



Center for Advanced Decision Support for
Water and Environmental Systems (CADSWES)

UNIVERSITY OF COLORADO **BOULDER**

Enhanced Features for Operations: Snapshots, SCT, Notes

2025 RiverWare User Group Meeting

Presenter: Mitch

Snapshots



Snapshots Overview

- Preserve run results for comparison
- Select which slots to preserve
- Snapshot slots are read-only
- Recent enhancements (9.2)
 - Improved naming, creation, management
 - Easier viewing in plots
 - Easier viewing in SCT



Slot Viewer (1 Day)

File Edit View TimeStep I/O Adjust

Selected Slot: Snapshot.Birch_Pool Elevation

Value: 251.441429352 m Feb 19, 2020

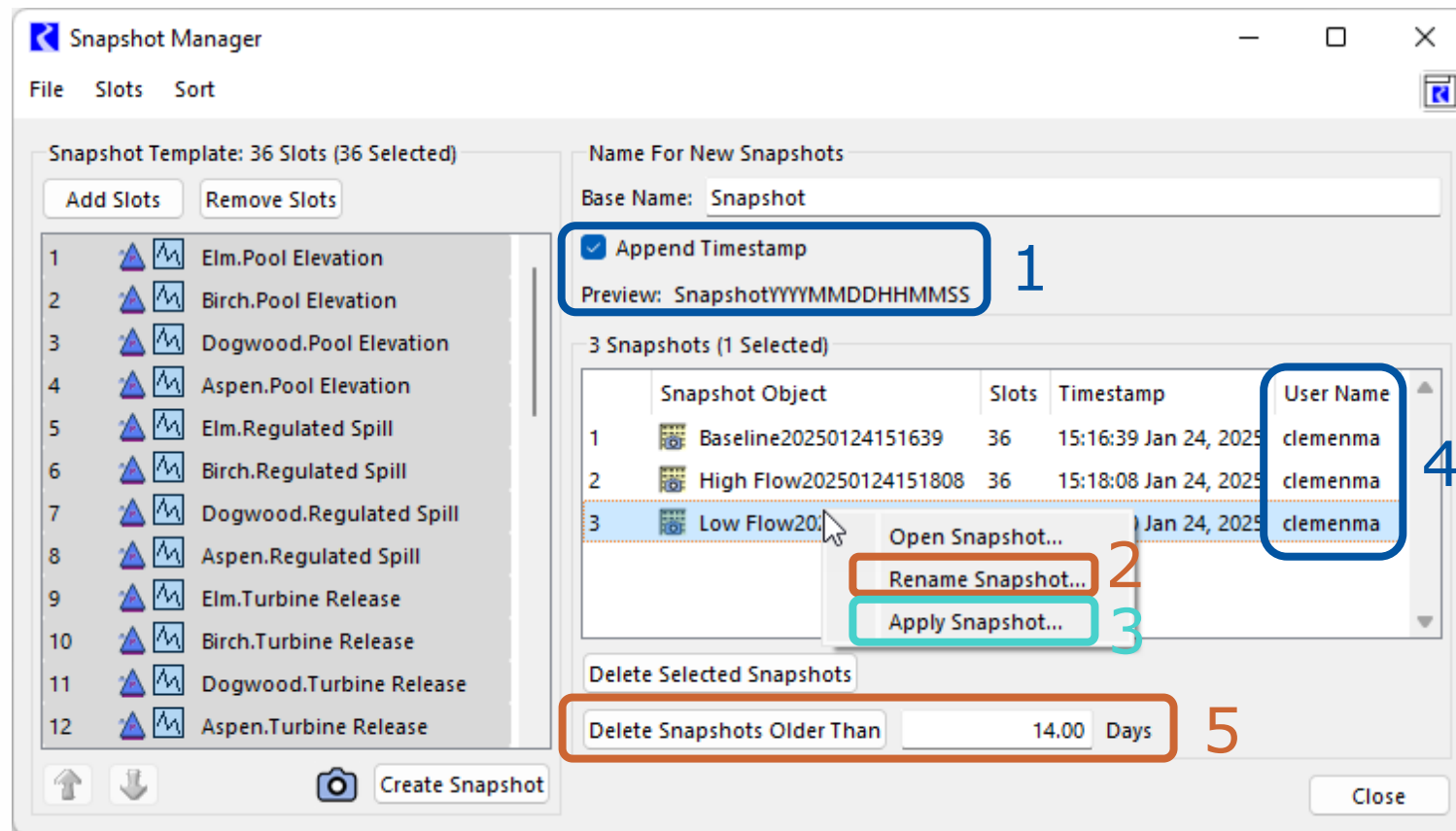
	Snapshot .Aspen_Pool Elevation m	Snapshot .Birch_Pool Elevation m
01-01-2020 Wed	273.91 I 0	253.00 I 0
01-02-2020 Thu	273.92 O 27	253.00 O 27
