

October 12, 2011

Dr. Al Armendariz  
Administrator  
Region 6, Environmental Protection Agency  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202

Subject: City of Fayetteville Commitment to Water Quality and Nutrient Reduction

Dear Dr. Armendariz,

Thank you for your visit to Northwest Arkansas, the Illinois River Basin, and to Fayetteville's West Side Wastewater Treatment Facility September 29<sup>th</sup>. I hope the visit allowed you to see first hand the tremendous dedication the entire region has to preserving water quality.

The City of Fayetteville believes deeply in and is fully committed to its responsibilities as a steward of the environment in Fayetteville, our surrounding areas, and in the other areas impacted by our actions. For decades, Fayetteville has been a leader in Arkansas and the region for its leadership in environmental stewardship. As an individual, I hold this environmental commitment as a core belief. As Mayor, I represent a City Council and a population that also holds this environmental commitment as a core belief. We have not wavered from this dedication, and we will not.

Water quality is a major focus of this effort, not simply in the reduction of phosphorus, but also addressing other pollutants, sediment, and reducing both total flow and peak flows within and downstream of our creeks and streams. As sediment is a significant issue, coupled with the fact that 86% of the phosphorus in the Illinois River comes from sources other than Wastewater Treatment Plant (WWTP) discharges, Fayetteville believes a broad-spectrum watershed approach is the only way to truly create the maximum benefit to improving the water quality. Addressing phosphorus alone will not achieve all water quality objectives. In the late 90's, WWTPs were 45% of the total load. Regional WWTPs have made significant progress, and continue to improve (L.B. Massey, L.W. Cash, and B.E. Haggard, Water Quality Sampling, Analysis and Annual Load Determinations For The Illinois River At Arkansas Highway 59 Bridge, 2008).

To achieve these water quality benefits, Fayetteville has, for over 23 years, led the way in Arkansas and the region in wastewater treatment and water quality protection. Let me list a few of our accomplishments and ongoing actions:

- 1988, the Paul R. Noland WWTP came on-line as just the second full-scale Anaerobic/Anoxic/Oxic (A2O) facility in the nation, meeting a (then almost unheard of) 1.0 mg/l phosphorus discharge limit.

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- Effluent from the City's two WWTPs, while allowed to contain as much as 1.0 mg/l of P by NPDES permit, has averaged less than half of that concentration over the life of the two facilities.
- Uses a biological nutrient removal treatment system with available polishing via alum at both WWTPs. As these facilities must be designed to meet peak flow and loading conditions, they produce much better than required effluent during normal conditions. As a result, the total pounds per day of P discharged from the West Side WWTP averages less than 20% of what is allowed by the NPDES permit.
- 2005, made an agreement with the Beaver Water District, in which the City committed to meet a voluntary annual average phosphorus limit of 0.5 mg/l in our Noland WWTP discharge. We have met, with significant safety margins, this discharge limit since the agreement was made.
- 2008, completed construction on its new West Side WWTP, the cornerstone of a \$185 million wastewater system improvement effort. Since its first discharge on June 1, 2008, the plant has a perfect compliance record, has passed all toxicity testing, has "undetected" levels for most priority pollutants, and has received not one single public complaint- for odor, effluent, or any other aspect of the operation.
- Like most cities, Fayetteville had significant issues with wet weather sewer overflows (SSOs). After 20 years of concentrated efforts costing over \$40 million, we have now achieved the goal of eliminating wet weather overflows in a five year storm. The SSO elimination program in Fayetteville is heralded as one of the most successful in the nation. This sanitary sewer rehabilitation program continues using wastewater system revenues and STAG funds to continue our efforts to prevent any future SSOs and capacity issues.

In addition to the wastewater efforts, Fayetteville has completed or is working on the following efforts that will directly benefit the water quality in both the Illinois and White River watersheds, including but not limited to:

- 2004, completed construction of a LEED Silver Library.
- 2007, first city in Arkansas to hire a full-time sustainability coordinator. His work has significantly benefited all aspects of the municipal operation and environment in which we work.
- 2007, formally adopted City Plan 2025 as its formal land use master plan, which identifies reducing suburban sprawl and developing an enduring green network as two of the six primary goals. CP2025 has won multiple national awards, including a best practices designation for "smart growth" by the EPA. Fayetteville's Natural Heritage Association is developing a Green Infrastructure Plan for the region that will provide data to update Fayetteville's City Plan 2030 green infrastructure goals and designations.
- 2007, City Council adopted a resolution requiring all new city-owned buildings in excess of 5,000 square feet meet LEED-Silver certification.
- 2008, completed a \$262,200 stream bank restoration project on the Niokaska Creek (Illinois River Basin) in our Gulley Park using partnership funding from Section 319 grants and City funds.
- 2009, completed a two year long study producing a Nutrient Reduction Plan for the White River Basin, developed by Geosyntec. While focused on the White River watershed, the vast majority of the actions recommended in that plan have equal benefit in both the White and Illinois River watersheds. The region partnered with Tetrattech to develop a Beaver Lake Watershed Protection Plan that targets sediment and nutrient reduction mirroring Fayetteville's plan.
- 2009, completed construction of a LEED Silver Municipal Court building.
- 2011, nearing completion on a \$312,000 stream bank restoration project on the Niokaska Creek (Illinois River Basin) on private property and in our Sweetbriar Park with City and USEPA wetland grant funds.

- Continuing program of other stream bank restoration projects in both the Illinois and White River basins with total funding either spent or programmed within the next 18 months, of over \$1.9 million, using funds from Arkansas Natural Resources Commission, University partnerships, watershed foundation partnerships, and City funds. National expert Dave Rosgen from Colorado Springs is assisting the City in these efforts. We have completed one project already and are in planning and/or design on four other stream bank projects.
- 2010, the Fayetteville City Council adopted a Low Impact Development ordinance whereby new developments are encouraged to incorporate sustainable design and construction techniques. The first large scale development under this LID ordinance will be the City's own Broyles Avenue Recycling Drop Off and Education Facility, which has equal focus on recycling collections and education. The facility, which includes an outdoor covered classroom, focuses on sustainability education, and will showcase multiple low impact development techniques including a rain garden, pervious pavement, xeriscaping, native plantings, bioswales, etc.
- 2011, after many hours of public discussion, the City Council adopted a Riparian Zone/Streamside Protection ordinance creating significant riparian zone protection in the City. This is the only such ordinance in the state of Arkansas, and was used as a reference in the City of Norman's development of its own similar ordinance.
- Developing a Stormwater Utility Feasibility Study evaluating the best methods of operating, maintaining, and funding our stormwater system.
- Actively participate, financially and with staff time, in numerous cooperative watershed protection partnerships including the Illinois River Watershed Partnership, the Beaver Lake/White River Partnership, and others.
- Developed a pet waste program providing pet waste stations and baggies in parks, trails and other public areas.
- Currently executing a broad-based \$40,000 stormwater education program including the local cable provider, local television stations, and advertisements at movie theaters, integrated and coordinated with other area education programs to reach all public segments. We also have an additional \$40,000 per year educational partnership with the University of Arkansas Cooperative Extension Agency. The City's Environmental Action Committee, chaired by a member of the City Council, recently completed a year-long Watershed Luncheon Series focused on the economic and environmental impacts of watershed protection. The series targeted influential residents in the community that carried this message to their larger networks.
- Inventoried septic systems within the City to better capture potential water quality impacts of these systems and identify requirements to connect them to the City's wastewater treatment.

Over the past decade, Fayetteville grew by 15,533 residents, to a population of 73,580 citizens. All the while, we have continued to increase our commitment to water quality and environmentally sustainability needs as shown above.

We are committed to continuing our work to improve water quality in the coming years, but that's not to suggest Oklahoma's 0.037 mg/l phosphorus standard can be attained. The 0.037 standard is based on small streams in forested, undeveloped regions of the U.S., and is not achievable in developed watersheds like the Illinois River basin.

Fayetteville is not alone in its efforts to improve water quality. Fayetteville and other Northwest Arkansas cities have invested \$225 million in capital expenditures related to water quality since 2000. Fayetteville specifically is just now completing a \$185 million Wastewater System Improvement project, in which the vast majority of the effort was taken in the Illinois River basin including a \$61 million state of the art wastewater treatment plant. We're proud of the tremendous steps we've taken to protect water quality in Arkansas and Oklahoma. The citizens of Bentonville, Rogers, Siloam Springs and Springdale also paid to build and upgrade sewer plants, and the cities enhanced wastewater treatment processes to reduce phosphorus discharges. Bentonville and Tontitown are partners in a regional Northwest Arkansas Conservation Authority (NACA) wastewater treatment plant that will someday be expanded to provide additional high-quality wastewater treatment and water protection for other Northwest Arkansas cities. All of these improvements, excluding the NACA plant, were designed in good faith to meet a 1.0 mg/l as specified within the Statement of Joint Principles. The region's poultry companies, which provide thousands of jobs to Oklahomans, have spent millions of dollars developing transportation systems to help independent, contract growers send poultry litter out of the Illinois River and other Scenic River watersheds in both Oklahoma and Arkansas. The companies' efforts have taken tons of poultry litter to cropland in Arkansas and Oklahoma outside the Illinois River watershed. Developers are meeting ever tighter requirements and best management practices to protect water quality in the short term – during development – and in the long term, once a development is built out. Arkansas' State government has supported our efforts by providing low-interest loans to assist the Northwest Arkansas Conservation Authority and the city of Fayetteville with sewer treatment projects. It has required area farmers to have nutrient management plans to monitor and control poultry litter's use as fertilizer. More recently, the Arkansas Natural Resources Commission took aggressive steps to ensure that lawn fertilization companies in Northwest Arkansas are spreading lawn fertilizer as required by state laws regulating the use of commercial fertilizer.

