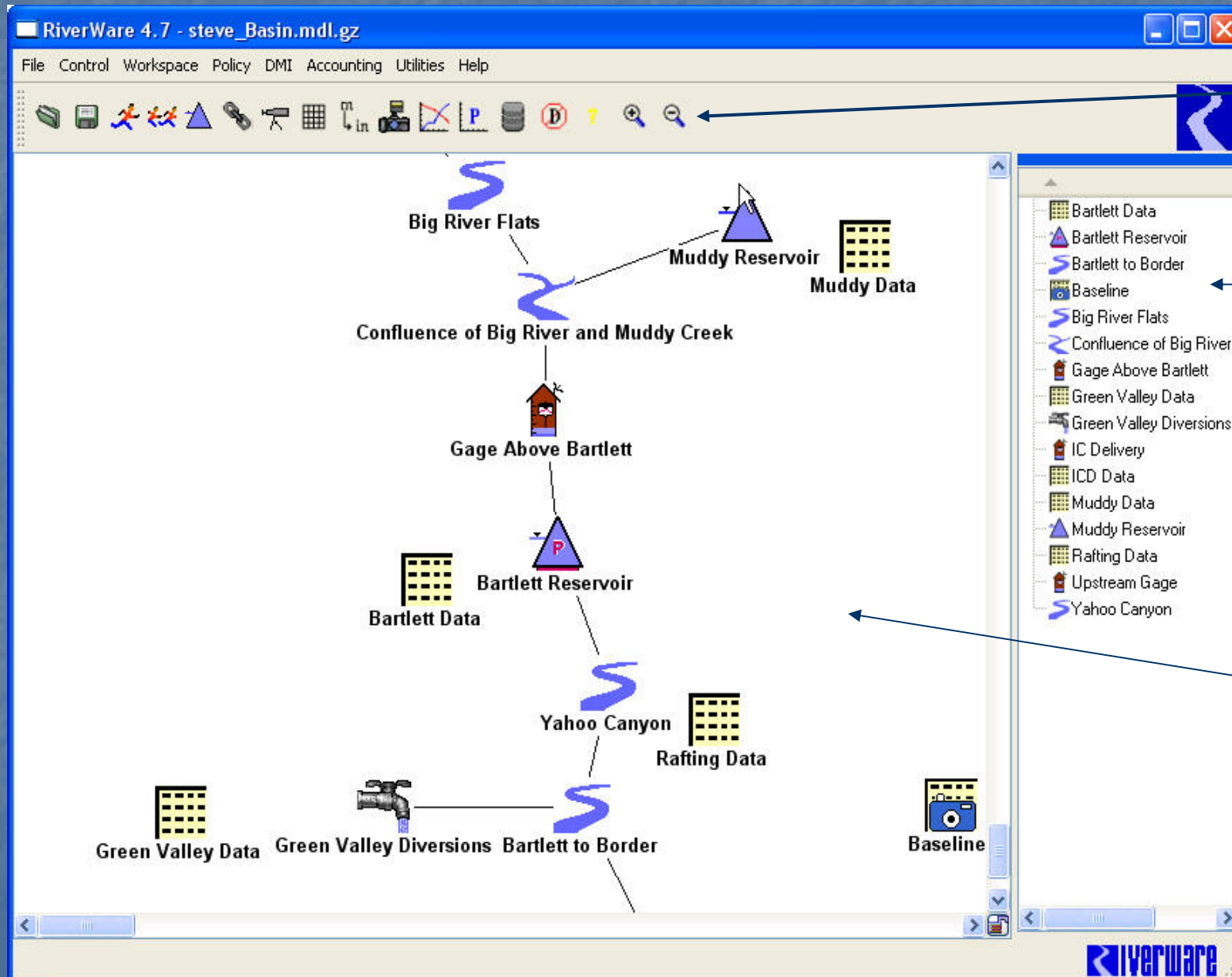


RiverWare GUI ... Workspace

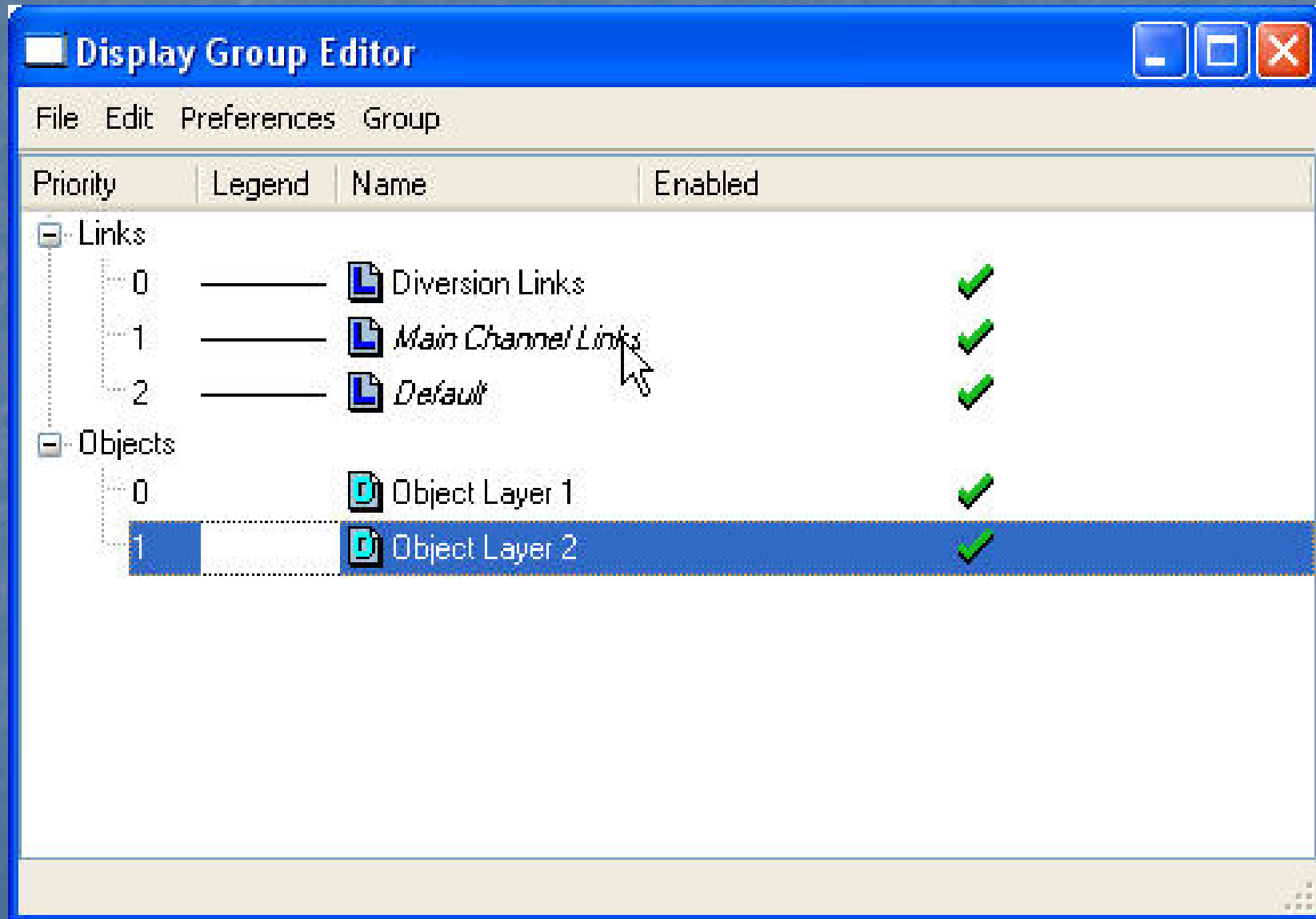


Zoom

Dockable
Object
List

Right
Click
Sensitive

Display Groups



Display Groups

- Configure Link Properties
 - Color/Hide Link Groups

- Configure Object Groups
 - Show/Hide Labels
 - Specify Layering for groups of objects

Selector Dialog (Qt)

Slots on Objects,
Accounts, Supplies...

Object
Filtering

Slot Filtering

Select Single Slot for RPL Expression

Show Slots on: Objects Accounts Supplies Other: Exchanges

Object Types: 2 (of 11) Objects: 2 (of 2) Slots: 1 (of 100)

All Invert

Obj Type

- AggregateObj
- AggDistributionCanal
- AggDiversionSite
- Confluence
- DistributionCanal
- DiversionObject
- Reach
- Reservoir
- StorageReservoir
- StreamGage
- WaterUser

Object Name: *

Has Account: Any

| Type | Object |
|----------|-------------------|
| StorageR | El Vado Reservoir |
| StorageR | Heron Reservoir |

| Object | Slot |
|-------------------|-------------------------------|
| El Vado Reservoir | Daily Reservoir Computations |
| El Vado Reservoir | Hypothetical Condition |
| El Vado Reservoir | Preliminary Data |
| El Vado Reservoir | PreReservoir Condition |
| El Vado Reservoir | Present Condition |
| El Vado Reservoir | Reservoir Summary |
| El Vado Reservoir | Control and PreRes Areas |
| El Vado Reservoir | Convergence |
| El Vado Reservoir | Effective Precipitation Table |
| El Vado Reservoir | Elevation Area Table |

Ok Apply Cancel

Selector Dialog (Qt)

Object Filtering

Account Filtering

Select Single Slot for RPL Expression

Show Slots on: Objects Accounts Supplies Other: Exchanges

Object Types: 1 (of 11) Objects: 2 (of 2) Accounts: 4 (of 11)

Obj Type: AggregateObj, AggDistributionCanal, AggDiversionSite, Confluence, DistributionCanal, DiversionObject, Reach, Reservoir, StorageReservoir, StreamGage, WaterUser