01-03-2020 Fri	273.93 O 27	253.00 O 27
01-04-2020 Sat	273.94 O 30	252.96 O 30
01-05-2020 Sun	273.95 O 30	252.92 O 30
01-06-2020 Mon	273.96 O 30	252.88 O 30
01-07-2020 Tue	273.97 O 30	252.85 O 30
01-08-2020 Wed	273.98 O 30	252.82 O 30
01-09-2020 Thu	273.99 O 30	252.79 O 30
01-10-2020 Fri	274.00 O 30	252.76 O 30
01-11-2020 Sat	274.01 O 30	252.74 O 30
01-12-2020 Sun	274.02 O 30	252.72 O 30
01-13-2020 Mon	274.03 O 30	252.71 O 30
01-14-2020 Tue	274.04 O 30	252.70 O 30
01-15-2020 Wed	274.05 O 30	252.69 O 30
01-16-2020 Thu	274.05 O 30	252.68 O 30
01-17-2020 Fri	274.06 O 30	252.68 O 30
01-18-2020 Sat	274.07 O 30	252.68 O 30
01-19-2020 Sun	274.08 O 30	252.69 O 30
01-20-2020 Mon	274.09 O 30	252.70 O 30
01-21-2020 Tue	274.10 O 30	252.71 O 30
01-22-2020 Wed	274.11 O 30	252.72 O 30
01-23-2020 Thu	274.12 O 30	252.74 O 30

