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For the record:

I have recently retired from my work as a librarian in our public schools, where I taught research skills and critical thinking to young students and collaborated with my peers for over 33 years. This highly controversial draft Environmental Assessment (EA) contracted by the Farm Services Agency (FSA) and the Small Business Administration (SBA) is flawed for many reasons. As a librarian I notice especially that their research is incomplete and shallow. I will mention a few reasons for my observations in my comments.

We must hold the SBA and the FSA accountable for the unnecessary expenditures of the money we earn and turn over to them in tax dollars. Our dollars this time go to Cardno, and Ecosphere, multinational Australian/western US businesses that specialize in trying to get government agencies out of the jams they have created for themselves. Couldn't the FSA and SBA have chosen an American firm that might better understand the necessity to research effects of the Buffalo National River watershed's location in karst topography? If they had researched carefully in their first EA they would have never guaranteed loans totaling more than \$3 million dollars in this location. What other local family farm, or any other kind of business for that matter, has been able to finance a dream with such a carte blanche government loan guarantee on an unsuitable site? Our government must follow the laws it has created. In this case, the SBA and the FSA must take a hard look conducted by expert hydrogeologists and biologists at the physical site for which they guaranteed these oversized and misdirected loans. It is reasonable to anticipate that C&H will have a cumulatively significant impact on this river. If only their EA research had explored the karst geology and the presence of critical habitat of Gray, Northern Long-eared and Indiana endangered bats and the threatened Rabbitsfoot and Snuffbox mussel species, they would now be forced to admit that an environmental Impact Statement must be conducted and the viable alternative enforced that this CAFO must be relocated out of the watershed of our nation's first National River, this outstanding and extraordinary resource water that is the Buffalo National River. (See link to recent survey of endangered bats on Big Creek: <http://buffaloriveralliance.org/Resources/Documents/Bat%20Survey.pdf>) and (See below, USFWS map of Buffalo National River Snuffbox mussel critical habitat.)

This draft EA says that the BCRET study "is considered the best available scientific information." However, the National Park Service (NPS) and the Karst Hydrogeology of the Buffalo National River (KHBNR) team's research are not explored at all in the draft

EA. The EA's overall reliance on the BCRET is flawed for several reasons. For instance, with funds allotted to the BCRET for monitoring the water quality and the effects of the C&H CAFO on the BNR, BCRET contracted with Oklahoma State University (OSU) to conduct highly technical Electrical Resistivity Tomographic tests on two fields that C&H has approval to dispose of its waste. The point of ERT underground examinations is to look for faults, sinkholes, and epikarst that can be saturated or used as conduits for liquids such as water or swine waste. ERTs are sensitive underground pictures that reveal the subsurface geology of a site. Why would BCRET choose to do one of only two tests on Field 5a, which has never had swine waste applied to it and there are no plans to do so? Control fields hypothetically exist in nonkarst topography but are not viable in karst. Put yourself in BCRET's place for a moment. If you have 17 fields to choose from, and these ERT tests are costly, you must carefully choose two fields to accurately assess where C&H's swine waste is traveling beneath the surface of the fields. Wouldn't it be prudent to choose two of the fields where swine waste is being spread? It would be best practice to select fields such as fields 7 and 13 where waste is actually being applied.

This is especially true in karst where control field examinations don't work because underground features such as fractures, sinking springs and sinkholes can create diversions of flow within a few feet of one another. For example, the slide below from the OSU ERT study provides evidence of a huge doline formation, or sinkhole, beneath field 12 where manure is spread regularly. (See attached slide from OSU ERT tests on field 12 below.) Should that sinkhole destabilize due to disturbances and changing conditions on the surface (such as the repeated vac tanker truck (honey wagon) applications and vibrations while discharging, as well as pressures from cumulative build up of waste on the surface), or should liquid waste enter crevices, cracks, caves and other openings consistent with epikarstic features, then the underground water picture is changed. Unexpected leaks can degrade endangered bat cave habitat. A sinkhole collapse under waste disposal fields means pollutants finding their way to the Buffalo River in channels that will only be available for examination in yet to be performed ERT or dye trace studies.

The Snuffbox mussel's critical habitat includes a 70-mile stretch of the Buffalo National River including its confluence with Big Creek and many miles above and below. Dye traces conducted by the KHBNR team in the C&H area have already shown up in this critical habitat near Carver and as far downriver as Woolum. As the first Large CAFO in the Buffalo River watershed, C&H establishes a precedent for future actions by the federal agencies and the state. If one of those future actions is the cleanup of a large sinkhole collapse saturated with swine waste that inundates the snuffbox mussel's critical habitat in the river, or the destruction through habitat degradation of a hibernarium or maternity cave, or pristine foraging creek or river zone for endangered Gray bats, the consequences of a flawed EA can be catastrophic. A scrupulous Environmental Impact Statement needs to be conducted to determine the actual ramifications of the C&H operation and its field waste application sites.

