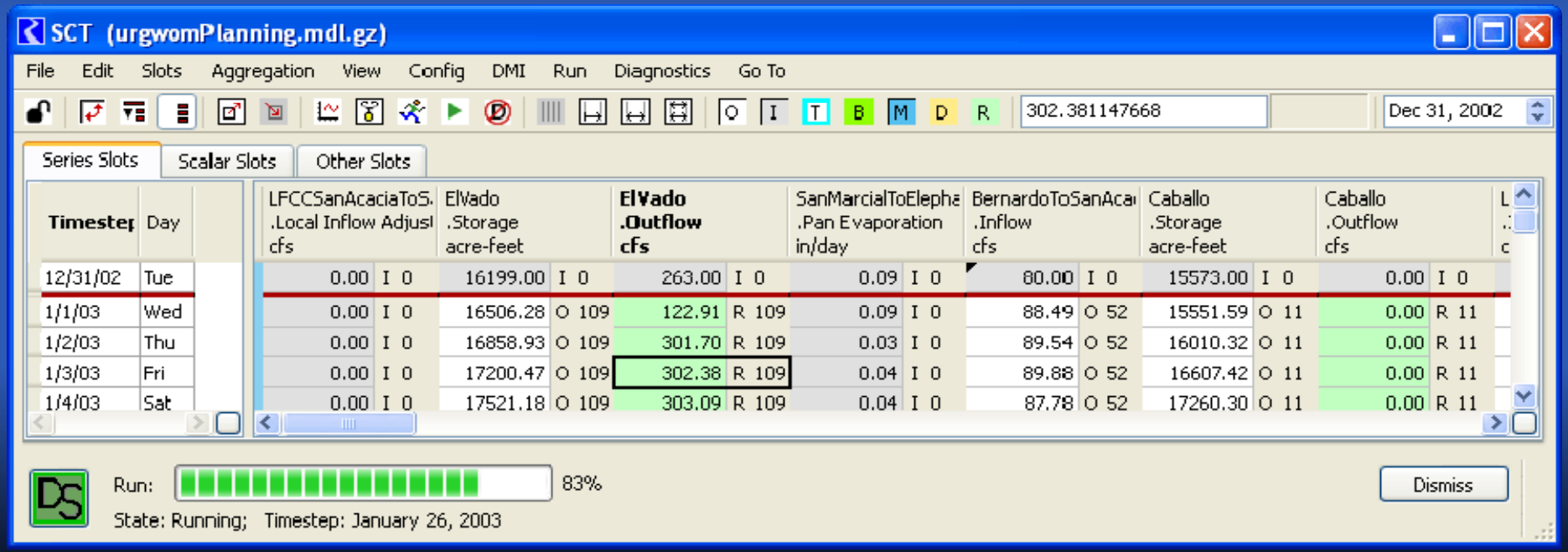


Demo: Find Series Slots with Inputs

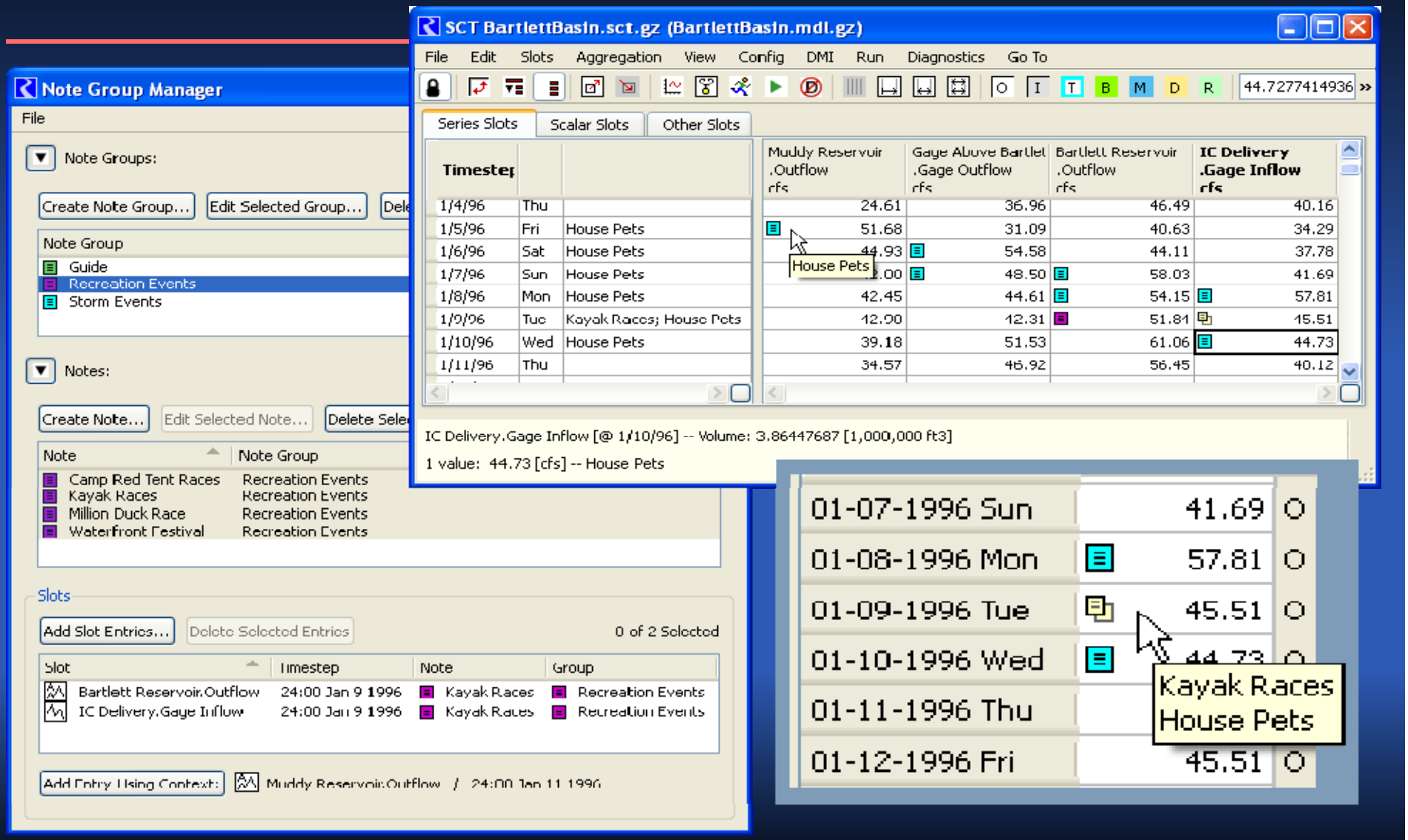


Demo: SCT Enhancements

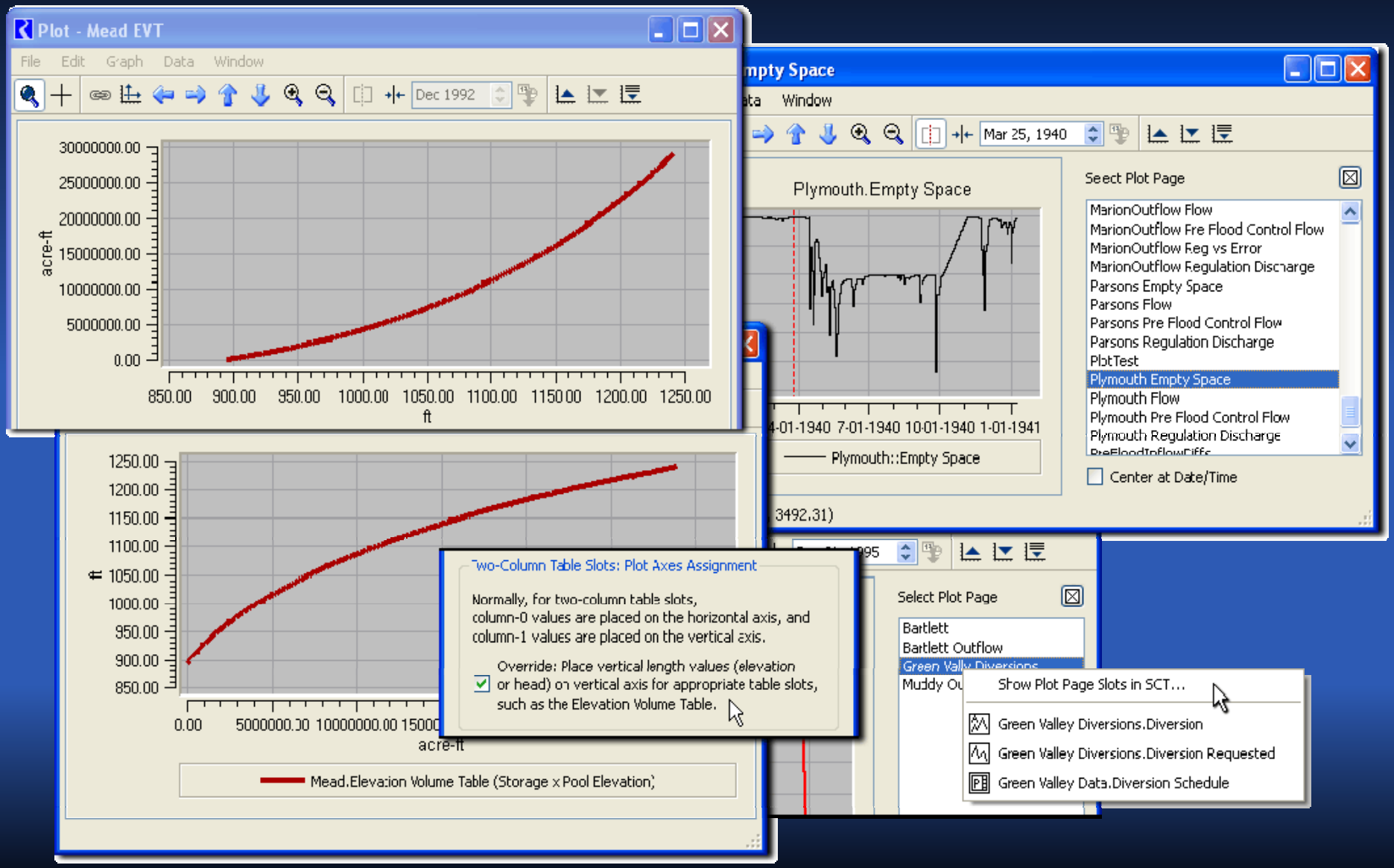
- Flag Letters and Rule Priorities
- Table Slots tab shows Slot Column Labels
- Copy Slots (e.g. to Output Device)
- Copy / Paste Notes
- Import Paste
- Export Copy *enhancement*



