SALT RIVER LAKE STURGEON E-FLOWS

RRAT presentation
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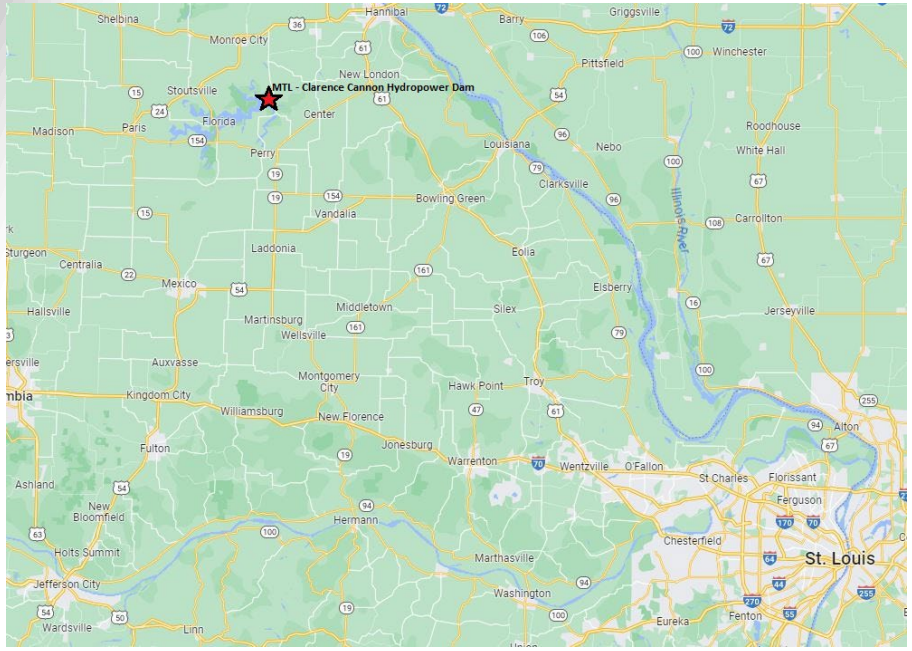
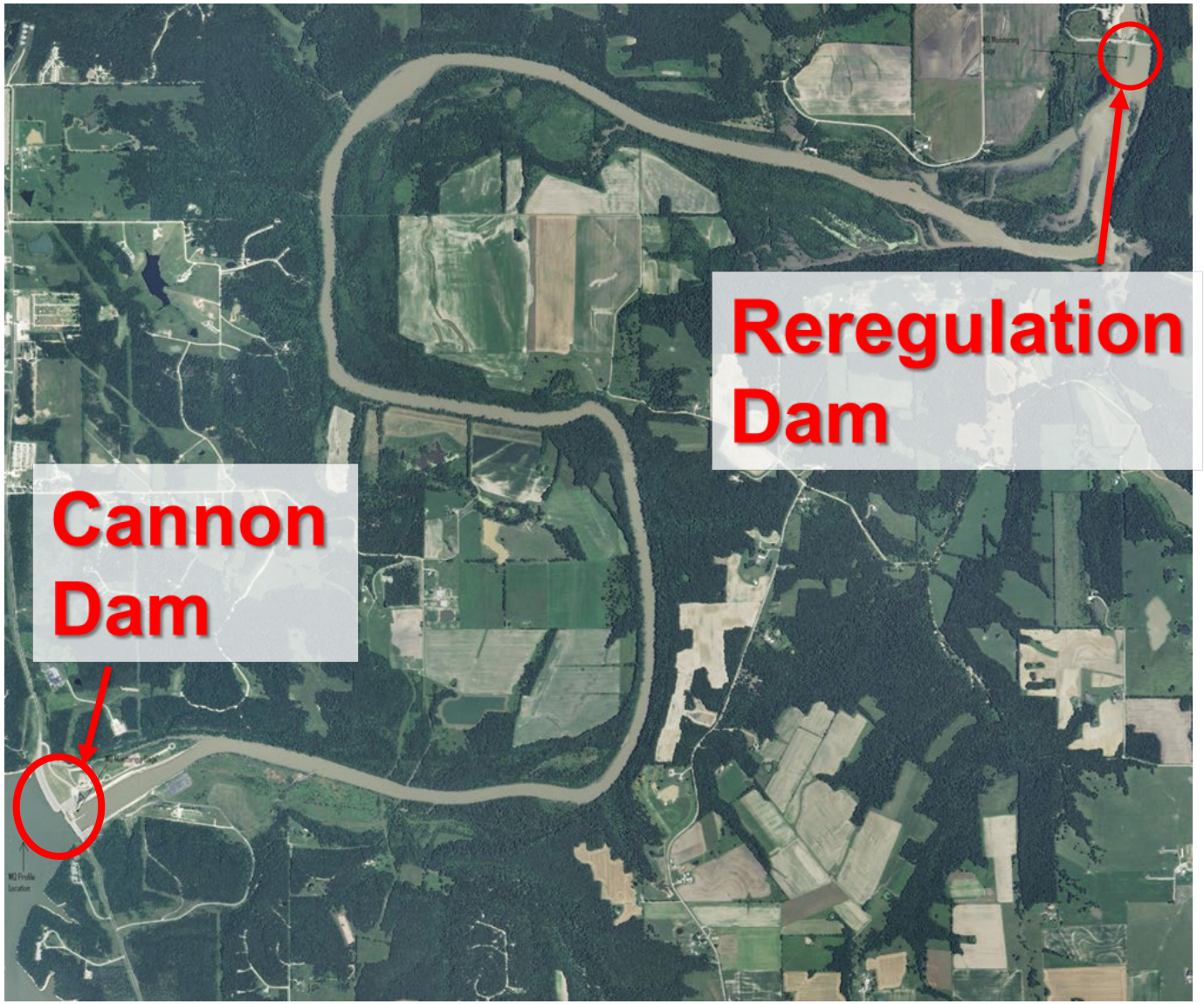


