

Validation of NRBHM OASIS

Model Version:

SimBase Intermediate version modified in August 2009

Assumptions:

- Demand 2007 – Actual monthly pattern for daily average
- WWRF 2007
 - Actual monthly pattern for daily average for demand nodes as pattern [*Not a function of demand data - changed return flow OCL file*].
 - Actual monthly pattern for daily average for direct return flow nodes as inflow
- Beginning of Yr 2007 Reservoir Levels
- No actual Agricultural Data - used as calculated by the model
- No actual Evaporation Data - used as calculated by the model
- No Actual Reservoir Drought/Special Operation

Input Data File Location:

- F:\DATA\RBMS\Neuse Basin\Neuse Model\01 OASIS - Neuse Hydrologic Modeling\Validation Run Inputs.xls

Validation of NRBHM OASIS

Comparison of Computed vs. Historical Operation:

- Falls Lake Elevation
- Falls Lake and Beaver Dam Total storage percent
- Falls Lake and BD Total WS - WQ percent
- Falls Lake Release

- West Fork Eno River Reservoir Elevation
- West Fork Eno River Reservoir Release

- Lake Orange Elevation
- Lake Orange Release

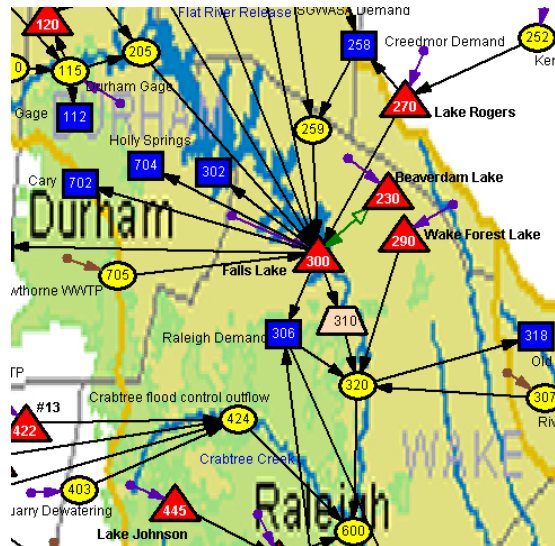
- Little River and Lake Michie Elevations
- Little River and Lake Michie Releases

Validation of NRBHM OASIS

Comparison of Computed vs. Historical Data:

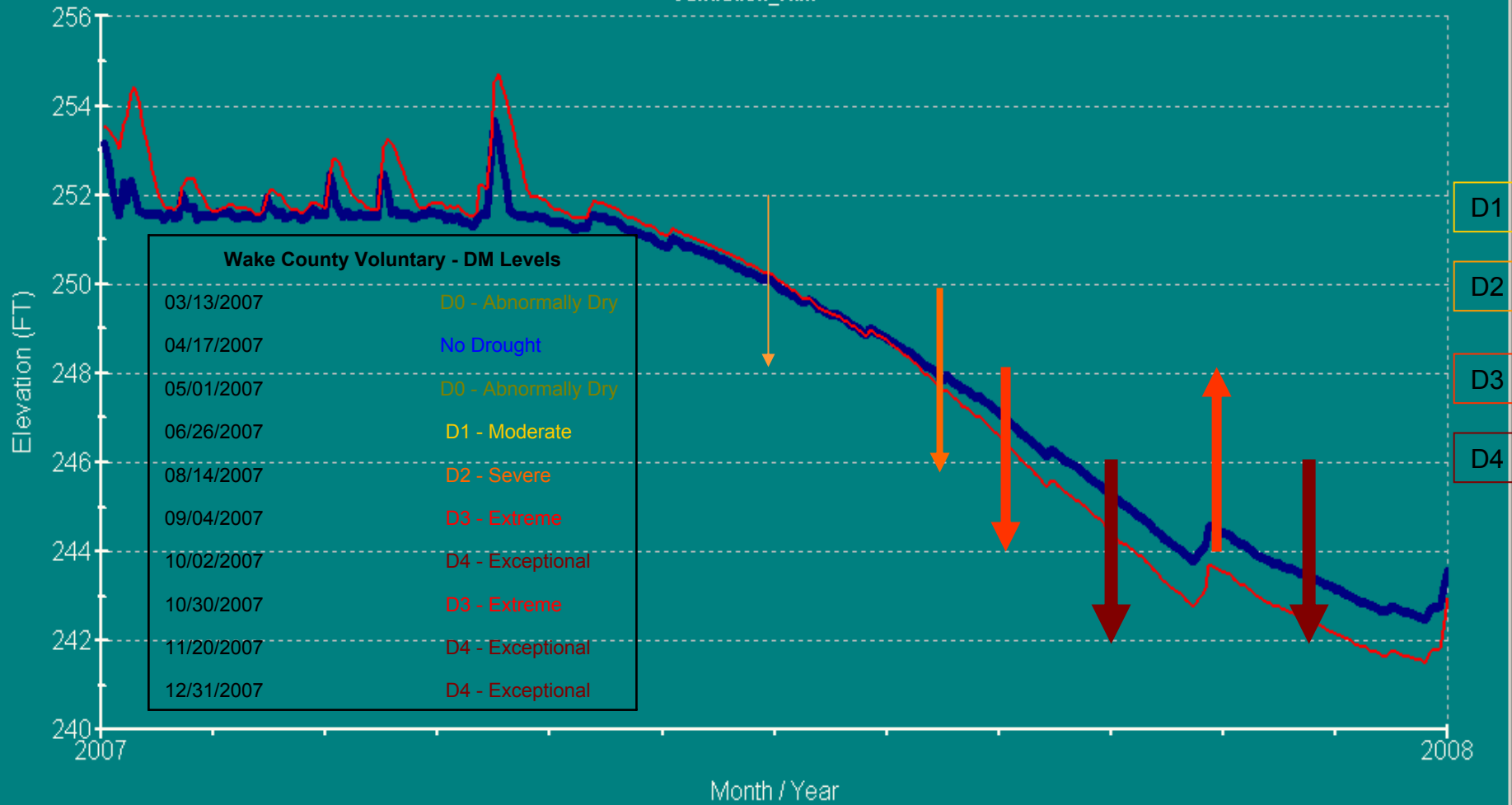
- Hillsborough Gage Data – node 110
- Clayton Gage Data – node 630
- Princeton Gage Data – node 750
- Goldsboro Gage Data – node 780
- Kinston Gage Data – node 800

Falls Lake – Beaver Dam Operation



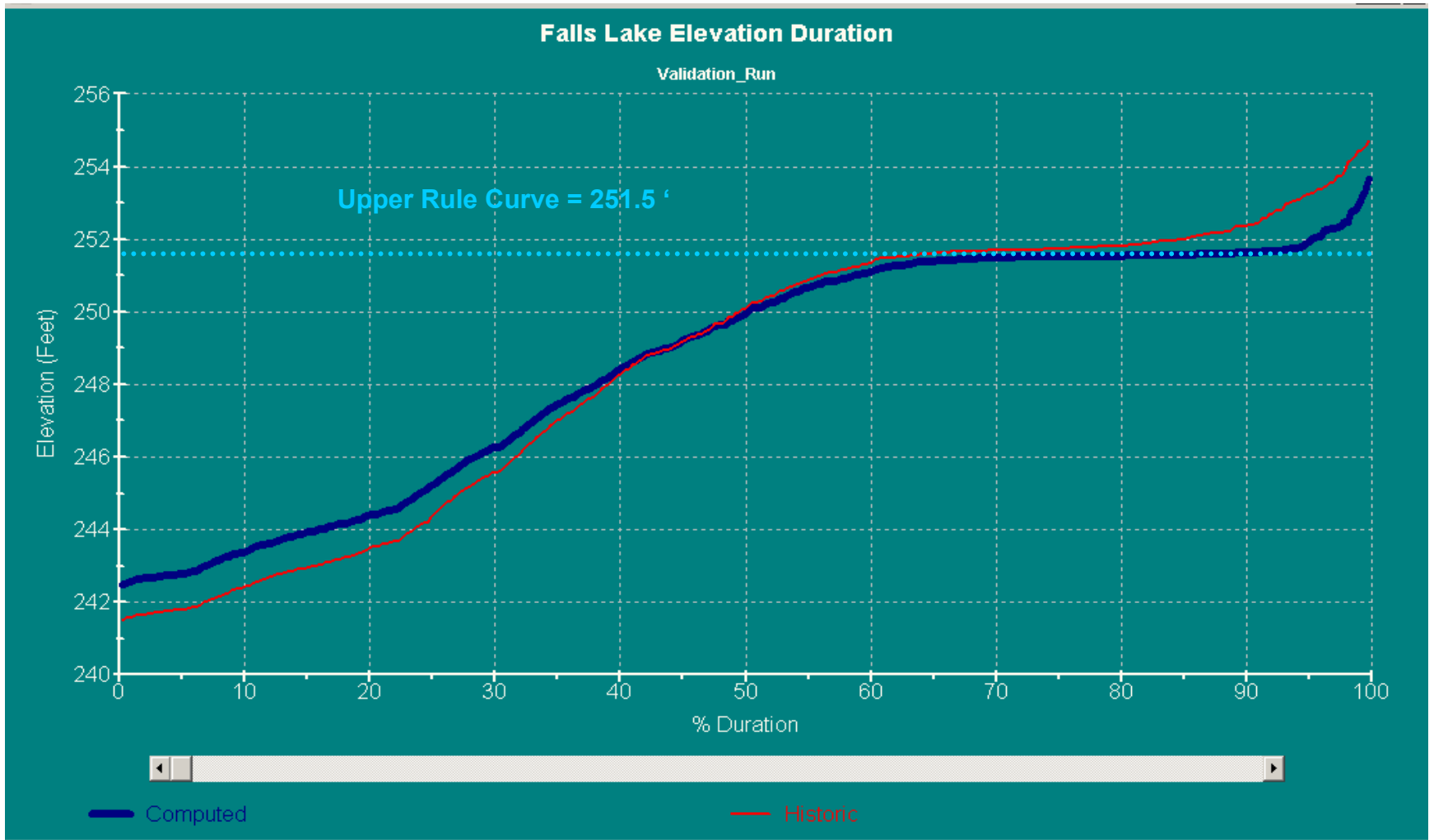
Elevation at node 300 -- Falls Lake for Validation Run