Show Description Synchronize Scrolling

Snapshot.Birch_Pool Elevation [@ 24:00 February 19, 2020]
1 value: 251.44 [m] (Priority 30)

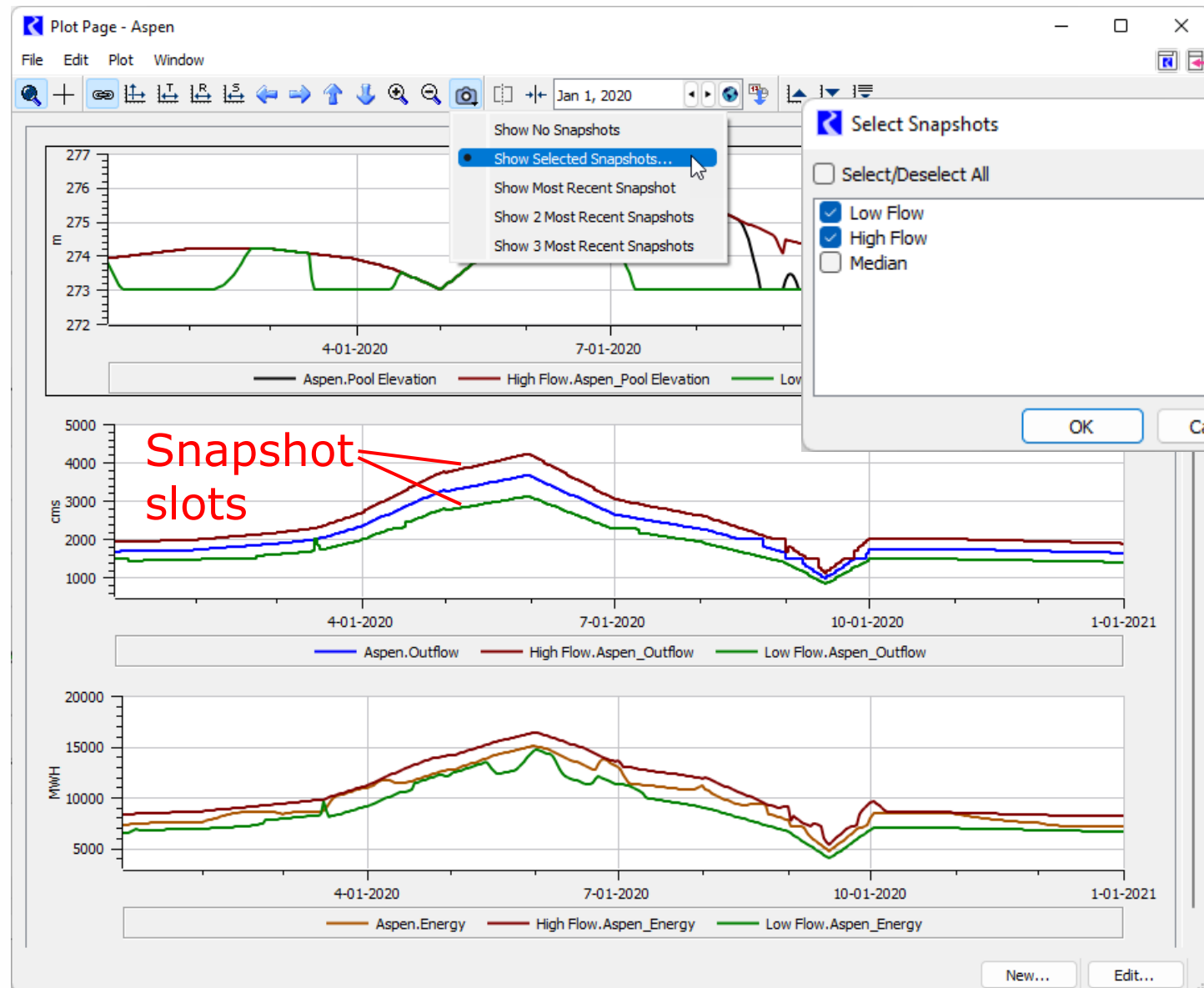
Improved Snapshot Management

1. Append timestamp on snapshot name
2. Rename from Manager
3. Apply Snapshot operation – paste values back to source slots with flags
4. Record Username (9.3)
5. Delete Snapshots older than *N* days – also a script action