Mark Twain Lake ~ 100 miles NW of STL

-Flood Risk Management, Hydropower, Water Supply, Recreation, Fish & Wildlife Conservation

-Narrow set of parameters (hydropower needs, lake levels, river levels, etc.) that allow for e-flows, use reregulation pool as a buffer/storage system to hold water as we target extended downstream discharges that are more advantageous to sturgeon spawning compared to typical erratic pulse seen currently that follow power generation cycles.



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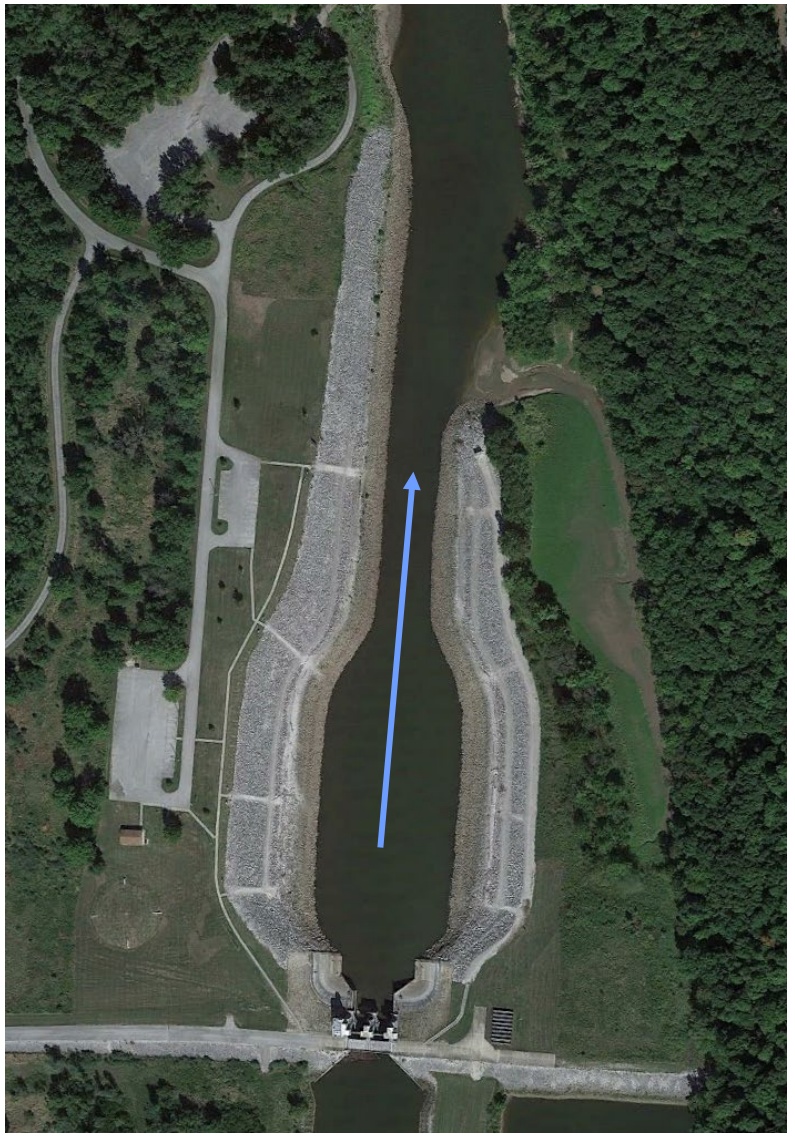
- **Sturgeon Spawn Critical Elements:**
  - Water temps ~55 degrees
    - Approximately Early April to Mid May
  - Rocky/Cobble Substrate
  - Velocities 1.0-1.5 ft/s