Validation_Run

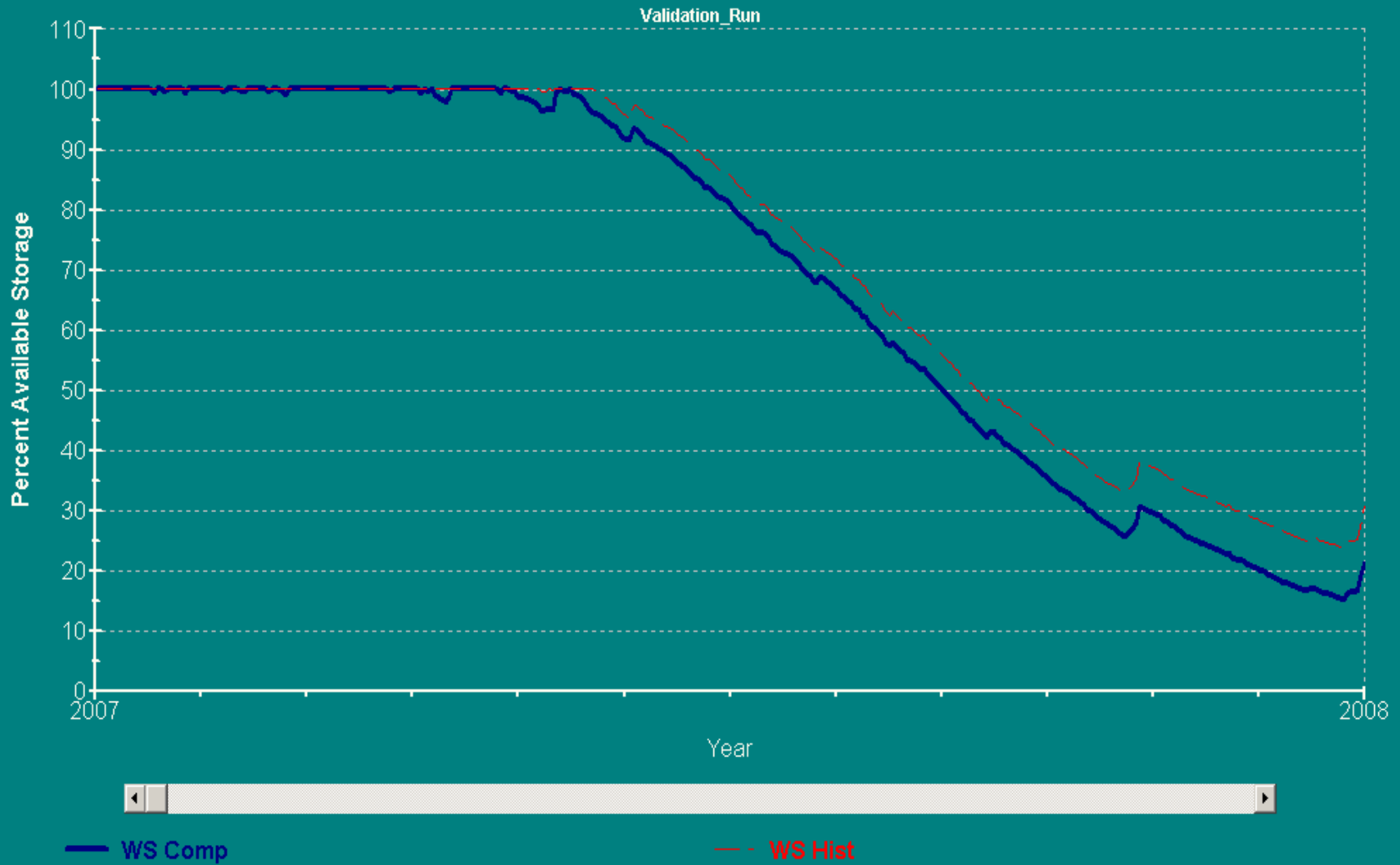


Computed

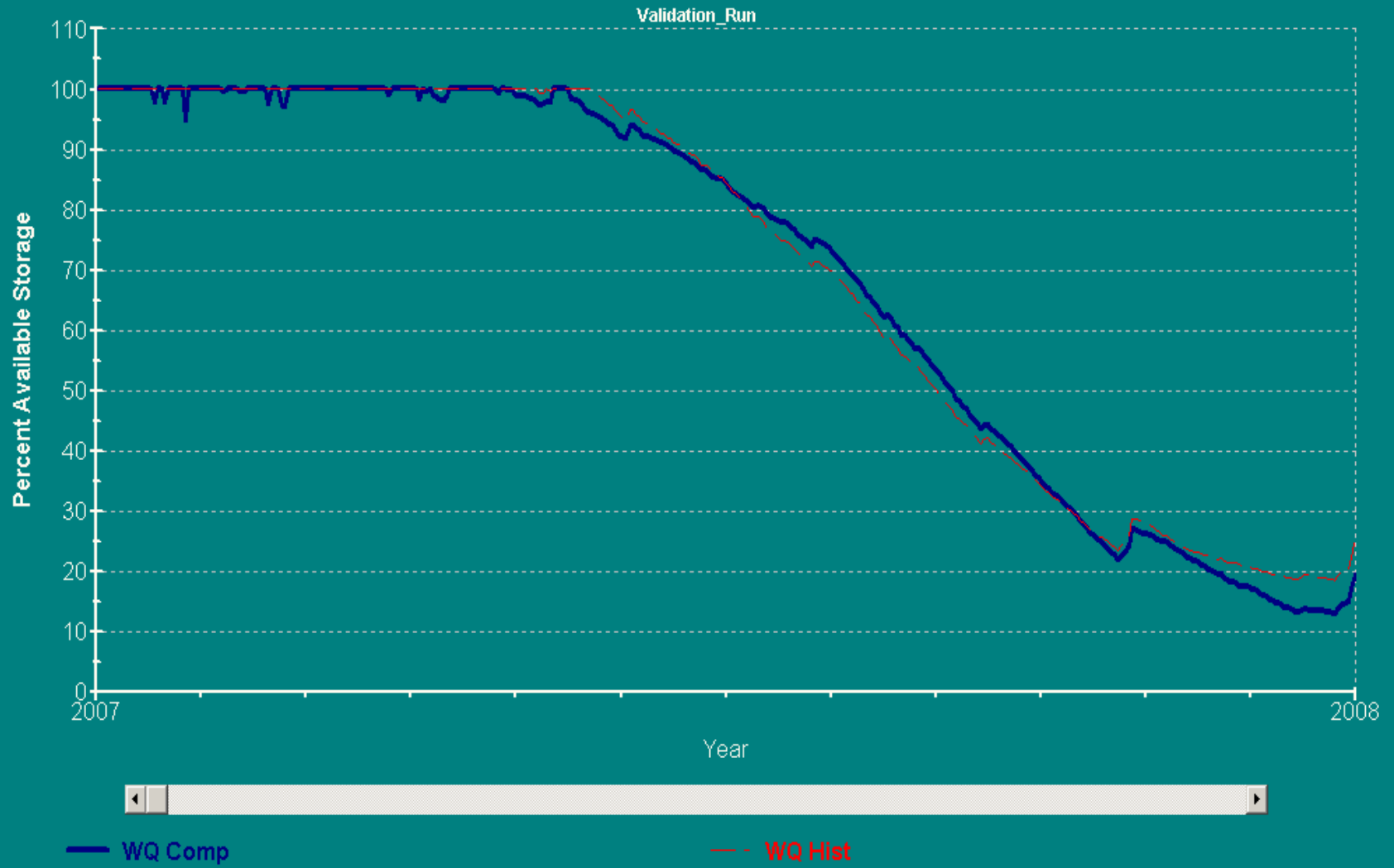
Historic



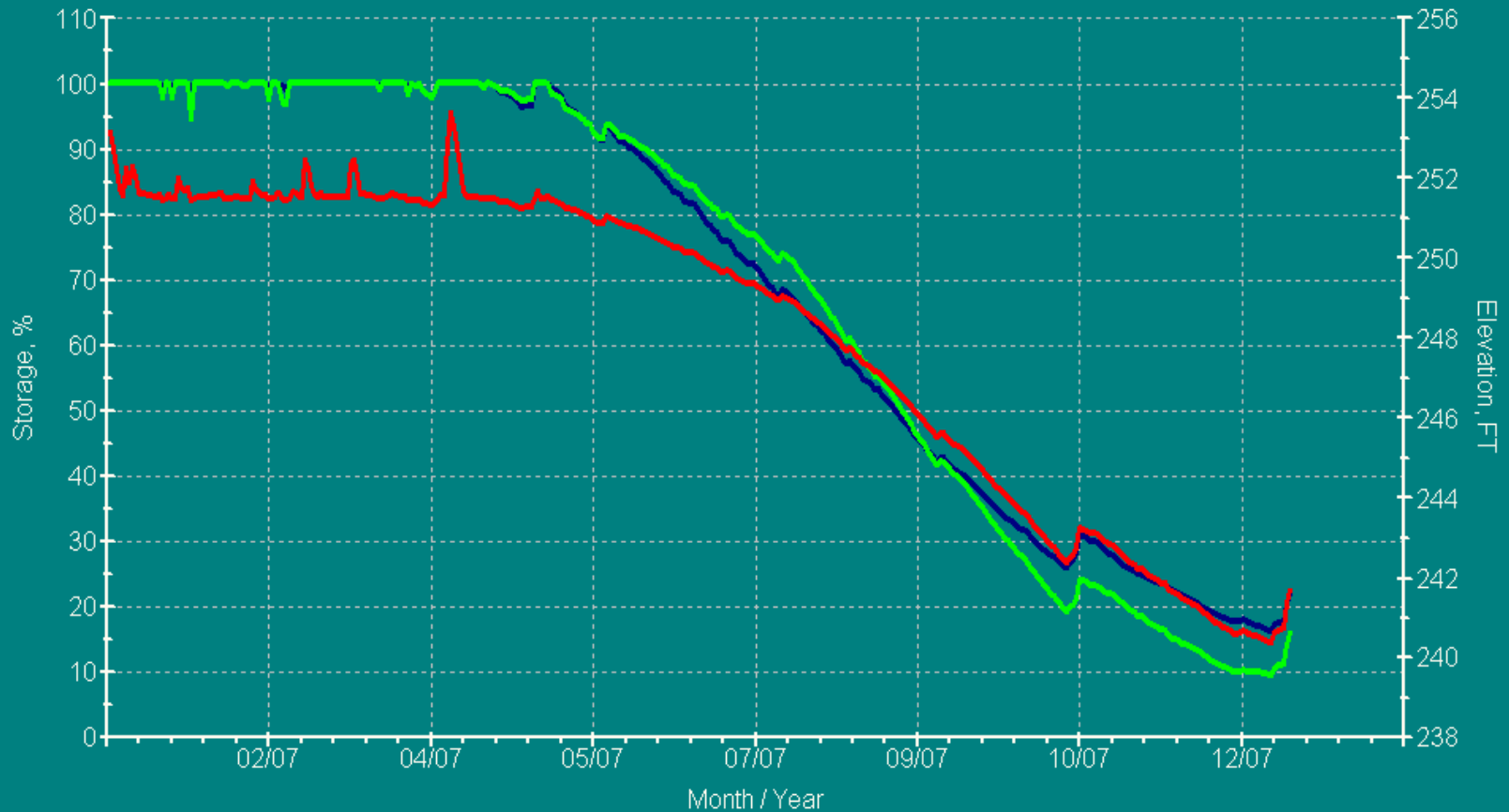
Falls Lake - Beaver Dam Total Water Supply Storage Account