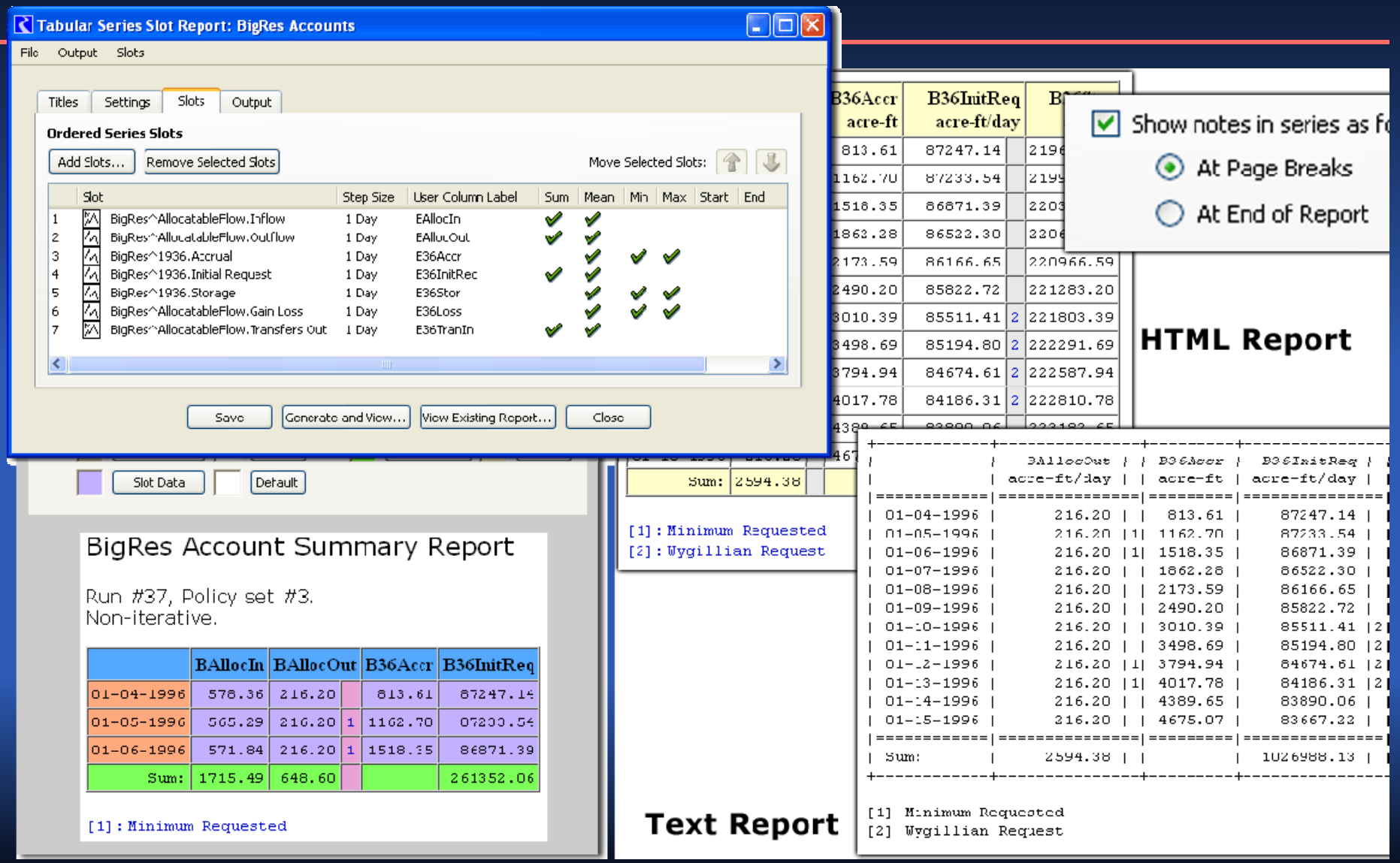
Demo: Series Notes Redesign



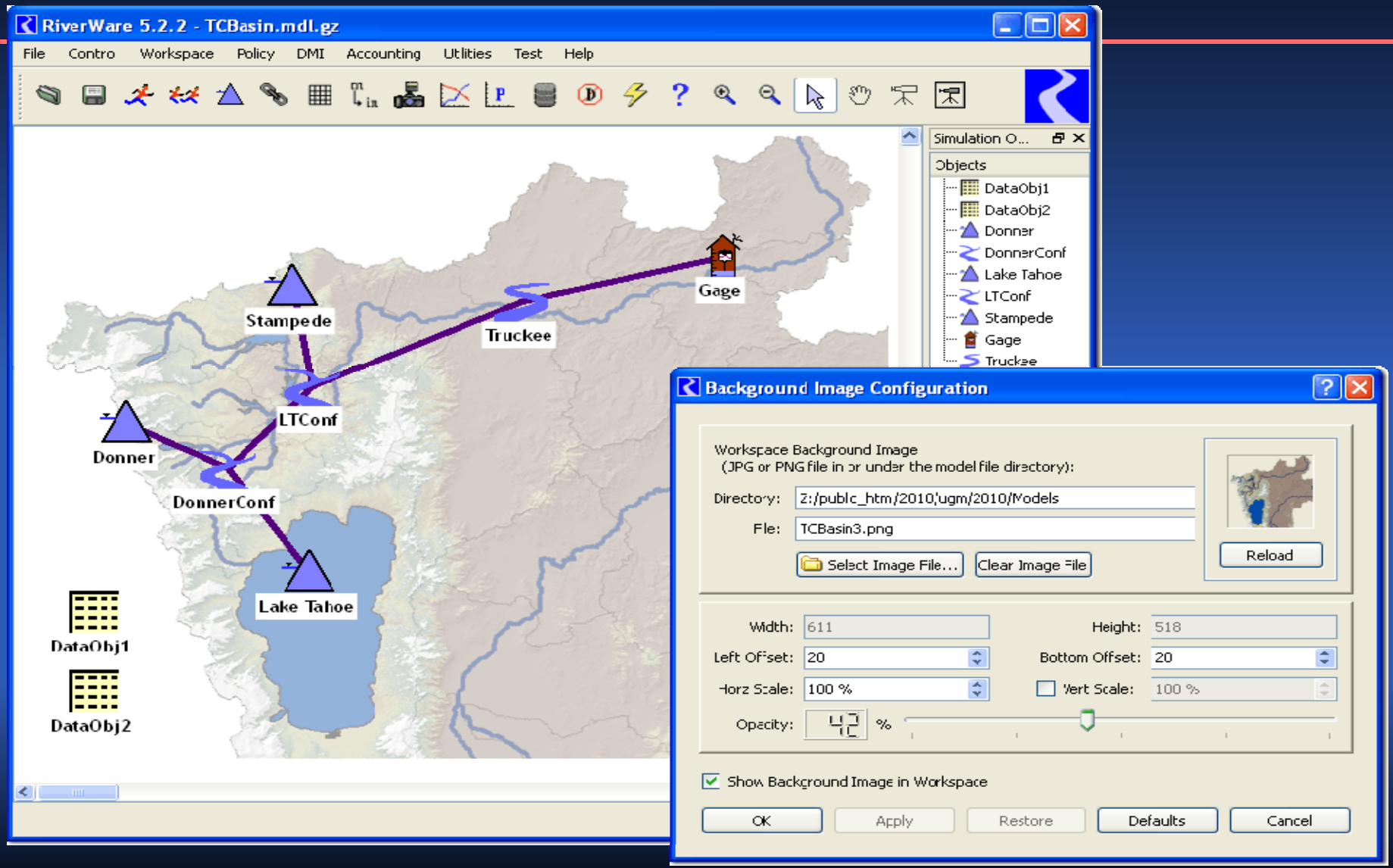
Demo: New Plotting Features



Demo: Tabular Series Slot Report

