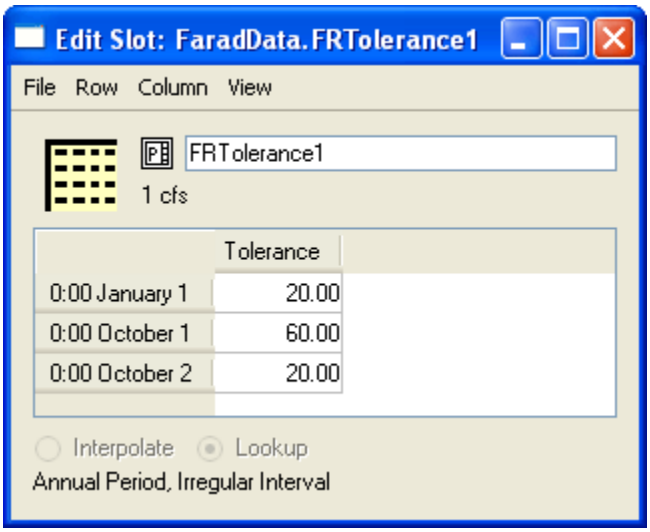
RiverWare Series Display Compression

This wepage illustates examples from Shane Coors (USBR) for potential uses of Series Display Compression and images of possible Slot Dialog configurations using Series Display Compression in RiverWare 5.0. [September / October 2007].

Image 1: FaradData-FRTolerance-Perio	Image 2: TahoeData-UserInputRelease	Image 3a: FRSourcePriorityTables-Pros	Image 3b: DonnerReleaseControls-SCT

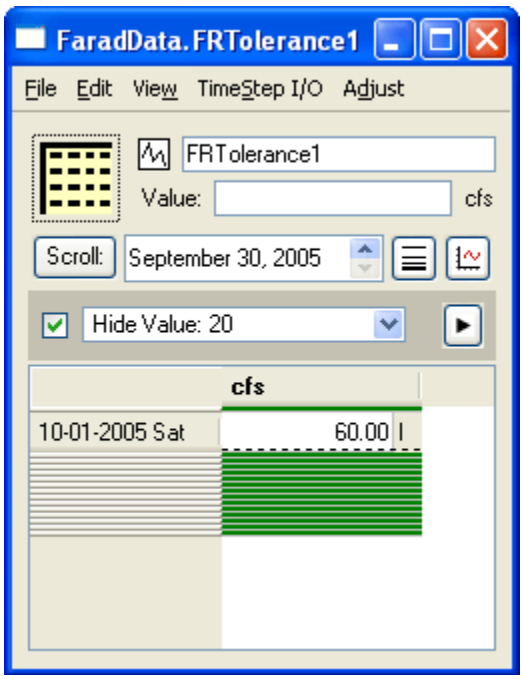


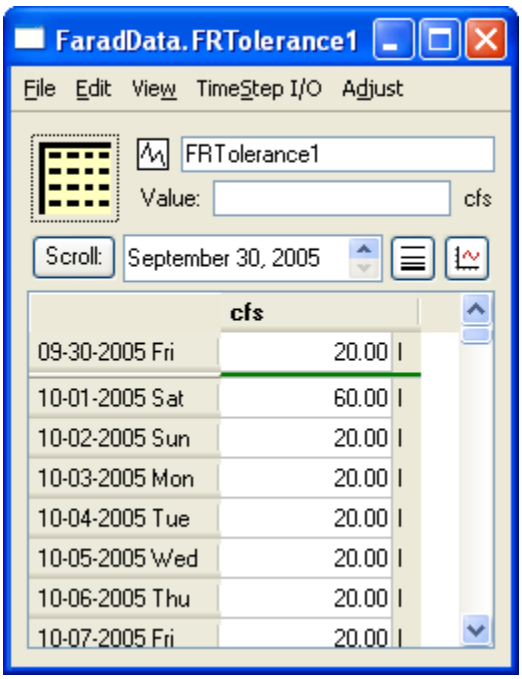
(1) Single Series slot with high redundancy (no NaNs)

