

John H. Kerr Dam and Reservoir

Proposed Flood Operations Change

Southeastern Federal Power Alliance

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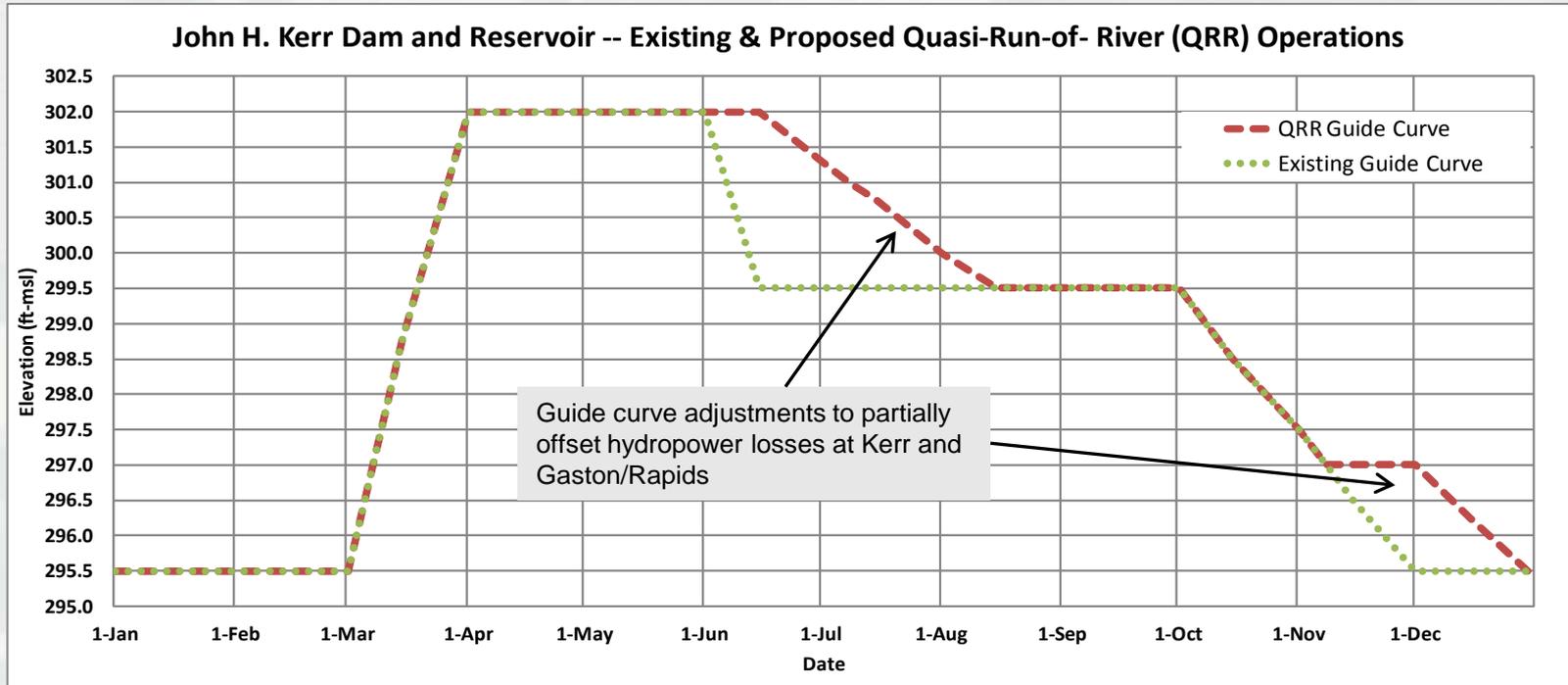
John H Kerr

Proposed Flood Operations Change

- Transitioning away from Section 216 study
- Instead pursuing Quasi-Run-of-the River (QRR) operational change through Water Control Plan revision in accordance w/Corps guidance
 - ▶ Preparing modified WCP and NEPA document using O&M funds
 - ▶ Public information session
 - ▶ Releasing Kerr 216 summary document w/technical analyses as appendices
- Outreach to hydropower interests prior to release of modified WCP & EA for public comment (previous outreach to other interests)
 - ▶ Alliance mtg
 - ▶ Dominion
- Potential implementation in Jan 2016



Comparison of Existing and QRR Operations



| Existing Operations* | | QRR Year-Round* |
|----------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kerr Lake Level (ft-msl) | Roanoke Rapids Releases (cfs) | Roanoke Rapids Releases (cfs) |
| Below 300 | Up to 8,000 | <ul style="list-style-type: none"> Above QRR Guide Curve (GC): Outflow \approx Inflow up to 35,000 cfs based on a weekly average inflow. Above lake level 320 ft-msl: Existing operations Below GC: Minimum energy (equals or exceeds FERC minimum releases at Roanoke Rapids Dam) |
| 300-312 | Up to 20,000 | |
| 312-315 | Up to 25,000 | |
| 315-320 | Up to 35,000 | |
| 320-321 | 85% of inflow | |
| Above 321 | Inflow | |
| *April 1 - June 15, abide by striped bass spawning release targets when feasible | | |



Hydropower Impacts

- No impacts to contractual minimum energy or capacity obligation
 - ▶ Impacts only to excess (secondary) energy

- QRR would reduce excess hydropower generation at Kerr during flood operations by an estimated 3.4% per USACE Hydropower Analysis Center.
 - ▶ QRR only affects flood releases...no change in ops when lake is at or below guide curve
 - ▶ Higher flood releases (still all through turbines) bring lake levels back down to guide curve more quickly, resulting in lower head/efficiencies during QRR flood ops

- Beneficial modifications to guide curve
 - ▶ Summer drawdown delayed 2 weeks and lasts 2 months longer.
 - Increased potential for higher head and secondary generation from mid-Jun to mid-Aug
 - ▶ One-month delay in completion of winter drawdown
 - Increased potential for higher head and secondary generation during December



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