

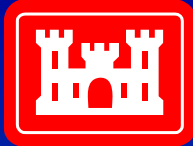


U.S. Army Corps
of Engineers
Wilmington District

Falls Lake Update and Information on Operational Deviation

Terry Brown
Senior Water Control Manager
Wilmington District,
US Army Corps of Engineers

18 March 2008



U.S. Army Corps
of Engineers
Wilmington District

Neuse River Basin Profile of Falls Lake

Falls Lake Project Profile

Elevation at Top of Dam is 291.5 Feet, msl —

Spillway Crest at 264.8 Feet, msl - - -

Controlled Flood Storage

Elevation 251.5 to 264.8 Feet, msl

221,182 Acre-Feet or 5.4 Inches of Runoff Storage

Normal Operating Level of 251.5 Feet, msl

Conservation Storage

Water Supply Storage

45,000 Acre-Feet or
42.3 % of Conservation Pool

Water Quality Storage

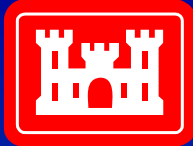
61,322 Acre-Feet or
57.7 % of Conservation Pool

Bottom of Conservation Pool is 236.5 Feet, msl

Sedimentation Storage

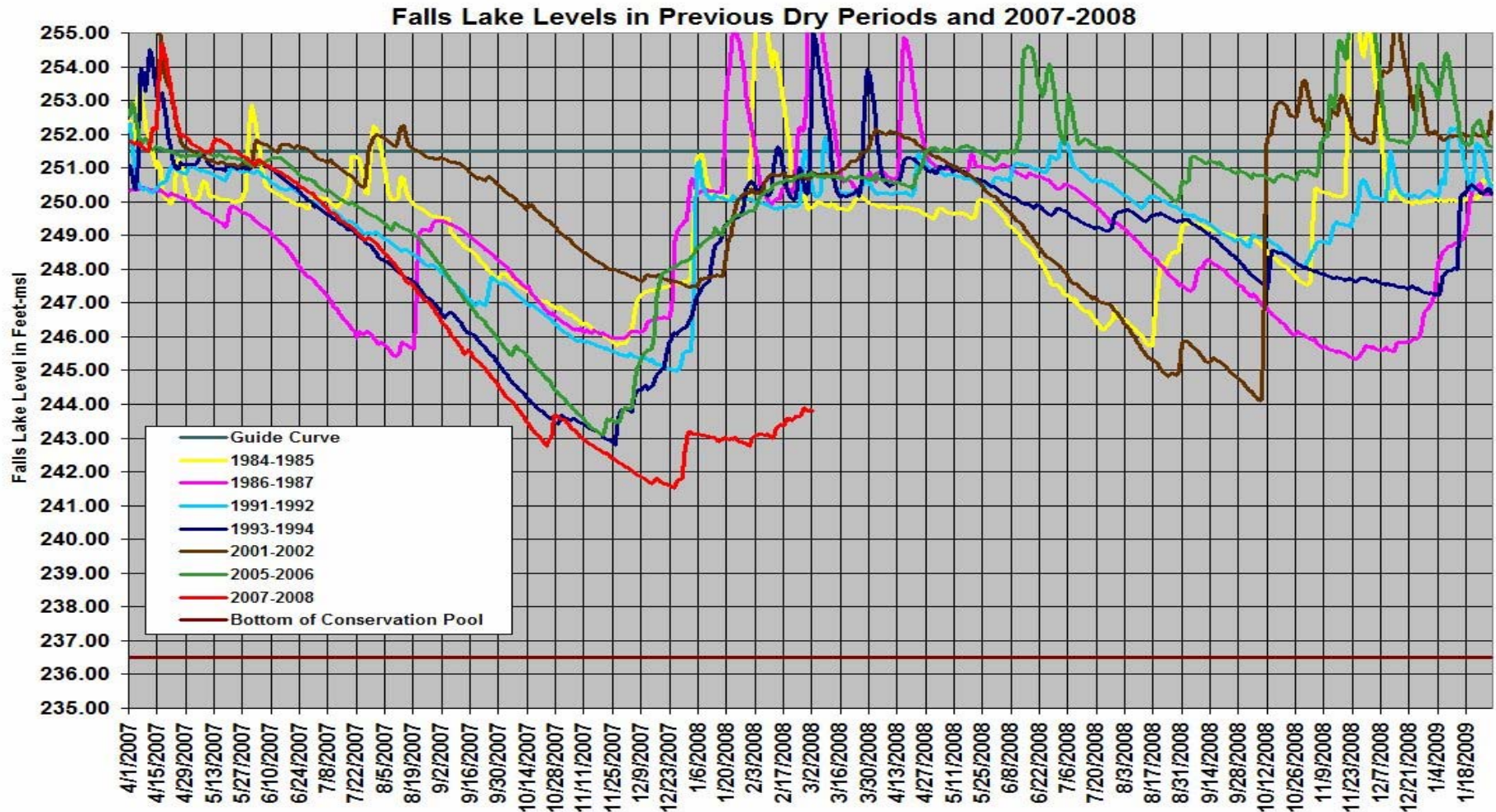
Elevation 200 to 236.5 Feet, msl or 25,073 Acre-Feet