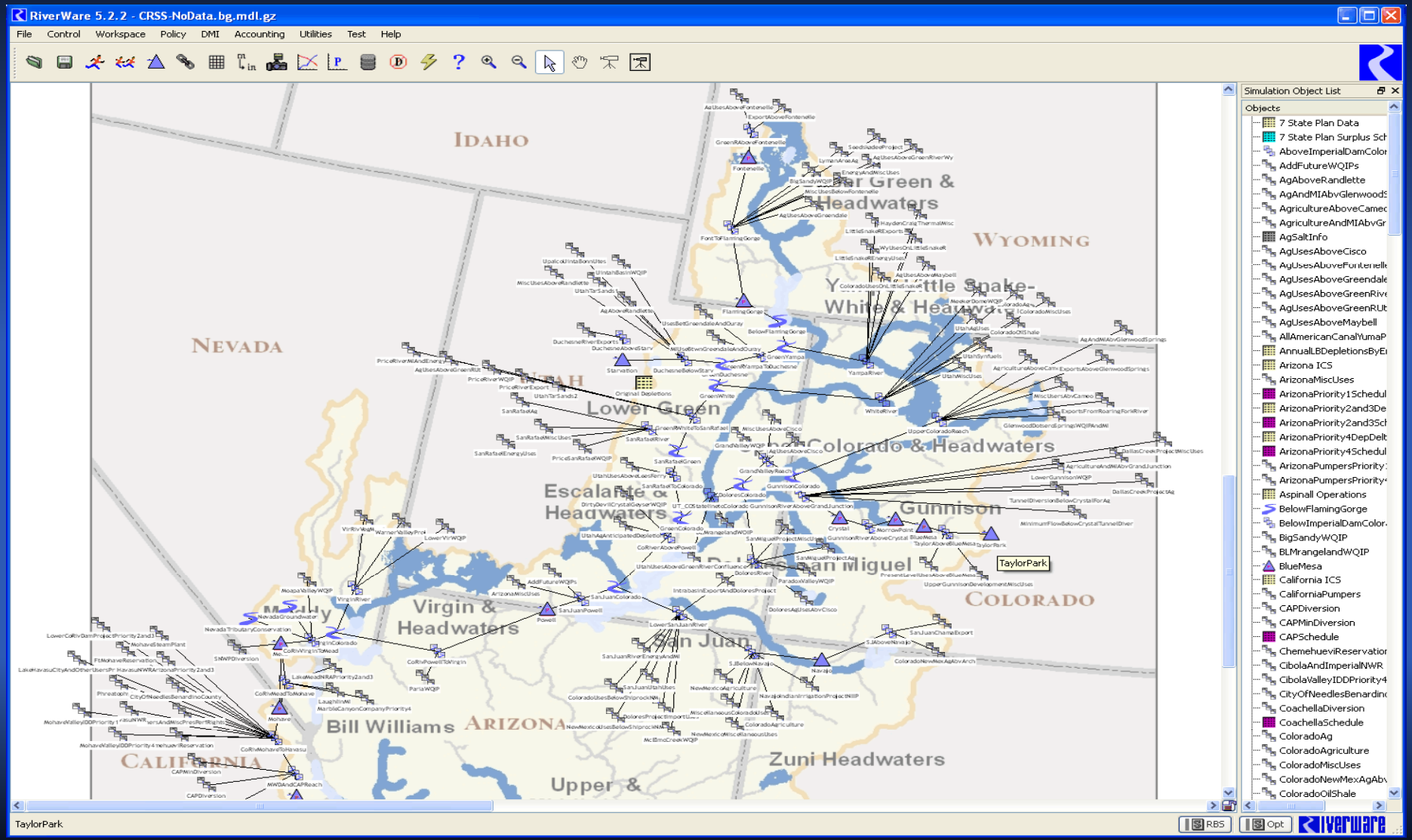


Demo: Background Image



Background Image: Actual Use

Courtesy of USBR / CADSWES office



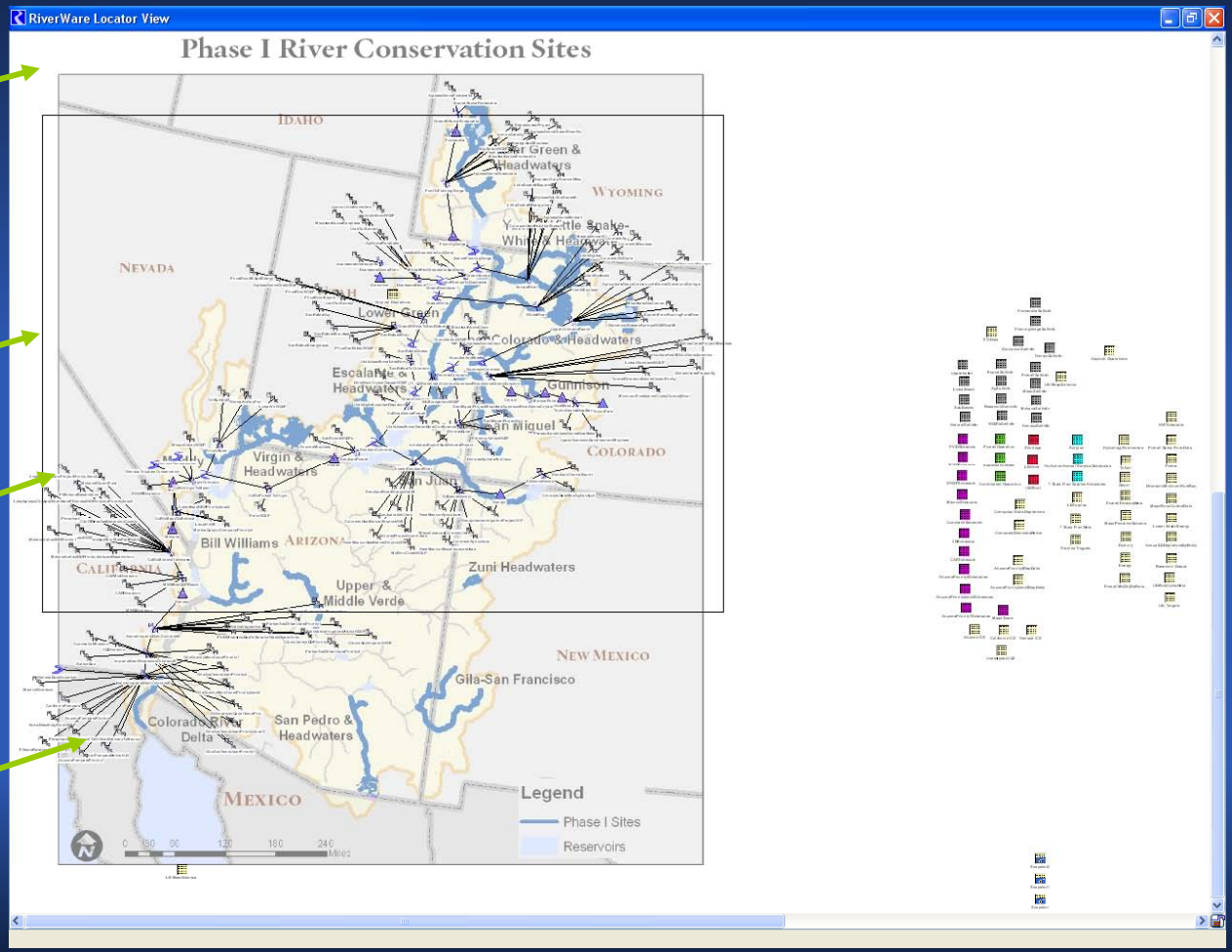
Components of a Workspace View