Falls Lake - Beaver Dam Total Water Quality Storage Account



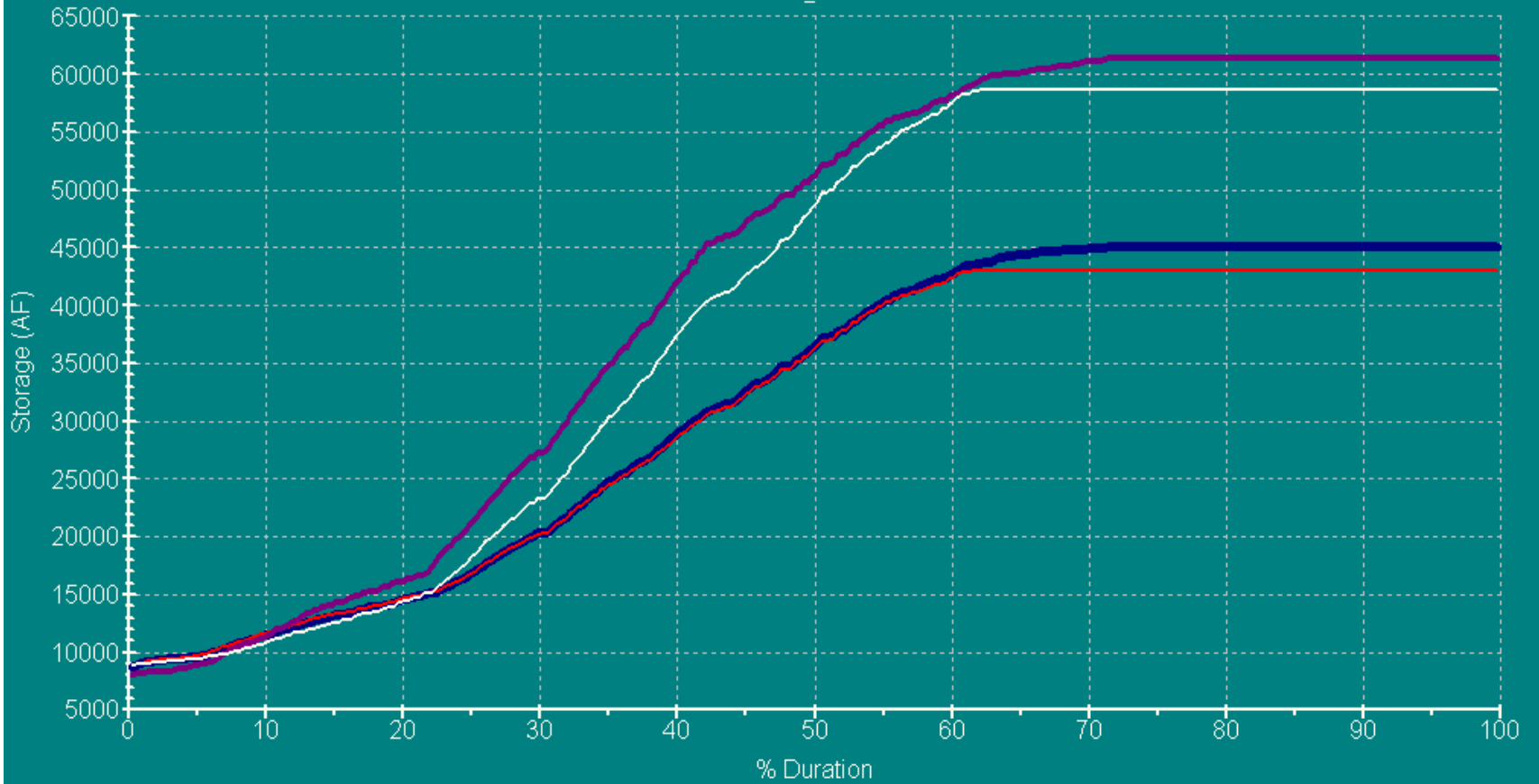
WSWQ Pct & Elevation -- Falls Lake



WS WQ Elevation

WS-WQ Storage Duration

Validation_Run



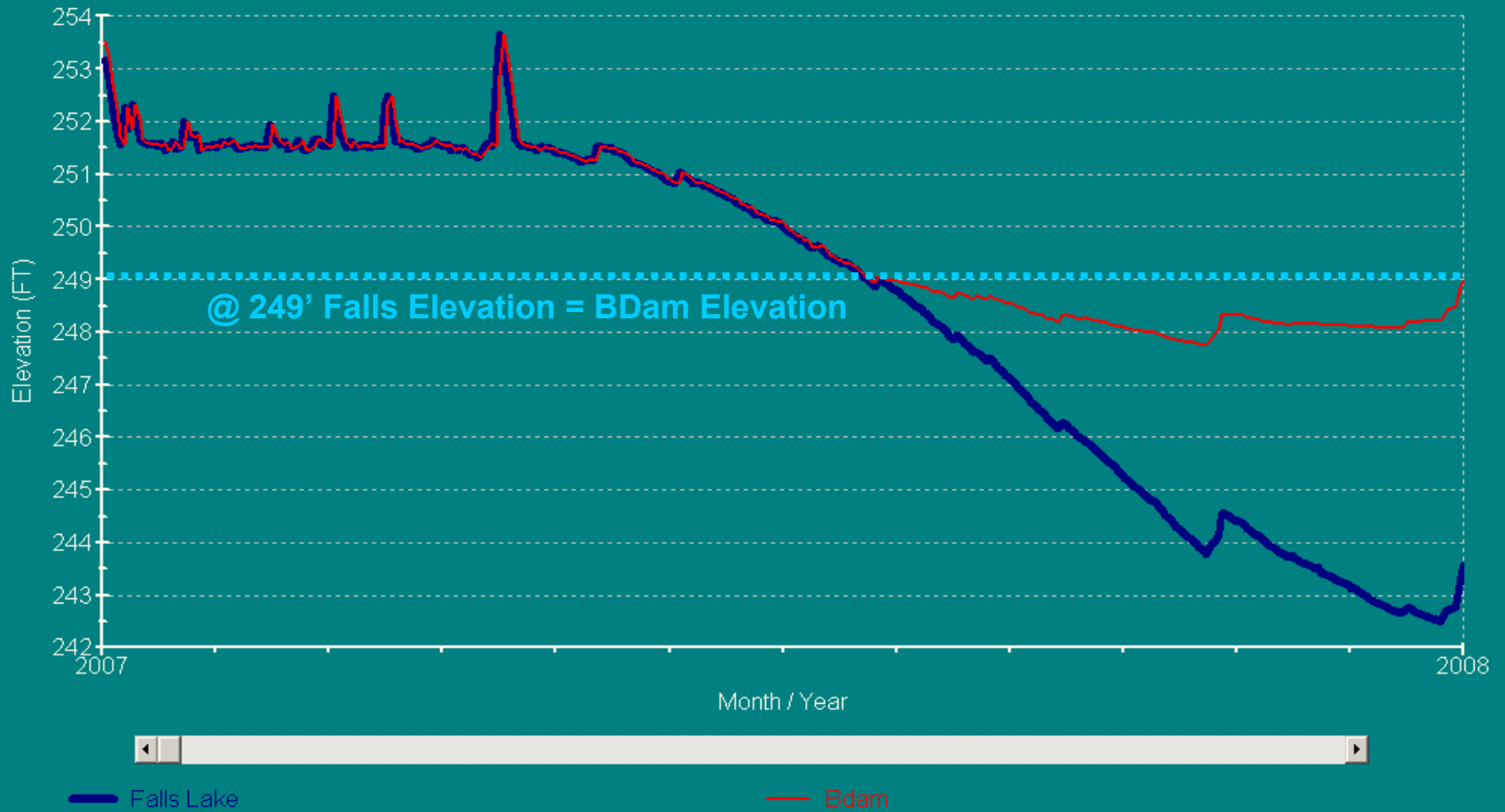
WS

Historic WS

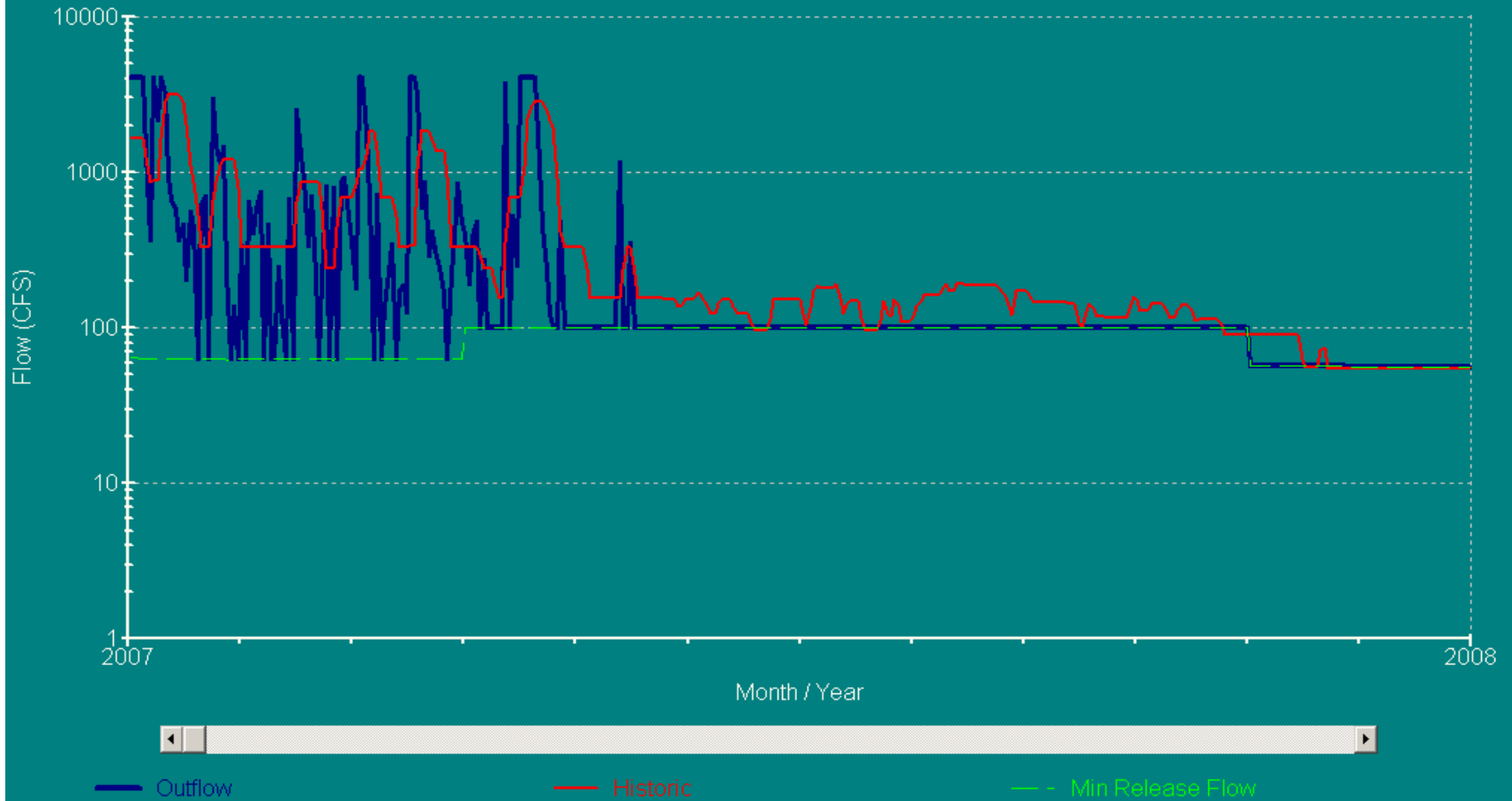
WQ

Historic WQ

Falls Lake - BD Balance