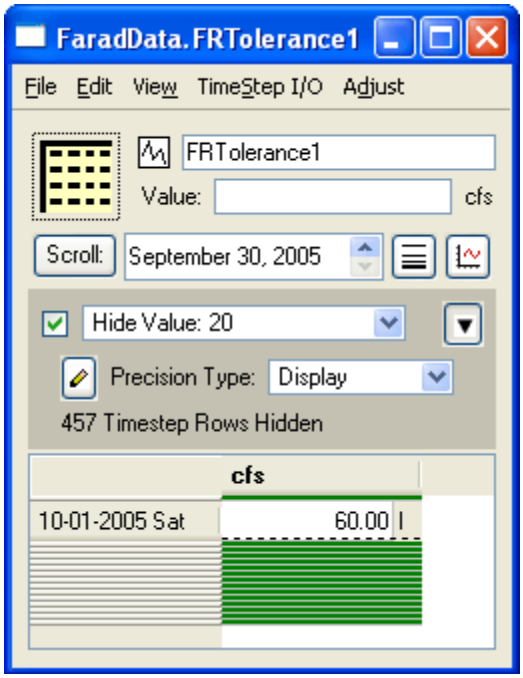
Example Slot: FaradData.FRTolerance

Explanation: This slot is used to specify the tolerance in the flow at the Farad Gage that is identified as meeting the Floriston Rate. For most days it is set to 20cfs but user/operator needs ability to relax the tolerance on a daily basis if conditions warrant. There aren't very many exceptions to the standard 20cfs; maybe only a handful per year and usually for only a day or two at a time.

Suggested SeriesSlot alternative with new RiverWare (5.0 Development) Series Display Compression Feature [10-16-2007]:







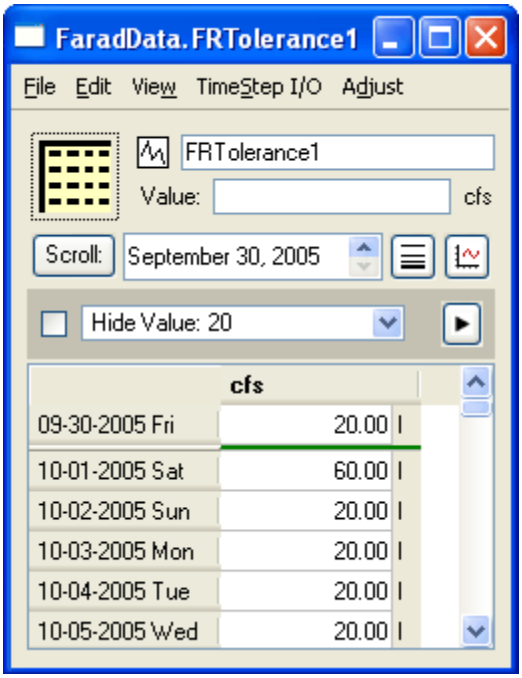


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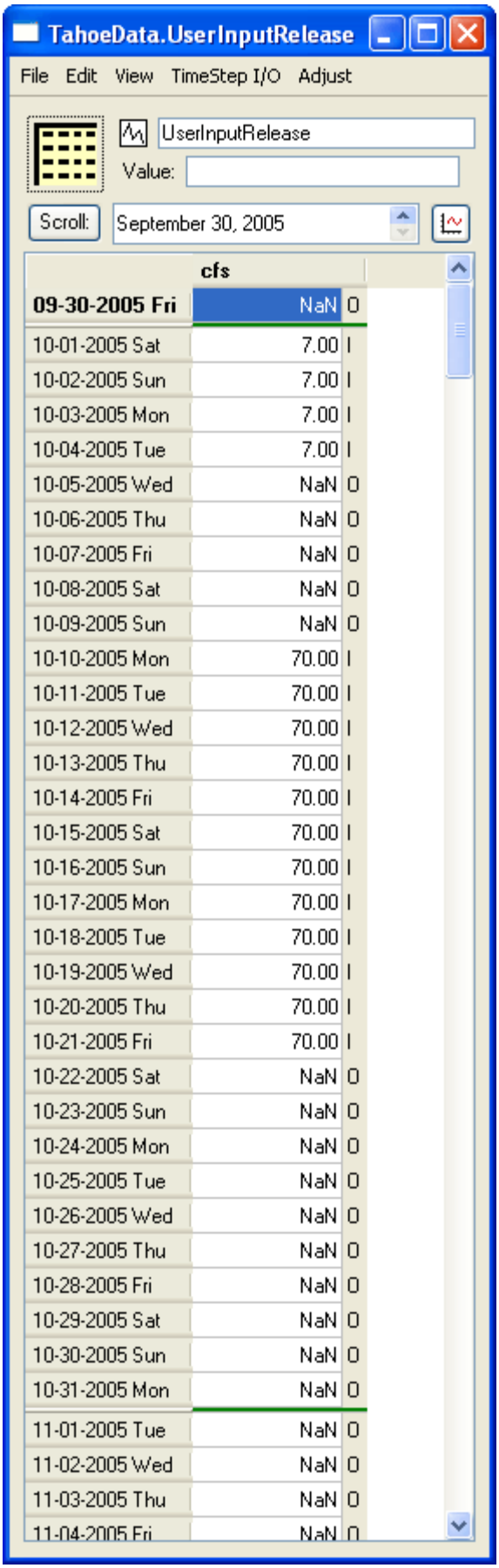
Image 1: FaradData-FRTolerance-Perio	**Image 2:** TahoeData-UserInputRelease	Image 3a: FRSourcePriorityTables-Pros	Image 3b: DonnerReleaseControls-SCT

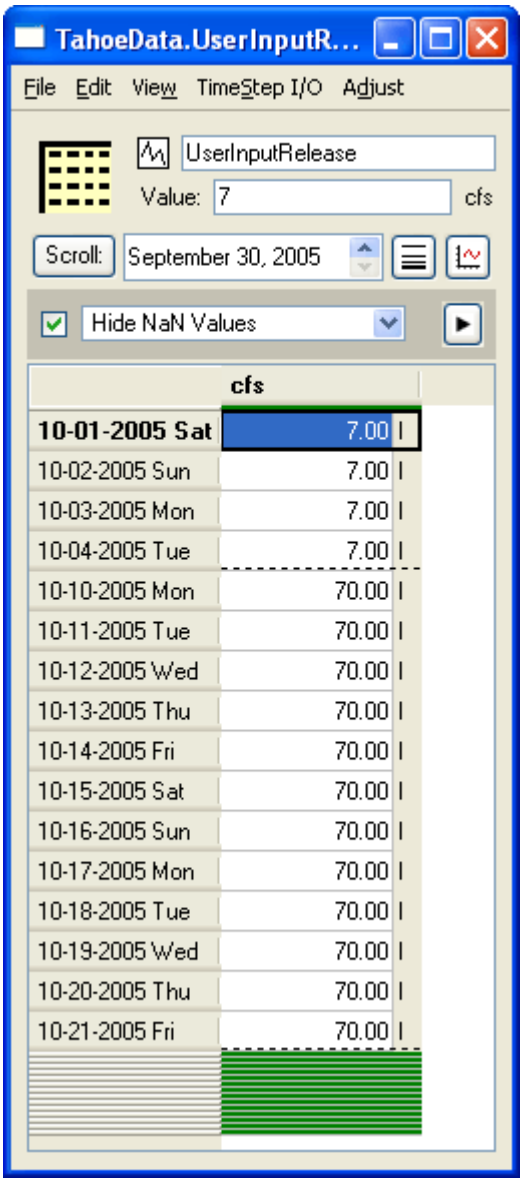
(2) Single Series Slot with mostly NaN

Example Slot: Tahoe Data.UserInputRelease

Explanation: This slot is used to specify an override release from Tahoe. The model will assign a release according logic specified in the ruleset. However, there are occasions when a different release needs to be set by the user for any of a wide-variety of reasons. The release-setting logic in the ruleset looks for a value in this slot, if there isn't one (NaN) then its proceeds with the logic, if there is a value, it sets the release to this value. This slot has mostly NaN's except when the operator has reason to override the standard release.