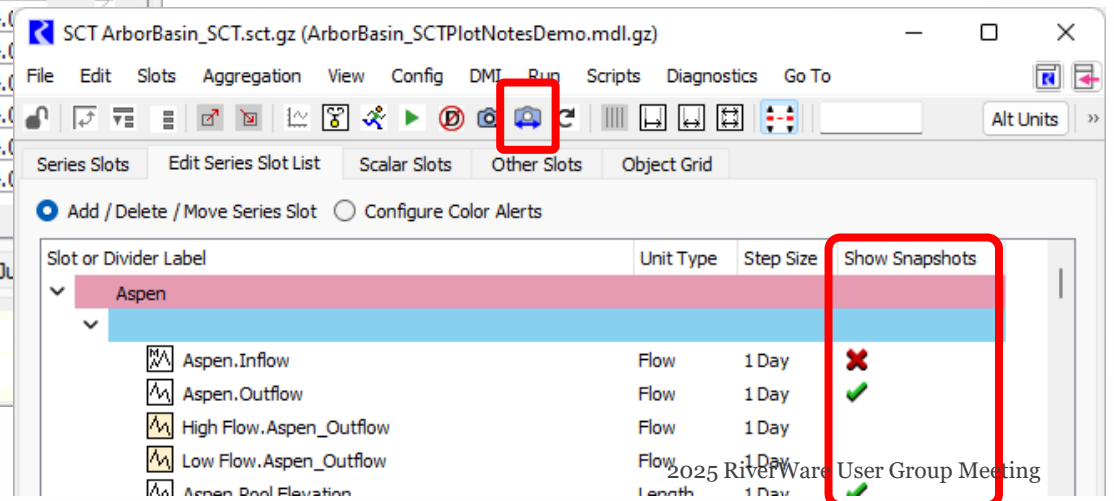
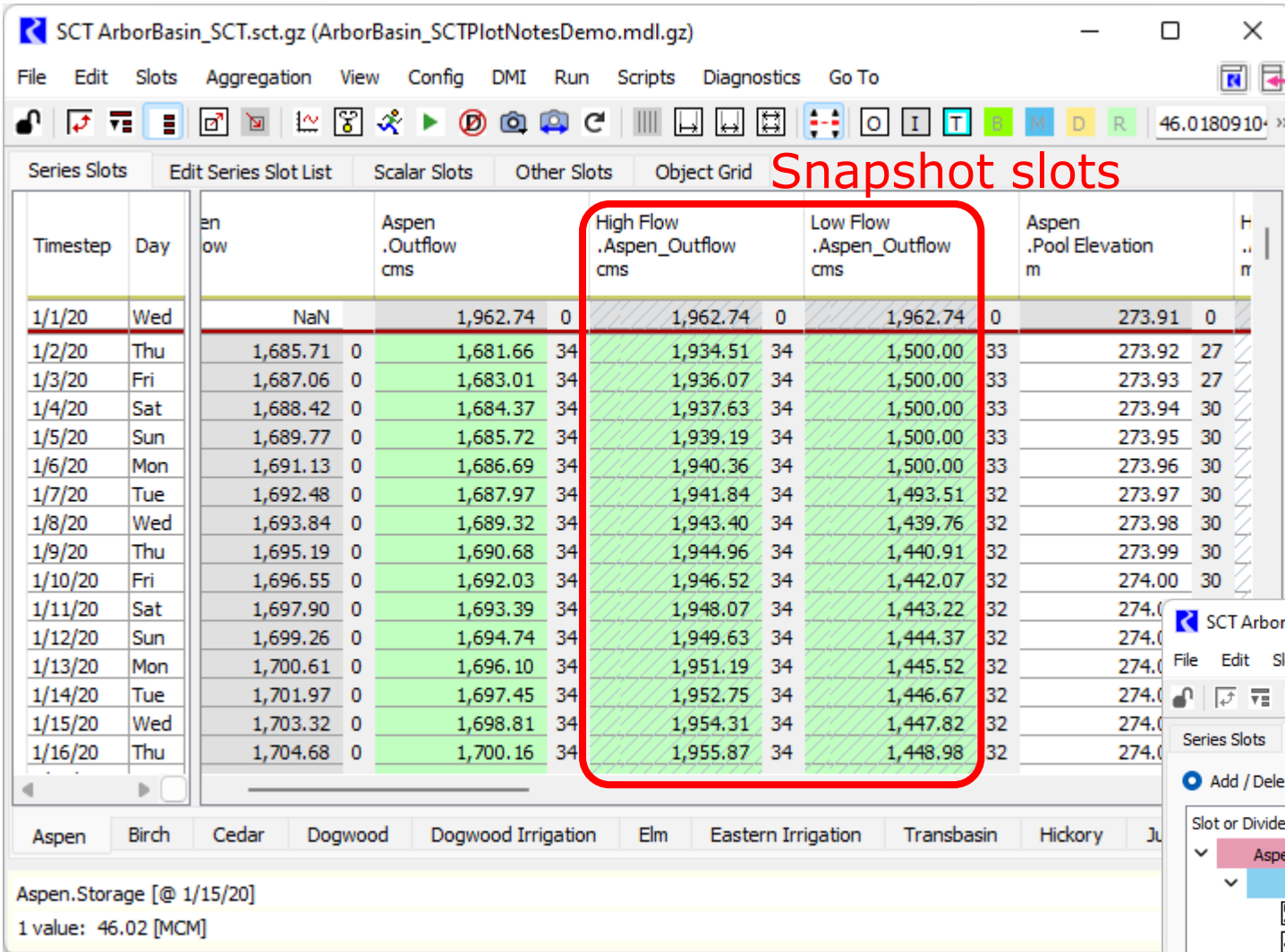
Show Snapshots in Plots

