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From: Alford Drinkwater <alford_drinkwater@yahoo.com>
Sent: Monday, April 4, 2022 10:07 AM
To: Water Draft Permit Comment
Subject: AR0053210 AFIN 60-05010 Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2
Attachments: Letter - to Faizan Khan - COMMENT - 4-1-22.docx

Attached are my comments regarding AR0053210 Pulaski County Property Owners' Multipurpose Improvement District No. 2021-2

Thanks,

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March 31, 2022

Faizan Khan
Office of Water Quality
Arkansas Department of Energy & Environment
North Little Rock, Arkansas

RE: Public Comment AR0053210 AFIN 60-05010
Pulaski County Property Owners' Multipurpose Improvement District
No. 2021-2

Dear Mr. Khan,

I would like to provide a few comments regarding the proposed wastewater permit for the Paradise Valley Subdivision in west Pulaski County near the Roland community. I am against issuing this permit for a number of reasons and believe that the community needs additional time to review documents and prepare responses. Therefore, I am requesting a 30-day extension of the public comment period and am also requesting a public hearing in Roland to be held at least two weeks after the public comment period has closed. This issue is very important to the residents of the community and they should be given an opportunity to express their concerns directly to those who are in charge of making this permitting decision.

The wastewater treatment plant that has been proposed is a package system very similar to the package system the developer operates for the adjoining Waterview Estates subdivision. The package system serving the Waterview Estates subdivision uses only about 30% of its rated capacity for processing wastewater. Even though the system is under no pressure from volume/flow and only handles residential sewage, it has accumulated at least eight violations of its discharge permit. Plus, the owner has had to be forced by at least two Consent Administrative Orders (CAO) to correct problems.

Package systems such as the one serving the Waterview Estates subdivision and the one proposed for the Paradise Valley subdivision have a bad track record for violations of all types. While the system itself is designed with the necessary parts to make a reasonable treatment system, the backups and failsafe systems that are included in site-built wastewater treatment systems are mostly not found or they are undersized in package systems.

The operator must pay close attention to package treatment units to make sure the system is operating properly and maintenance is done when needed. Because of the limited modular nature of the system and the variability of the wastewater arriving at the system, problems often arise that exceed the built-in capacity and there is nothing left to do but discharge poorly treated

wastewater. Everything that happens must happen within the package system and if it does not, untreated sewage pollutes our streams.

Operator error is also often identified as the cause for problems with package systems. The systems are small and the operator always has several other jobs besides operating the wastewater treatment system. That is the case with the proposed Paradise Valley wastewater treatment system. The operator will not be fulltime and, if the Waterview Estates WWTP experience is any predictor, the operator will not even make the normal appointed rounds committed to in the operation manual which is required by the permit. U.S. EPA notes in one of its fact sheets that an operator should be at the package system two to three hours per day. Operator neglect and a lack of any significant backup capacity are two of the biggest reasons for failure of package systems.

In many ways, comparing package treatment systems to site-built treatment systems is similar to comparing a mobile home to a site-built home. A mobile home has all the features of a site-built home but they don't work very well for very long before they breakdown. Metal pops off the screws on a mobile home, windows don't work, and the environment begins to leak in. The package treatment system is also factory build, hauled to the site, hooked up, and turned on. With a package treatment system, a valve malfunctions, a switch malfunctions, filters clog, maintenance goes lacking, and poorly treated sewage is discharged into the environment.

For the reasons stated above and many others, package treatment systems are outlawed in many locations. Package treatment systems and other surface discharge systems are not allowed in the neighboring, Maumelle watershed. It is not a matter of their design not working. It is a matter of their track record not working. And that is the reason they are outlawed at various locations. If they do not work in the Maumelle watershed, why would anyone think they will work in the Mill Bayou watershed.

The draft permit for the Paradise Valley wastewater treatment system does not contain a requirement for phosphorus. Most wastewater permits do contain a phosphorus requirement consisting of either a hard numeric standard or testing and reporting. This permit has neither. While phosphorus is not toxic in the wastewater, it is most often the limiting nutrient for algae bloom, and general eutrophication of streams, swamps, and wetlands.

The Preston Community Wastewater Utility (AR0050571) located just across the Arkansas River from Roland in Faulkner County also uses a package treatment system consisting of multiple package units. The limit for phosphorus contained in the Preston Community wastewater permit is a monthly average of 1 mg/l. Why would the state offer a higher level of protection for Palarm Creek and Lake Conway than it is providing for Mill Bayou? Why would the state offer Mill Bayou no protection at all for phosphorus?

All the other parameters contained in the Preston Community Wastewater Utility permit are much lower than they are for the Paradise Valley permit. Some of the parameters, such as fecal coliform is 500 percent greater in the Paradise Valley permit than they are in the Preston Community

Wastewater Utility permit. Why is DEQ allowing Paradise Valley to discharge five times as much fecal coliform into Mill Bayou?

