

# FERC Technical Workshop

Martin Relicensing Rule Curve Study  
Study Plan 12a

September 29, 2009



# Purpose

## Study Plan 12a

- As a part of the Martin Relicensing process, stakeholders have requested that Alabama Power (APC) evaluate an increase in the winter pool elevation as well as possibly filling to summer pool earlier and extending summer pool later in the year
- In order to properly evaluate their request, APC must study both the effects on Martin Reservoir as well as any potential effects downstream

# Modeling Objectives

## Study Plan 12a

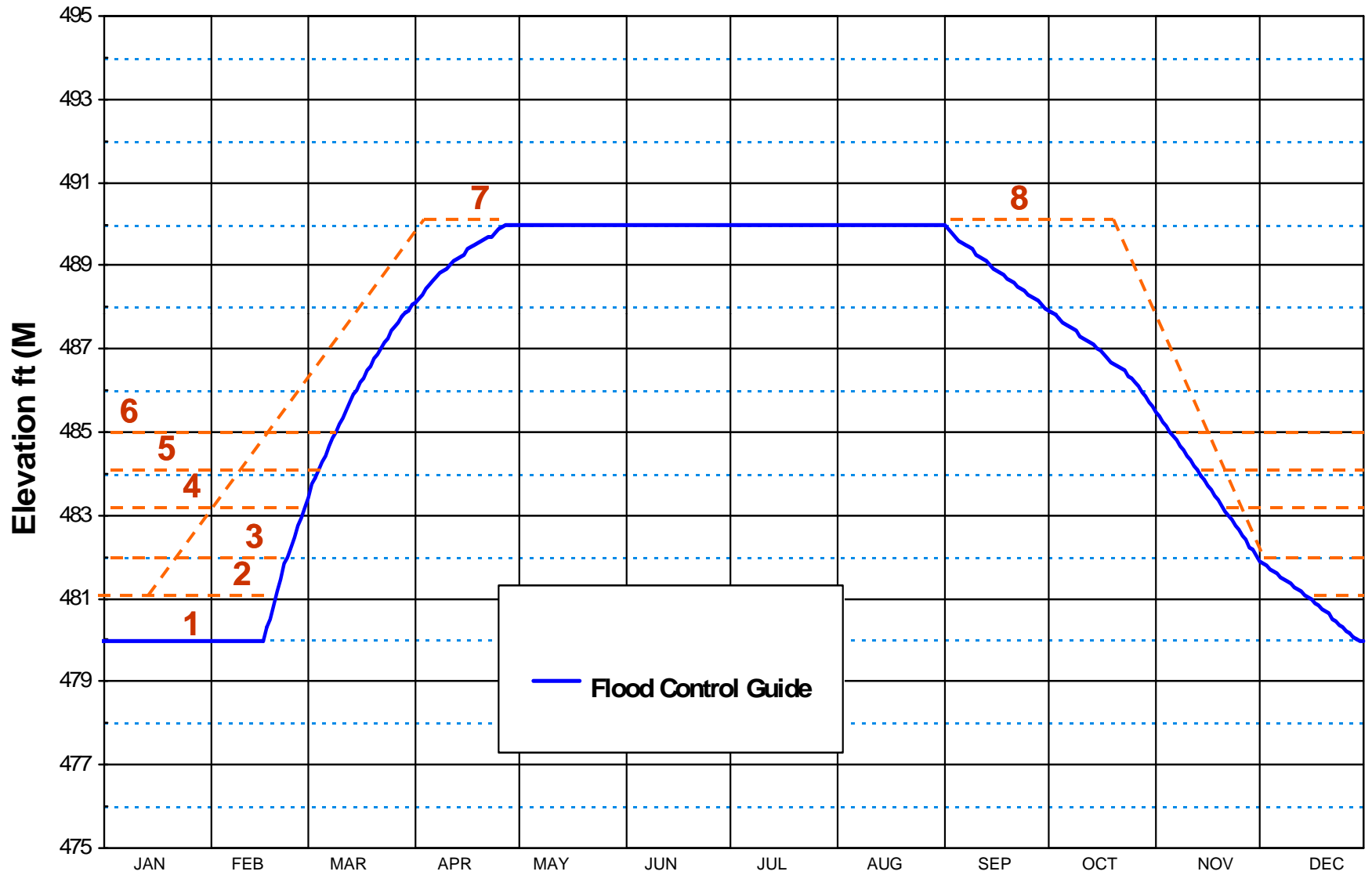
- Evaluate any increased flood potential on Martin Reservoir as well as downstream
- Evaluate any changes in flow durations downstream of Martin as a result of proposed rule curves
- Evaluate the generation/economic gains or losses associated with hydro generation

# Where We Left Off?

## Study Plan 12a

- Development & Calibration of the Harris to Martin HEC-RAS model
- Development & Calibration of the Thurlow to Montgomery Water Works gage HEC-RAS model
- Hydrologic development of the Design flood
- Development of the monthly flood frequency analysis using the HEC-SSP model
- Further Development and Simulations in HEC-ResSim

# Martin Reservoir



# Flood Study Evaluations

## ➤ Higher Winter Pool

- Baseline 480' MD
- 481' MD (mid Dec- mid Feb)
- 482' MD (Dec – mid Feb)
- 483' MD (mid Nov – March 1)
- 484' MD (mid Nov – early March)
- 485' MD (early Nov – early March)

## ➤ Early Spring Fill

- Baseline April 1<sup>st</sup> 488' MD
- Proposed April 1<sup>st</sup> 490' MD
- Note: Converges together by end of month