### Partnering in Transportation for Endangered Species Protection

Bree McMurray
Senior Environmental Specialist
MoDOT
TEAM 2018

#### Perry County, MO

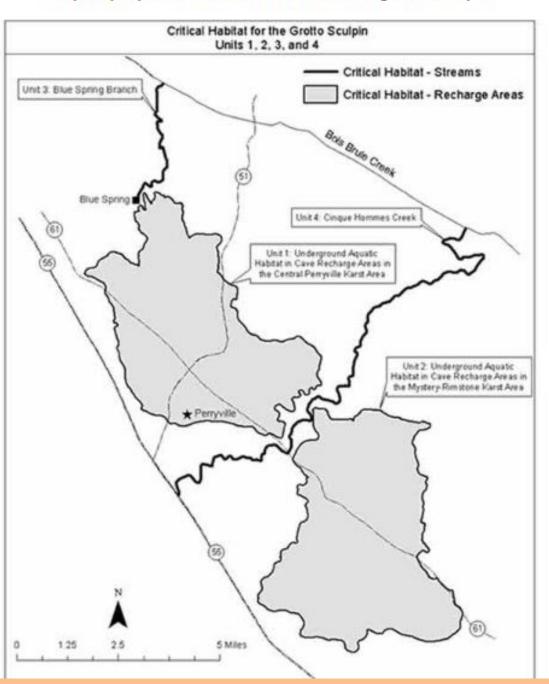




#### Grotto Sculpin a cave-dwelling fish

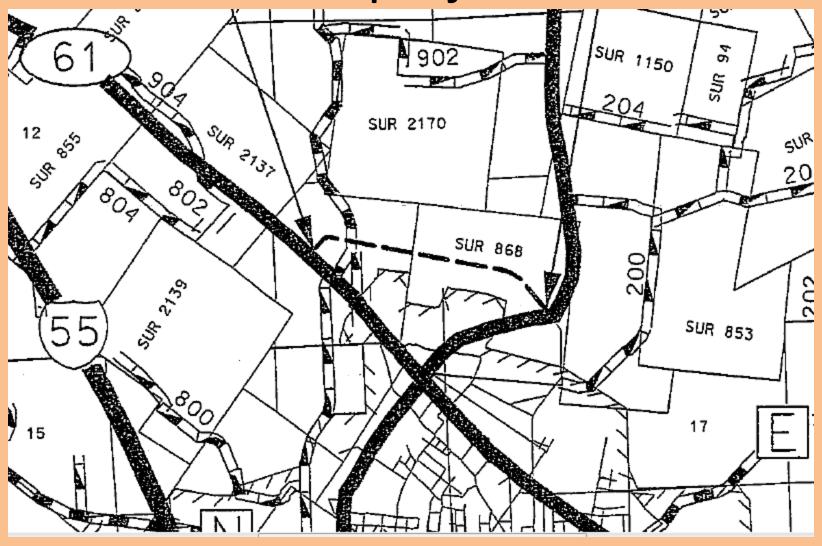
- Occurs only in 5 caves and 2 surface streams in Perry Co Mo
- Proposed for listing Sep 2012; public meeting Oct 2012
- Draft economic plan released Mar 2013-4 potential Formal Consultations for transportation
- MoDOT commented with justification no Formal Consultations-reduce impacts and partner for conservation
- Listed endangered Sep 2013