Elevation at Base of Dam is 200 Feet, msl



Neuse River Basin

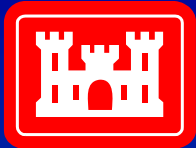
Falls Lake Level as of Deviation Start on 3 March



Falls Lake fell to 241.5 (-10.0') on Dec. 25, 2007

WQ storage remaining = 19.4%

WS storage remaining = 24.6%



Falls Lake Deviation Request

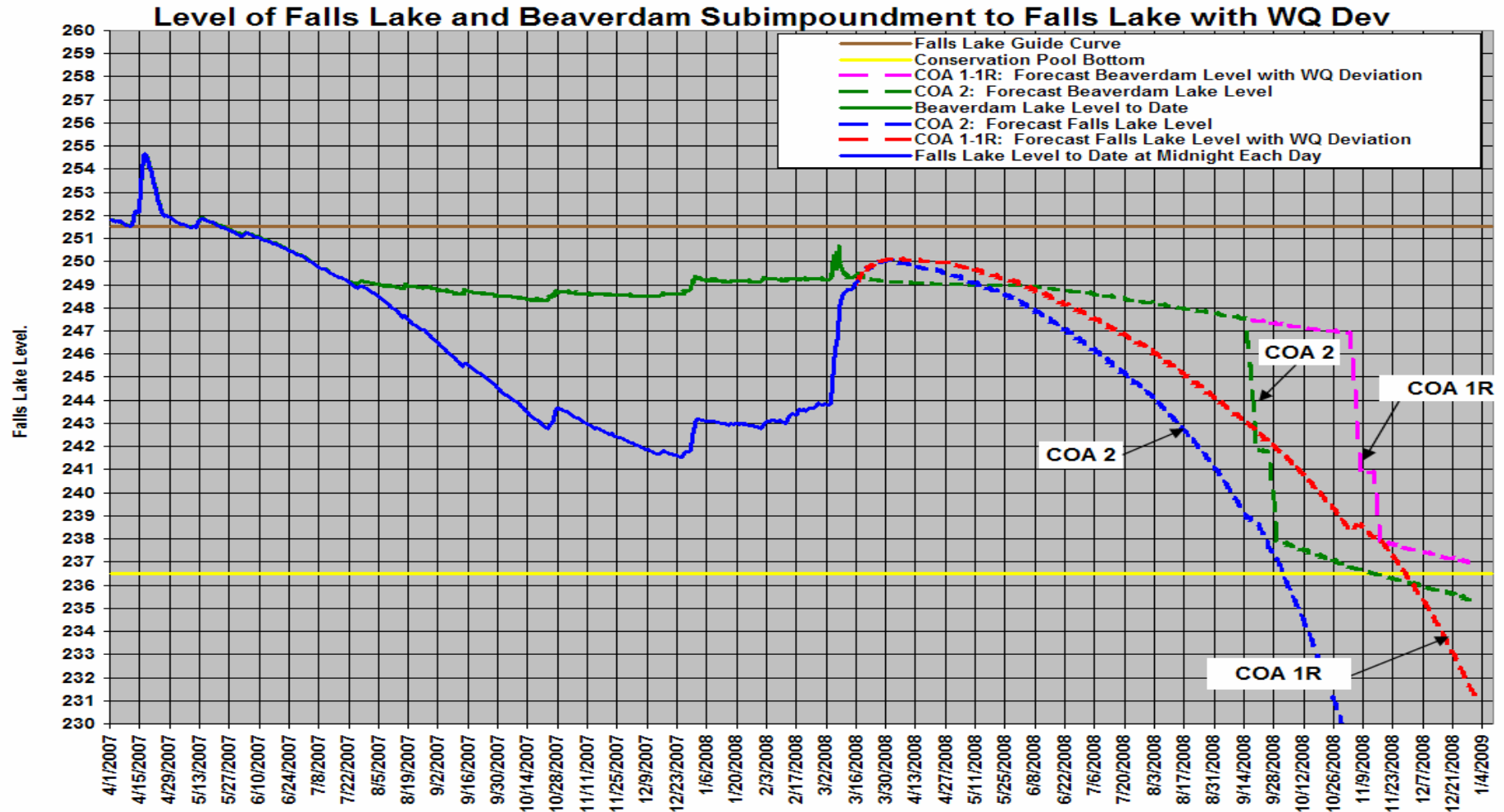
Dates/ Location	COA 1 Proposed Minimum Flow Target Ranges	COA 1R Proposed Minimum Flow Target Ranges	COA 2 Normal Minimum Flow Targets 1 Nov – 31 Mar	COA 2 Normal Minimum Flow Targets 1 Apr – 31 Oct
At Falls Dam	50 – 100 cfs	27 – 100 cfs	50-65 cfs	100 cfs
At Clayton	184 – 254 cfs	184 – 254 cfs	184 cfs	254 cfs