- Quickly show slots from recent Snapshots together with the source slots
- Select from new Snapshot button on plots



Show Snapshots in SCT

- Show recent snapshot slots in SCT – similar to plots
- Select which snapshot slots to include – with global override

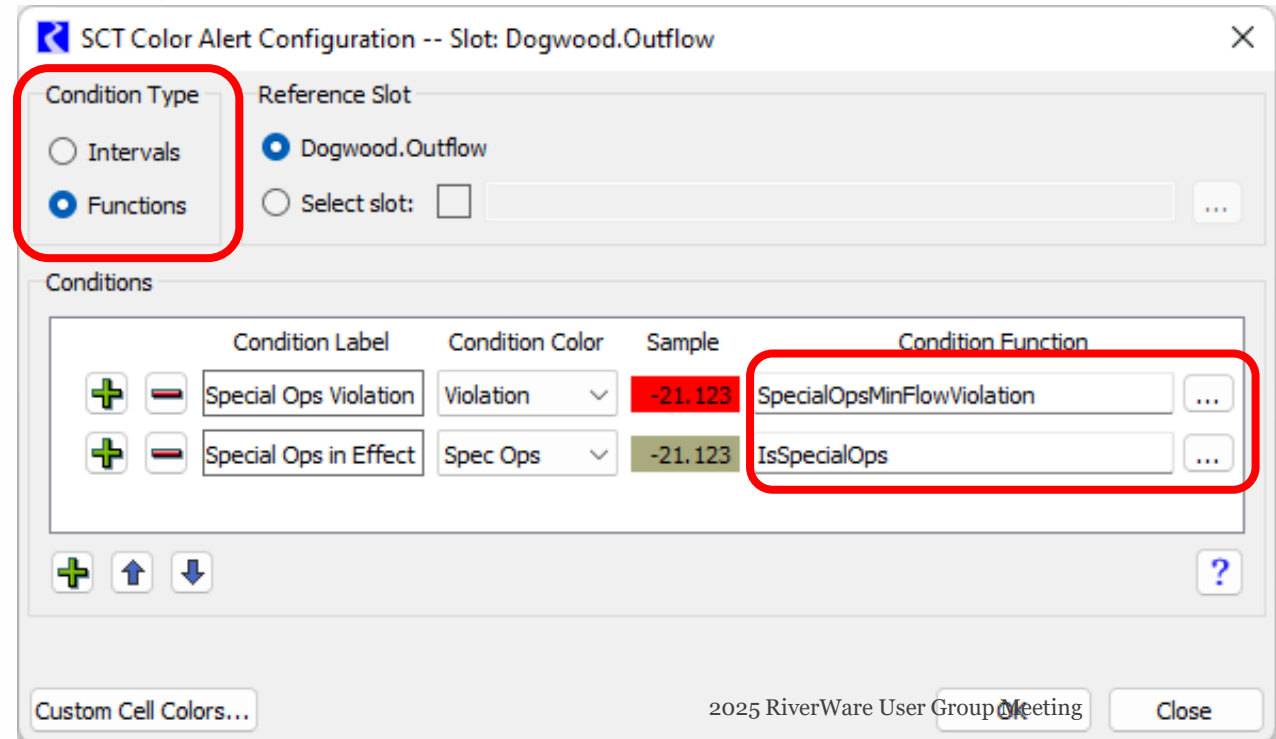
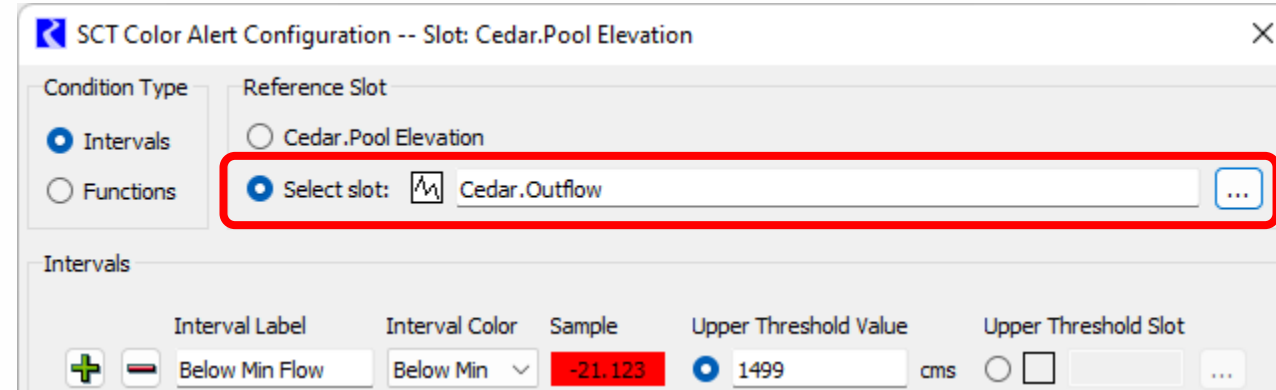