Object Name: * Has Account: Any

| Type | Object |
|----------|-------------------|
| StorageR | El Vado Reservoir |
| StorageR | Heron Reservoir |

Storage Accounts Diversion Accounts PassThrough Accounts

Account Name: *

| Object | Account |
|-------------------|---------------|
| El Vado Reservoir | Contractor123 |
| El Vado Reservoir | RioGrande |
| El Vado Reservoir | SanJuan1 |
| El Vado Reservoir | SanJuan2 |

Account Slots: 0 (of 48)

| Type | Object | Account | Slot |
|----------|-------------------|---------------|---------------|
| StorageR | El Vado Reservoir | Contractor123 | Inflow |
| StorageR | El Vado Reservoir | Contractor123 | Outflow |
| StorageR | El Vado Reservoir | Contractor123 | Transfers In |
| StorageR | El Vado Reservoir | Contractor123 | Transfers Out |
| StorageR | El Vado Reservoir | RioGrande | Inflow |
| StorageR | El Vado Reservoir | RioGrande | Outflow |
| StorageR | El Vado Reservoir | RioGrande | Transfers In |
| StorageR | El Vado Reservoir | RioGrande | Transfers Out |

Ok Apply Cancel

Selecting Slots on Accounts

Open Slot Dialog (Qt port)

Scroll To Date

Multiple Cell Selection & Operations:

- Set Values
- Set Flags
- Block Copy
- Interpolation

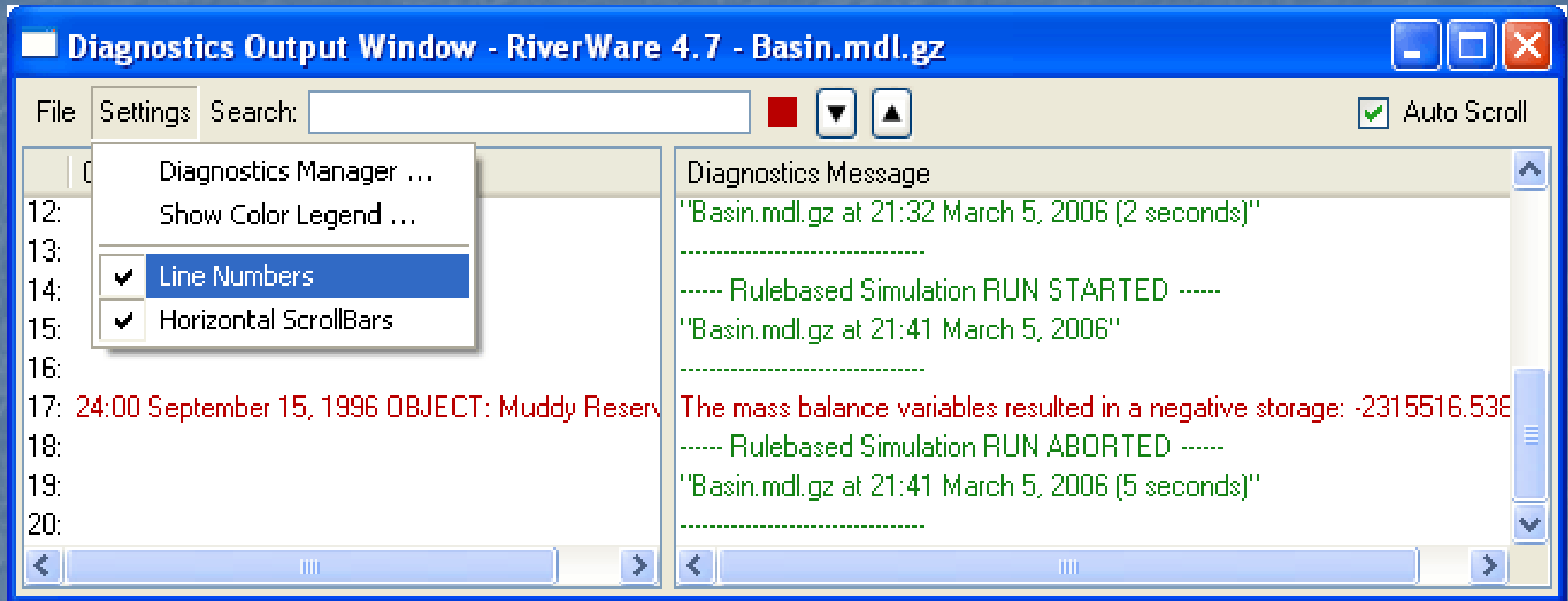
| | Total [cfs] | |
|-----------------------|------------------|----------|
| 12-31-1995 Sun | NaN | 0 |
| 01-01-1996 Mon | 19.948614 | |
| 01-02-1996 Tue | 16.930714 | |
| 01-03-1996 Wed | 15.766011 | |
| 01-04-1996 Thu | 21.289970 | |
| 01-05-1996 Fri | 24.613418 | |
| 01-06-1996 Sat | 18.748646 | |
| 01-07-1996 Sun | 22.237613 | |
| 01-08-1996 Mon | 26.151364 | |
| 01-09-1996 Tue | 32.269614 | |
| 01-10-1996 Wed | 29.964642 | |
| 01-11-1996 Thu | 39.184531 | |
| 01-12-1996 Fri | 34.574587 | |
| 01-13-1996 Sat | 29.964642 | |
| 01-14-1996 Sun | 20.744752 | |

Automatic Time Dividers

(e.g. between months in a daily model)

Easy Scrolling!!

