Savannah District

Savannah River Basin Comprehensive Study

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SRB Comp Study

Study Approach

Establish Base Condition- (Existing Condition)

1. **Operational Rules**
2. **Water Supply Needs**
3. **Hydropower Requirements**

Serves as reference of comparison for alternative analysis

Water Allocations and Operational Scenarios

- Drought Plan Operations- Phase I
- Storage Changes – Phase II
- Flow Changes – Phase II
- Operational Rules – Phase II

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Drought Plan Operations

- Objective- To access the impacts of different drought rules, triggers, and their timing
- Recent Drought (1998-2002) is being used for analysis

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- 1A. During drought recovery increase flows when return elevations are X feet above setting elevation
  - 1) X = 1 ft
  - 2) X = 2 ft
- 2A. Increase the number of drought triggers for drought management and return from drought to provide a more gradual transition to 3600cfs.
- 3A. Lower the minimum drought-trigger 3 JST releases to 3300 cfs (3A1) and 3000 cfs (3A2) with a rule to maintain 3600 cfs at the lock and dam. Similar to EA proposed during recent drought.
- 4A. Raise minimum level 3 JST releases to 3800 cfs to determine or illustrate pool elevation differences.

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- 5A. Maximize RBR pumping during drought within current environmental operational limits.
  - 1. Two pump units June thru Sept.
    (w/o JST O2 system; same as Base)
  - 2. Four pump units available June thru Sept.

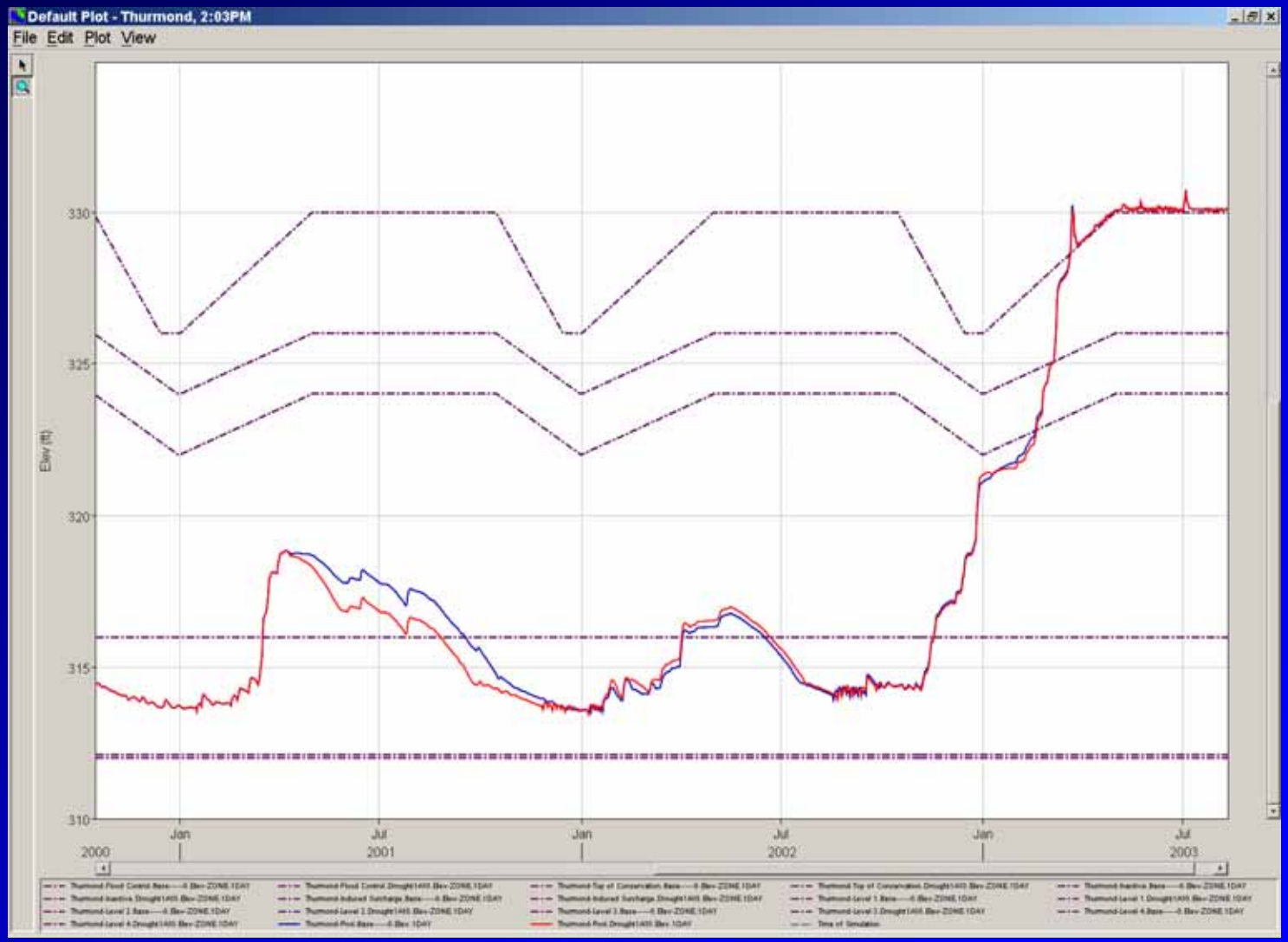
- 6A. Add flow restrictions at JST for drought trigger 1 condition. (eg 5200 cfs)