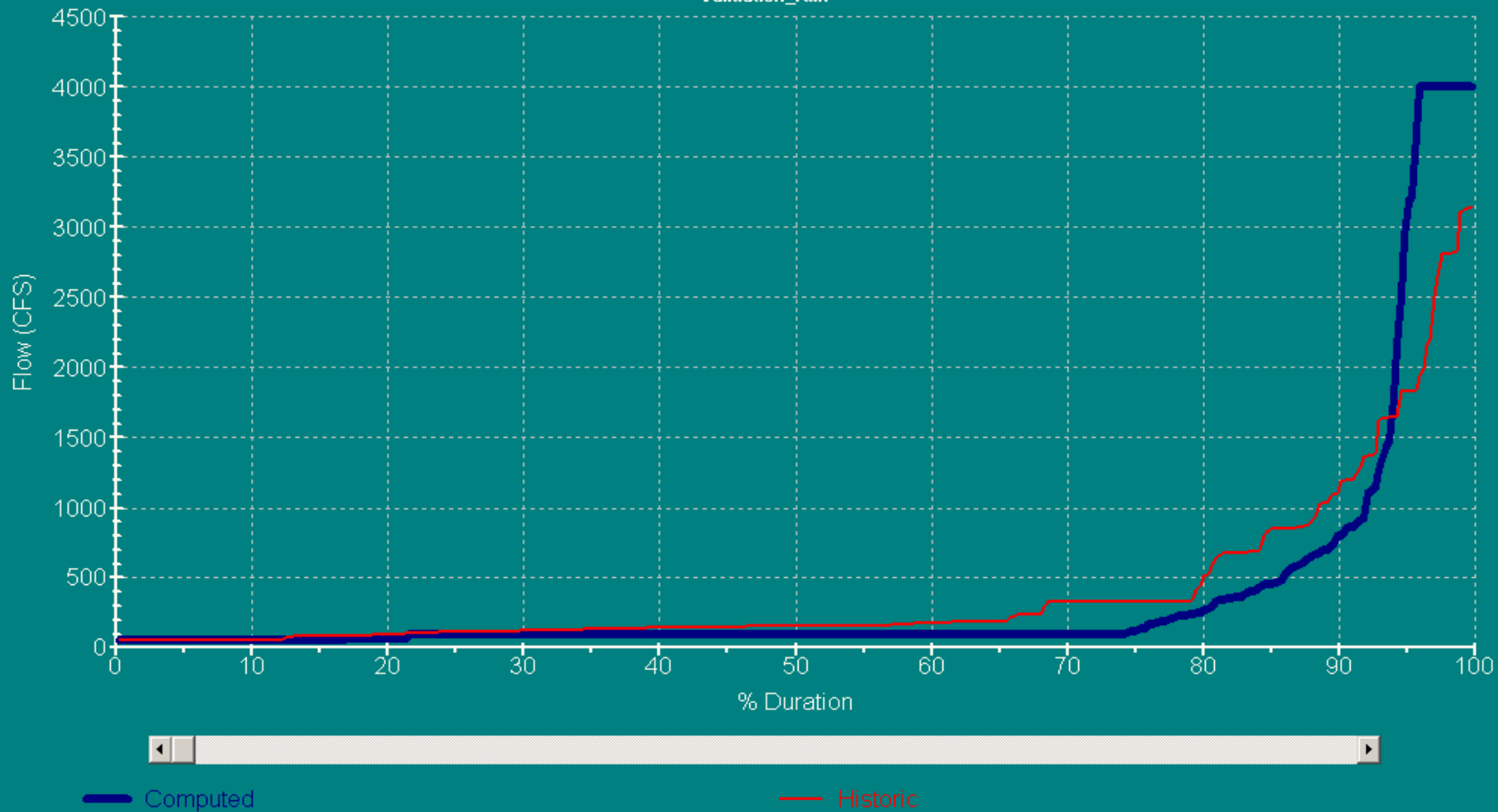


Flow at arc 300.310 -- Falls release

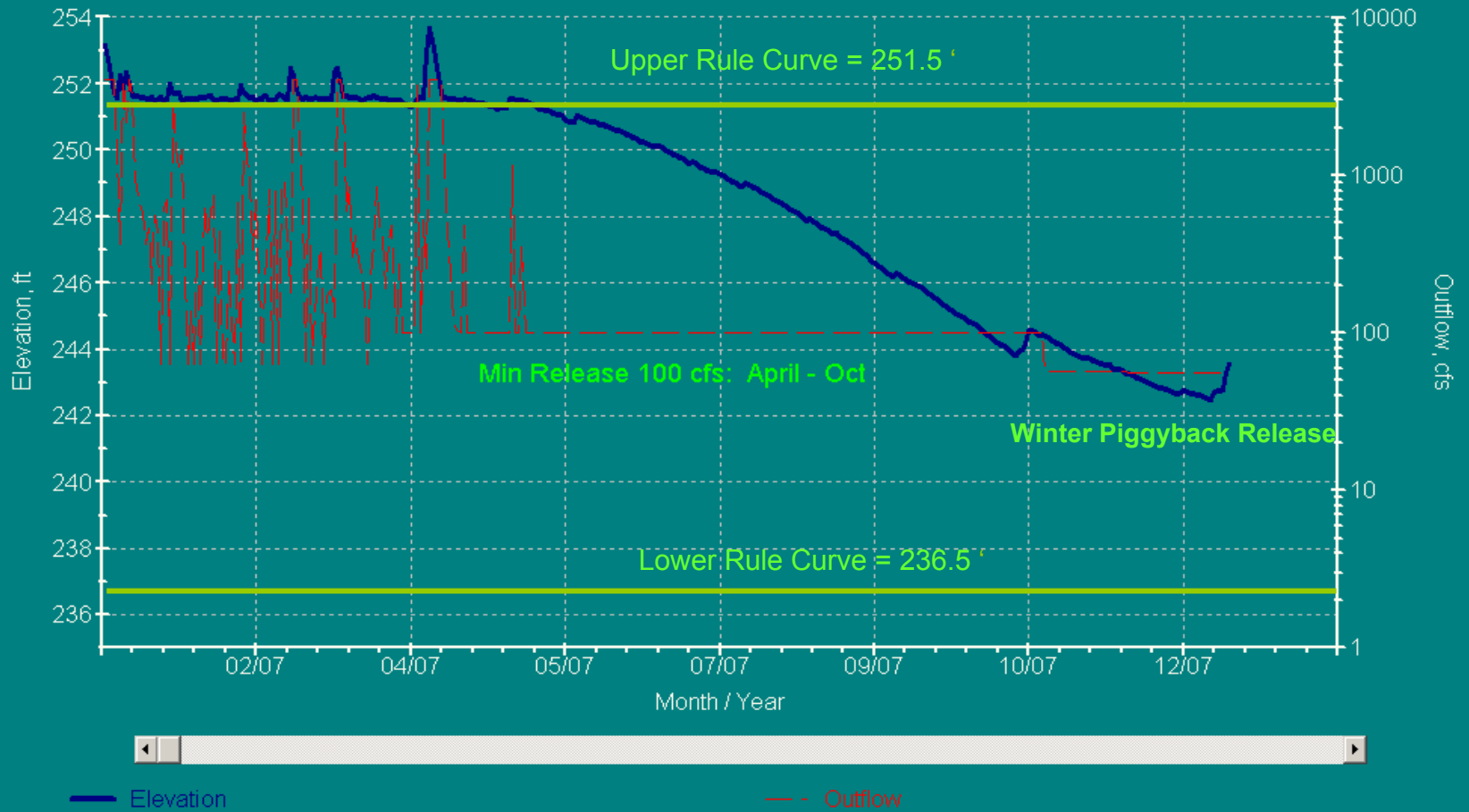


Falls Lake Flow Duration

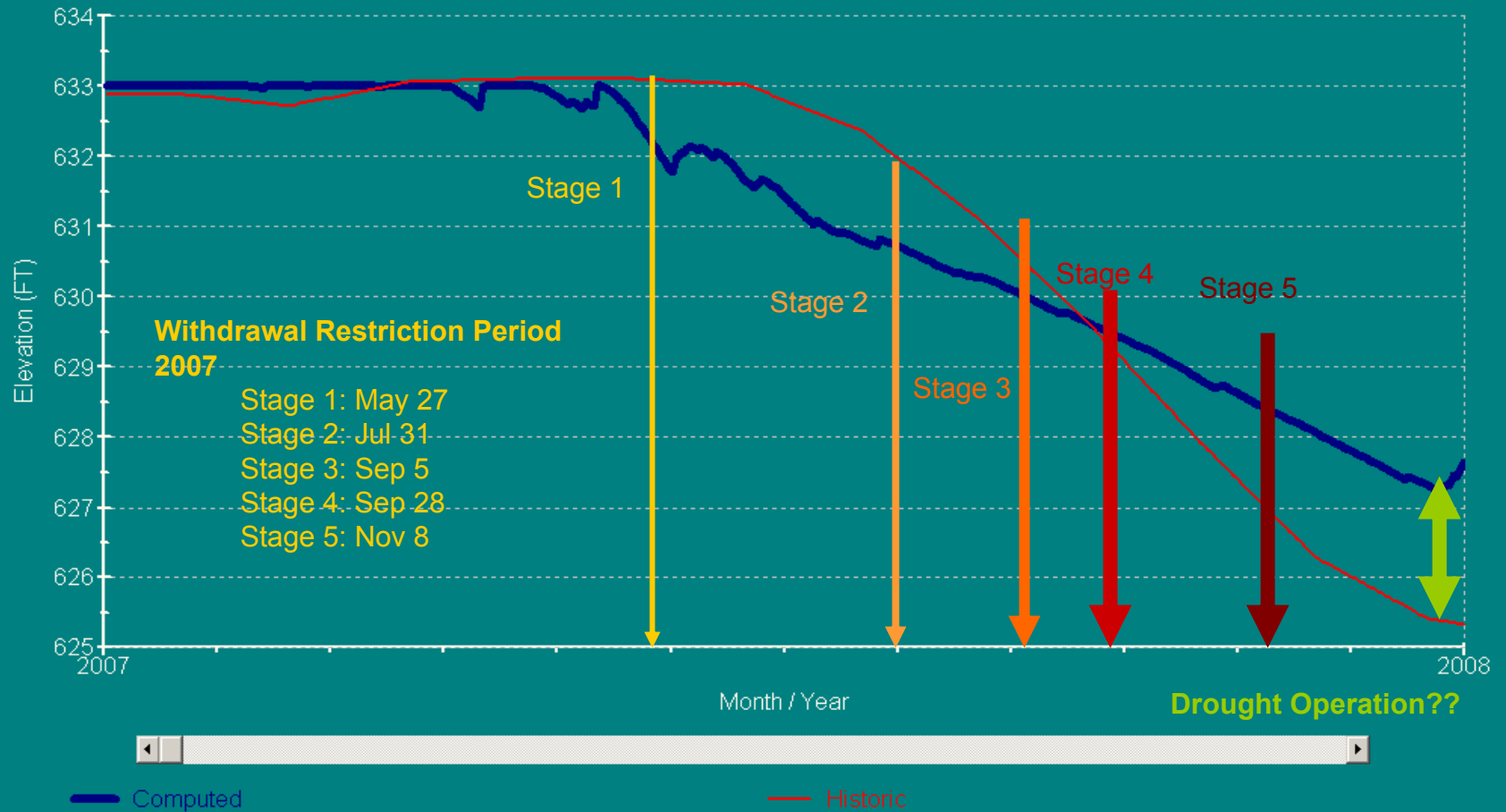
Validation_Run

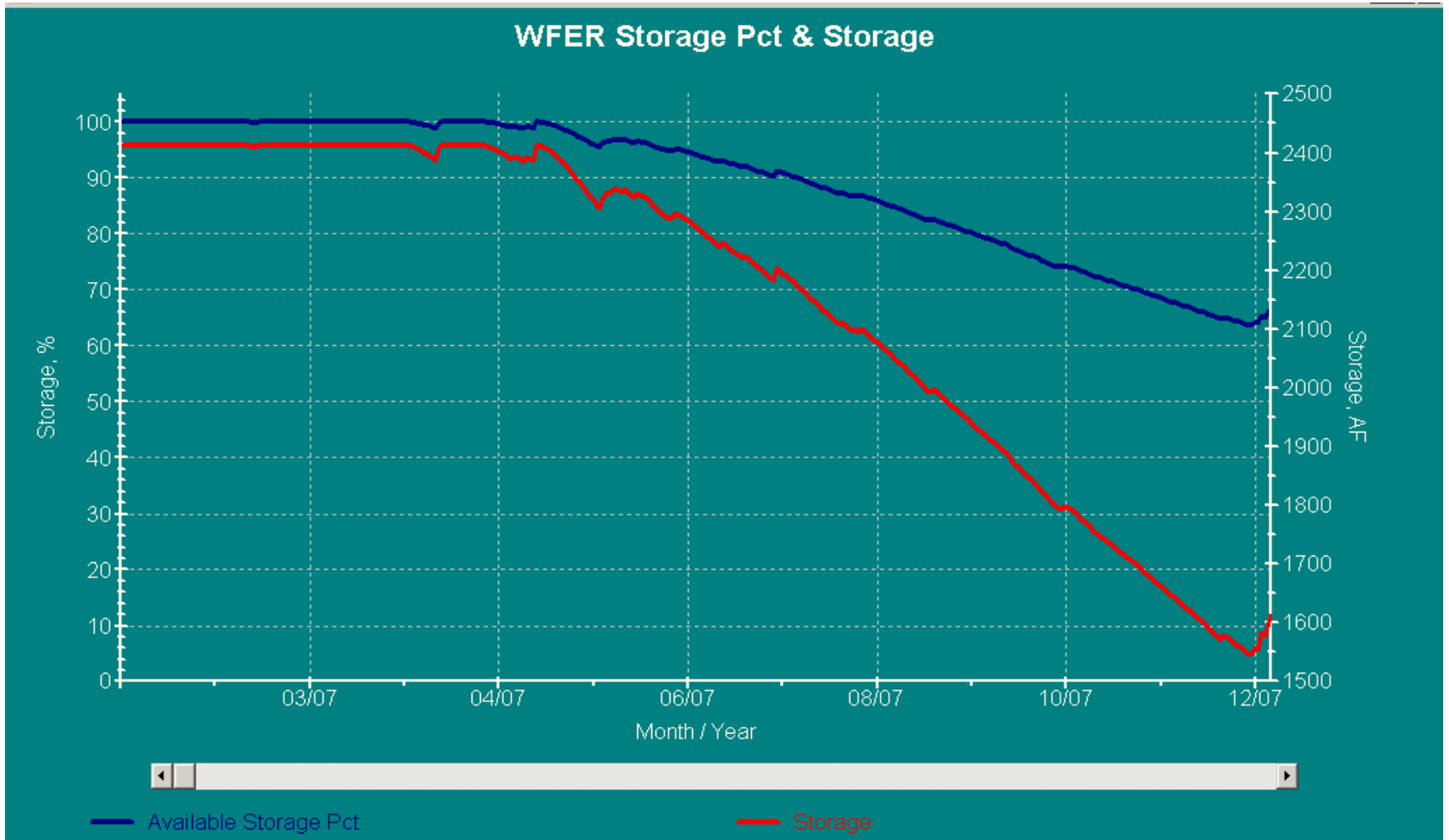


Elevation & Outflow -- Falls Lake



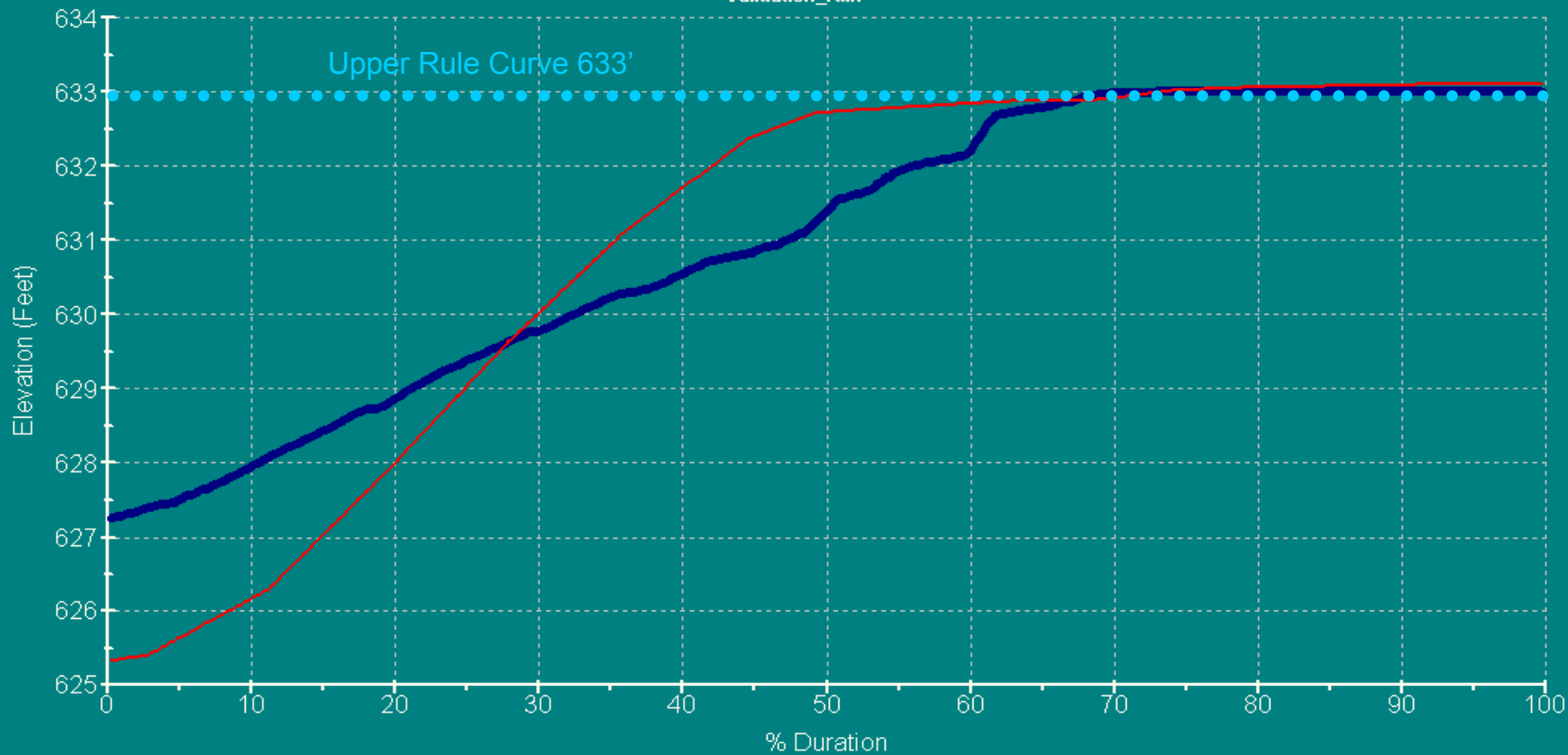