Month	Suggested Clayton Target Flow (DSF)	Month	Suggested Clayton Target Flow (DSF)
March	184	June	204
April	184	July	204
May	194	Aug-Oct	204



Neuse River Basin

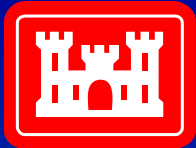
Actual and Forecast Falls Lake Level as of 17 March



Falls Lake Level = 249.2 (-2.3') as of 17 March 2008

WQ storage remaining = 76.5%

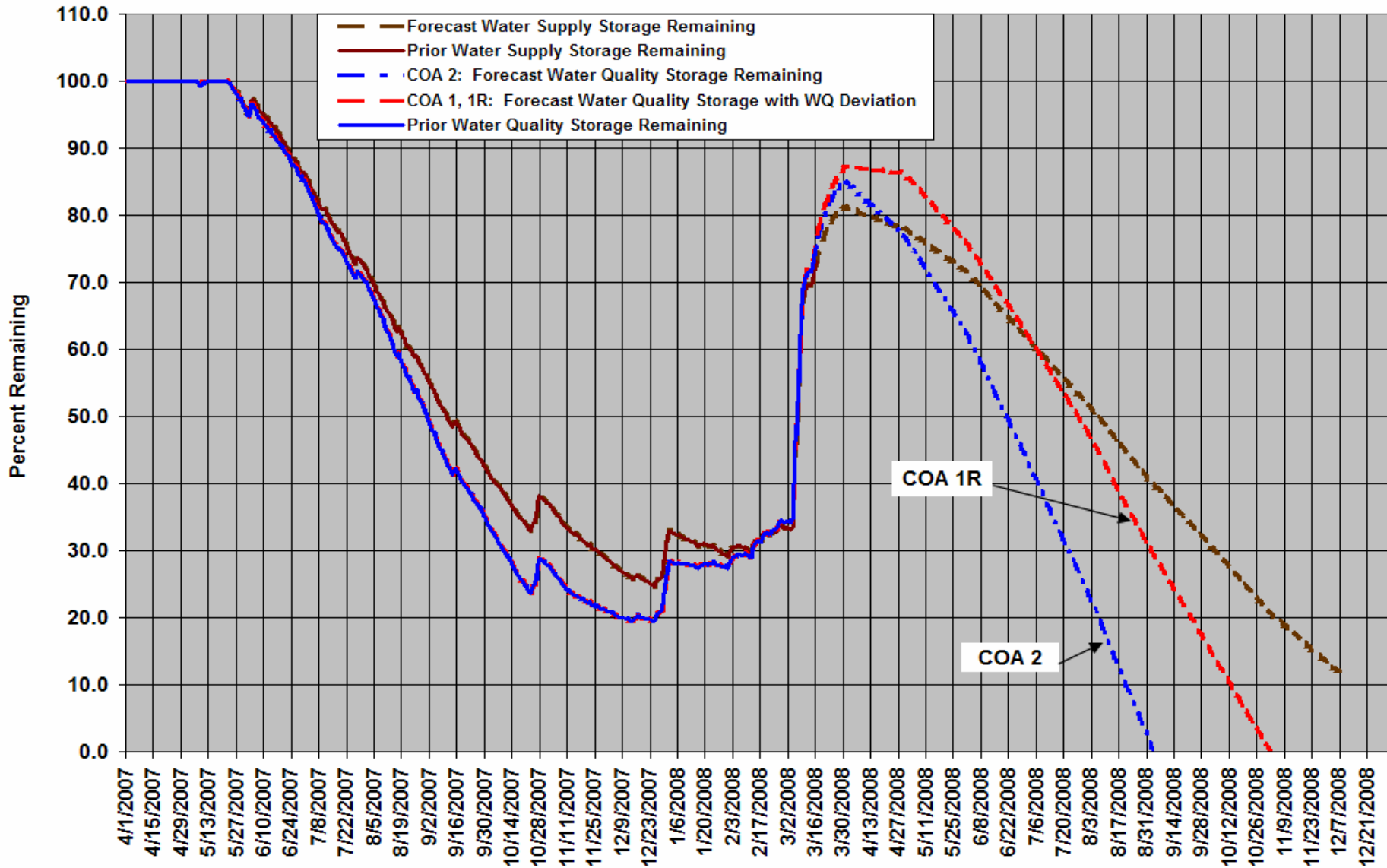
WS storage remaining = 73.1%

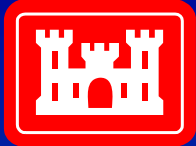


Neuse River Basin

WS and WQ Storage Accounts As of 17 March

Falls Lake Water Supply and Water Quality Storages Remaining with Deviation





17 March 2008 Reports on Water Supply Intake Conditions Downstream of Falls Dam

“Smithfield has not experienced any water quality problems as a result of the deviation.”

Earl Botkin - Utilities Director – Smithfield

Johnston County has experienced no issues on river depth versus intake screen level or water quality for drinking water treatment.

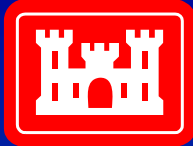
Tim Broome – Utilities Director - Johnston County

We have not seen any water quality or treatment issues since the operational deviation at Falls Dam.

Karen Brashear – Utilities Director – Goldsboro

There were no indications of problems with dissolved oxygen or pH. Dissolved oxygen ranged from 8.7 mg/L at Goldsboro to 10.8 mg/L below the dam. Water downstream of the dam and at Hwy 1 was clear, but became increasingly muddy the further downstream.