In their initial permit application, the developer indicated that the treatment plant would produce a CBOD5 limit of 10 mg/l. Why did DEQ increase that limit to 23 mg/l from May through October and to 30 mg/l from November through April? That is a 200% and 300% increase respectively for those periods for CBOD5. Did the developer request the increase or was it freely given by DEQ?

The same is true for Suspended Solids. The original application indicated the package unit would produce effluent with 10 mg/l of Suspended Solids. In the draft permit, DEQ has given the developer a limit of 30mg/l which is a 300% increase from what the plant is supposed to be able to produce. If the package treatment unit can produce better quality effluent, why does DEQ allow the permittee such largess.

Higher effluent limits in the permit quickens the degradation of Mill Bayou and preserves money in the pocket of the developer. Protection of Mill Bayou is more important than saving the developer a few dollars on treatment cost. The whole reason for our environmental legal system is to more correctly place the cost of pollution onto the polluter. In other words, "the polluter pays." Or at least, that is supposed to be the way it works.

The area below the outfall for Paradise Valley's proposed permit is a swamp and a wetland. The flooded area of the swamp begins shortly past the point on the property line where the unnamed tributary leaves the treatment plant site. The swamp and wetlands are sunken in and around Mill Bayou and maintain a significant water flood during most of the year. A limited amount of water testing in Mill Bayou to determine water quality has been conducted by Laura Ruhl, Ph.D., with UALR's Earth Science Department.

The area downstream from the proposed wastewater discharge point is low or sunken ground around and adjoining the unnamed tributary to Mill Bayou. The area is flooded for a significant portion of the year with maximum flooding occurring during the wet season. During most of the year (six to nine months) the area around the channel of the unnamed tributary is flooded from six to twelve inches deep. The flooded area varies to well over 500 feet in width. The channel of the unnamed tributary retains water in pools throughout most of the dry period although there is very little if any flow during that period.

I have completed some simple modeling of the area below the discharge point to determine what will happen to the phosphorus concentration after the wastewater is introduced. The modeling considered precipitation, runoff, evaporation, infiltration, flow, and wastewater discharge. As I had suspected, the phosphorus concentration will rise significantly after the wastewater discharge from the first package treatment unit begins.

The testing conducted by doctor Ruhl indicates that the phosphorus level in Mill Bayou and its tributaries is already near a level that cannot be increased without expectations of causing significant algae bloom. Additional testing should be done to provide a better basis for

understanding how severe the impact of adding high phosphorus wastewater to the ecosystem will be.

Testing water quality in streams such as Mill Bayou to determine its safety and usefulness is the responsibility of the Division of Environmental Quality and should be a part of the ongoing work supporting the state's 208 water quality plan. We are unaware of any testing that has been done by DEQ in Mill Bayou or its tributaries to date. The wastewater permit for Paradise Valley should not be issued until DEQ has actually gathered data sufficient to show that the wastewater will not have significant negative impacts on the water quality, ecology, or eutrophication of Mill Bayou, its tributaries and wetlands.

The swamp and wetland areas below the proposed discharge point are already showing visible signs of degradation caused by the developers reckless stripping of the Paradise Valley subdivision site. The developer has bulldozed across the unnamed tributary and destroyed all buffer areas while failing to construct the required stormwater retention ponds – all acts in violation of the developer's construction stormwater permit.

The antidegradation requirements in the clean water regulations should be considered and applied in advance of any final decision to issue this permit. Properly implementing antidegradation standards to permitting decisions requires significant knowledge of the stream or aquatic system. At this point, it does not appear that DEQ has any significant information regarding Mill Bayou.

The Maumelle Water Corporation has three wells in the Roland area that provide water to the residents in the area. These wells all appear to be completed in the quaternary alluvium which consists of sand, and sand and gravel with small amounts of silty sand on the surface. It is well known that the associated aquifer is locally recharged which makes local pollution much more serious.

After the Paradise Valley wastewater treatment plant was proposed, Maumelle Water Corporation asked ADEQ to conduct a source water assessment that would provide them with information regarding how vulnerable their water wells are to surface pollution. As I understand it, that assessment has not been started. This assessment and a more rigorous evaluation of all the geohydrological conditions impacting the community's water wells should be conducted before any permit to pollute Mill Bayou is issued. The need for that assessment is based on the very sensitive geohydrological conditions that exist in association with the Maumelle Water Corporation's wells. Whether that assessment should be done by ADEQ or the Arkansas Department of Health is not important at this point. It simply appears that the request has been made of ADEQ and no response has been given.

Maumelle Water Corporation's well #1 is located in very close proximity to Mill Bayou. Any pollution going through Mill Bayou or pollution flooding the swamps and wetlands surrounding Mill Bayou can potentially wind up in the drinking water wells due to the sensitive nature of the geology the wells are located in. The location of well #1 could make it particularly susceptible to pollution due to how close the well is to the location and path of the pollution from the Paradise

Valley wastewater treatment plant and from stormwater originating at Paradise Valley and Waterview Estates.