#### Map of proposed Critical Habitat for the grotto sculpin.

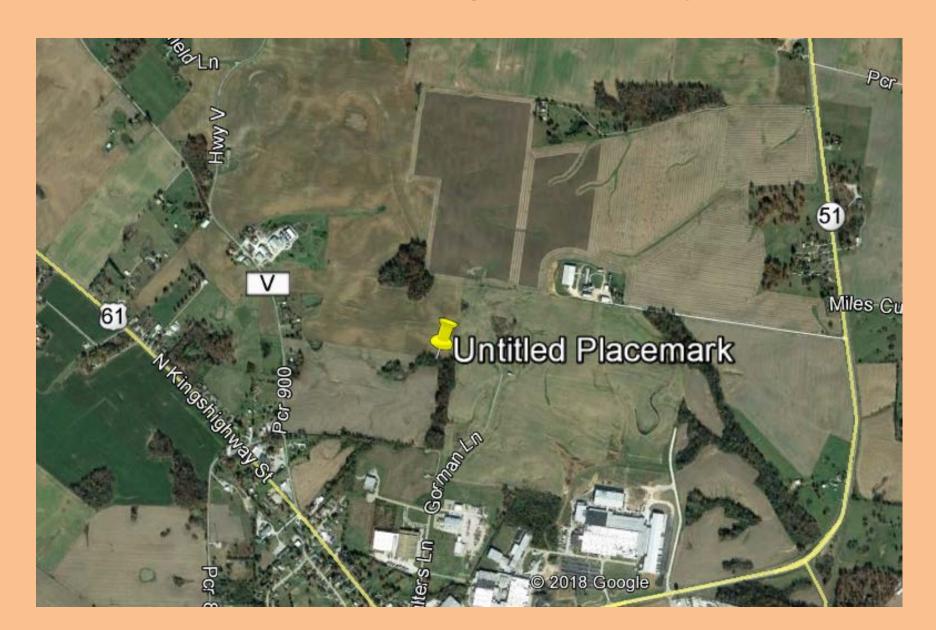


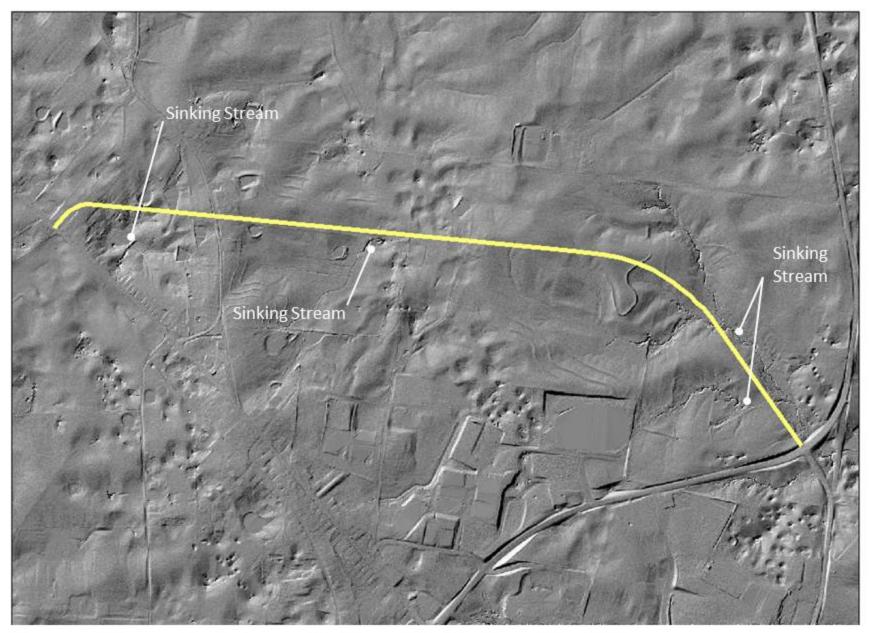
- MoDOT public meeting released alignment Nov 2014.
- Within days, MoDOT Environmental, USFWS, FHWA were in discussions with MoDOT SE district and Missouri Speleological Survey
- Cave ceiling only 10' below proposed centerline-cave destruction and grotto sculpin concerns—Formal Consultation meetings