SCT



SCT Color Alerts – Increased Flexibility

- Use an alternative Reference Slot
- Condition Functions – RPL functions define conditions for formatting



SCT Functionality

- Paste values, flags and notes
 - Pastes values with flags and notes from source
 - Helpful when pasting a combination of flags – input, output, max, target...

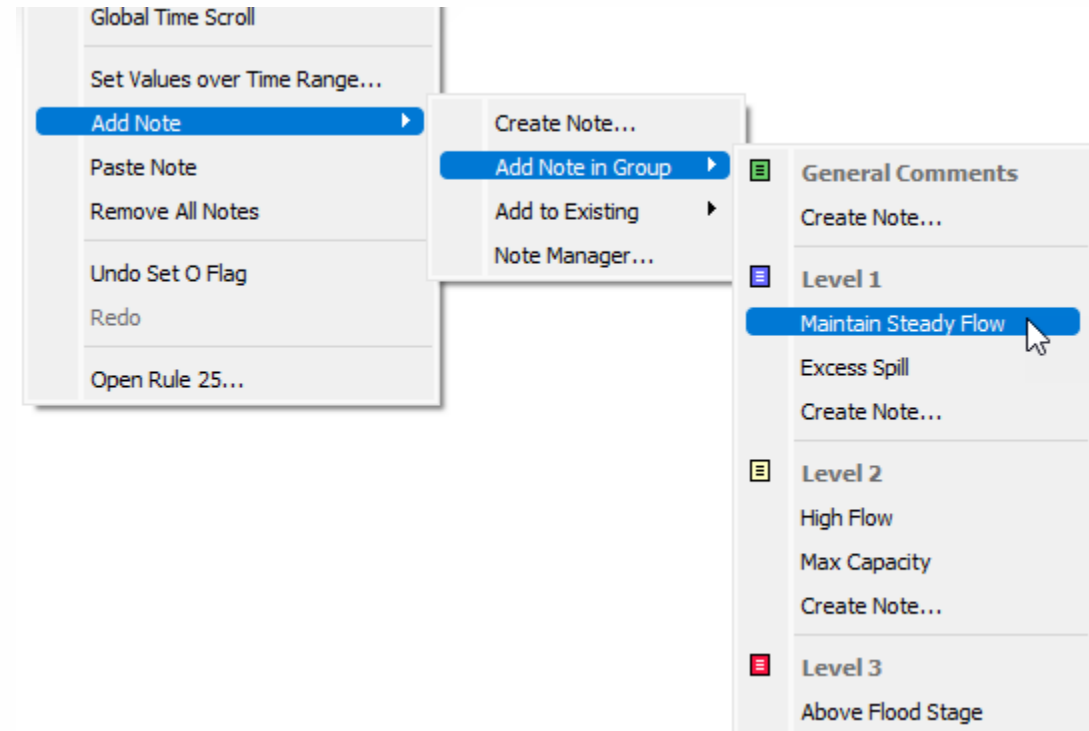
Series Slot Notes

...

Apply Notes from SCT/Slot Viewer

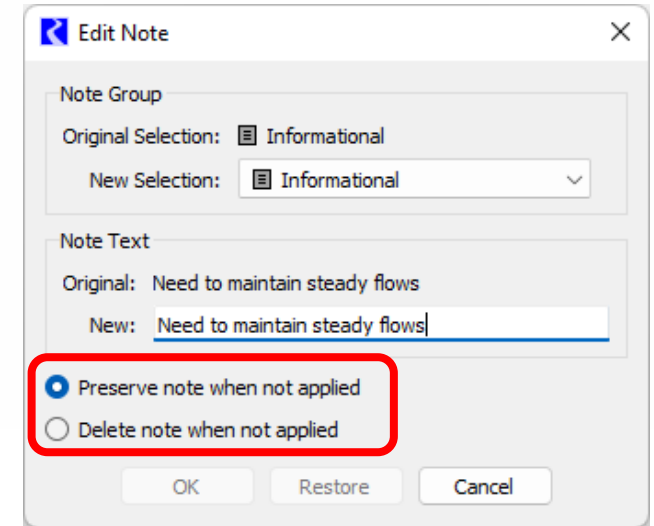
Many new options to easily add, edit, delete notes directly from SCT/Slots without opening the Note Manager

- Create Note
- Add Preconfigured Note in a Group
- Add to Existing Note
- Replace Note with Updated Version
- Remove All Notes from Selection



Note Improvements

- Improved terminology in the Note Manager
- Options to automatically delete...
 - Notes that are no longer applied
 - Note instance outside the slot time range



- Timestamps included with notes
- New model report item: Notes Summary

Feedback Notes

Feedback Notes

Slot	Timestep	Note	Group	Slot Value	Timestamp