Alternative with new RiverWare (5.0 Dev) Series Display Compression Feature [10-16-2007]:





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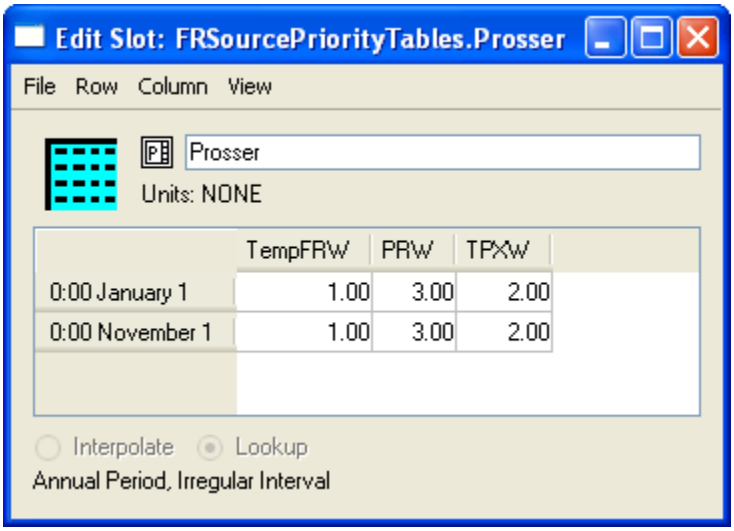


(3a) Multiple Series Slots all inter-related (Ag-series candidate?)

Example A: Reservoir Priority Tables

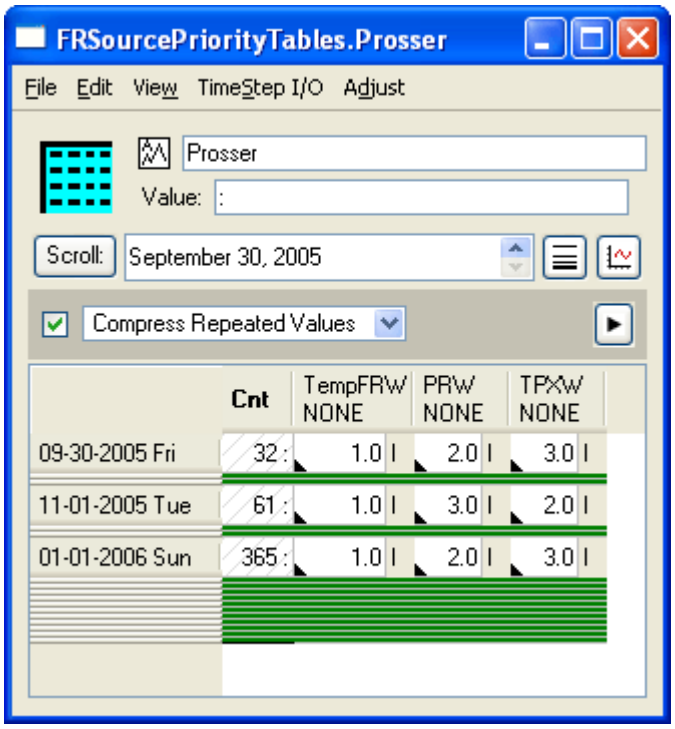
Example Slot:
FRSourcePriorityTables:Prosser

Explanation: This example is a periodic slot, but as we discussed, we see it better as 3 (in this case) series slots, one for each account. These 3 slots function as a unit describing in which order water will be charged to accounts on Prosser for meeting the FR demand. All of the "Priority Tables" objects in that region of the model are examples like this. The priority order will change only a couple times per year and in many cases will not change at all. So it would be nice to just see the timesteps where there was a priority change between 2 or more of the accounts. There would never be any NaN's in any of these slots.