Diagnostics (Qt port)



- Dockable in the SCT (*shown stand-alone above*)
- Embedded Search on text and message type
- Optional Line Numbers

SCT 2Res.sct (2Res.mdl.gz)

File Edit Slots TimeSteps View DMI Run Diagnostics Go To

76.3611

| TimeStep | | Res 1 .Inflow acre-feet/d | Res 1 .Outflow acre-feet/d | Res 1 .Spill cms | Res 1 .Storage acre-ft | Res 1 .Pool Ele ft | Res 2 .Inflow acre-feet/d | Res 2 .Outflow acre-feet/d | Res .Spi acre |
|----------|-----|---------------------------------|----------------------------------|------------------------|------------------------------|--------------------------|---------------------------------|----------------------------------|---------------------|
| 1/31/94 | Mon | 29100 | NaN | NaN | 2951044 | 6020.01 | NaN | NaN | |
| 2/28/94 | Mon | 30200 | 272138 | 0.00 | 2709107 | 6012.94 | 272137.63 | 322138 | 1035 |
| 3/31/94 | Thu | 41400 | 301296 | 0.00 | 2449211 | 6004.85 | 301295.81 | 401296 | 1884 |
| 4/30/94 | Sat | 70400 | 291577 | 0.00 | 2228035 | 5997.51 | 291576.75 | 348577 | 1785 |
| 5/31/94 | Tue | 67100 | 193195 | 0.00 | 2101940 | 5993.11 | 193195.16 | 136195 | |

File Settings Search: Auto Scroll

| | |
|---------|--|
| Context | Diagnostics Message |
| 2: | Last saved on: 08-23-2005 10:48:55. |
| 3: | Last saved by "setzer" using "RiverWare 4.6.3". |
| 4: | ----- Simulation RUN STARTED ----- |
| 5: | "2Res.mdl.gz at 14:40 December 14, 2005" |
| 6: | ----- |
| 7: | ----- Simulation RUN FINISHED ----- |
| 8: | "2Res.mdl.gz at 14:40 December 14, 2005 (0 seconds)" |
| 9: | ----- |

Res 1.Pool Elevation [Column 0] -- (108 obscured post-sim timesteps)
 13 values [ft] -- Sum 78031.83 -- Ave 6002.45 -- Med 6001.38 -- Min 5993.11 -- Max 6020.01 -- Range 26.91