Boone.Regulated Spill	24:00 Oct 24 2023	Most leads wouldn't	Level 4	0.00 cfs	10:14:26 Nov 2 2023
Boone.Turbine Release	12:00 Oct 24 2023	Most leads wouldn't	Level 4	1.69 cfs	10:14:21 Nov 2 2023
Boone.Turbine Release	06:00 Oct 24 2023	Most leads wouldn't	Level 4	1.69 cfs	10:14:21 Nov 2 2023
Boone.Turbine Release	18:00 Oct 24 2023	Most leads wouldn't	Level 4	1.69 cfs	10:14:21 Nov 2 2023
Boone.Turbine Release	24:00 Oct 24 2023	Most leads wouldn't	Level 4	1.69 cfs	10:14:21 Nov 2 2023
Cherokee.Turbine Release	06:00 Oct 24 2023	Opt unaware- need steady flow	Level 2	5.50 cfs	10:31:50 Nov 2 2023
Cherokee.Turbine Release	12:00 Oct 24 2023	Opt unaware- need steady flow	Level 2	5.50 cfs	10:31:50 Nov 2 2023
Cherokee.Turbine Release	18:00 Oct 24 2023	Opt unaware- need steady flow	Level 2	5.50 cfs	10:31:51 Nov 2 2023
Cherokee.Turbine Release	24:00 Oct 24 2023	Opt unaware- need steady flow	Level 2	5.50 cfs	10:31:51 Nov 2 2023

Diagnostics



Diagnostic Improvements

Optionally raise Diagnostic Output Window for

- RPL Alert
- RPL Warning
- RPL Notice

