fracion of their precipitation; hit reduction targets for a host of pollutants, ranging from phosphorus to pharmaceuticals; and help keep the mighty Mississippi tamed by controlling floodwaters within their boundaries. Incentives and regulations for meeting requirements trickle top-down from the federal level through the nested layers. The federal government’s carrots and sticks go directly to tier-one subunits, which subsequently allocate their own set of carrots and sticks to tier-two subunits. Thus, the money and mandates come from above, but the specifics of water management are locally determined.

For Yahara, this means it must help the Rock River Subunit meet specific targets for the quality and quantity of the water that flows from the Rock River’s mouth into the Mississippi. If successful, the federal government rewards the Rock River Watershed Management Authority (RRWMA) with payments. If a target is missed, the RRWMA will be fined if it doesn’t remedy the situation within the probationary period. Subsequently and similarly, the RRWMA incentivizes and regulates Yahara and its other tier-two watershed subunits based on their contributions to the Rock River’s performance.

Pledging our allegiance to water initially caused some growing pains, as subunits scrambled to get organized and standard compliant. Expectations for Nested Watersheds were high, and the pressure to meet them intense. In the United States’ nearly three-hundred-year history, change this drastic was rare, and it would take some getting used to.

United We Stand

In her 2068 memoir, United Watersheds, which chronicles the preceding and early years of the Reform, Harris shares the raw emotion of her own pressures. Showered with public praise and speculation of an eventual run for presidency, she felt somewhat obligated to stay in Washington after the Reform passed. But she also felt called back to Yahara, her home. She felt a deeper obligation to help guide it through the transition. Ultimately, her loyalty to Yahara outweighed her federal pursuits and she followed her heart, running for the first Yahara Watershed Management Authority Executive seat. She had victory in the bag.

An immediate order of business was to reassure Yahara’s farmers. The Reform’s inclusion of an updated Clean Water Act presented farmers with a long list of new or stricter existing rules: groundwater recharge quotas, irrigation restrictions, climate change adaptation requirements, animal unit limits, runoff limits, tax penalties for surpassing limits, and so on. Despite the incentives issued to ease the regulatory weight, many farmers felt their centuries-long tradition was under threat.

“Farming has long been a piece of Yahara’s identity. My own family has farming roots here,” Harris told me with careful words. After a thoughtful pause, she continued, “But, I think it was Woody Allen who once said, ‘Tradition is the illusion of permanence.’”

While the Reform disrupted tradition, it altered rather than ended it. Underlying the list of rules was the principle that farming had more to contribute than just food and fuel. Clean water, healthy soil, wildlife habitat, and flood control are services that can go hand-in-hand with commodity production. Harris understands the Reform as an enhancement to agriculture’s purpose to society. “Farming has
many functions. The Reform merely incentivized the conservation services it can provide,” she said.

The Farm and Water Bill, another piece of the Reform’s package, helped nurture farming’s many purposes. Formerly just the Farm Bill, Congress overhauled the legislation to orient agriculture around effective water management and help farmers ensure they can still reap a profit off their land. In other words, it set farmers up to treat water like a crop, and shifted agriculture’s gears from maximizing to controlling production.

The Farm and Water Bill restructured subsidies, tax incentives, and crop insurance requirements to be tied with water and land conservation. It diverted funds once meant for corn and soy production to soil and water conservation. Land once meant for corn or cows became more profitable as grassland, wetland, or forest. Fields too saturated with phosphorus or too susceptible to erosion found new lives as pasture. Subsidies were assigned to perennial crops, such as herbs, fruit trees, asparagus, and switchgrass. As high value crops that reduce erosion and make soil healthier, these year-rounders help keep waterways clean and clear of excess sediment and nutrients.

At the local level, the YWMA created its own programs to help farmers adapt to the Reform. Its flagship program, Climate Ready Farms, helps Yahara farmers meet water requirements, while also coping with climate change. It provides farmers grants, tax incentives, and technical assistance to undertake practices and projects for meeting water management and climate change adaptation standards. Farmers across the watershed have converted cornfields to green space, replaced corn and soy with a cornucopia of non-commodity crops, downsized cattle and pig herds, and installed myriad gadgets and systems to capture and monitor phosphorus, nitrogen, and carbon.

In partnership with UW Discovery Farms, an on-farm research program of the University of Wisconsin Extension and UW-Madison, the YWMA also pays select farmers to use their fields as demonstration sites for new techniques and technologies.

Donaldson Dairy is a Climate Ready demonstration farm. As loyal UW-Madison alums—Greta studied dairy science, Lou studied water chemistry—the Donaldsons were eager to participate in the two long-term adaptation studies currently happening on the farm. Lou explained that climate readiness has helped them not only weather unpredictable growing seasons, but also become a profitable enterprise. “The nature of the business has always required farmers to adapt to nature,” he told me.

The siblings now practice Managed Intensive Rotational Grazing, a method that surged after the Reform for its water-friendlier manure management. On the day I visited the farm, I helped Greta drive their 60-head dairy herd to a new pasture. The cows had stripped the previous pasture of most of its edibles, making the balding soil susceptible to erosion. Donaldson Dairy lies within the Sixmile Creek Watershed, one of the relatively livestock-heavy sections of the Yahara Subunit, which means Greta must keep a close watch on what the girls leave behind.

“It just made economic sense to convert to pasture,” Greta told me as she clipped shut the electric fence after the last cow.

The dairy farm hadn’t changed much through its previous generations, aside from