Modifying four wastewater treatment plants in Northwest Arkansas to discharge phosphorus of 0.1 mg/l instead of 1 mg/l is estimated to cost an additional \$90 million to \$100 million in capital upgrades, plus several million per year in operations and maintenance expenses. This is an unreasonable amount of additional money for these communities to be called upon to spend when scientists say there would be little or no environmental benefit. The expenditures on upgrading wastewater treatment plants do not begin to cover the costs associated with urban stormwater water quality controls. Cities would have to spend millions more dealing with the runoff from their boundaries, while once again producing minimal water quality impacts.

These successes, and the resulting reductions in phosphorus, are well documented in both states' water quality monitoring reports developed for the Arkansas – Oklahoma Compact. The 2009 Arkansas – Oklahoma Compact reports from both states show that the long targeted 40% phosphorus reduction has been achieved in the Illinois River- both at Watts and at the state line (Oklahoma's 5-year Rolling Average Phosphorus Report for the Illinois River Basin, Illinois River Basin, Arkansas – Oklahoma Compact, CY2009 and Water Quality Monitoring Report, Illinois River Basin, Arkansas – Oklahoma Compact CY2009). The 40% has been a stated objective of the Arkansas Oklahoma Arkansas River Compact Commission since 1993. While there was little documented success prior to 2001, which led to developing the Statement of Joint Principles and Actions, there has been significant measurable success since.

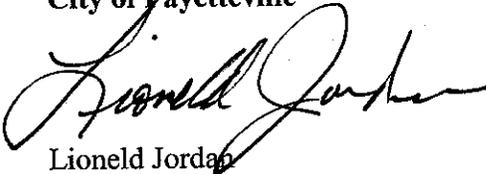
We look forward to seeing the results of EPA's total maximum daily load (TMDL) evaluation of the Illinois River, and appreciate the numerous public input and information sessions that have occurred throughout the process. Your staff has made numerous trips to the region to ensure all possible information is obtained, and that all stakeholders are fully informed of the progress made. The model will be an incredibly valuable tool for maintaining the Illinois River water quality for years to come. The contractor, Aqua Terra has the confidence of all parties involved for their capabilities and desires to produce a top quality model. The contractor has expressed one major concern, however, as my staff discussed with you during the tour of our West Side WWTF. The TMDL project has enough funding for Aqua Terra to run the model, but not enough to run an uncertainty analysis, and barely enough to run minor sensitivity analyses. These analyses are essential to validate the work and the model itself. Without it, the model simply will not be fully trusted.

In conclusion, the City of Fayetteville is and has long remained fully committed to its responsibilities as a steward of the watershed and our environment. We are dedicated to improving all aspects of the environment, using a broad-spectrum watershed approach as the most effective way of improving the water quality. We are partners with the rest of Northwest Arkansas, Oklahoma, and the EPA in these goals. We share the same vision of a cleaner environment, and have a proven and effective track record of partnership with all other agencies dedicated to this effort. Given the success seen in the Illinois River, and in keeping with objectives of the Arkansas Oklahoma Arkansas River Compact Commission and the Statement of Joint Principles, Fayetteville requests EPA make every effort to ensure adequate funding is provided to the TMDL evaluation to allow adequate uncertainty and sensitivity analyses, and ensure that TMDL and stream standards are based upon the best available science.

Please do not hesitate to contact me or David Jurgens, my Utilities Director, 479-575-8330, email [ljordan@ci.fayetteville.ar.us](mailto:ljordan@ci.fayetteville.ar.us), [djurgens@ci.fayetteville.ar.us](mailto:djurgens@ci.fayetteville.ar.us), if you have any questions.

Sincerely,

City of Fayetteville



Lioneld Jordan  
Mayor