West Fork Eno River Reservoir





WFER Elevation Duration

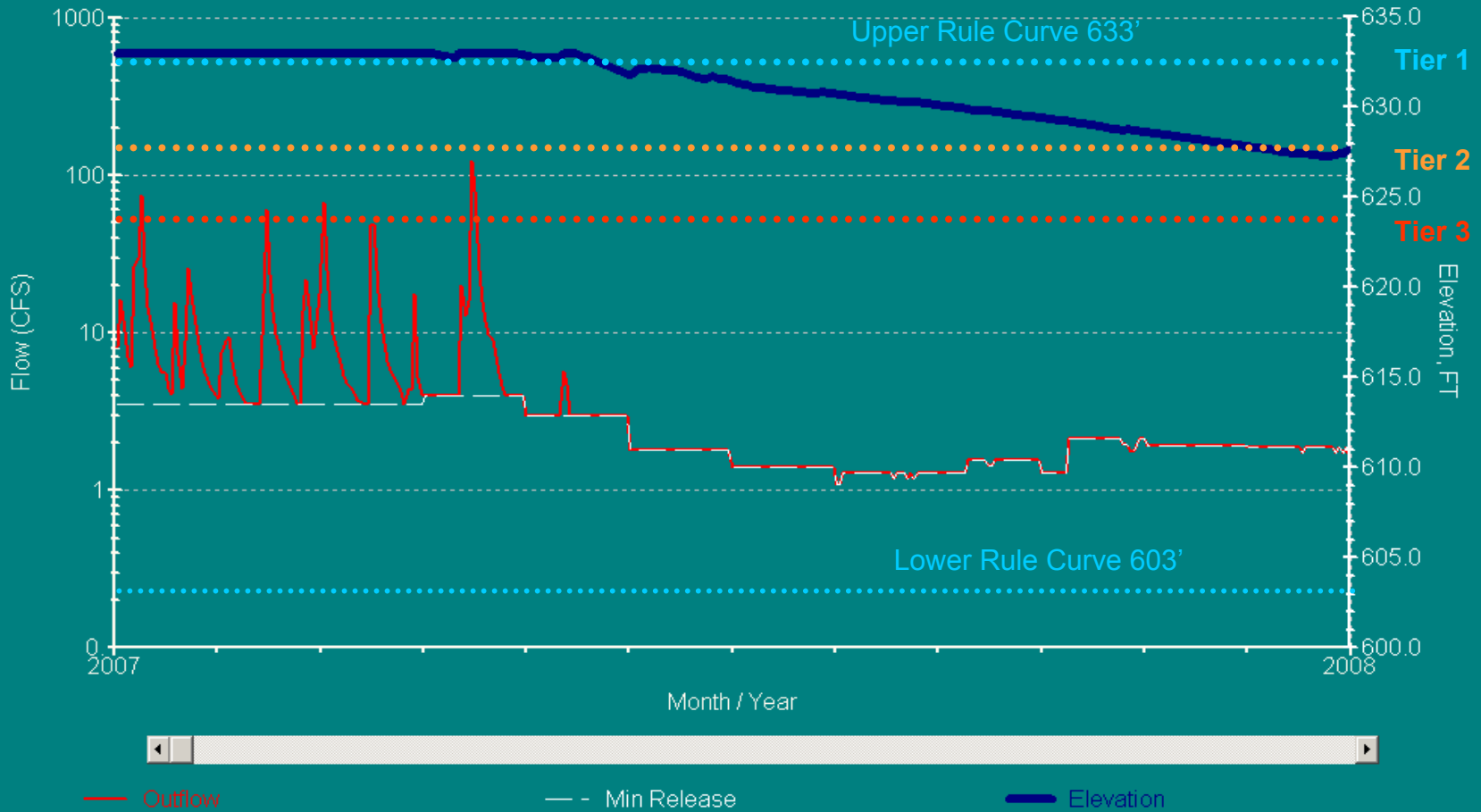
Validation_Run

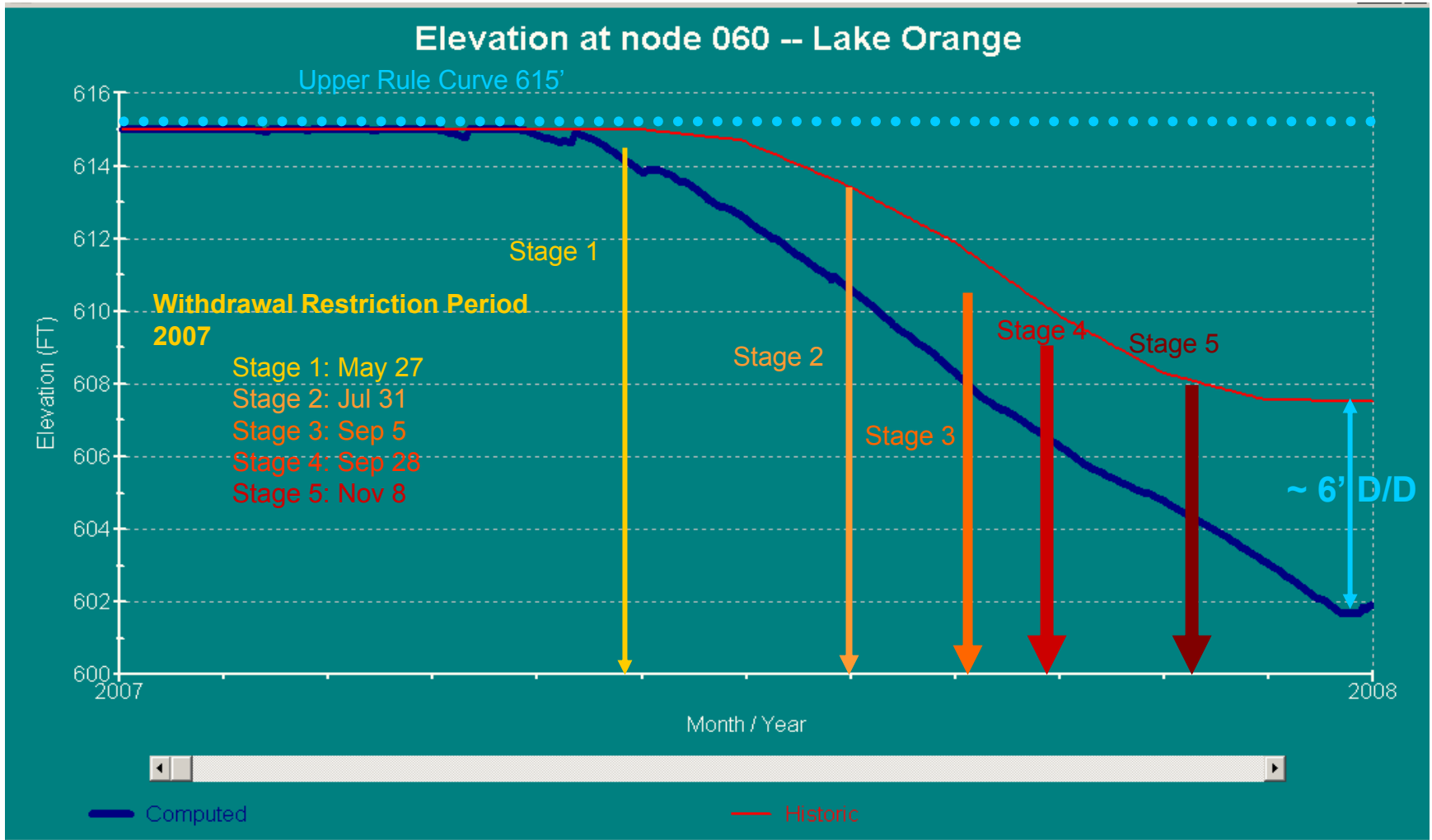


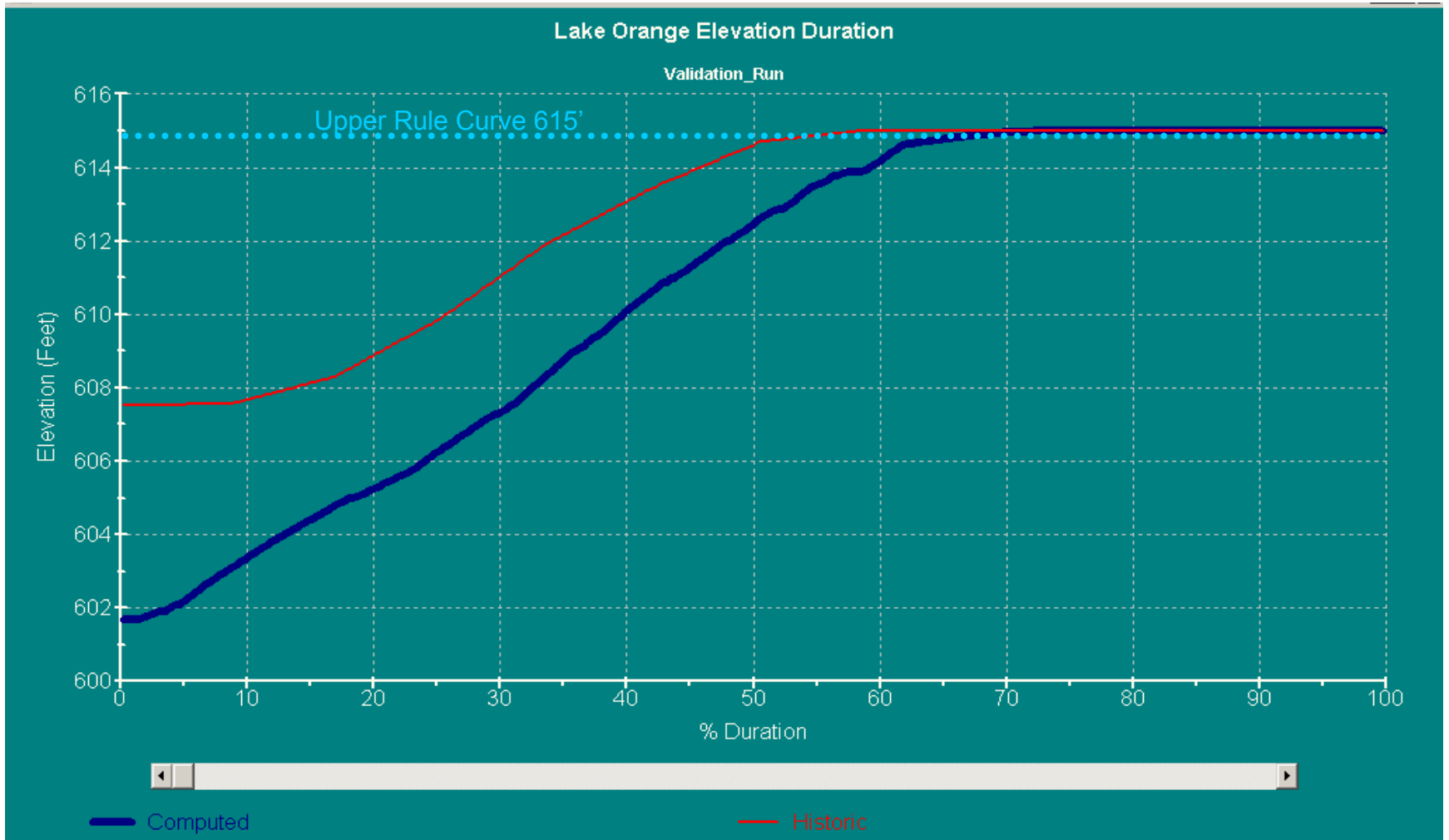
Computed

Historic

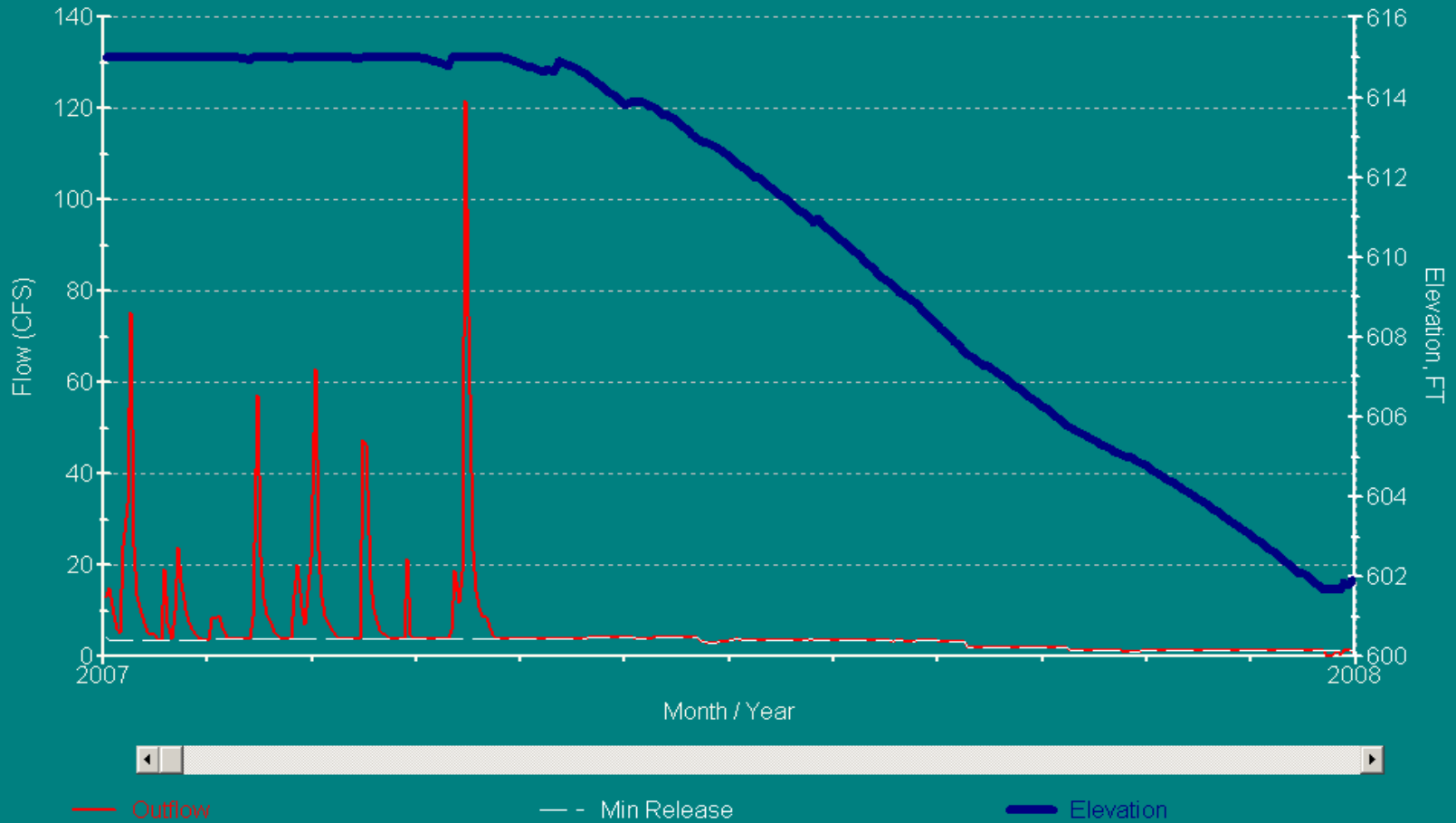
WFER Flow - Elevation



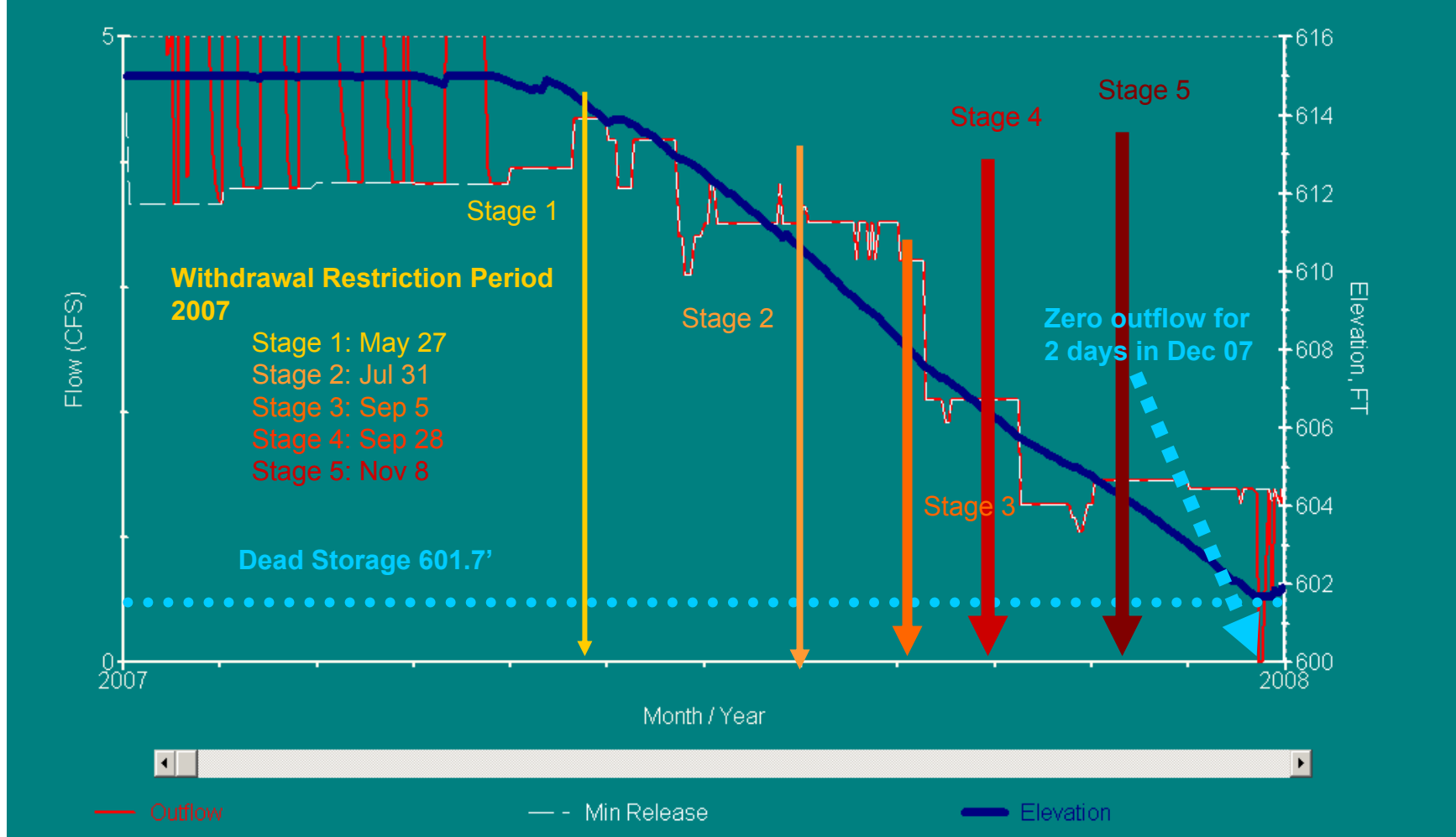