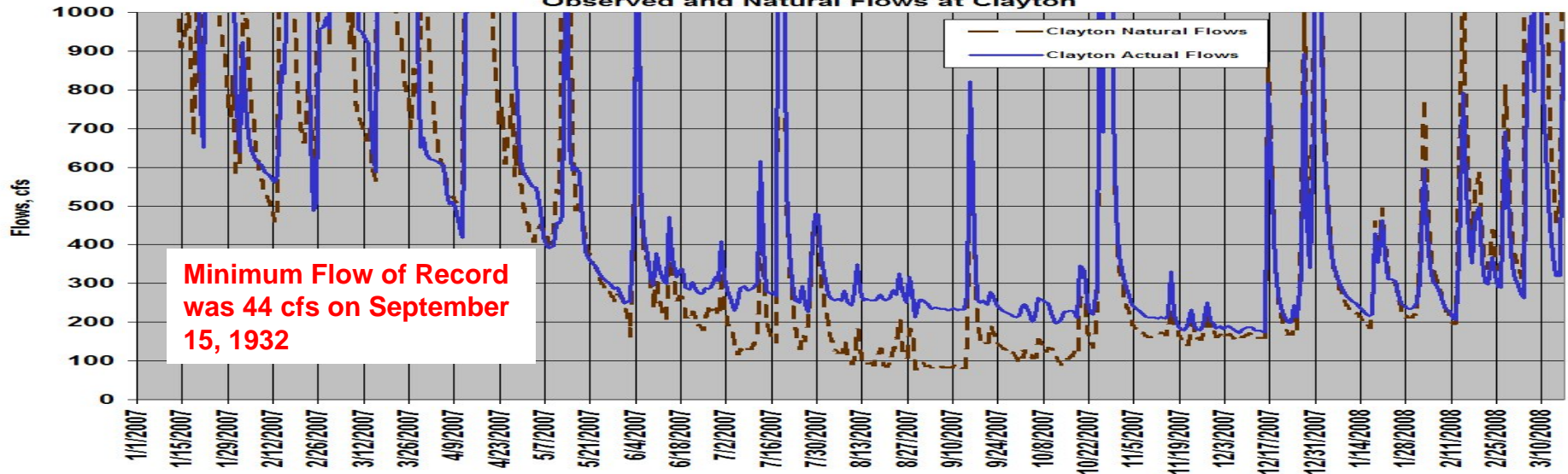
Debra Owen - NCDWQ



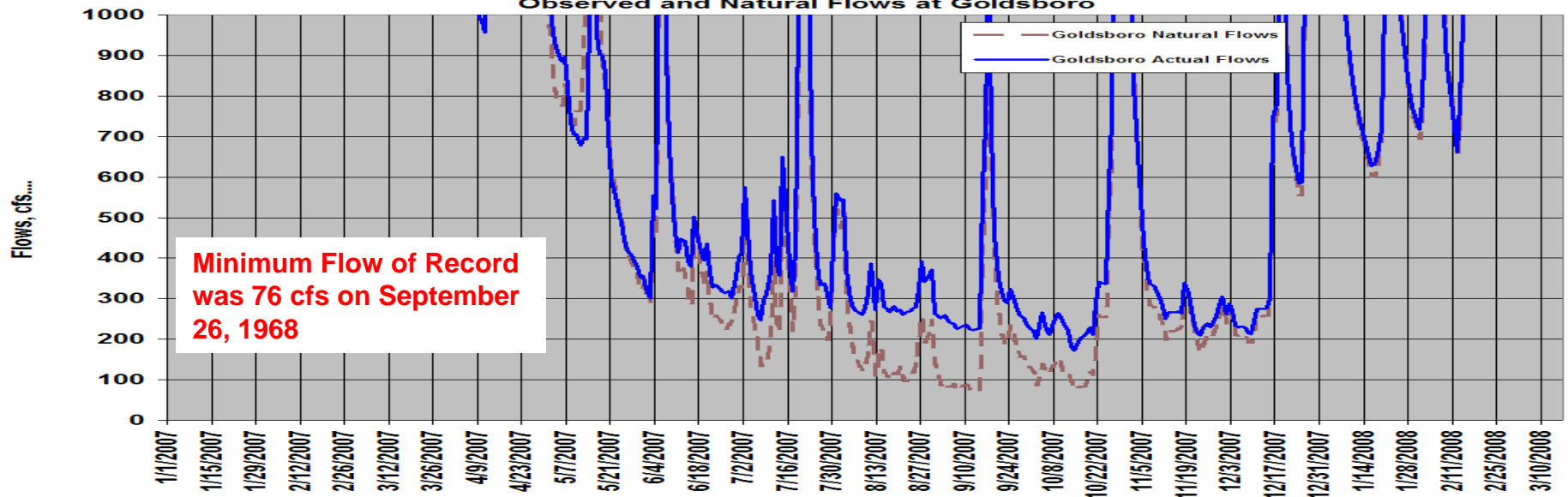
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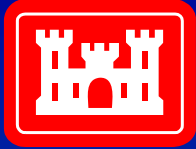
Natural Flows at Clayton and Goldsboro