- 7A. Adjust Level 3 elevations at Hartwell and JST from 646 and 316 to

  1) 648 and 318

  2) 649 and 319

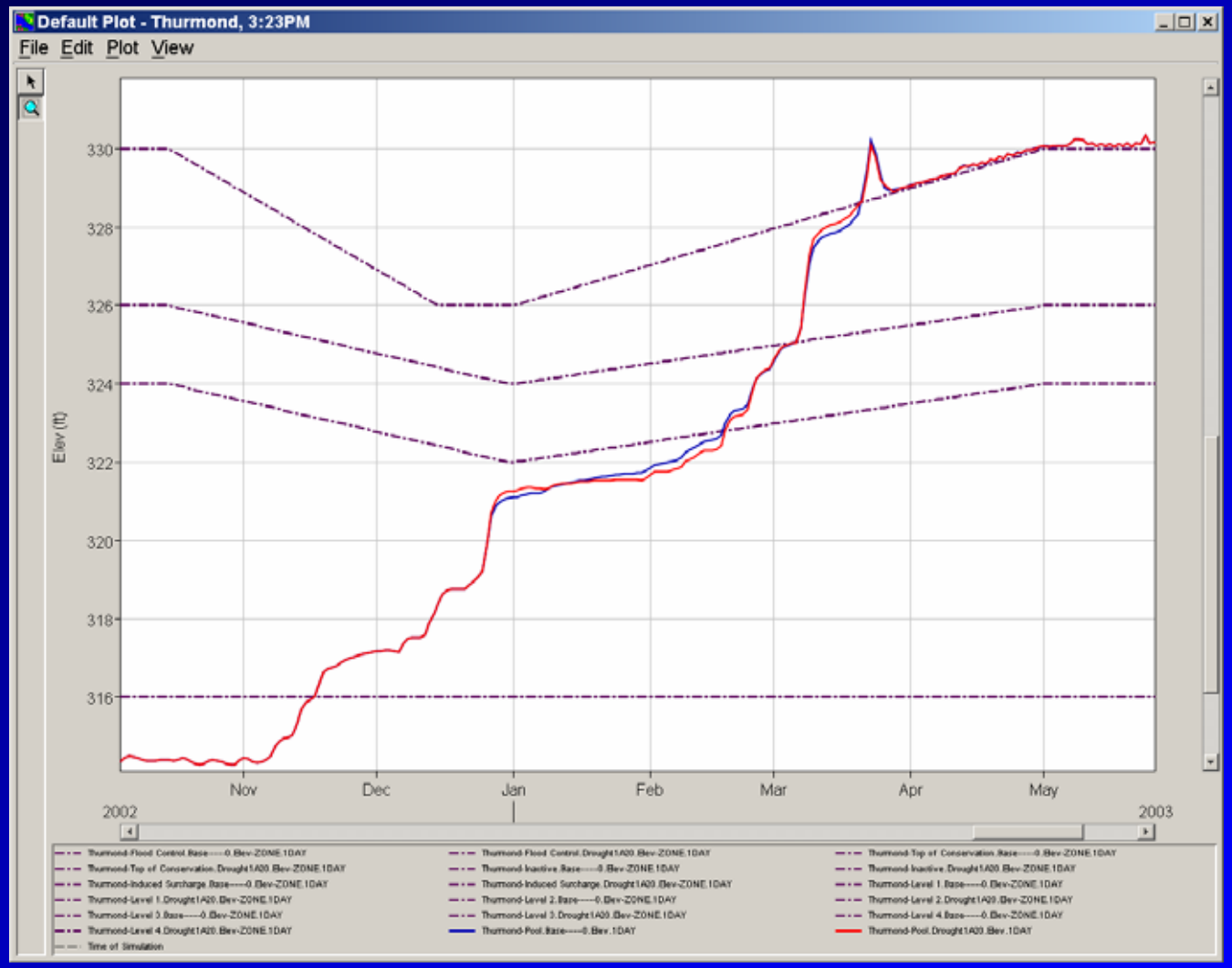
1A1. During drought recovery increase flows when return elevations are 1 foot above setting elevation