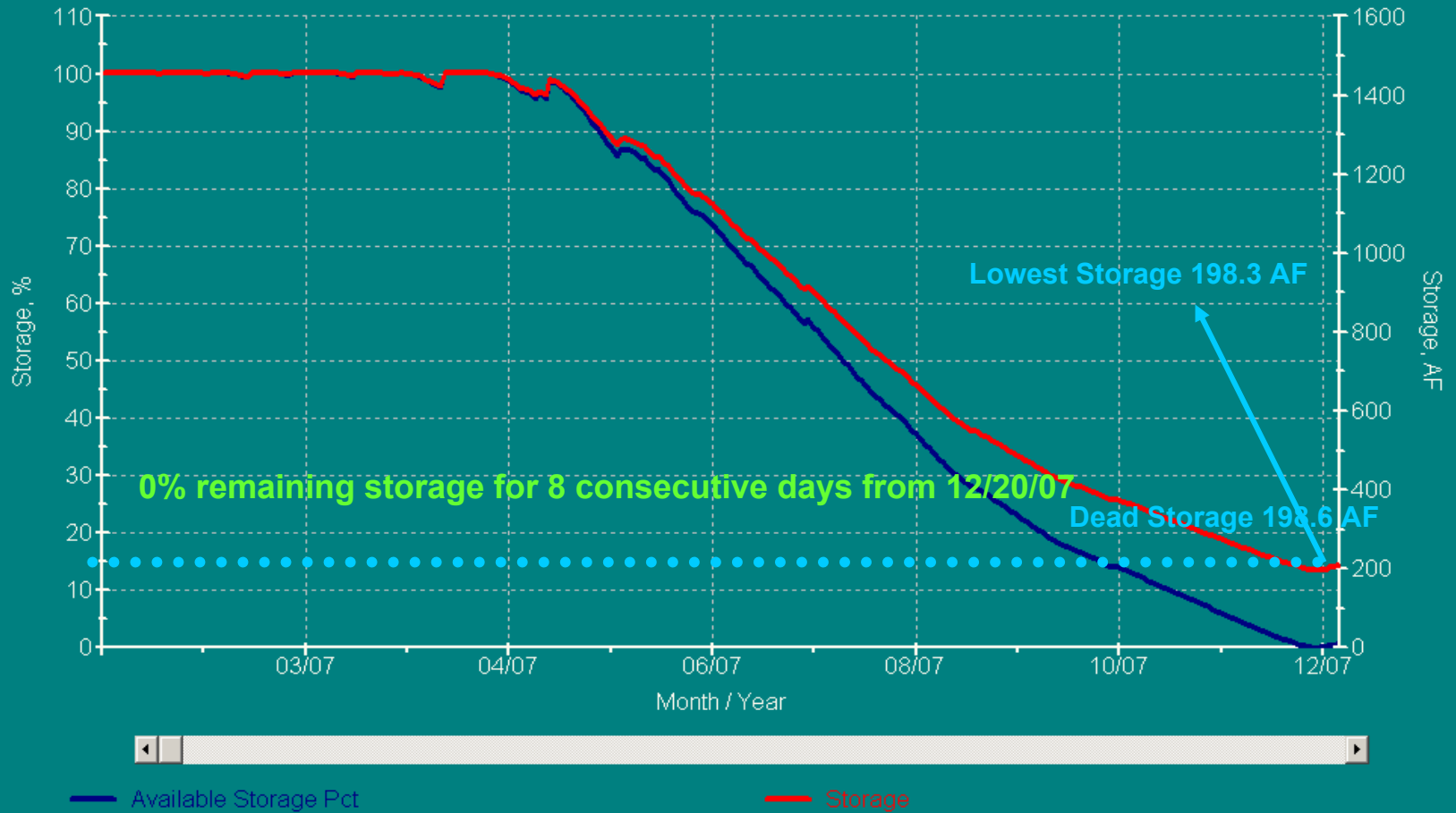
LO Flow - Elevation



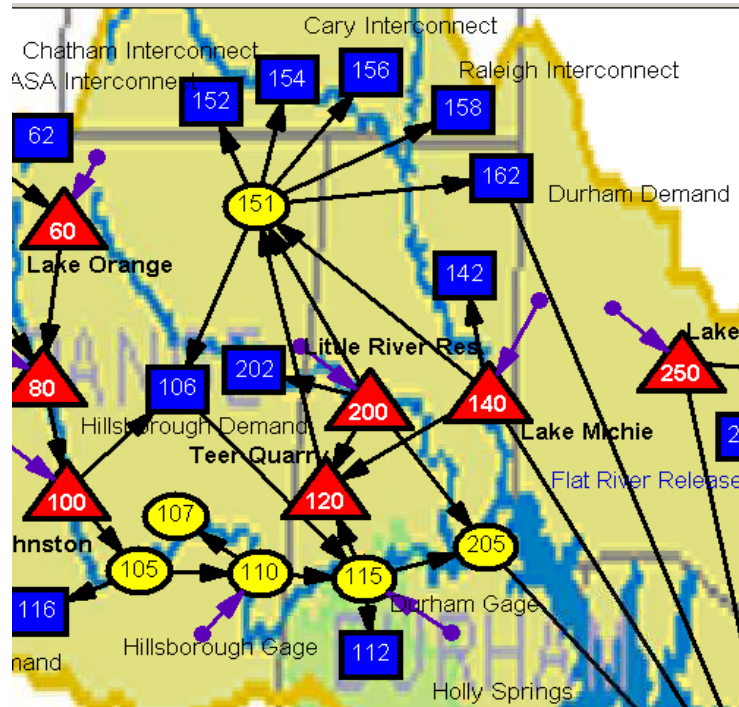
LO Flow - Elevation



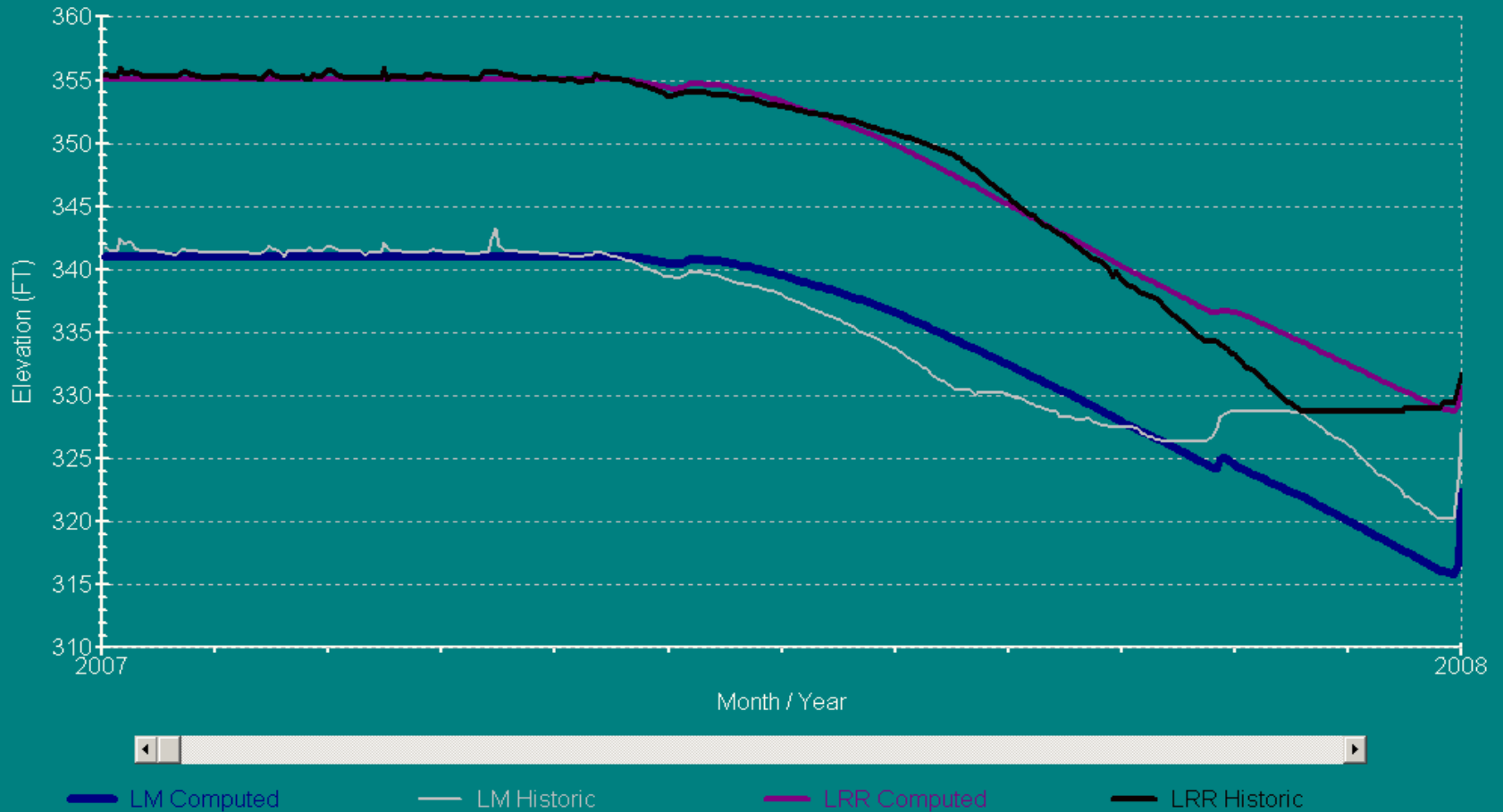
Lake Orange Storage Pct & Storage



Durham Systems



Durham Reservoirs

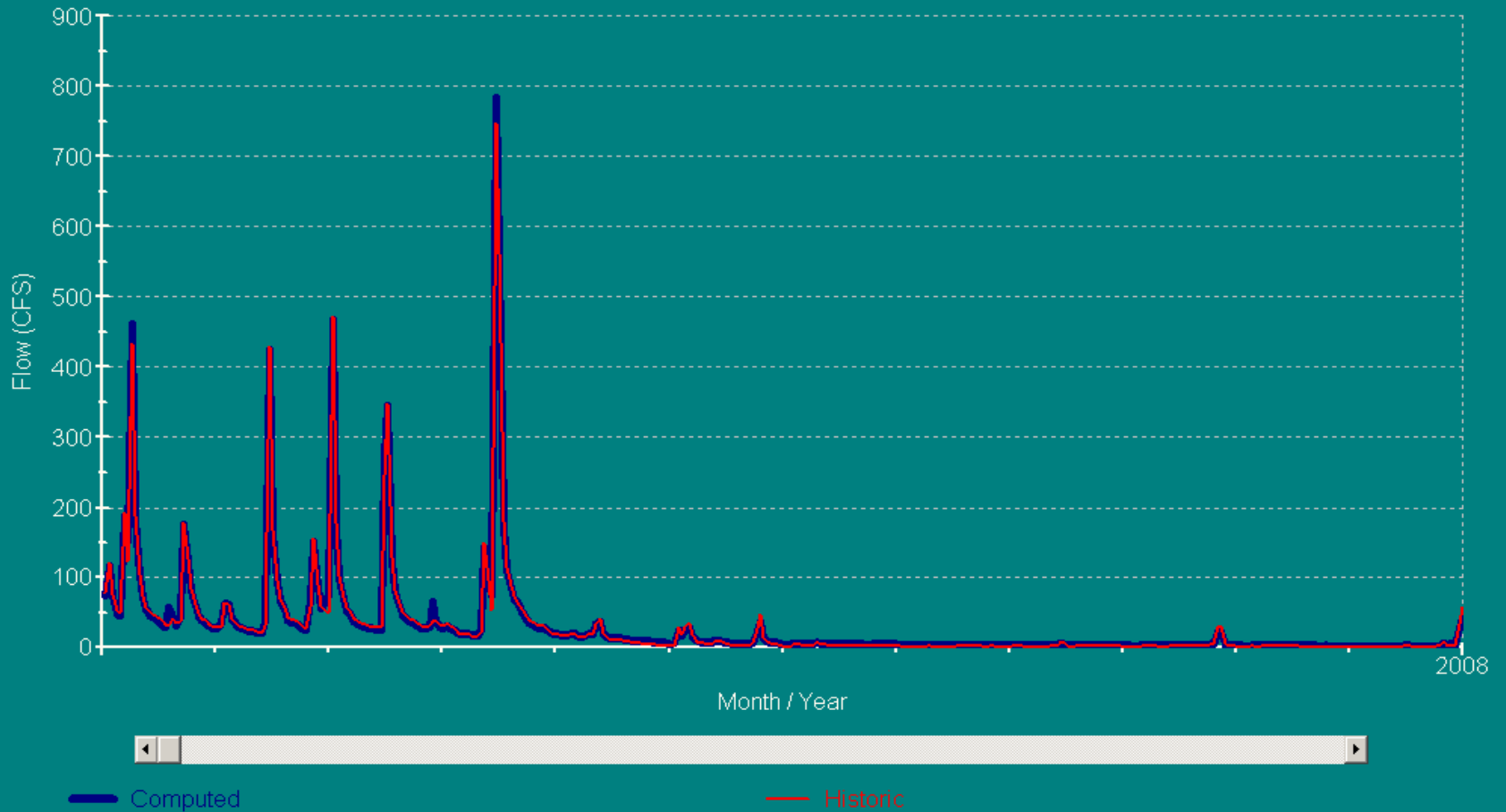


Balancing Durham Reservoirs - Storage Pct

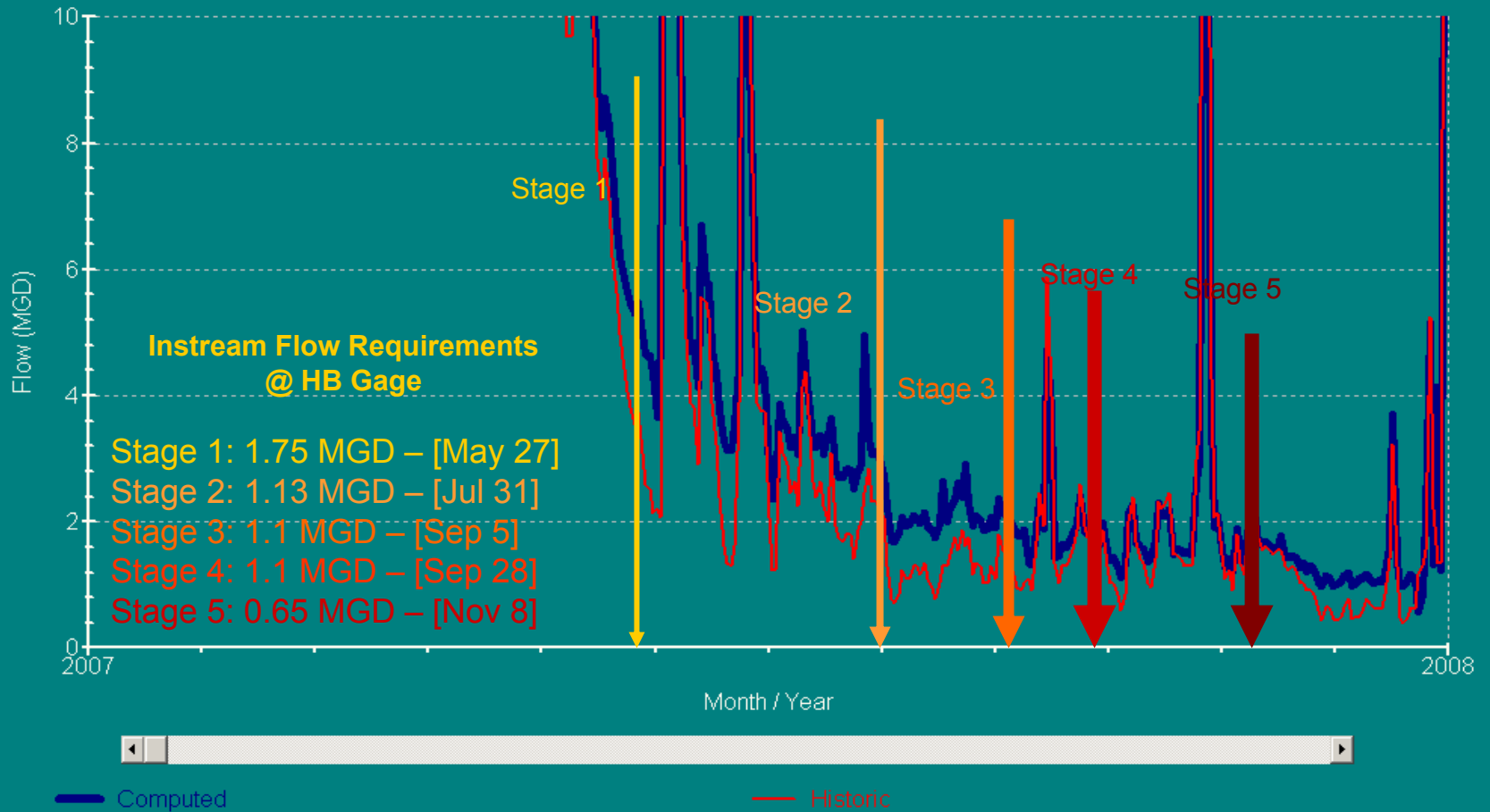