In addition to Mill Bayou itself, there is an extensive area above and hydrologically upgradient from well #1 that is swamp and wetlands. This area is flooded for a majority of the year. The presence of such a large area with surface water cover sitting on a very permeable underlying geology significantly enhances the potential for pollution to penetrate down and travel downgradient reaching well #1.

Significant reevaluation of the permit is needed at this time. That reevaluation should fully consider the very lax and inappropriate standard the proposed wastewater plant will be allowed to meet as the permit is currently drafted, as well as the unique geology, geomorphology, hydrology, and ecology of the area. All source water studies should be completed before any permit is issued. These are all things that are within reach of DEQ and the State of Arkansas.

In addition to the significant environmental problems the proposed wastewater treatment plant itself will create, it is also a key to many other serious problems the community faces. One of those problems is increased flooding. Over the past ten years, residents of the community have seen increased flooding during normal rainfall events. The Waterview Estates subdivision atop the mountain range to the south of Paradise Valley has been developed over that same period. As the subdivision has continued its development through that period, stormwater runoff volume has been added to the drainage basin resulting in more frequent flooding.

DEQ issued the stormwater permit for construction of Waterview Estates subdivision (ARR150142) which contained provisions for rerouting stormwater from the Maumelle watershed into the Mill Bayou watershed. DEQ's permit and enforcement program has allowed the Waterview Estates subdivision to discharge stormwater from a point source originating within both the Maumelle River watershed and the Mill Bayou watershed without any detention or slow-release controls to prevent flooding. DEQ must have known that the stormwater permit it issued for construction of the Waterview Estates subdivision would significantly increase flooding in Mill Bayou. Construction is continuing at the Waterview Estates subdivision so the predictable increases in flooding of the Mill Bayou basin are ongoing.

Flooding in the area downstream from the Waterview Estates subdivision, which includes the Paradise Valley subdivision, has been intensified by DEQ having allowed the developer to move the stormwater from approximately 100 acres in the Maumelle drainage basin to the Mill Bayou drainage basin. The permit was issued by DEQ without including a requirement for detention and slow-release. The additional volume of stormwater created by this basin-to-basin transfer has resulted in flooding in the Mill Bayou basin. Both pollution and flooding are covered by the federal regulations governing stormwater and should be covered by the permits issued by DEQ.

This is yet another example of provisions made by DEQ for protecting the Maumelle drainage basin that are not being made to protect the Mill Bayou drainage basin. More specifically, in the case of the basin-to-basin stormwater diversion, these provisions have been made to benefit the

Maumelle drainage basin and one developer at the expense of the Mill Bayou drainage basin and those who live near Mill Bayou.

The stormwater permit for Waterview Estates is the same permit covering the development of Paradise Valley. That permit covers 1,100 acres and when development is complete the area covered will accommodate thousands of homes and thousands of people per square mile making it an “urban area” by regulations promulgated under the U.S. Clean Water Act. At that time, it will be covered by General Permit ARRO4000 – MS4 Stormwater and will be required to secure coverage under that permit or secure an individual permit to discharge stormwater.

DEQ should not wait until after-the-fact to regulate the stormwater problems in Mill Bayou. Citizens of the community have already shown the Department how flagrant the developer is with his disregard of stormwater regulations and his failure to fulfill the commitments he made to the Department under his existing construction stormwater permit. Between the violations at the existing Waterview Estates wastewater treatment plant and the disregard shown for stormwater regulations at the Paradise Valley subdivision, the developer has proven that he is a bad actor and as a bad actor, he should not be given any new permits.

Recently, the Department has become aware of the cultural and historical significance of the area downstream from the wastewater treatment plant. Appropriate consideration should be given to the rich heritage located in this area and prevent its destruction before it happens. In the developer’s original permit application, he proposed to pump wastewater from Paradise Valley to a point next to Mill Bayou where the Waterview wastewater treatment plant is located. That point is over one-and-a-half miles south of Roland where Mill Bayou flows year-round. The proposal was changed after the developer discovered that it would be cheaper to discharge wastewater into the much closer unnamed tributary of Mill Bayou. However, the chosen discharge point on the unnamed tributary is dry during much of the year. Placing a package treatment plant, and ultimately many packaged treatment plants, on the unnamed tributary will turn it into a sewage ditch destroying and changing much of the ecology downstream. It is a bad mistake for the Department to encourage that to happen.

The Department has much more discretion before the permit is issued than it will have after the permit is issued regarding the protections it can provide to the community, the bayou, the ecology, and the rich heritage that all stand to be hurt or destroyed. Discretion is the better part of valor. The Department should use its discretion at this point to show that it truly does stand for environmental protection and the environmental security of our communities and people.

Sincerely,

Alford Drinkwater
President

cc: Ross Noland, esq.