Base

1A1

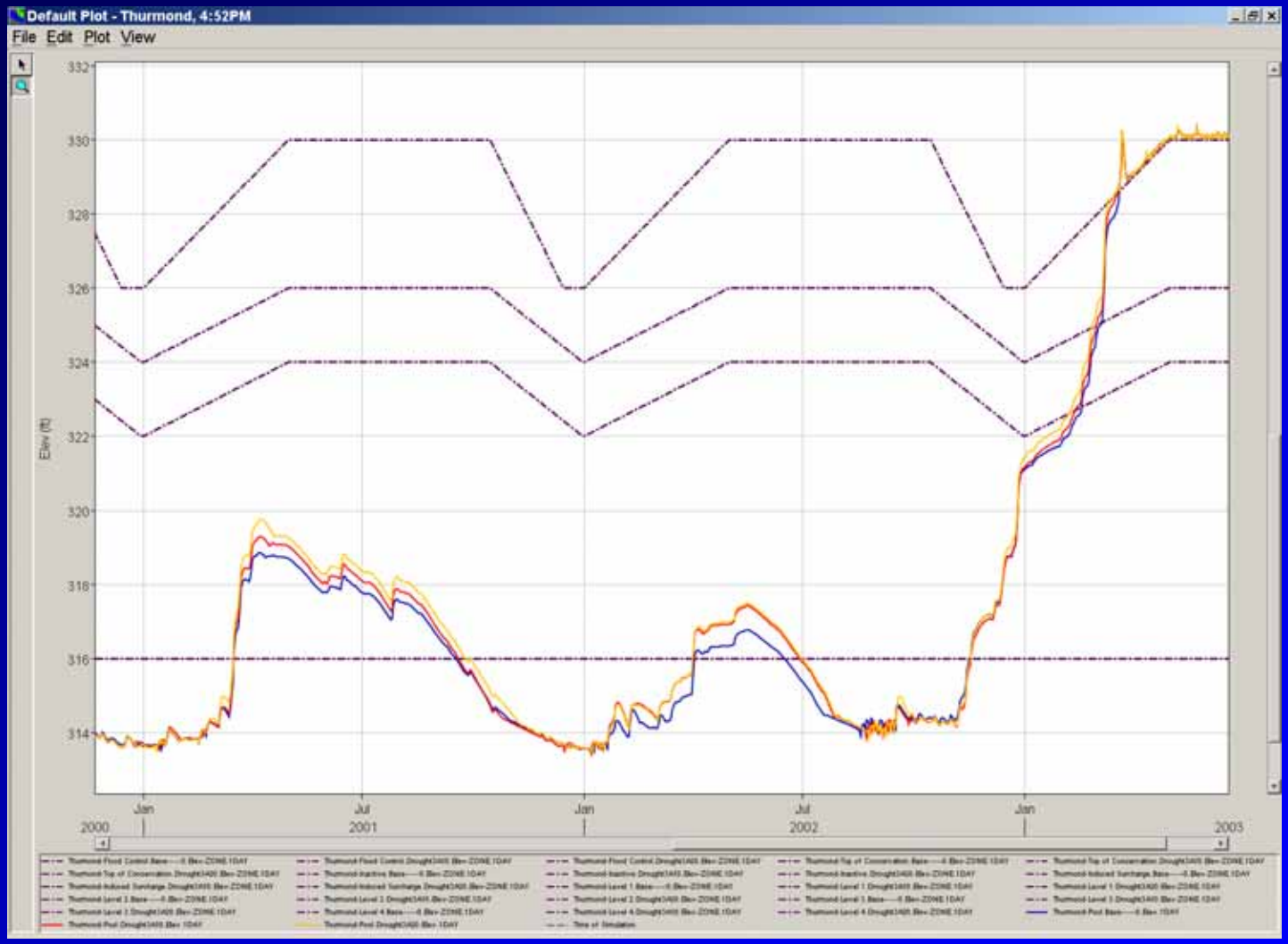
1A2. During drought recovery increase flows when return elevations are 2 feet above setting elevation