Observed and Natural Flows at Clayton



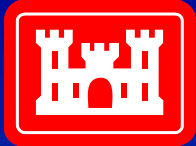
Observed and Natural Flows at Goldsboro



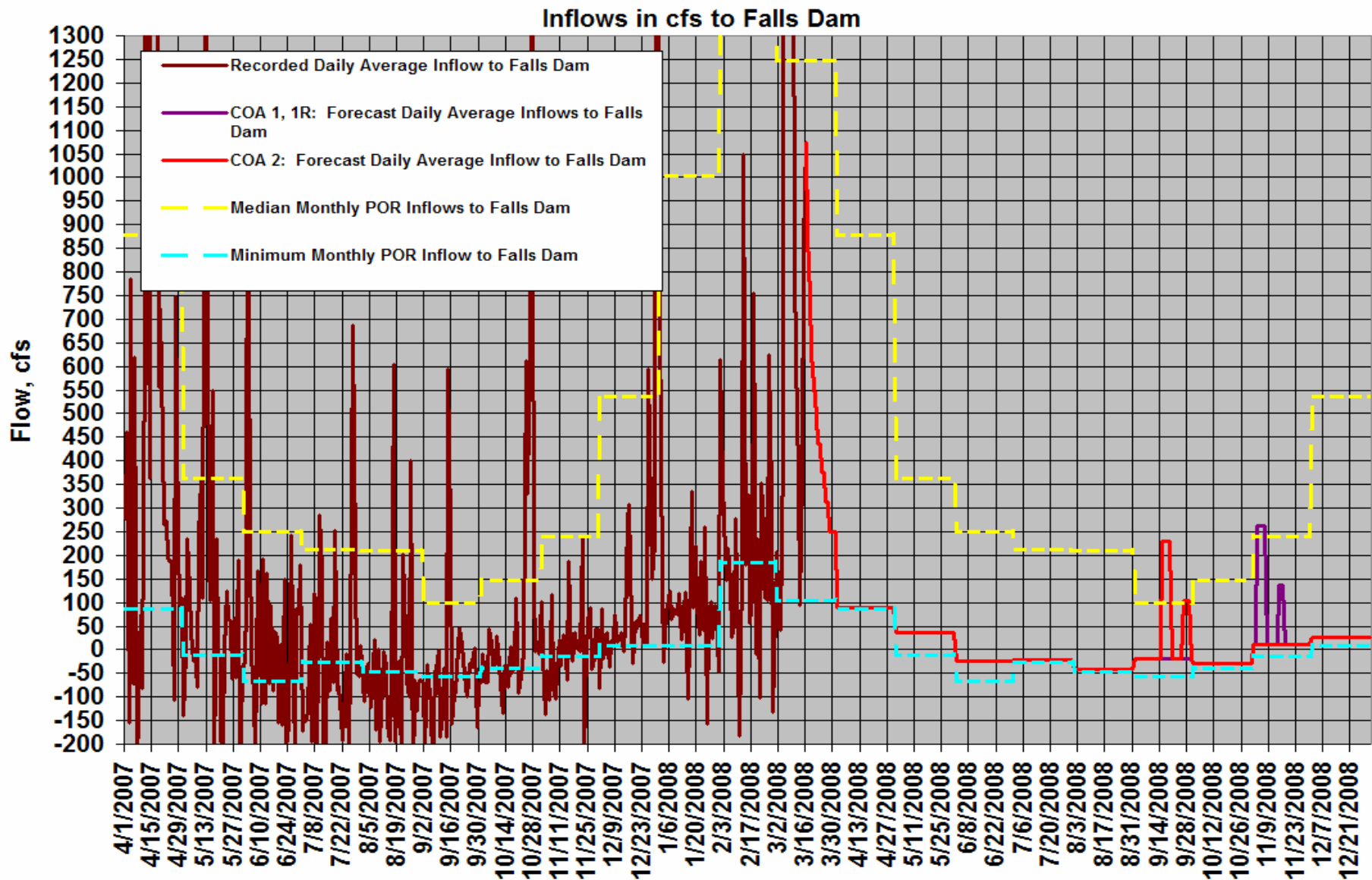


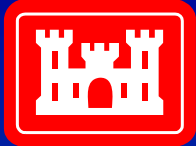
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**Extra slides to be used
If needed**

