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Flint Hills Farm Ponds: Good, Bad, But Rarely Ugly

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Flint Hills - grass, ponds
Bill McBride

FLINT HILLS FARM PONDS: GOOD, BAD, BUT RARELY UGLY

Stand atop any ridge in the Flint Hills of Kansas in late spring and look about. The fires are finished, the prairie is a new and vibrant green, and the black and russet daubs that amble in the distance are the cattle returned to summer range.

Regardless of the direction you gaze from that cuesta, you will likely see at least one farm or stock pond. These ponds, an estimated quarter million of them in Kansas, built by farmers and ranchers over the last hundred years or so, provide water for cattle, but so much more.

When I close my eyes to better recall the memories I have of farm ponds, they don't begin with cattle watering. Rather I hear the throaty click of a Zebco reel, followed by the whisk of the rod as I see the worm-bearing hook, lead sinker, and red and white bobber flying toward the center of the pond where they land with a plunk and splash. I see my ten-year-old daughter reel in the slack and settle patiently (which she learned from her mother) to wait for the bobber's movement to indicate the interest of a bluegill, crappie, channel catfish, or largemouth bass. I see a mid-September afternoon when I shoot (mostly at) mourning doves as they come to water after gleaning the wheat stubble for grain and weed seed. I then relive a slow and calculated sneak on a late November day, a quiet stalk up the face of the pond's dam and the explosion of teal or ducks, sometimes both, from the water's

surface. And I see my grandkids learning to fish as did their mother on these waters.

The ponds of the Flint Hills provide water for livestock and wildlife; habitat for reptiles, amphibians, and fish; and important layover points for migrating waterfowl and shorebirds. They also provide us recreational and aesthetic pleasures. Yet these ponds have not always been a part of this landscape. Prior to European settlement, “flat water” in the Flint Hills would have been rare indeed. There were no doubt spring pools and oxbow lakes and wetlands associated with the rivers draining the region. There were buffalo wallows that held water after spring and early summer rains. Free-flowing streams and rivers of the Flint Hills were the sources of water that supported the indigenous, migrant ungulates and humans, as well as local wildlife species. The spring-fed creeks of the Flint Hills provided the water needed for the cattle that replaced the bison, but as grazing practices changed and periods of drought occurred, a more reliable source of water became necessary.

Edwin Stene (1946) notes that “Early in the state’s [KS] history... The state board of agriculture sought to encourage farmers to build ponds in order to preserve

water for their cattle, and the state fish commissioner published instructions and diagrams for the construction of farm ponds...” The state did not, however, have the funds to help with such construction. Kansas, by the late 1920s, using funds from hunting and fishing licenses, began building county lakes, but the Depression years slowed this program greatly. Enter the Civilian Conservation Corps (CCC), begun in 1933, which built dozens of county and city lakes between 1935 and 1940. (Last winter I watched Tundra Swans as they swam and rested in a small lake constructed by the CCC in the late 30s.) The Soil Conservation Service (SCS) began to assist the construction of farm ponds and lakes in the late 1930s with activity continuing into the 1950s with the passage of the Small Watershed Program in 1954. Interestingly, the SCS ponds and watershed structures were promoted in the name of flood control. Whether for stock water, fish habitat, flood control, or a combination of these and other reasons, the construction of ponds continued into the mid-1980s. The damming of the creeks and streams to build ponds has changed the drainage system of the Flint Hills.



Evening Sky and Farm Pond
Dave Leiker

All ponds are sediment traps, and those built to allow water to “flow through” usually result in degradation (down-cutting) of the stream bed directly downstream. As sediment-laden water flows into the pond from the stream channel above, the water’s velocity is slowed, and it drops the sediment it has carried from the uplands. Notice the number of ponds being “cleaned out” of this excess sediment during dry years. The water leaving the pond via tubes

or spillways is relatively clean when it enters the channel below the dam. It is sometimes referred to as “hungry water” as it has more ability to pick up and transport sediment. This sediment comes from the stream bed and banks, causing incision and accelerated bank erosion. The result of these changes is an increase in channel erosion, as well as interruption of normal sediment transport processes.