Base

1A2

3A. Lower the minimum drought-trigger 3 JST releases to 3300 cfs (3A1) and 3000 cfs (3A2) with a rule to maintain 3600 cfs at the lock and dam

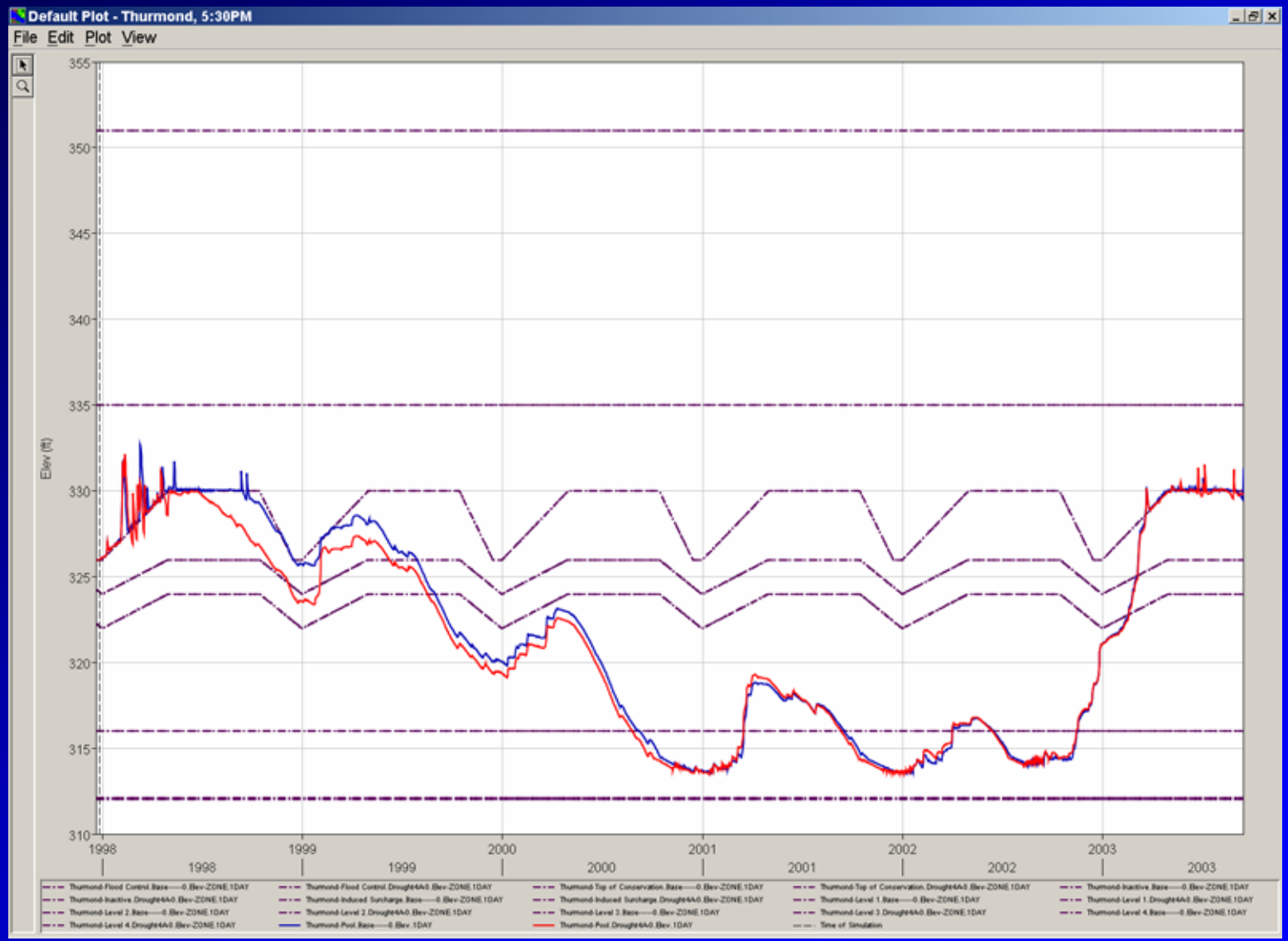


Base

3A1

3A2

4A. Raise minimum level 3 JST releases to 3800 cfs to determine pool elevation differences