These are a few of the reasons I hold deep reservations about the FSA and SBA draft EA and its selective use of the BCRET study, as well as the choices made by our governor

and legislature for the expenditure of state funds. Besides state taxpayers dollars being spent on testing fields where there is no waste, and disregarding data on fields where there is, our federal tax dollars have been spent to conduct this cursory and flawed draft EA by the Farm Services Agency and Small Business Administration. Not only would these agencies not have had to spend our dollars on this ridiculous draft EA, but if they had done the job in the original EA entrusted to them, this second EA would never have been necessary. Now they have once again wasted our tax dollars on another useless EA. Our dollars this time have gone to Cardno, and Ecosphere, multinational businesses that specialize in trying to get government agencies out of the boondoggles they have created for themselves.

If ADEQ had performed proper assessment of the original NOI and NMP as entrusted to it by the federal EPA under the NPDES General Reg 6 Permit, as well as the EA submitted by the SBA and the FSA, then this second EA and the expenses it continues to incur would be unnecessary. It is interesting that the ADEQ in its submittal to Cardno's call for comments states that, "The ADEQ makes no comments on the EA conclusions." Again, it is passing off its assessment responsibilities. It has a whole list of "corrections or clarifications" including several that mention the blatant blunder that SBA and FSA make drawing conclusions based upon Reg 5 permits, not the Reg 6 permit that the C&H CAFO holds. ADEQ gently reminds the SBA and FSA, "The referenced significant changes are defined in APC&EC Regulation 5.305. **C&H is not operating under a Regulation 5 permit.** Significant changes for the NPDES General Permit ARG590000, which C&H is currently covered under, are defined in Part 3.2.6.3(a)- (d)," and "'Annual soil and waste/wastewater nutrient testing conducted as outlined in the NMP and as required by ADEQ Regulation 5" This statement should refer to NPDES General Permit ARG590000 instead of APC&EC Regulation 5. **The facility is not permitted under Regulation 5.**" Another "clarification" ADEQ helpfully makes in response to this fabricated statement made by the SBA and FSA: "Ponds are surrounded by fencing that meets local Natural Resource Conservation Service (NRCS) requirements and signs are posed to alert people of the ponds' purpose(ADEQ 2015a).' 'The Department is unaware of any fencing around the ponds or signs posted to alert people of the ponds' purpose.'" (See entire list of "corrections" and "clarifications" in ADEQ's submittal of non-comments:

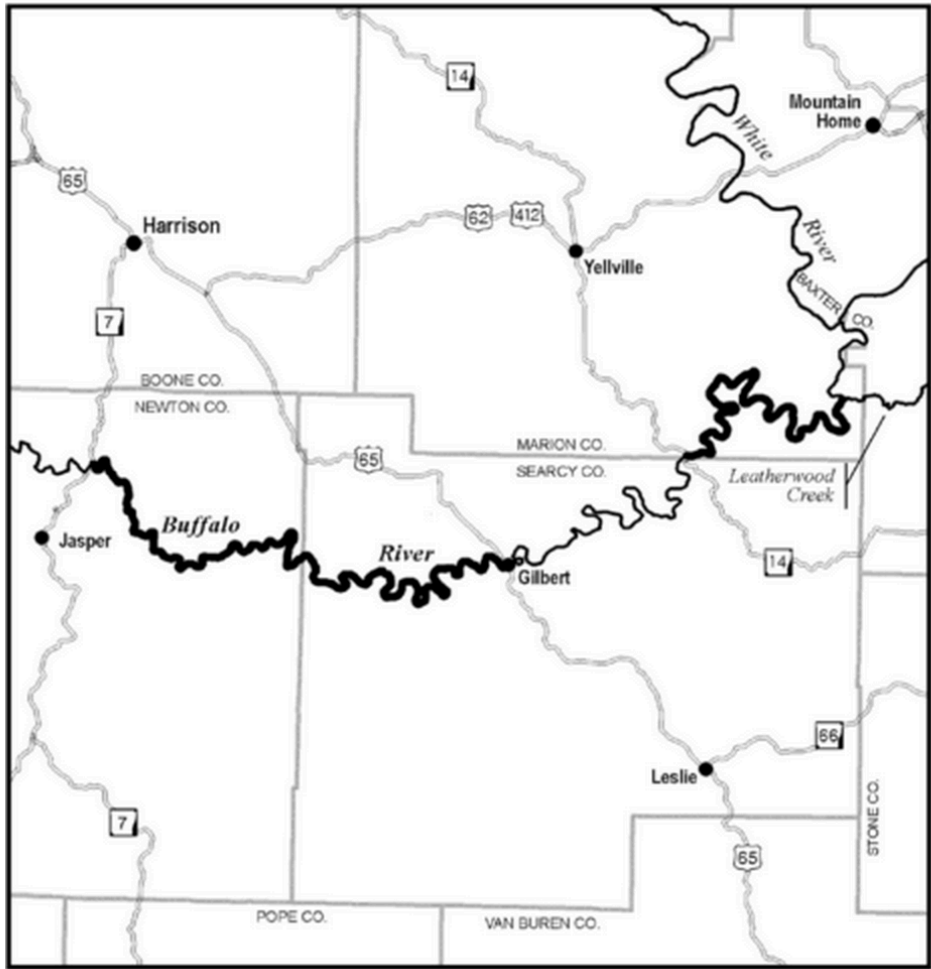
[https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG590001\\_Environmental%20Assessment%20Comments\\_20150831.pdf](https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG590001_Environmental%20Assessment%20Comments_20150831.pdf)