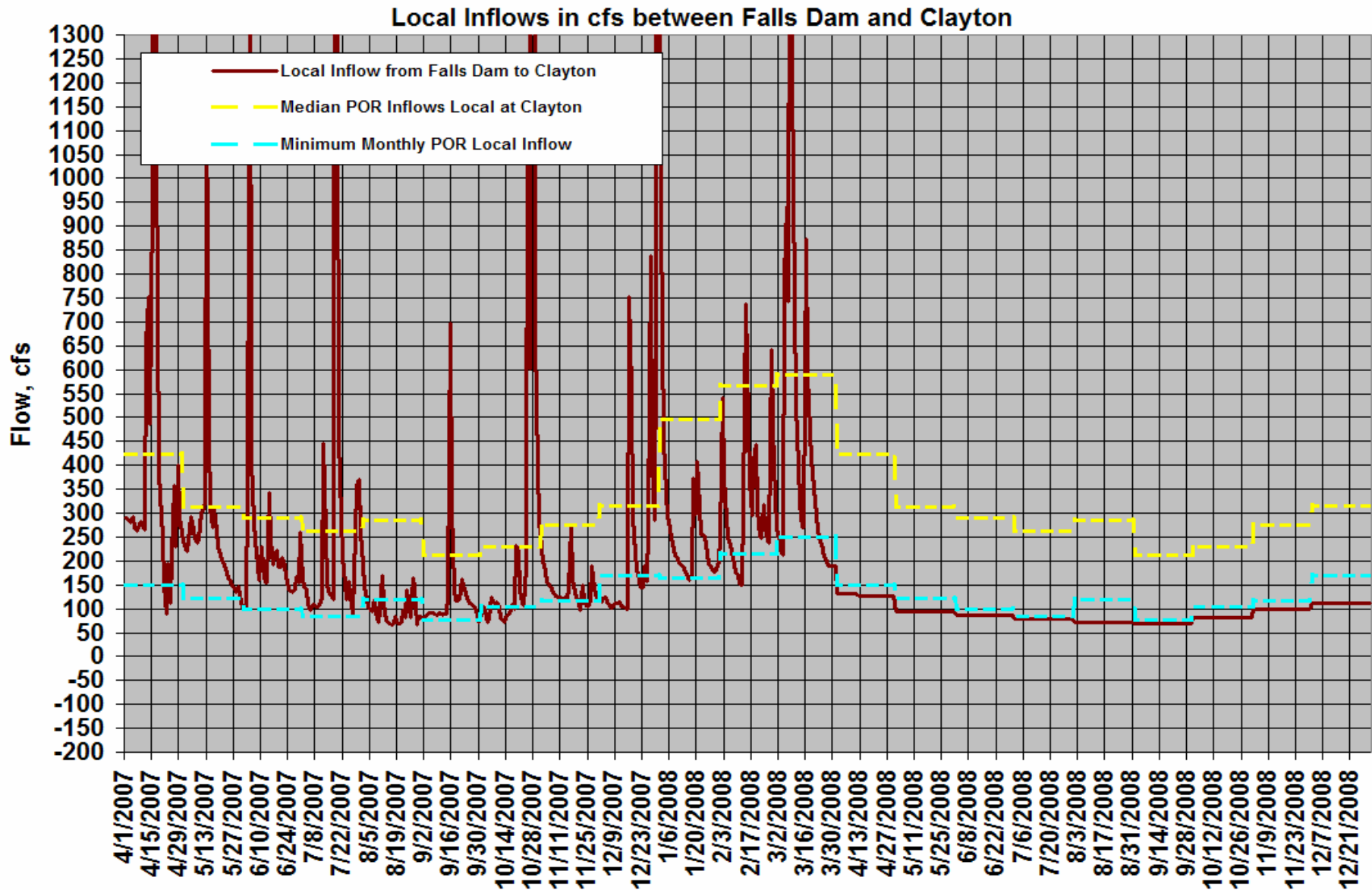


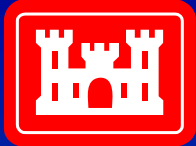
Actual and Forecast Inflows to Falls Dam