Base

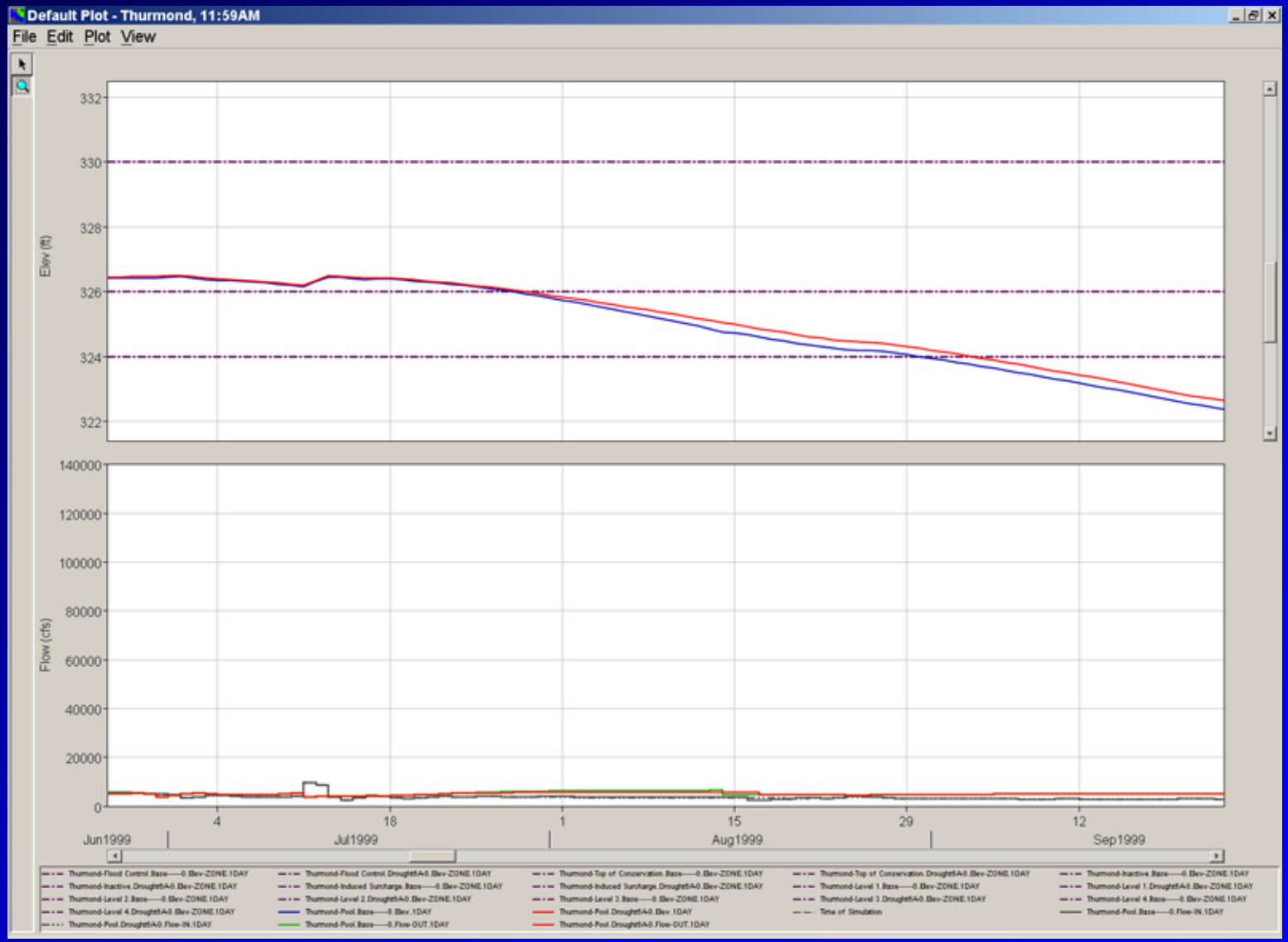
4A

5A. Maximize RBR pumping during drought within current environmental operational limits