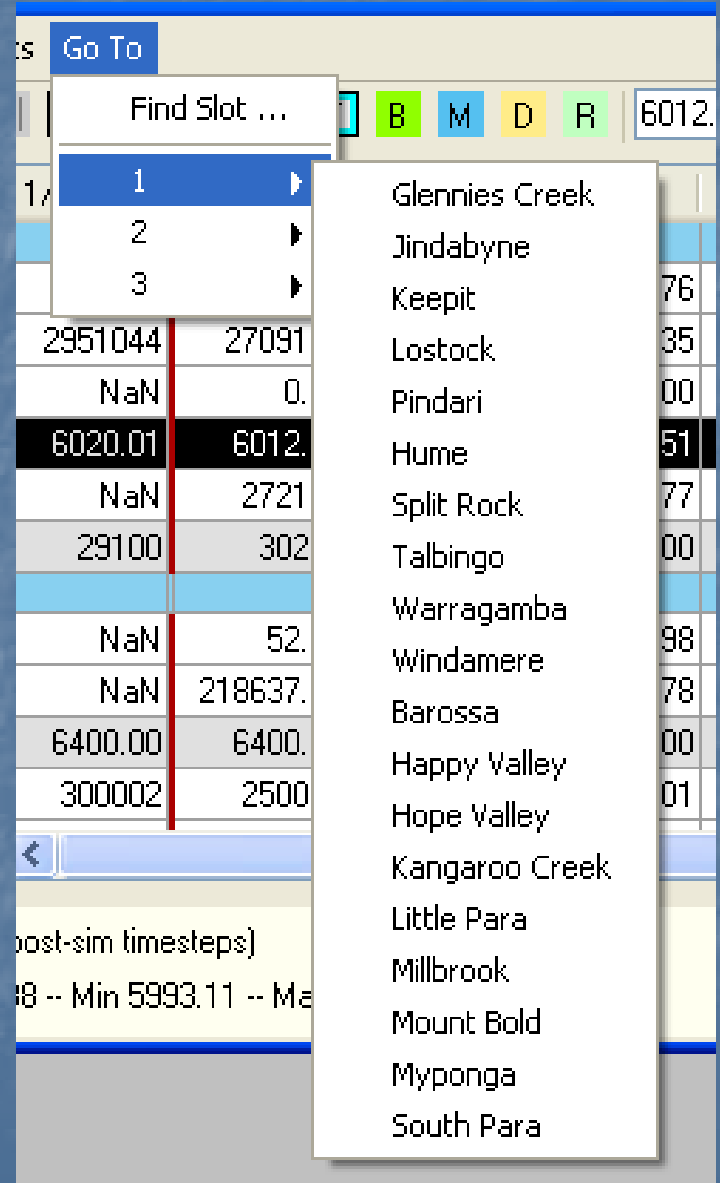
SCT Enhancements

➤ Model operation support

- Dynamic DMI Menu
- Integrated Diagnostics
- Integrated Run Status (in Selection Status area)

➤ Slot Navigation

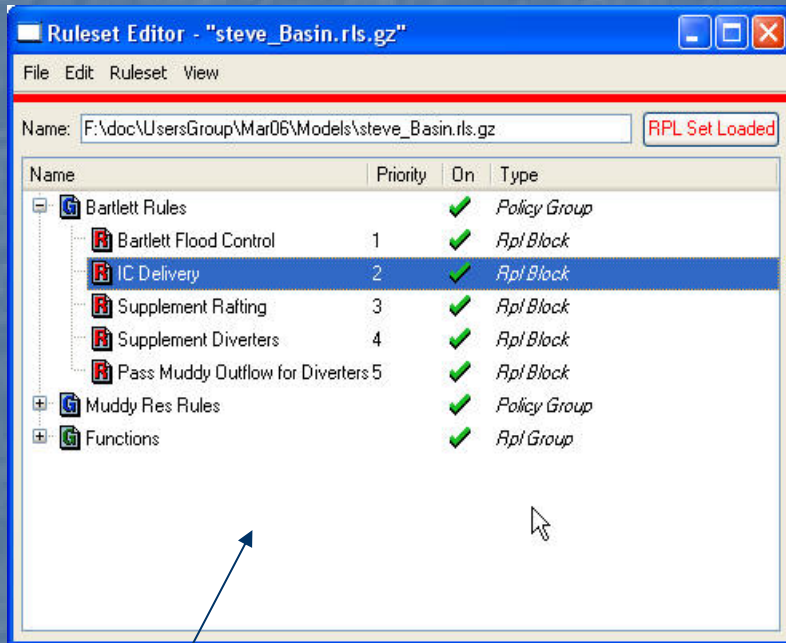
- Cascading "Go To" menu based on Divider Text →



SCT Enhancements

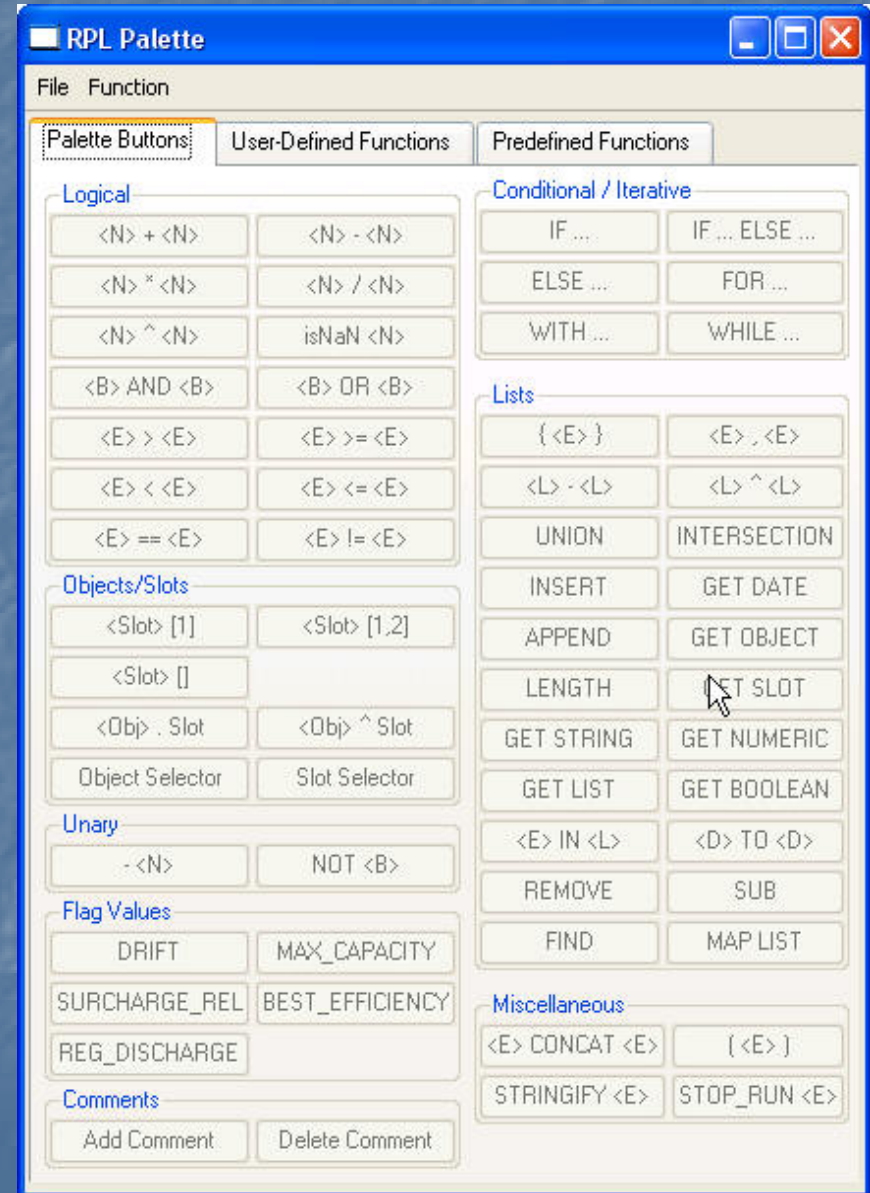
- Auto-scrolling to Error Timestep on an Aborted Run *(when a time is relevant)*
- Open SCT Window Management / Loading
 - Quick Load / Show the last several accessed named (saved) SCTs.
 - Ability to Create new SCTs and Open new SCT windows from an SCT.