Gage Flows

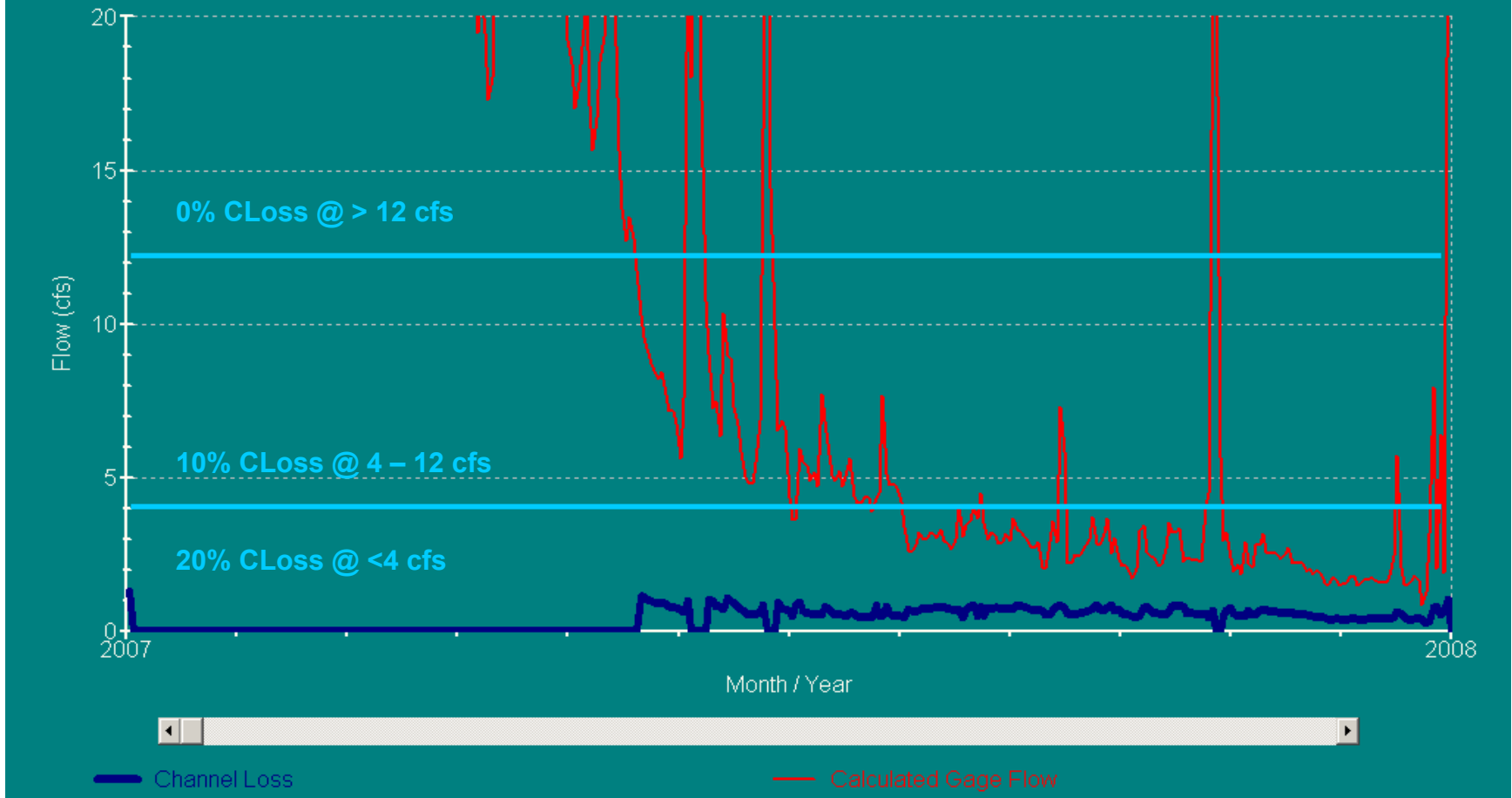
HB Gage Flow



HB Gage Flow

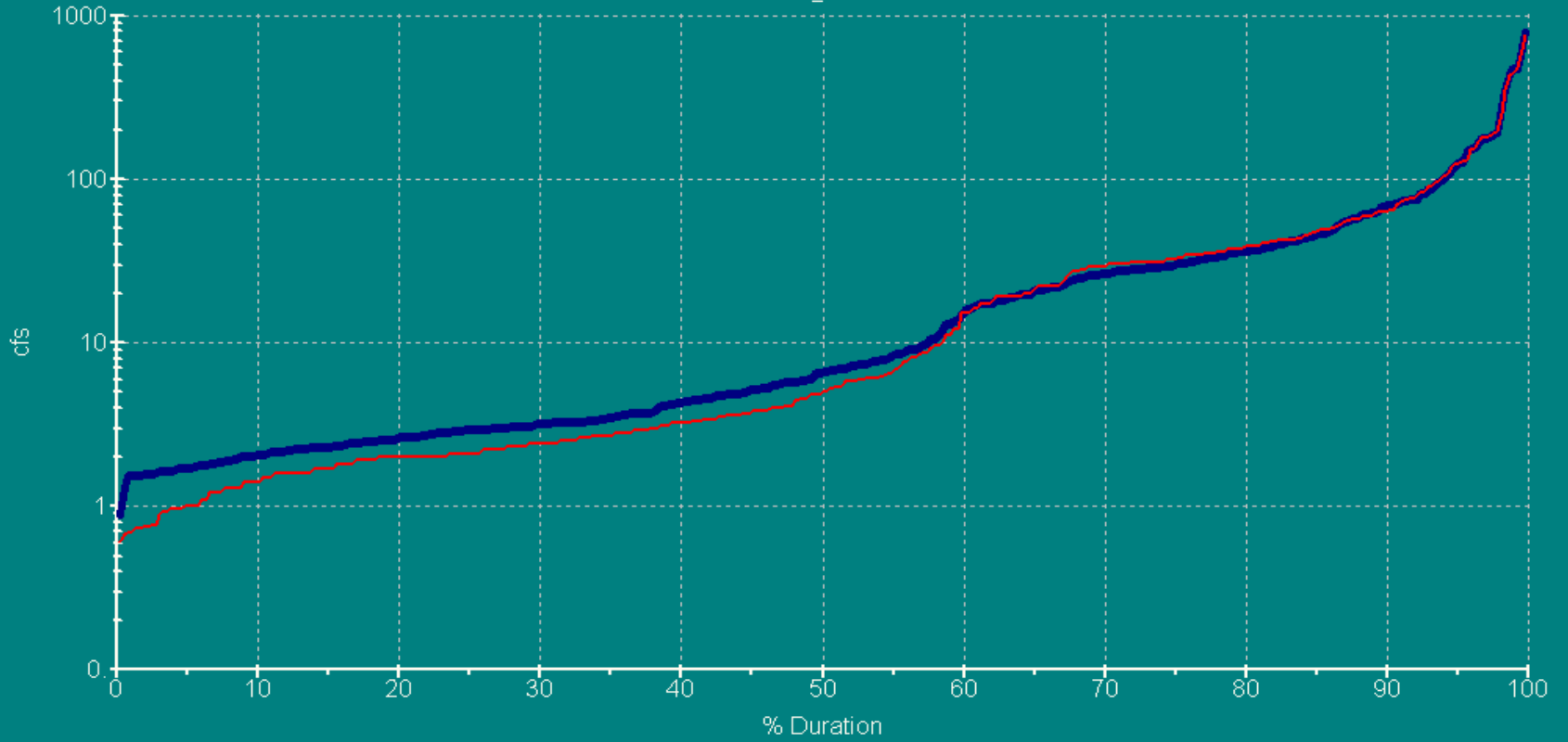


Channel Loss with HB Gage Flow



HB Gage Flow Duration

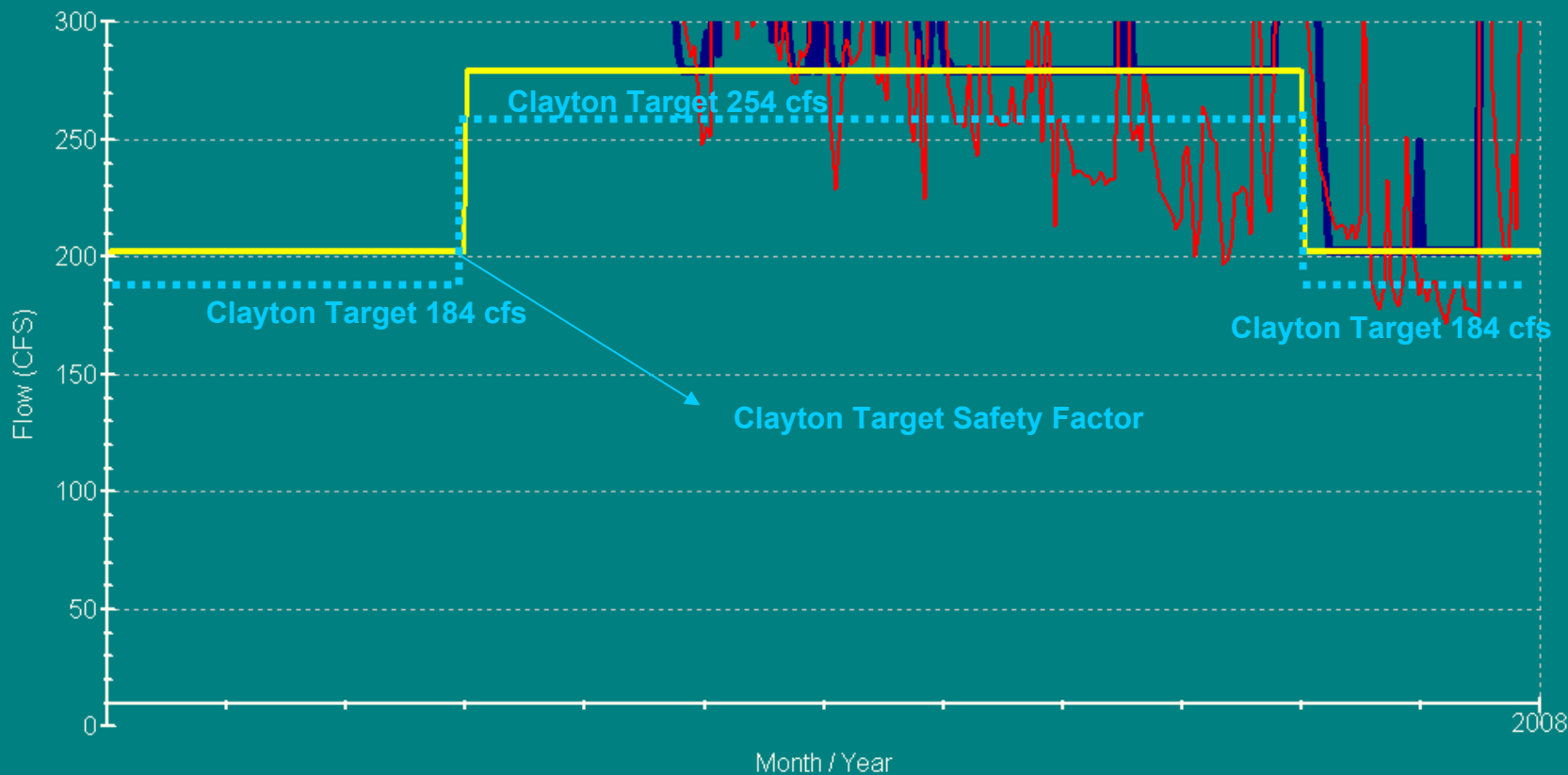
Validation_Run



Computed

Historic

Clayton Flow

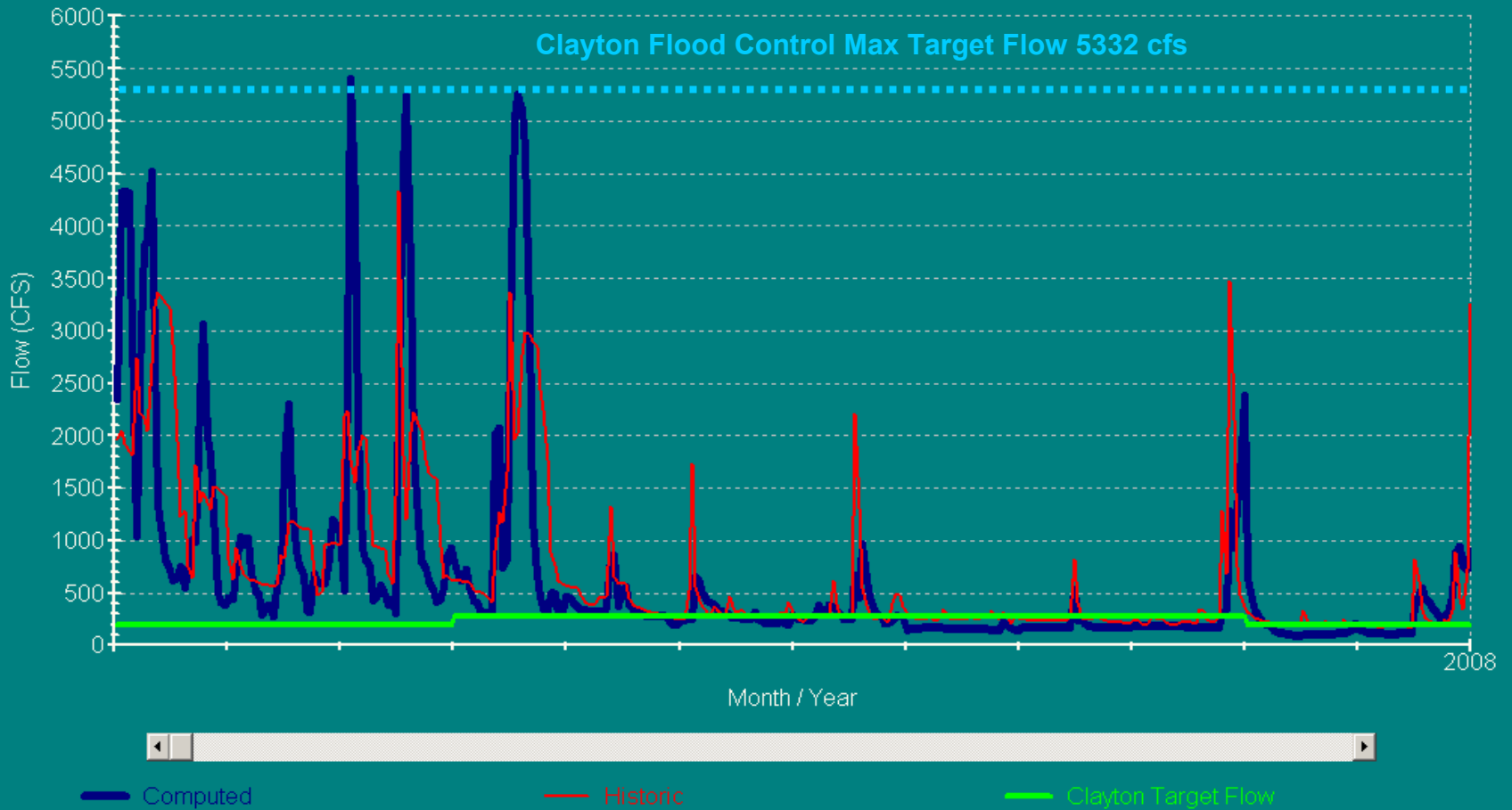