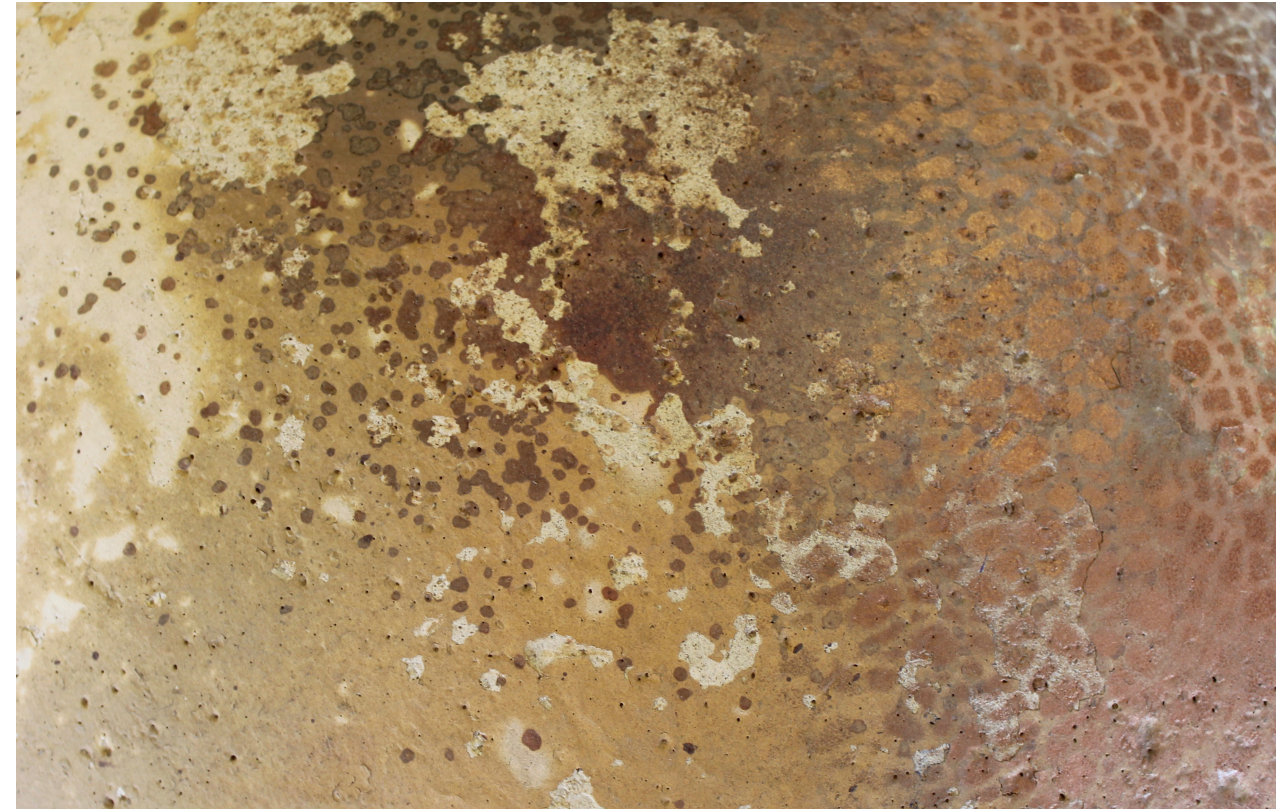
Many dams that form farm ponds in the Flint Hills serve as migration barriers

for native fishes (e.g. Topeka shiner), reducing the available habitat. As an added insult, non-native fish often stocked in farm ponds can wash out during high flows, putting predatory pressures on native stream species that have little ability to fend off. Ponds also have local impacts on soil and vegetation. The attraction of ponds as watering holes for livestock results in overgrazing near them, and the daily trampling of the soil around the pond and the hoof shear on the banks compact the soil, reducing infiltration and moisture-holding capacity, and generally favoring annual weedy species.

Farm ponds in the Flint Hills, like almost anything else we have introduced to this landscape, have impacts that are both good and bad. We will not do away with farm ponds in the Flint Hills any time soon, so our best bet is to lessen the bad impacts as much as we can while enjoying those unique and memory-making opportunities the good ones allow. Poet Gary Snyder (1995) notes, “For a watershed, cities and dams are ephemeral and of no more account than a boulder that falls in the river or a landslide that temporarily alters the channel. The water will always be there, and it will always find its way down.” The erosion of flowing

water shaped these Flint Hills and will continue to do so. May we find better ways to entreat the soils, the grass, and the waters to more sustainably inhabit this unique place.

Dr. Tim Keane is a Professor of Landscape Architecture at Kansas State University and an award-winning cowboy poet.



Cocoon (detail)
Dale Allison-Hartley