General project area



# Surrounding landscape





Proposed Connector between Rt. 51 and Rt. 61, Perryville, MO



#### Multi-agency site visit Dec 2014

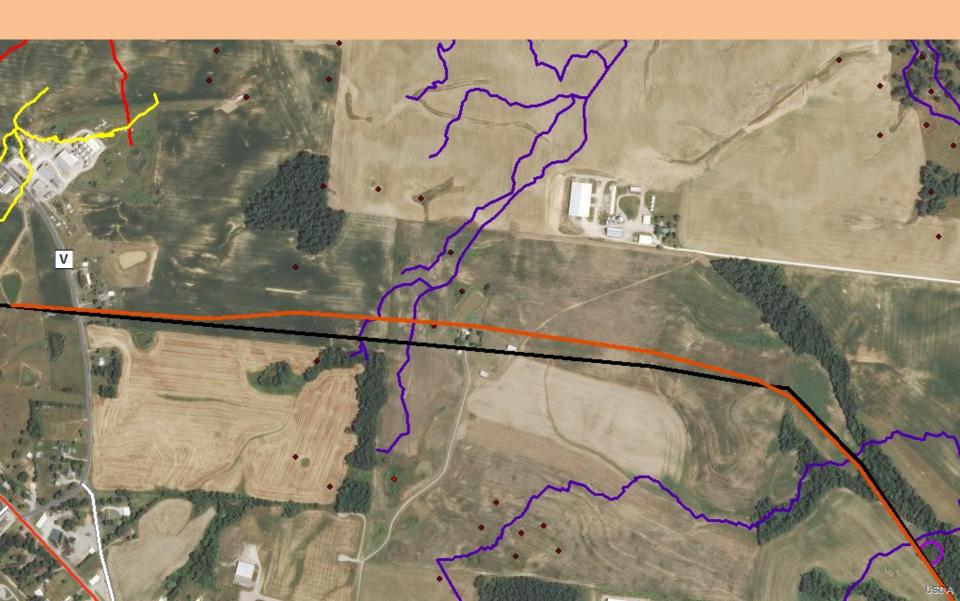




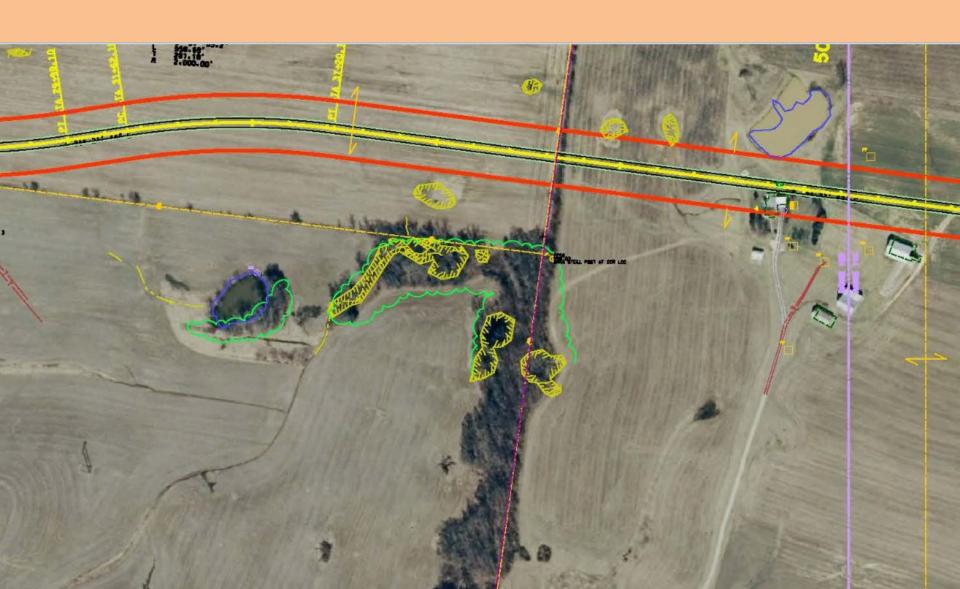




# Old and new alignments



#### New shifted alignment



#### June 2015

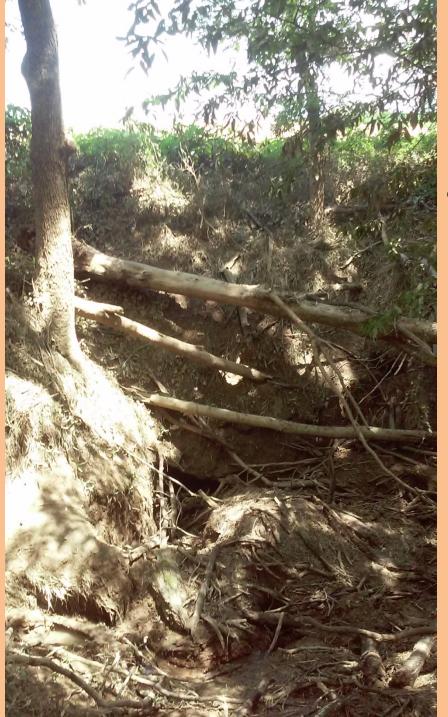




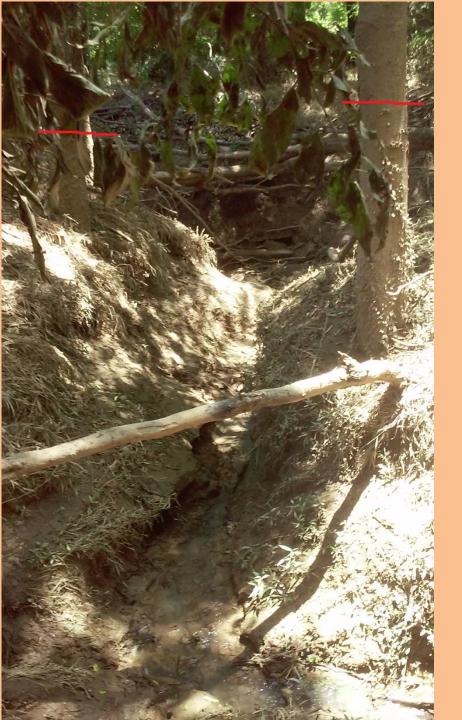








Losing stream
 enters subsurface
 below the edge of
 the field



 Mudline from soil erosion, about 8 ' from the lowest point of the stream

#### Nov 2016 MoDOT construction photo

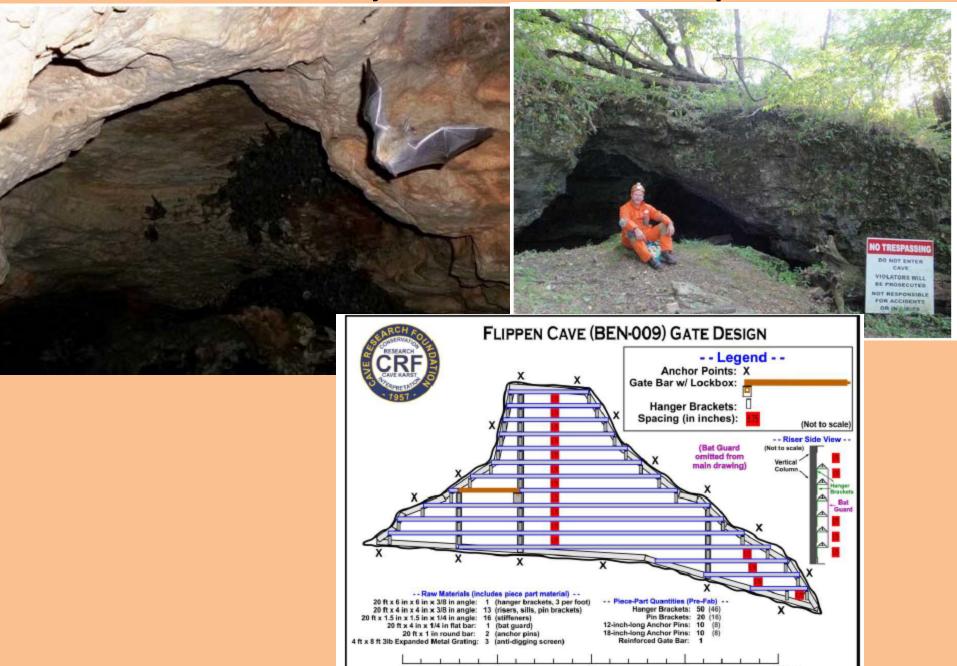




#### Stewardship and Partnership

- MoDOT will not actually have any ownership of Crevice cave, but we will protect it, and several others, regardless.