Note: I believe there is a mistake in this screenshot. The two rows are intended to be different, e.g. ...

January 1:	1.0	2.0	3.0
November 1:	1.0	3.0	2.0

Alternative with new RiverWare (5.0 Dev) Series Display Compression Feature [10-16-2007]:



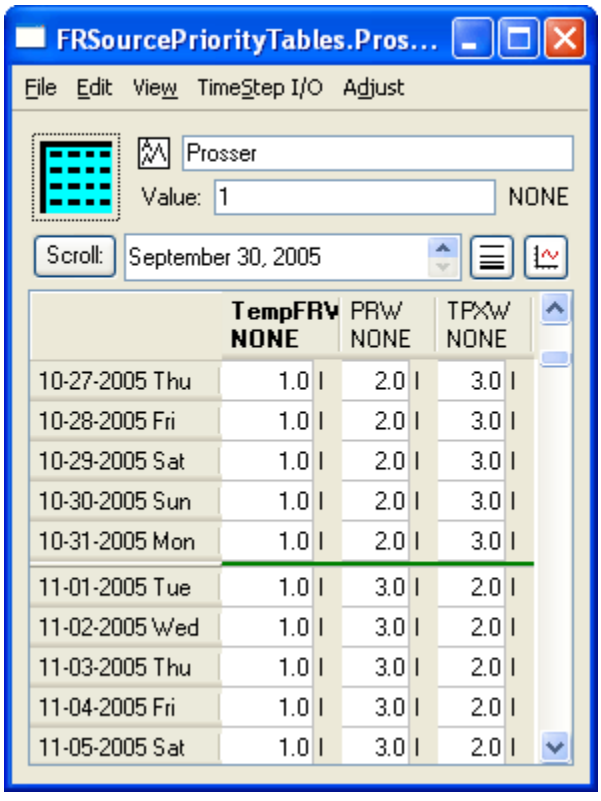


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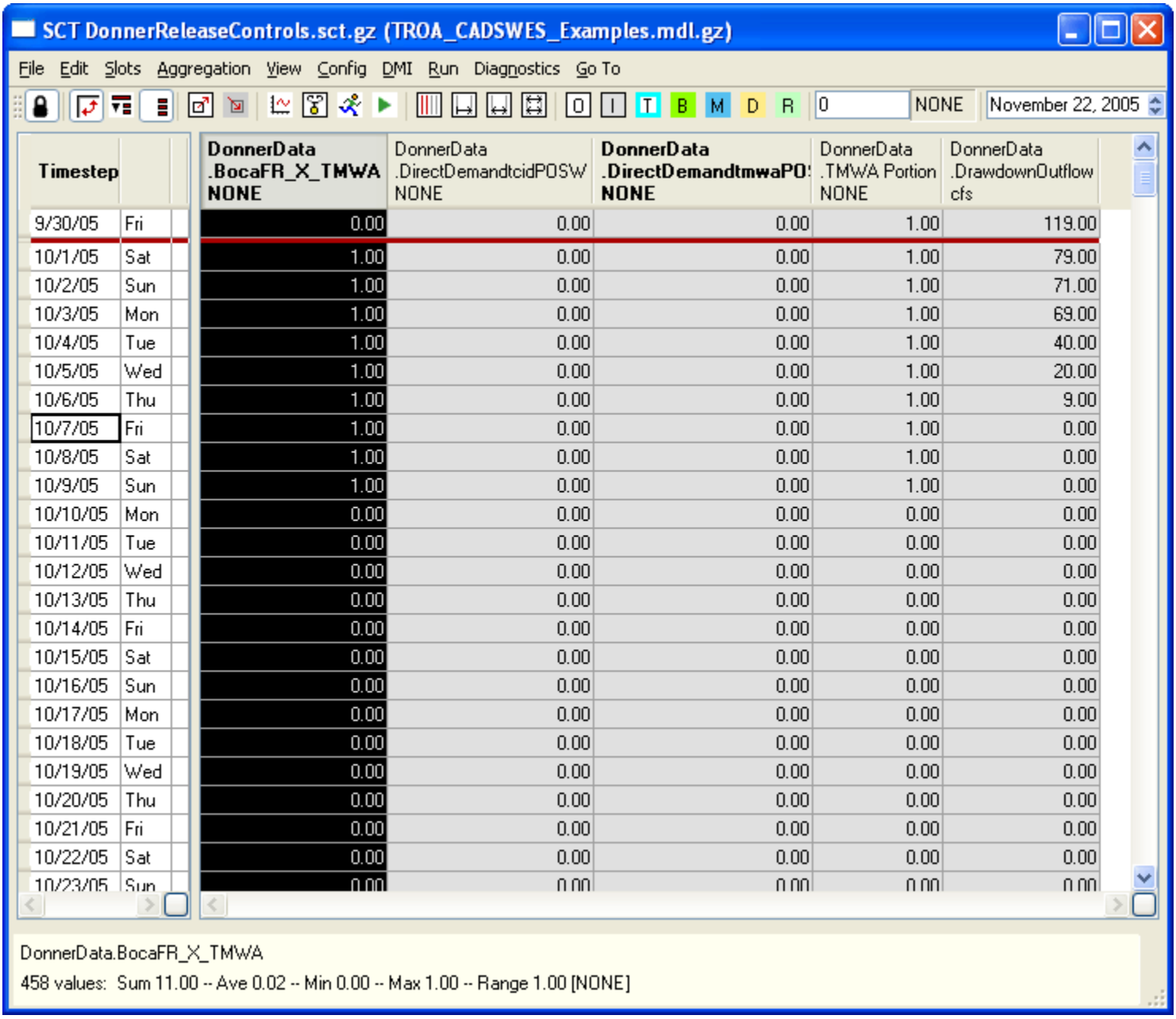
Image 1: FaradData-FRTolerance-Perio	Image 2: TahoeData-UserInputRelease	Image 3a: FRSourcePriorityTables-Pros	**Image 3b:** DonnerReleaseControls-SCT