RPL Interface (Qt port)



Now in Qt

Condensed Palette



Output Manager / Output To Excel

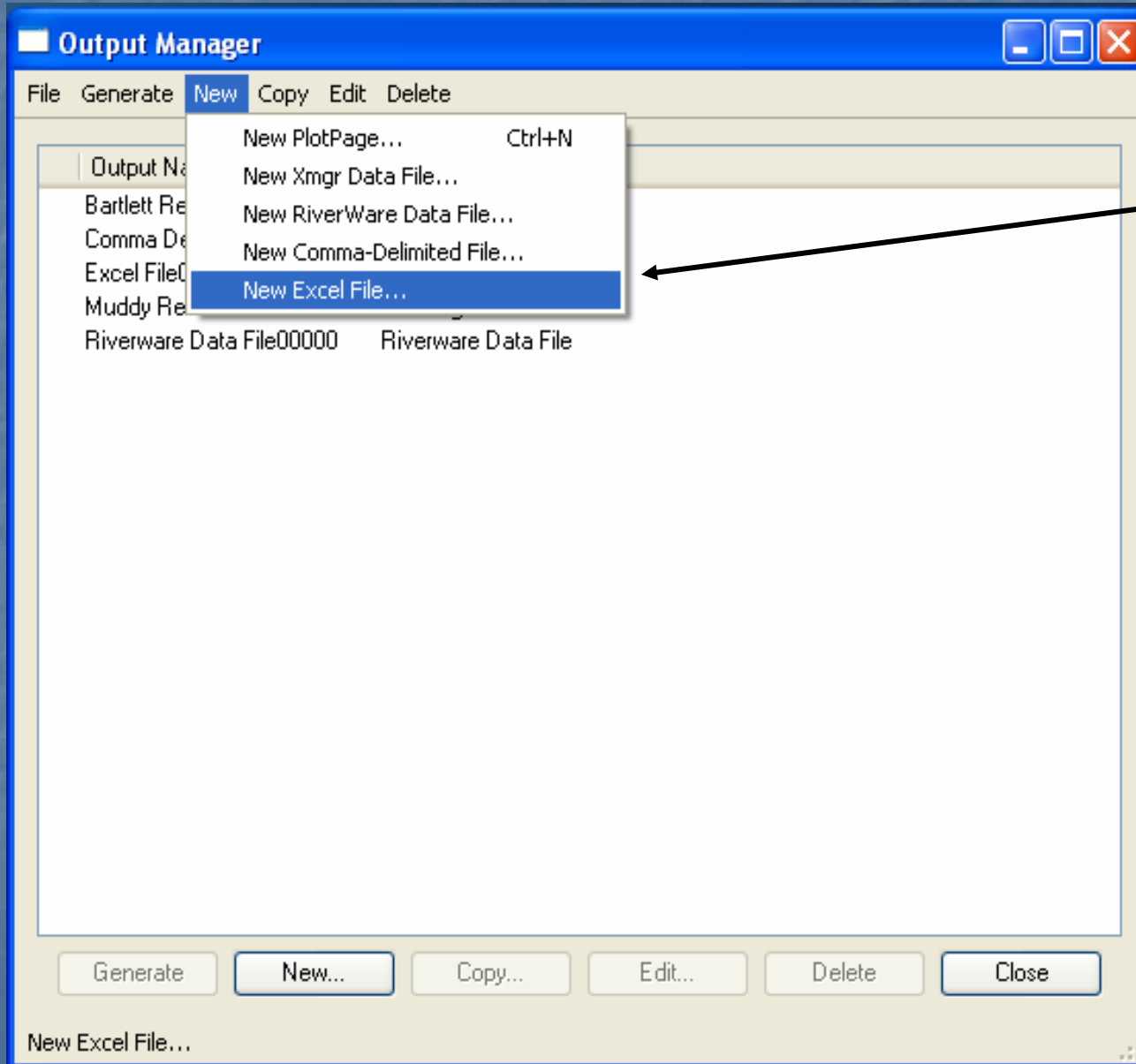
➤ Output Manager

- Output Manager dialog converted to Qt
- Output Device Configuration dialogs converted to Qt