- MoDOT does own at least 63 cavesdetermined by entrance in MoDOT right of way
- Some are pretty substantial features, and some even house endangered species

#### Other worthy endeavors for parners



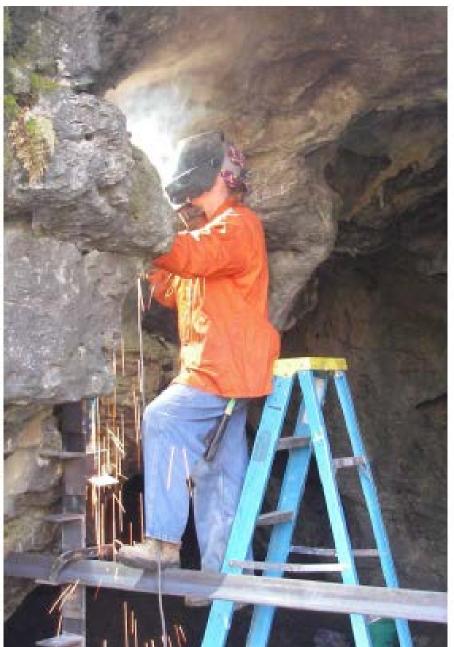
# Survey, design, materials, mobilization, labor, construction



Two working women. Below Left: Bree McMurray cuts steel. Photo by Jim Cooley. Below Right: Alicia Wallace welds on one of the risers. Photo by Bill Gee.

#### toiding chairs had been blown over – falling onto the





#### Landowner, grants, volunteers



#### McDonald County MoDOT caves

 In discussion about repairing and existing gate and building a new gate for protection of northern long-eared bats and a gray bat maternity colony