Computed

Historic

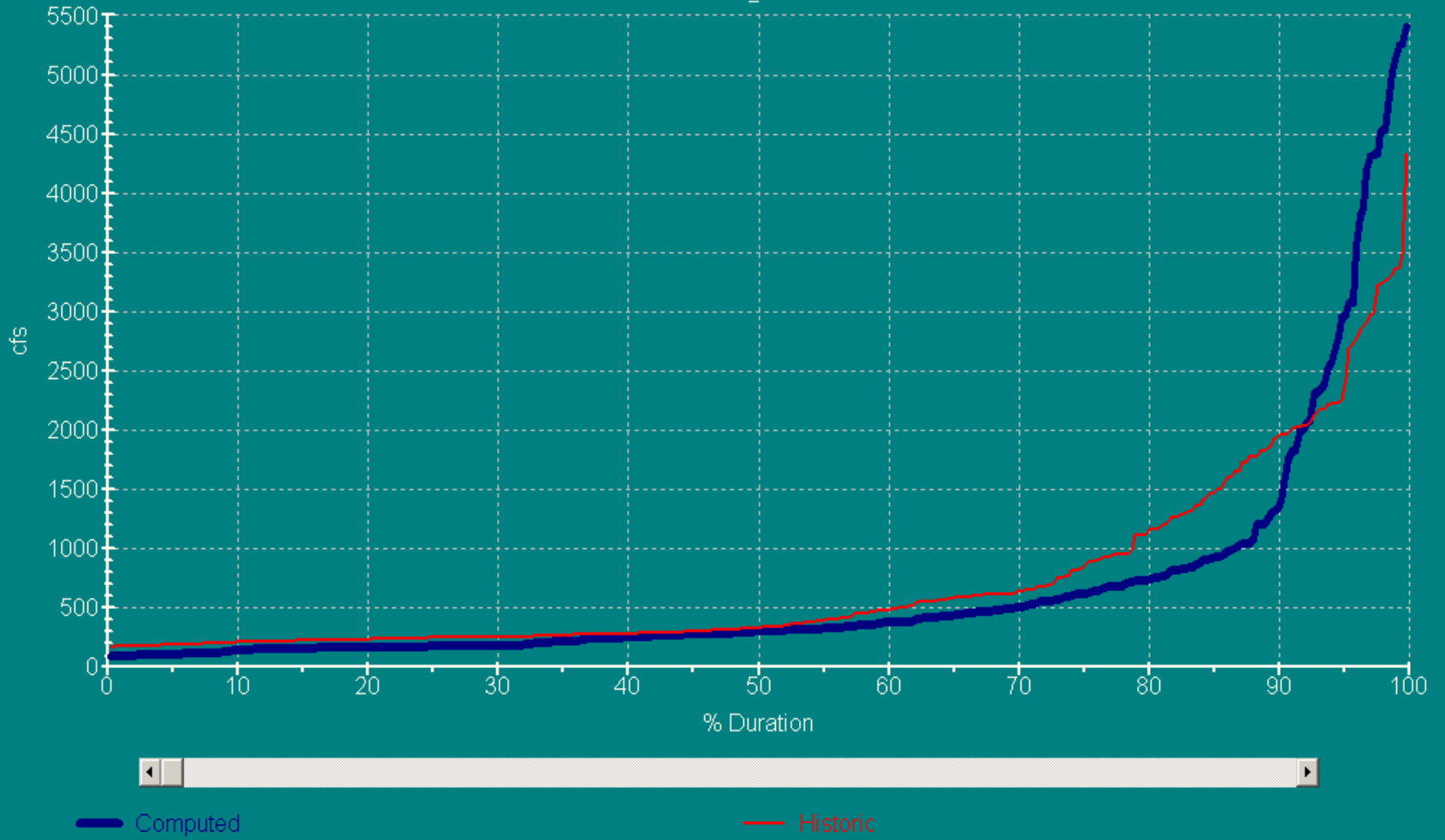
Clayton Min Flow

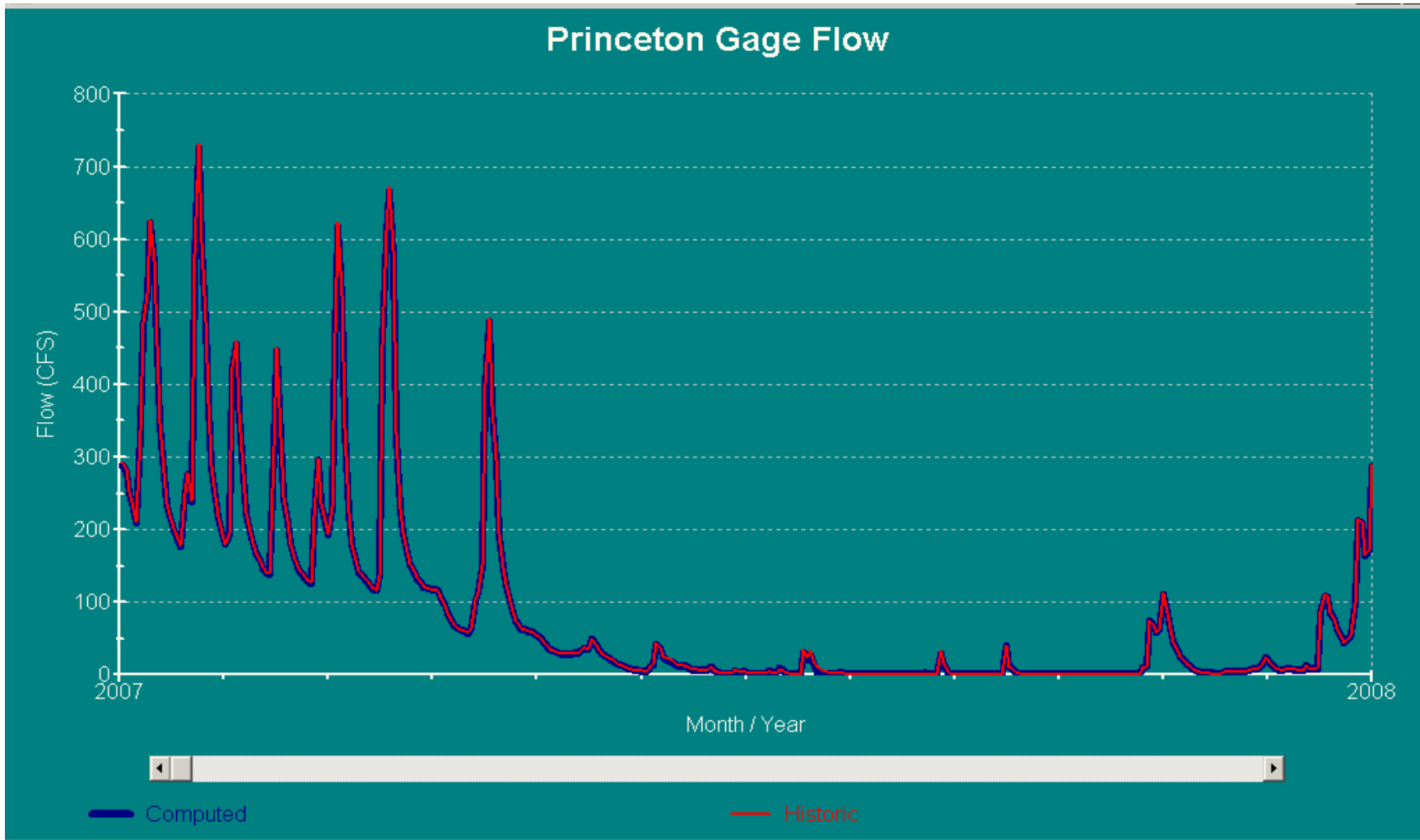
Clayton Flow



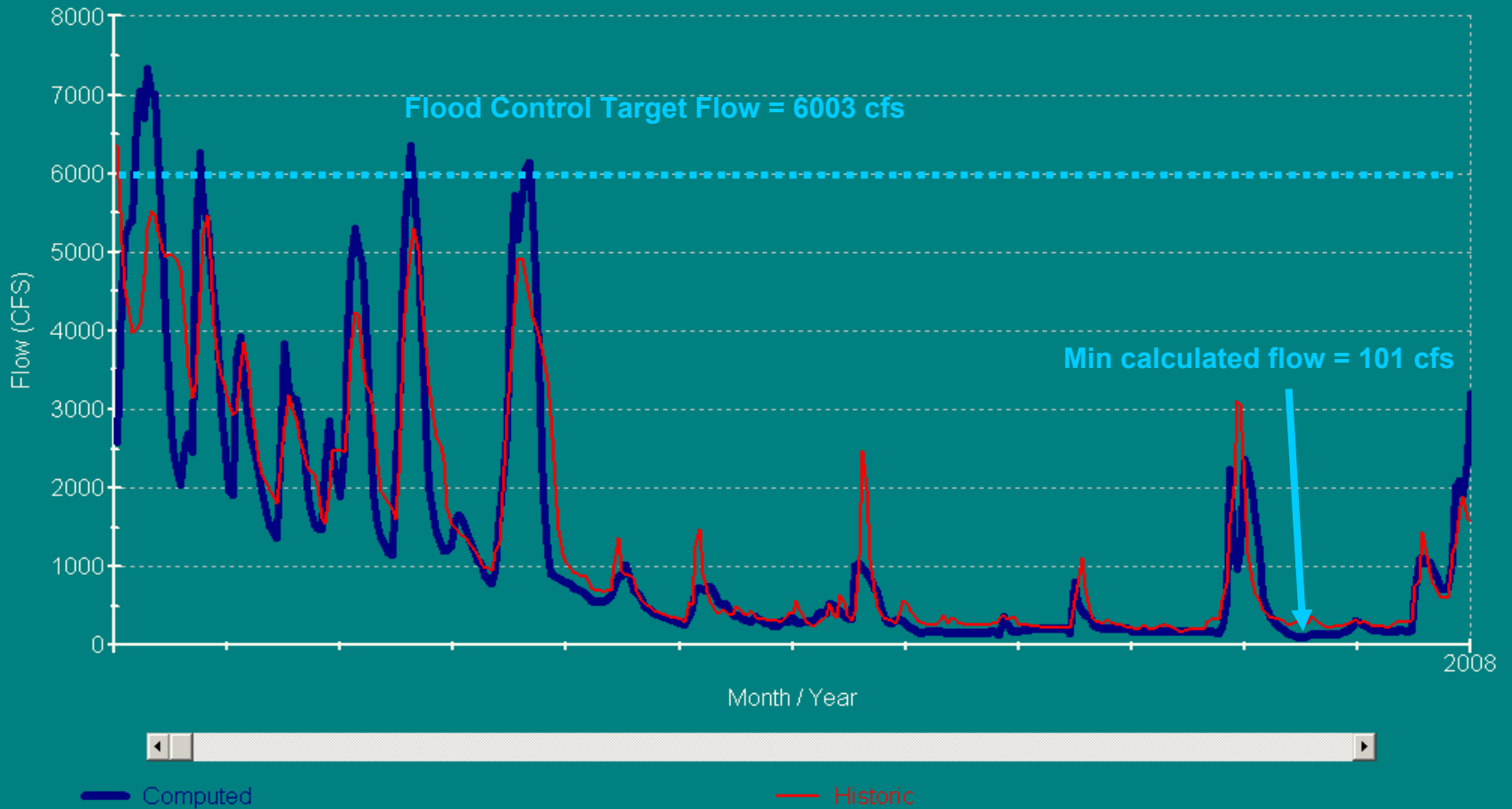
Clayton Gage Flow Duration

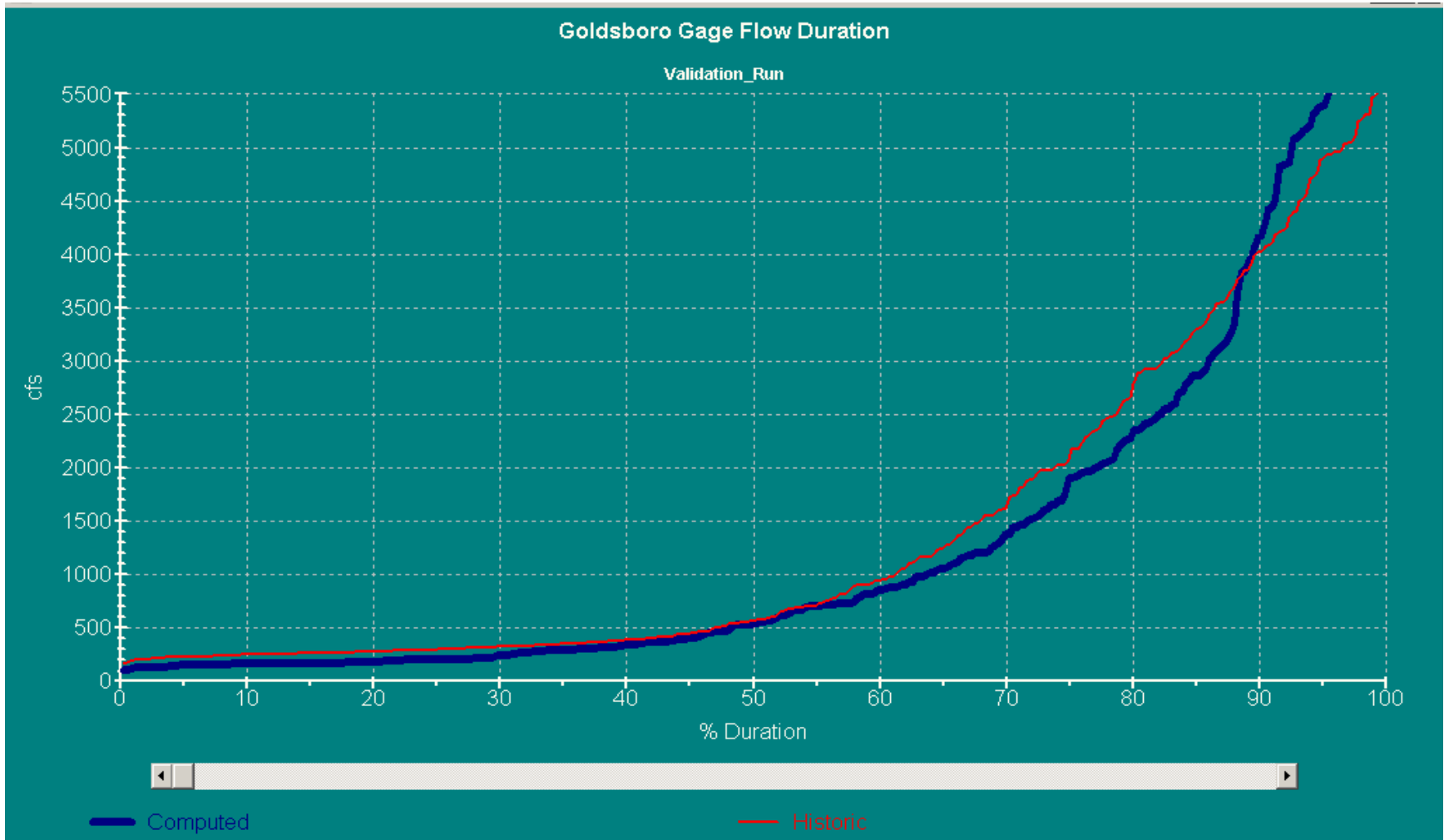
Validation_Run





Goldsboro Flood Control Target Flow





Kinston Flood Control Target Flow