Canvas

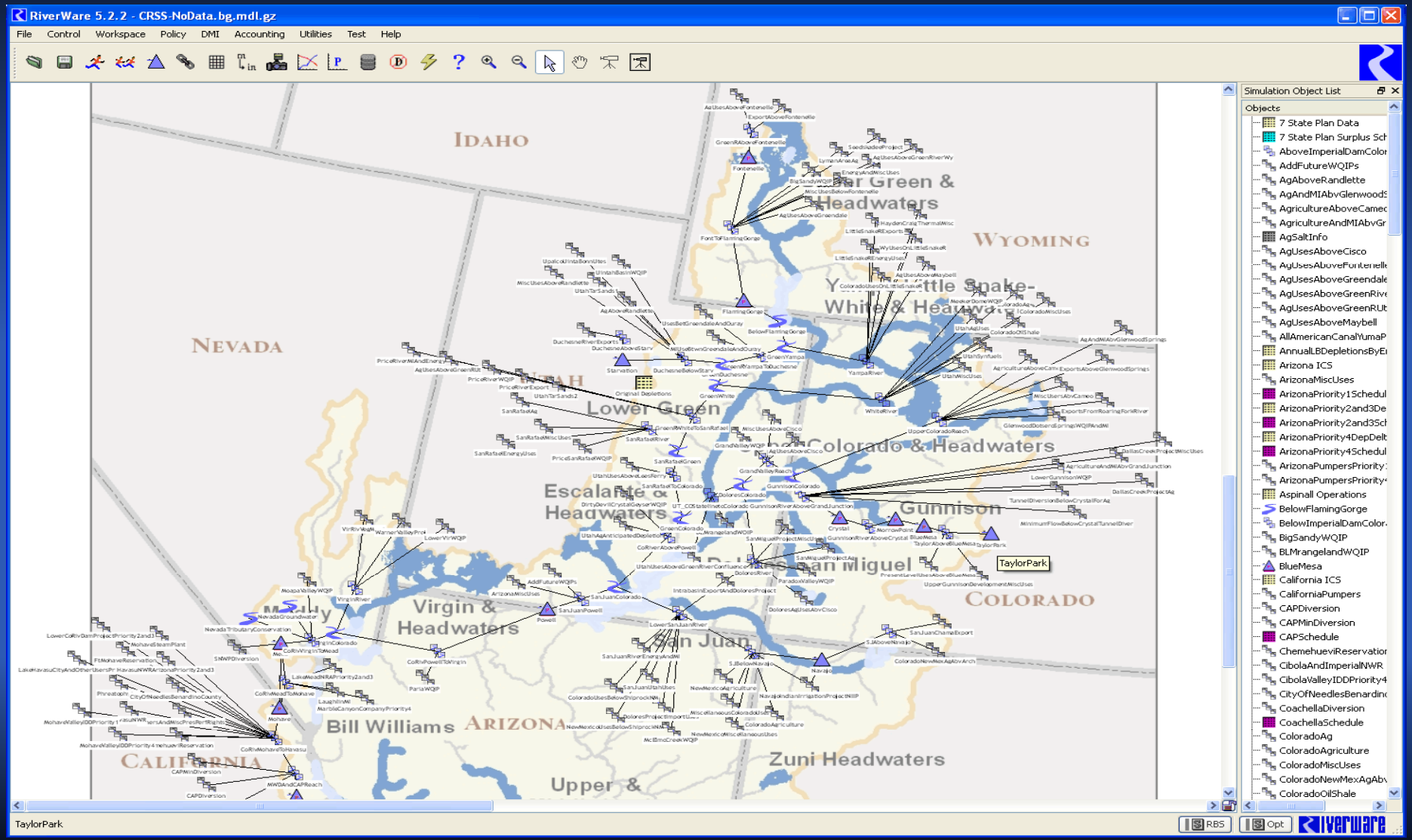
Display Area

Image

Objects



Limitations of the Simulation View



Upcoming: New Geospatial View

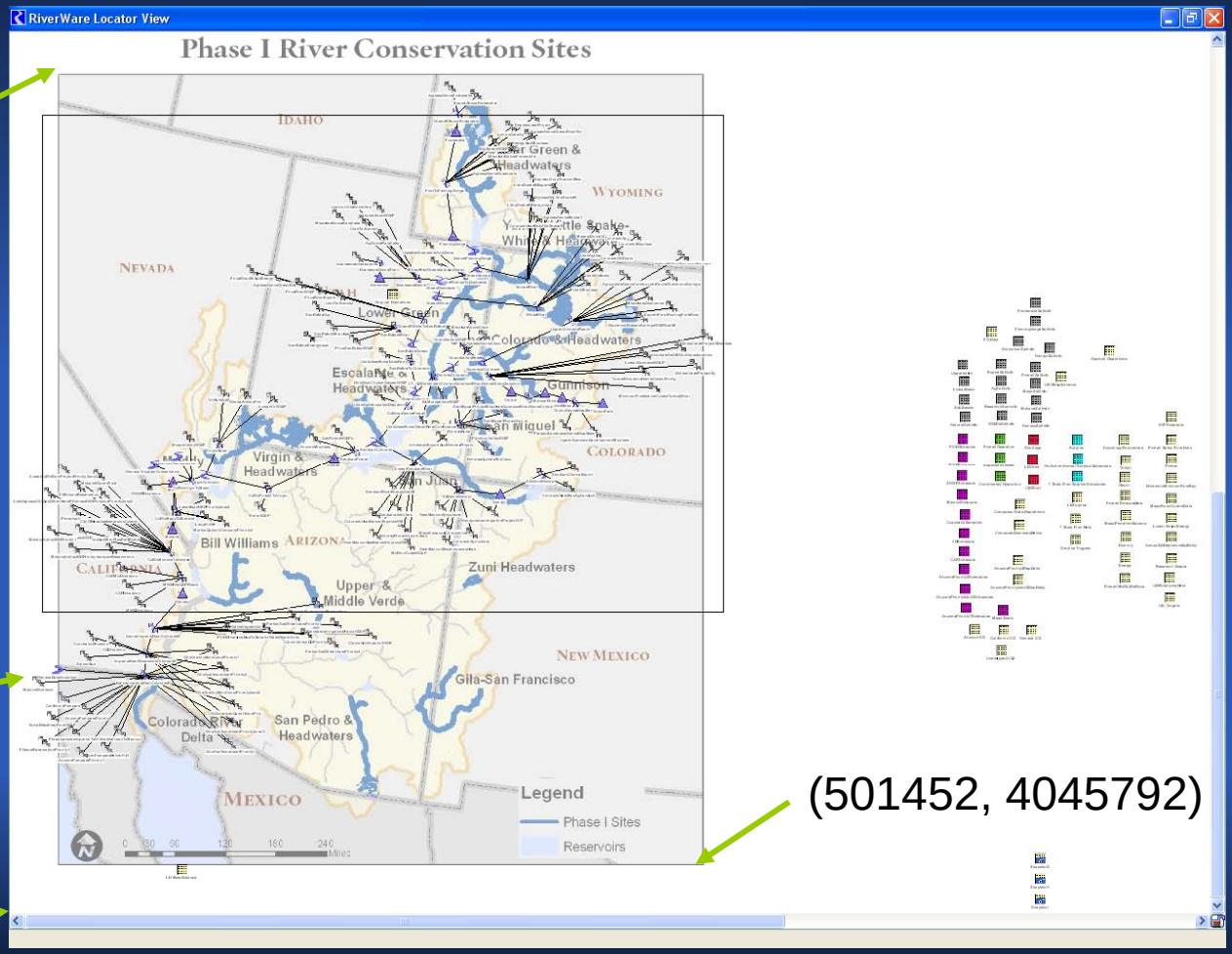
- Coordinate system defined by projection
- Projection locations known for:
  - Canvas
  - Map
  - Objects
- Import/Export of object spatial coordinates

Adding Spatial Information to the Geospatial View

(375223, 4289922)

(374501, 4108823)

(373452, 4045792)



(501452, 4045792)

Additional Possibilities for GIS Integration

- Geospatial View Enhancements
  - Layers
  - Visualization of spatial data
  - Custom legend
- Spatial Analysis
  - Catchment delineation
- Additional GIS database support
  - Name mapping
  - Tabular view of data
  - Direct connection