Oklahoma poultry feeding operations in fiscal year 2018 produced 227,723 tons of poultry litter — manure that was applied on Oklahoma lands or trucked elsewhere, according to the Oklahoma Department of Agriculture Food and Forestry's annual report. Poultry litter is subject to a long list of regulations and required training for all who store, deliver or apply the fertilizer. But it is also subject to a long list of objections from critics who say those regulations don't go far enough. Each year, Save the Illinois River founder Ed Brocksmith waits to digest poultry reports from Oklahoma and from the Arkansas Department of Natural Resources numbers for the Illinois River watershed, much of which lies in Benton and Washington counties in Arkansas. He acknowledges water quality improvements in the Illinois River the past few decades but said the water still does not meet agreed-upon target levels for phosphorus. He said the group believes that application of chicken litter in the Illinois River watershed and Spavinaw-Eucha watershed is a large source of non-point source phosphorus pollution in waters across northeast Oklahoma. Reports indicate about 87% of the 35,000 tons of litter produced in the watershed is hauled outside the state, however. The reports also show that amounts applied to the area decreased from about 15,000 tons in 2017 to 12,000 in 2018 despite increased numbers of chicken farms. "lt's a concern because, although our Agriculture Department tells us that waste is not supposed to leave the farms except by the rules according to their management plans, we know that it is mismanaged in many cases and in some cases it's not only getting into our streams and lakes but into the groundwater.― The most recent Illinois River water quality reports show phosphorus levels at the state border near Watts are nearly double the water quality target average of 0.03 ppm and exceed that level by 80% at Tahlequah, he said. Poultry litter is a dry product kept inside a shed and then hauled and spread across fields as fertilizer. Some pastures and crop lands might have the material applied too heavily, when weather conditions are not right, in spots too close to streams or where a

grassy buffer zone that prevents the best of the product from washing off fields and into a creek is lacking, Brocksmith said. Oklahoma's Registered Poultry Feeding Operations Act lays out guidelines for fertilizer stockpiling at poultry farms and addresses application and hauling rules. Additional rules apply specifically in the protected Illinois River Watershed and the Eucha-Spavinaw Watershed, which feeds Tulsa's fresh water supplies. The state's reports are compiled from reports required of farmers and haulers. But locals say the protocols sometimes aren't followed. Pam Kingfisher, an organizer of Green Country Guardians, a community group that lobbies state officials around poultry farm issues, said people in the group are documenting the comings and goings of poultry litter trucks. While violations in spreading manure are known, it often comes down to neighbors having to police neighbors and reports aren't made, she said. Soil samples are required from farms before they apply fertilizer but no one is around to know where those samples actually came from. The practice of required self-reporting is something that makes it too easy to ignore, she said. "Some of it is just good old boys and they've always done it this way and you're not going to get them to change,― she said. State rules require soil tests and that applicators check those documents before applying litter, but farmers in her group have told her that step is ignored by some haulers and spreaders, she said. Many of the spreader trucks are "just old dump trucks― and rumble down county roads leaving trails of manure, as one of the group's members recently reported, she said. "It looked like a herd of elephants had gone down the road and left piles everywhere,― she said. "That washes into the ditches and right on down to the creek it goes.― Monitoring of waterways by the Oklahoma Conservation Commission and local conservation districts shows that water quality has improved in many of the state's watersheds since passage of the Poultry Act, said Morgan Vance, spokeswoman for the Oklahoma Department of Agriculture Food and Forestry. The department has seven full-time poultry operation inspectors, Vance said. "All they do is review and inspect poultry operations, and we also

have two full-time people in the office that work through files and paperwork. We can't be everywhere at once but we do our level best and we respond quickly and efficiently to reports.― The state's annual report â€" based on reports from farmers and haulers in the July 1-June 30 fiscal year â€" lists the amount of litter produced and how much is spread or trucked away on a county-by-county basis. It also lists specific amounts for the Eucha-Spavinaw and the Illinois River watersheds. If a poultry operation has to dispose of litter, it is trucked to other counties or out of state. What isn't used in Oklahoma is mostly hauled to Arkansas and to Missouri, Vance said. "It is trucked outside the watershed and is applied in another location where there is a lack of fertilizer. Somewhere that farmers need it,― she said. The amount of litter applied in the Illinois River Watershed in Oklahoma totaled 12,774 tons in the 2018 fiscal year and another 15,286 tons were applied in the upper watershed area located in Arkansas' Washington County. The same reported line for the Eucha-Spavinaw watershed was 17,540 tons applied on the Oklahoma side, with 7,829 tons applied in Benton County, Arkansas, which is split by the Eucha-Spavinaw and Illinois River watersheds. "Studies have shown 60% or more of the phosphorus in the Illinois River is non-point source. Sure, it's cattle, and it's septic tanks but a lot of it is chicken litter and there are a lot of kilograms of phosphorus ending up in Lake Tenkiller on an annual basis,― he said. Brocksmith pointed to the latest meeting of the Arkansas-Oklahoma Arkansas River Compact Commission, where it was reported phosphorus loading at Tahlequah above Lake Tenkiller amounts to more than 49.5 tons per year. "That's the equivalent of 33 dump truck loads of phosphorus entering Tenkiller yearly,― he said. Featured video Kelly Bostian 918-581-8357 kelly.bostian @tulsaworld.com Twitter: @K