

From: [Lin Wellford](#)
To: [Water Draft Permit Comment](#)
Subject: Comment on C&H Hog Farms, Inc Reg. 5 Permit
Date: Thursday, March 16, 2017 8:08:58 PM

Dear Ms. McWilliams,

In 1992, ADEQ stated "the greatest threat to surface and **ground water** quality in northwest AR is nonpoint source pollution from confined animal operations."

In 2012, ADEQ employed a Reg. 6 General Permit to allow C&H Hog Farms, Inc., to build and operate a large swine CAFO along a major tributary to the Buffalo River.

According to the EPA website: To become an authorized NPDES state, **(2.1 Overview of EPA/State Roles in NPDES Program)** the requirements imposed under a State's NPDES program must at a minimum be as stringent as the requirements imposed under the federal NPDES program.

Further:

2.3.3 General/Individual Permits

Existing regulations provide that general permits may be issued to cover a category of discharges within a geographic region. Within such areas, general permits may regulate either storm water point sources or a category of point sources that **involves similar operations with similar waste. Operations subject to the same effluent limitations and operating conditions, and requiring similar monitoring, are most appropriately regulated under a general permit.**

It concludes;

2.5 Summary

State efforts to manage AFOs are carried out through issuance of NPDES permits and state issued non-NPDES permits and/or authorizations. State AFO regulatory programs are directed in large part at controlling the potential environmental impacts on surface water, **but also at protecting ground water and managing industry growth.**

This mention of protecting ground water seems to be absent from ADEQ regulations, making them less stringent and therefore not in compliance with federal standards under which C&H was established.

Since this was the first (and only) such Reg. 6 General Permit employed, it clearly was not used to harmonize a number of similar operations with the same waste output within a geographic region. APC&E ALJ Charles Moulton remarked at a public hearing that offering a Reg. 6 General Permit was brought before the commission by the former director, Teresa Marks, who claimed at the time that the addition needed to be adopted to be in line with EPA regulations. When current director Becky Keogh came before the commission last year to say that ADEQ had decided to do away with that particular permit option, she stated that EPA had not required states to offer the permit after all.

In light of that, looking at the differences between the AR Reg. 5 and EPA Reg. 6 permits sheds some light on why a Reg. 6 permit was pushed for in the first place. For one thing, Reg 5 requires a "Good Neighbor Policy" that includes notification of neighbors (**Reg. 5.302**):

An applicant for a new or modification of an existing liquid animal waste disposal

permit shall make a reasonable effort to notify all adjacent land owners that a complete application for a liquid animal waste disposal permit is on file with the Department. This notice shall also contain the permittee's name, mailing address, type of permit action, type of facility, size of facility and location. The land owners shall be notified at the same time that the permit application is submitted to the Department. The applicant must provide a copy of the letter sent to each adjacent land owner with the application. The Notice of Intent must also be posted in a local newspaper.

A Reg. 6 Permit has no such requirements, making it far easier to keep plans secret and place a NOI on a website where only those interested in commenting favorably on the application are likely to find it, as happened in this case. Without knowledge of the permit application, the public was shut out of the comment period and left without standing to appeal. It is unlikely that this was unintended.

Another key difference between the two permits is that a subsurface investigation is required for a Reg. 5 permit but not for a Reg. 6 permit. Had C&H been required to undergo a thorough subsurface investigation, it might have been difficult for two different out-of-state firms to conduct the required Environmental Assessment without concluding that introducing millions of gallons of waste into a fragile watershed would have a sizable environmental impact. The karst geology and siting of the facility along a major tributary to an Extraordinary Resource Water should have been enough. That the receiving waterway is also a national park and home to several endangered species makes the conclusion that a 6500 head concentrated hog feeding operation would not pose significant threat casts doubt on the credibility of the firms that conducting the assessment, apparently without ever actually visiting the area.

Now that C&H is built and operating, two of the key reasons for holding a Reg. 6 permit no longer apply. Instead, a Reg. 5 permit will allow them to add land application sites as a minor modification. and lengthens the time between soil testing from once every 3 years to once every 5 years. This could prove useful as many of the new fields C&H proposes to use are already near or above optimum for nutrients.

A key point of dispute from the start has been the claim by geologists that Mount Judea sits on porous and fractured limestone formations called karst that are prevalent throughout the Ozark Highlands Plateau. USGS national maps of karst clearly show the Buffalo Watershed is within the karst region. ADEQ and C&H have ignored or denied that karst substrate is an

issue.

NRCS Field Handbook (2012) states "Fractures in bedrock may convey contaminants directly from the site to the well and affect water quality in a local aquifer. Although karst topography is well known as a problem because of its wide, interconnected fractures and open conduits, almost any surface type rock will have fractures that can be problematic unless treated in design. Many fractures are wide enough to allow rapid flow. Pathogens may survive the passage from the site to the well (or groundwater) and thereby cause a health problem.

NRCS further states that "waste must be applied in a manner that:

Prevents runoff or excessive deep percolation of the wastewater

Applies nutrients in amounts that do not exceed the needs of the crop

Minimizes odors from waste being applied.

Not only does the fractured and porous nature of karst make the Buffalo River vulnerable, but the unpredictable nature of the dissolved conduits, caves and interconnected underground transmission routes have made it difficult to track or pinpoint where impaired waters may travel. Dye tests showed that water can move beneath mountains and even under the Buffalo River.

Electrical Resistivity Imaging tests conducted by Oklahoma State University geologists illustrate that a C&H spray field that had 'recently received waste' was covered with tiny sinkholes that allow seepage or percolation of fluids down into the water table. While regulations state that visible sinkholes must be protected by a 100 foot buffer zone, the spray fields actually act as a sieve, allowing pollutants to wash deep into the ground with little or no filtration. Despite the willingness of hydro-geologists to conduct dye testing at spray fields and around the facility, the owners of the facility have refused to allow any testing.

By nature and by definition, impairment happens slowly, incrementally and insidiously. Even Dr. Andrew Sharpley admitted as much during a filmed presentation on nonpoint source pollution, asserting that 'no one knows where the tipping points may be.' We simply don't know how much raw manure can be introduced into a fragile watershed before it begins to do damage. But 40% of impaired waterways in the U.S. were impaired solely by nonpoint source pollutants, so we can be sure that it is happening.

At this point we can look at trends and extrapolate from them that if millions of gallons of sewage continue to be added to the watershed, we are likely to continue to see increasing indicators of stress and impairment in the Buffalo River. More persistent and widespread algae, fish kills, a drop in tourism, possible health warnings due to rising pathogens at certain access areas are all outcomes that become more probable as time goes by.

Studies show dissolved nitrogen runoff is typically 340 percent higher from fields with manure application than on those where it has not been applied. It also remains in the soil solution and readily moves with infiltrating water and will persist for years. The sludge accumulating in the waste lagoons has been shown to be an even bigger problem, with P and N far more concentrated and therefore less likely to be taken up by grasses.

Adding more and more acres of application fields within the watershed only assures that even if (when) this industrial animal operation is finally closed for good, the impact it has had will

continue to degrade the water quality for decades.

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