➤ Output To Excel

- Excel Output Device added to Output Manager
- Excel Device Configuration Dialog created in Qt
- Outputs Excel file for your selected slots
- Available only on Windows Operating System

Output Manager



New Excel Output Device On Windows

Excel Output Device Configuration

Excel File: Excel File00000

File Output Slots

Output Type: Excel File Output File: Select File...

Output Name: Excel File00000 C:\Temp\default.xls

Description

Create Excel file of inflows to reservoirs and reaches.

Excel Configuration (Rows / Columns / Worksheets)

Timesteps / Slots / Run (single)

Timesteps / Run (single) / Slots

Slots / Timesteps / Run (single)

Slots / Run (single) / Timesteps

Run(single) / Timesteps / Slots

Run(single) / Slots / Timesteps

Data to Show in Selected Graph

Slots Only

Snapshots and Slots

Slots to Graph: Add Slots...

Bartlett Reservoir.Inflow
Bartlett to Border.Inflow
Big River Flats.Inflow
Muddy Reservoir.Inflow
Yahoo Canyon.Inflow

Snapshots of Selected Slots:

Modify Produce Output File Cancel

MRM Output To Excel

- Excel Options added to Output Tab of Multiple Run Management Configuration Dialog
- Creates Excel files from the MRM RDF output files
- Available only on Windows Operating System

MRM Output To Excel

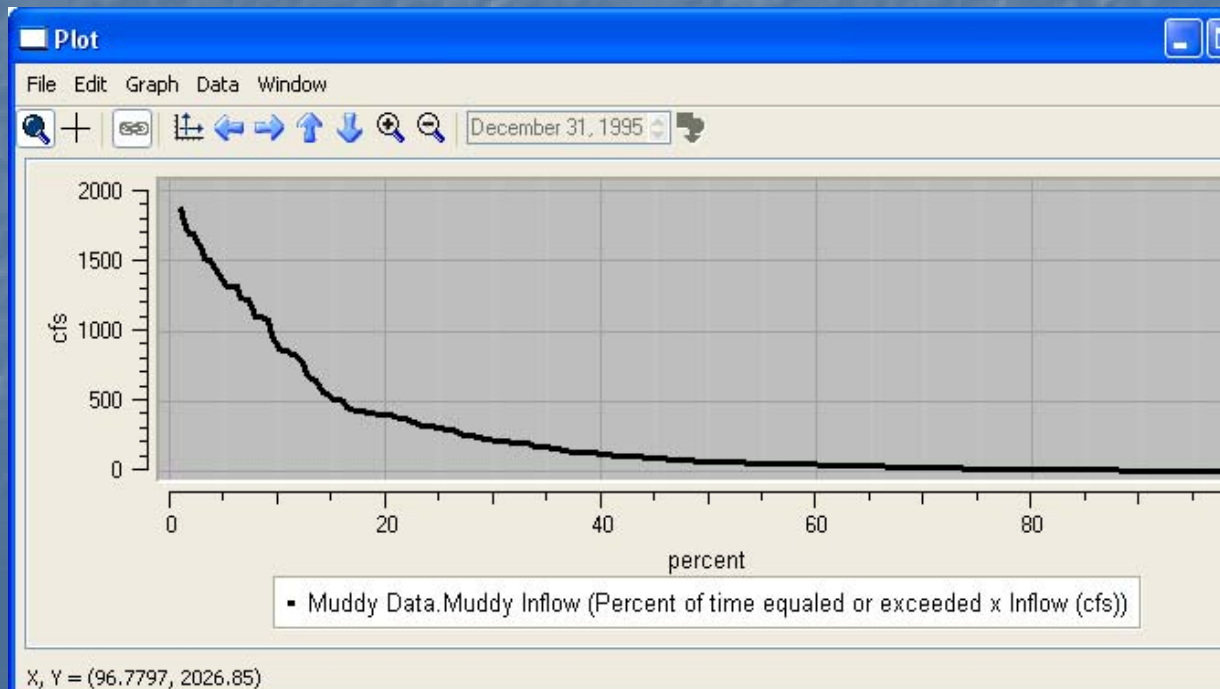
The screenshot shows the 'MRM Configuration - Configuration 0' dialog box. The 'Configuration' section includes a 'Name' field with 'Configuration 0', a 'Mode' dropdown set to 'Concurrent', a 'Policy' section with radio buttons for 'None' (selected), 'Rules', and 'Constraints', and an 'Input' section with checkboxes for 'Input DMIs' and 'Index Seq.'. Below this are tabs for 'Description', 'Output' (selected), 'Run Parameters', and 'Concurrent Runs'. The 'Output' tab contains fields for 'Control File:', 'Data File:', and 'DMI:', each with a browse icon. The 'Excel Options' section has a checked checkbox for 'Generate Excel files from RDF files. Rows / Columns / Worksheets', a 'Configuration:' dropdown set to 'Timesteps / Runs / Slots', and an unchecked checkbox for 'Delete RDF files after Excel files created.'. At the bottom are 'OK', 'Apply', 'Reset', and 'Cancel' buttons.

