How to drain a 22 million gallon lake for a highway project.

“The Natcher Parkway Extension”

District 3 Bowling Green
Warren County
Item No. 3-53.00
Alleviate congestion on US 231 (Scottsville Road) by providing better and safer access to southeastern Warren County and beyond.

Enhance the Level of Service (LOS) of US 231 (Scottsville Road), per 1993 US 231 Corridor Study.

“20% of existing traffic at US 231 was bound for points south of Bowling Green, including Scottsville and Allen County.”
• Interstate 65: 60,800 vpd (2007)
• Natcher Pkwy: 18,000 vpd (2027)
Quick Facts

• Natcher Parkway extended south of Interstate 65 to US 231
• 2.125 mile extension
• Reconstructed interchange at I-65, new interchange at KY 622
• EA/FONSI
• Rural Arterial classification
• 70 mph design speed
• 27 parcels, 6 utility companies

Prime Design Consultant

KYTC Project Manager, Jim Hudson, P.E.
## Authorized Funds

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<th>Phase</th>
<th>Year</th>
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*Grade, Drain, & Incidental Surfacing Let Nov. 20, 2009
Surfacing Letting scheduled for April 2010; Estimated $12m-$14m
Construction Progress

Fixed Completion Date: Aug. 1, 2011

Twin 3-span bridges over I-65
Prime Contractor
Scotty’s Contracting & Stone

Grading toward from I-65 to KY 622

Ramp 5 paving

S.P.U.I. at KY 622
Dewey Lake

- 15 acre lake
- 22 million gallons of water
- Dam was classified a Moderate B Hazard
- Built in 1960’s
Why Drain the Lake?

• AT&T fiber optic line needed to be relocated in this area.

• I-65 Ramps 3 and 7 cross thru Dewey Lake and Dam.
Coordinating Challenge
• What impacts are there associated with draining the lake?
• Where does the water flow?
• How do we pay for draining Dewey Lake?
• Who will drain the lake?
Impacts

• Impacts to Gray and Indiana Bat Habitat.
• Fish
• Three Springs Lake.
Gray Bat
Indiana Bat
Bat Foraging and Roosting Habitat
Bat Foraging Habitat Dewey Lake
Where does the water go?
Sampling Sites

Exhibit 1
Water Quality Sampling Locations
KYTC Item No. 3-53.00
Warren County, Kentucky
Table 1. Three Springs Lake Vertical Profile Measurements (9/25/07 1300)

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Dissolved Oxygen (mg/L)</th>
<th>PH (Standard Units)</th>
<th>Specific Conductance (µS/cm)</th>
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Table 2. Dewey Lake Vertical Profile Measurements (9/25/07 1700)

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Solutions

- Contacted Kentucky Fish and Wildlife Bowling Green Office to relocate fish.
- KY Division of Water ask we lower the water slowly to avoid water quality impacts that would lead to violations.
- The contract specified the Lake had to be drained between December 1st and end of February.
- ROW funds were used to pay for the cost of draining Dewey Lake because utilities were involved.
- We hired a contractor thru the ROWProperty Management Process of Solicitation for Removal of Improvements Process.
Timeline

- October 2007 dewatering management assigned to District 3.
- December 2008 contract awarded to Scotty’s Contracting to drain the lake.
- February 2009 Lake was drained.
In the beginning...
Lost River Cave
Dewatering Plan
The End is Near
The Great Flood of 2009
Breaching the Dam
Thank you

Renee Slaughter, D-3 Environmental Coordinator
Allen Arnold, D-3 Right of Way Unit Leader
Joe Plunk, D-3 Project Development

August 11, 2010
2010 Partnering Conference
Louisville, Kentucky