Reregulation Dam and Tailwater

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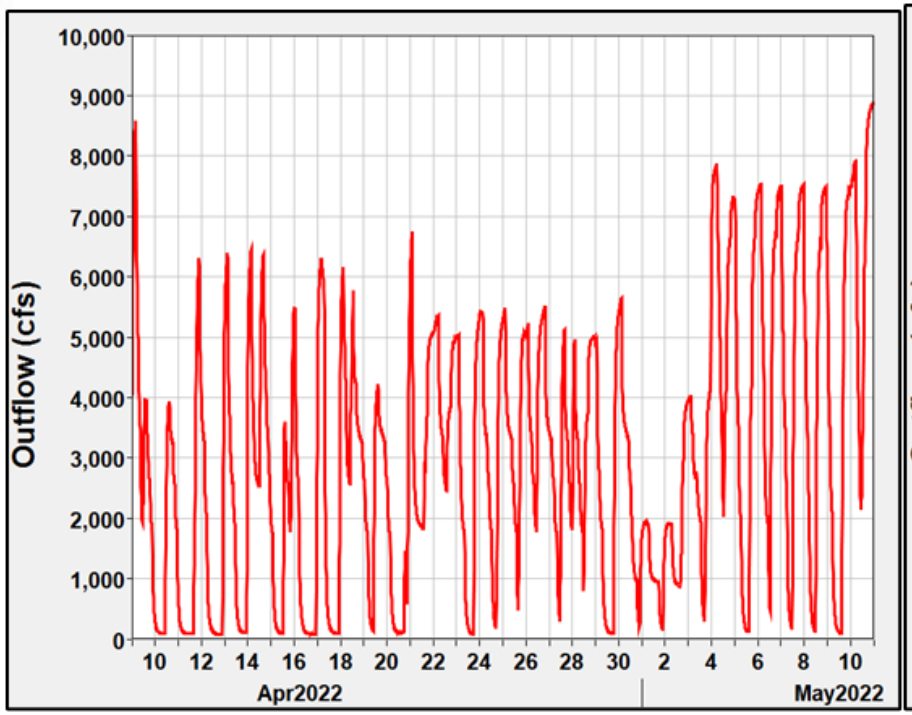
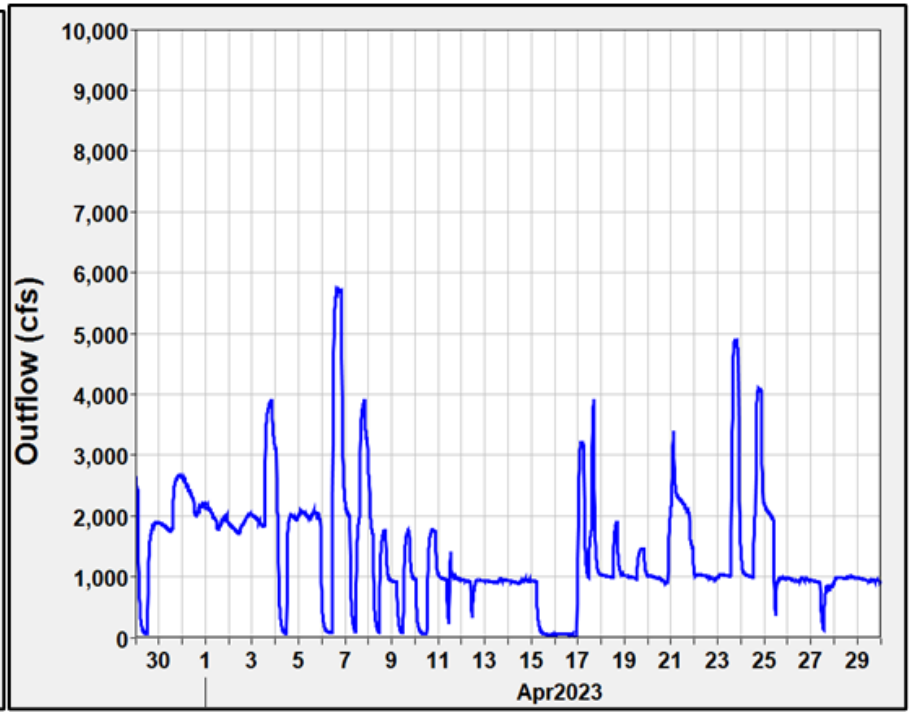
- FY23 was a “test” year of implementing operational tweaks at the Reregulation Dam to smooth out downstream discharge fluctuations
- ResSim modeling of the Reregulation Dam schedules with conjunction with Hydropower peaking at the main dam of Mark Twain Lake
- Realtime operational changes to gate setting to maintain constant outflows
- Biologists from USACE & MDC monitored the area for sturgeon activity

Similar Average Releases in 2022 vs 2023





FUTURE CONSIDERATIONS

- Collect more data / Tag a few more locally found fish leading up to spawning season
- Additional receivers to capture when tagged fish begin moving up into the Salt River
- More robust egg and larval sampling effort – post spawn
- Start e-flows earlier when temps reach upper 40's (46-48 degrees) to entice sturgeon to the area
- Try to maintain lower flows (~1,000cfs) over a longer period of time (2-3 weeks)