Excel Output
Options on
Windows



Statistical Table Slot

- Duration Curve: Percent of time equaled or exceeded
 - Each value is sorted and ranked
 - Can limit date range

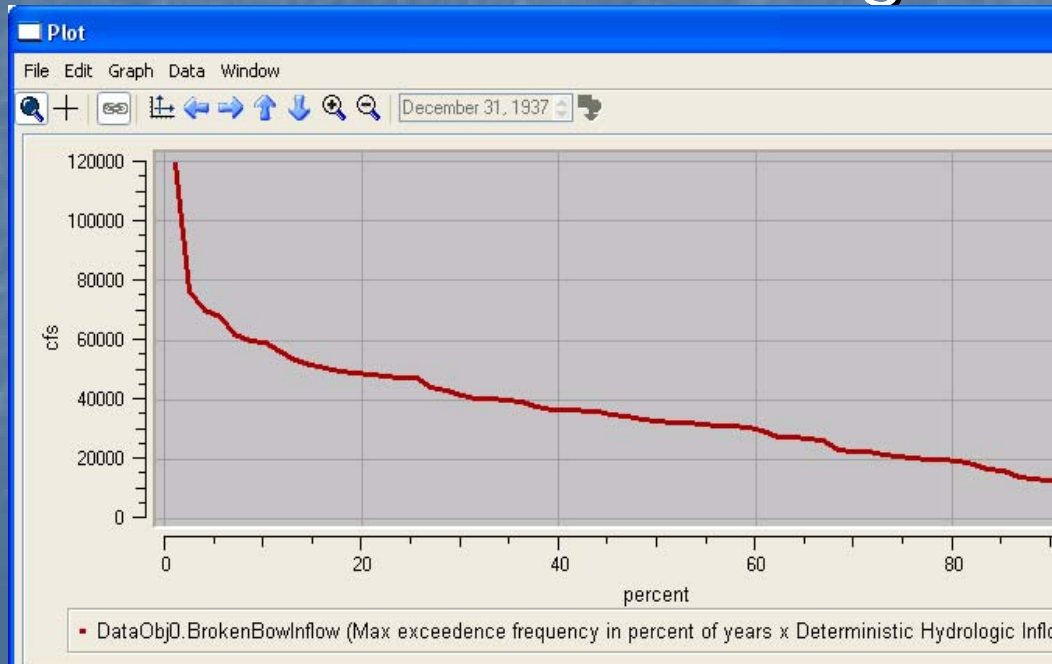


Muddy Data.Muddy Inflow window showing a table of data for a duration curve. The table has two columns: 'Percent of time equaled or exceeded' and 'Inflow (cfs)'. The data is sorted by the first column in descending order.

| | Percent of time equaled or exceeded | Inflow (cfs) |
|---|-------------------------------------|--------------|
| 1 | 1.095 | 1875.6 |
| 2 | 1.095 | 1875.6 |
| 3 | 1.095 | 1875.6 |
| 4 | 1.460 | 1730.3 |
| 5 | 1.825 | 1695.5 |
| 6 | 2.190 | 1690.8 |
| 7 | 2.555 | 1638.6 |
| 8 | 2.920 | 1604.8 |
| 9 | 3.285 | 1510.7 |

Statistical Table Slot

- Annual Max Frequency Curve: Max exceedance frequency in percent of years
 - Max value for each year is sorted and ranked
 - Can limit date range



DataObj0.BrokenBowInflow window showing the Max Frequency Curve function and a table of results. The table columns are 'Max exceedance frequency in percent of years' and 'Deterministic Hydrologic Inflow'.

| | Max exceedance frequency in percent of years | Deterministic Hydrologic Inflow |
|---|--|---------------------------------|
| 1 | 1.070 | 119578.00 |
| 2 | 2.599 | 76575.00 |
| 3 | 4.128 | 70000.00 |
| 4 | 5.657 | 67654.00 |
| 5 | 7.187 | 61925.00 |
| 6 | 8.716 | 59678.00 |
| 7 | 10.245 | 59000.00 |
| 8 | 11.774 | 55930.00 |
| 9 | 13.303 | 53475.00 |

X, Y = (77.7251, 8609.87)