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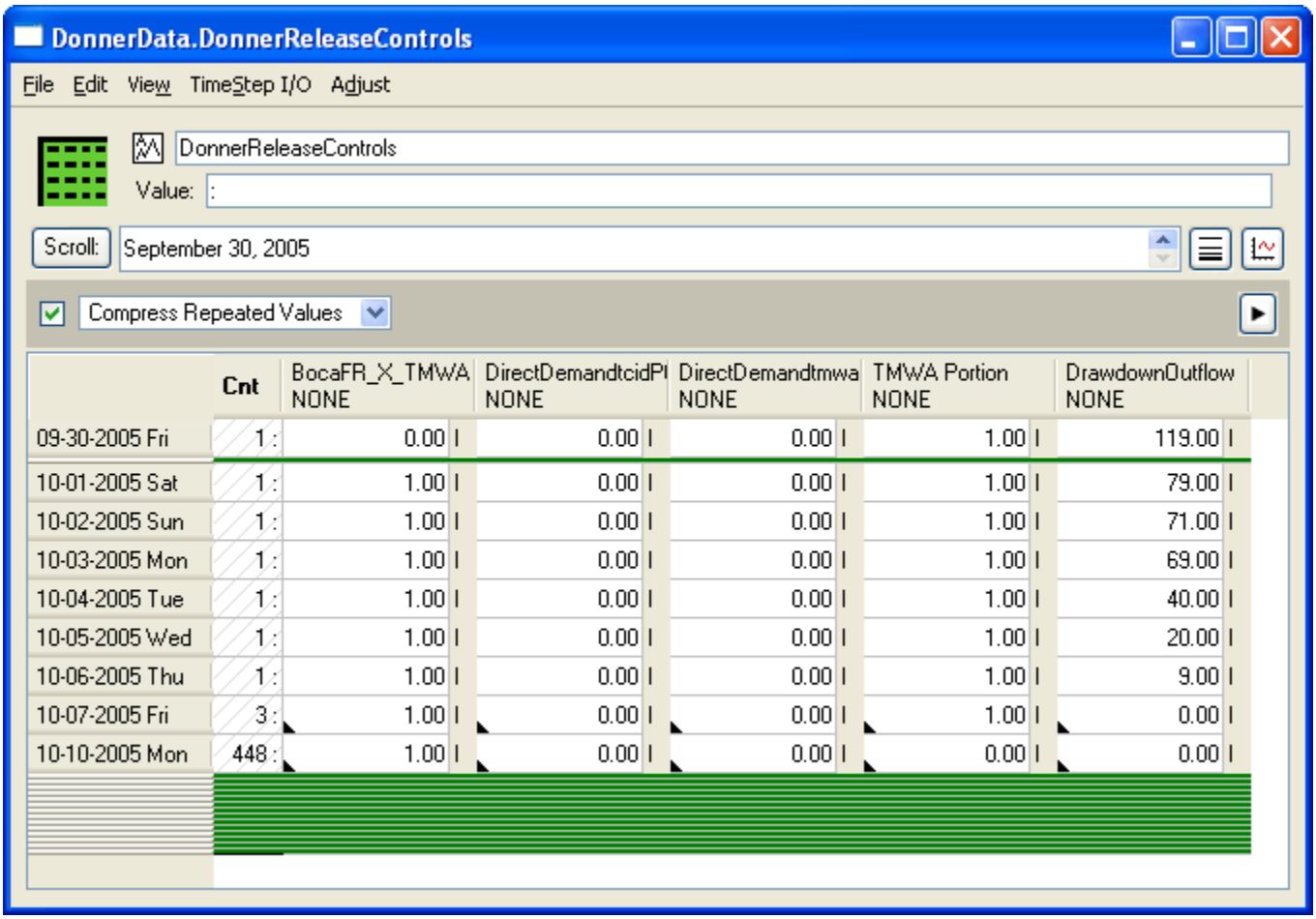

	Cnt	BocaFR_X_TMWA NONE	DirectDemandtcidPl NONE	DirectDemandtmwa NONE	TMWA Portion NONE	DrawdownOutflow NONE
09-30-2005 Fri	1 :	0.00	0.00	0.00	1.00	119.00
10-01-2005 Sat	1 :	1.00	0.00	0.00	1.00	79.00
10-02-2005 Sun	1 :	1.00	0.00	0.00	1.00	71.00
10-03-2005 Mon	1 :	1.00	0.00	0.00	1.00	69.00
10-04-2005 Tue	1 :	1.00	0.00	0.00	1.00	40.00
10-05-2005 Wed	1 :	1.00	0.00	0.00	1.00	20.00
10-06-2005 Thu	1 :	1.00	0.00	0.00	1.00	9.00
10-07-2005 Fri	3 :	1.00	0.00	0.00	1.00	0.00
10-10-2005 Mon	448 :	1.00	0.00	0.00	0.00	0.00

(3b) Multiple Series Slots all inter-related

Example B: Donner Release Controls

Example Slots: All on DonnerData.BocaFR_X_TMWA, DirectDemandtcidPOSW, DirectDemandtmwaPOSW, TMWAPortion, DrawdownOutflow. **SCT** including all of these slots is probably the most useful way to visualize what is happening

Explanation: These slots collectively control how the water is released from Donner Lake primarily during drawdown season. Two parties co-own the water in this lake and so the proportions of the release belonging to each party need to be defined as well as whether or not the water can go toward meeting the Floriston Rate or not. The SCT is helpful because all 5 slots can be viewed on a common time scale, but there is substantial redundancy that would be nice to be able to remove.