Base

5A

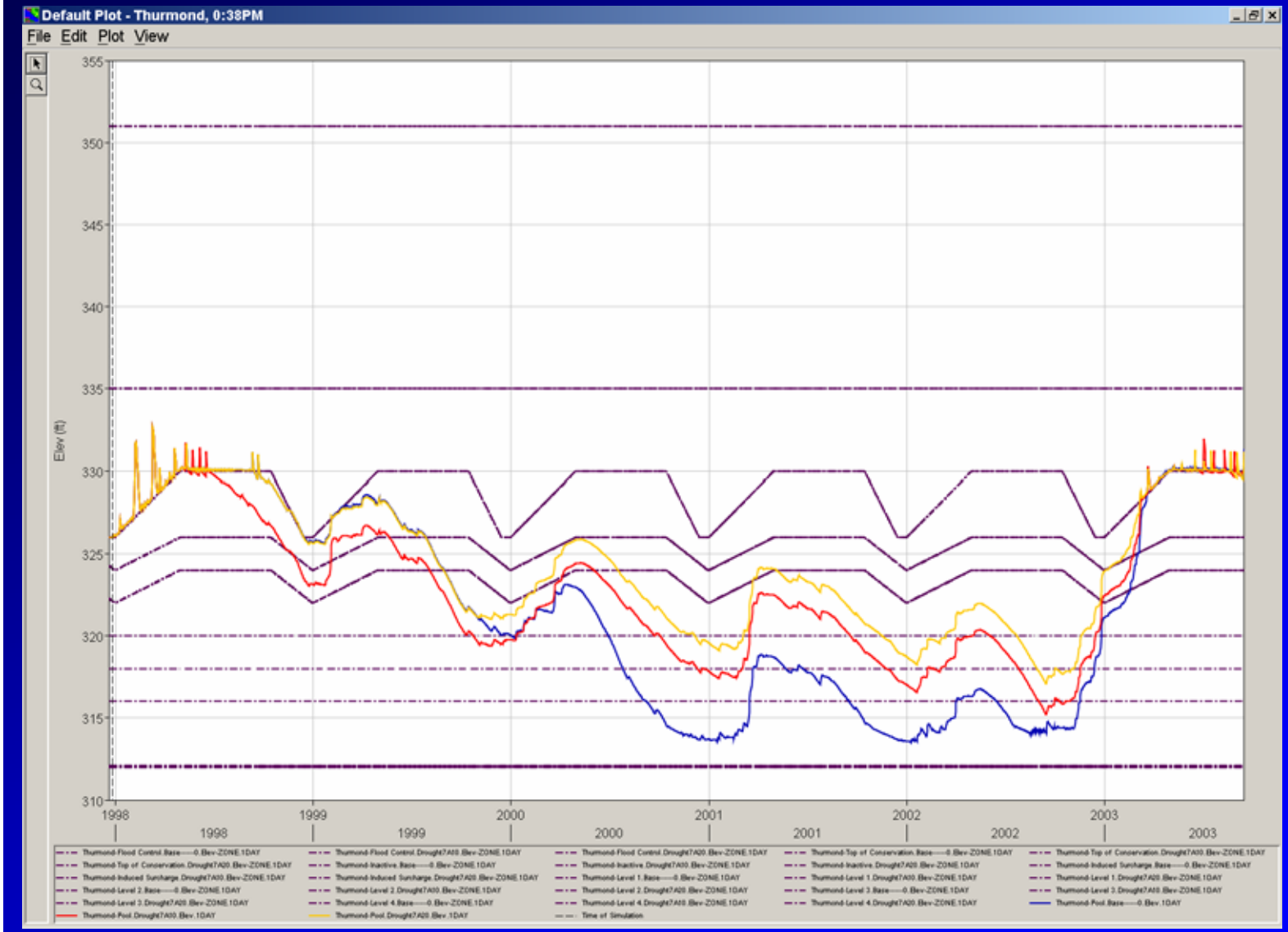
6A. Add flow restrictions at JST for drought trigger 1 condition. (eg 5200 cfs)



Base

6A

7A. Adjust Level 3 elevations at Hartwell and JST from 646 to 1)648 2) 649 and 316 to 1)318 2)319



Base

7A1

7A2

SRB Comp Study

Preliminary Analysis of Results

See Spreadsheet (ResSimOutput.xls)

- Summary Statistics (mean, min, max)
- Frequency Distributions (releases or downstream locations)
- % time pool elevation below zone

Summary

- Most alternatives do not show large changes in pool elevations
- Alternative 7A changes the most
- Are more alternatives needed? Can some be eliminated?
- Next step – Evaluating Cost/Benefits
- Questions?