I ask that the government of the United States be held accountable to follow its own laws and consider this draft EA another seriously flawed document, this time thrown together with minimal knowledge or awareness of our unique Buffalo National River and its watershed, as well as the CAFO permitting process it claims to draw its conclusions upon. I ask the government of our country and the ADEQ of our own state to look harder at this CAFO site using all of the scientific studies available including but not limited to BCRET, KHBNR, USGS, USFWS and the NPS to determine the cumulative detrimental effects of this operation in a properly conducted Environmental Impact statement and how best to actualize the only safe alternative to relocate it out of the BNR watershed before it creates irremediable damages.

Sincerely,

Marti Olesen

Map of Unit RF12 (Buffalo River) of critical habitat for Rabbitsfoot



 Critical Habitat



aws.com/images/federalregister.gov/FR30AP15.029/original.n  
USFWS map

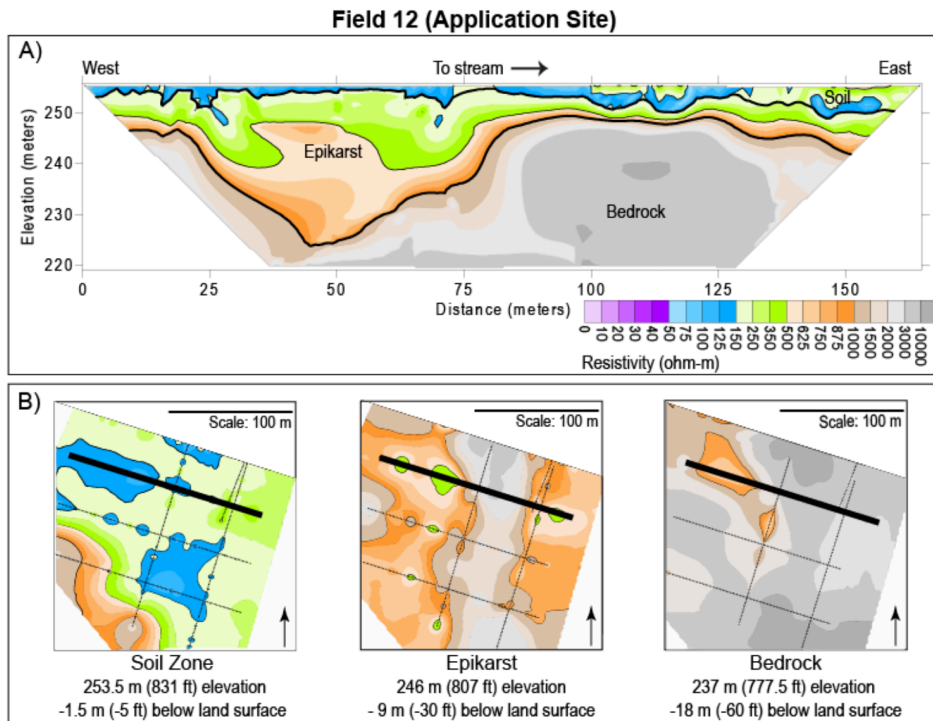


Figure 8 – A) Interpreted Soil-Epikarst boundary and Epikarst-Bedrock boundary for Field 12 for ERI dataset MTJ12 (Application site) cross sections. B) Interpolated 2D depth slices of resistivity at differing elevations illustrating a map view of the subsurface. Heavy black line indicates the location of the cross section from A)

"The epikarst surface on Field 12 is very irregular in transects MTJ08 (Figure 11), MTJ11 (Figure 14), and MTJ12 (Figure 8A), while on transects MTJ09 and MTJ10 (Figures 12 and 13) it is more uniform depth across each image. MTJ12 has the most variable epikarst surface across Field 12, as there is a deep and broad weathering feature present alongside a shallow and flat weathering surface in the cross-section (Figure 8A). There appears to be a large doline feature, a closed topographic depression caused by dissolution or collapse of underlying rock or soil, within the weathered bedrock on transect MTJ12 that stretches nearly 61 meters (200 feet) at the top of the feature and starts 8 meters (26 feet) below the land surface and delves 23 meters (75 feet) downward (Figure 8A)." (OSU ERT slide, Field 12.)

Glossary terms defined in OSU report:

Doline Feature: a closed topographic depression caused by dissolution or collapse of underlying rock or soil; synonymous with sinkhole. (UT)

Epikarst: a relatively thick (may vary significantly but up to 30 meters thick is a good generalization) portion of bedrock that extends from the base of the soil zone and is characterized by extreme weathering and enhanced solution. Significant water storage and transport are known to occur in this zone. (CK)

Jon Fields and Todd Halihan. Preliminary Electrical Resistivity Survey of Mount Judea Alluvium Sites. 2nd Quarter Report. Boone Pickens School of Geology, Oklahoma State University.