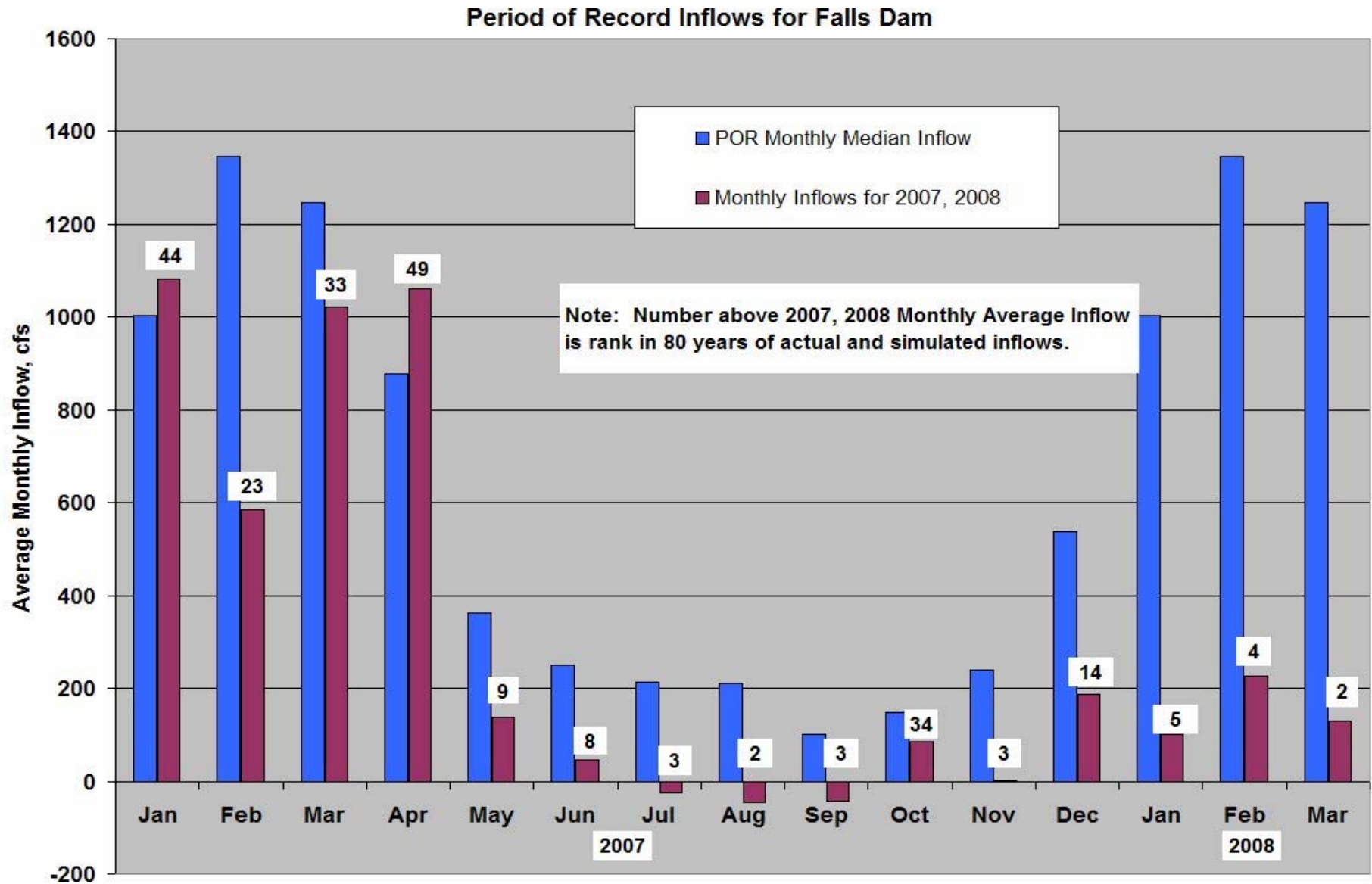


Actual and Forecast Local Inflows Between Falls Dam and Clayton





Inflows to Falls Dam as of 3 March





Inflows to Falls Dam Comparing 2001-02 to 2007-08

