Visionary landowners in the 1960s had a radical idea: turn the Napa Valley into an agricultural preserve, with minimum lot sizes of 40 acres (160 acres on the hillsides) and restricted commercial activities. The proposal to create the Agricultural Preserve was met with vigorous opposition from both developers and residents who wanted the freedom to subdivide their land. Fortunately, the visionaries joined forces with local governments and prevailed, saving Napa from the urban development that paved over other fertile California valleys, such as the Santa Clara.

Although the Ag Preserve—as it’s commonly known—saved the rural landscape, it did not prevent the degradation of the Napa River, nor lessen the destructiveness of its floods. Rising from springs and seeps on the slopes of Mount St. Helena (elevation 4,343 feet), the Napa River flows fifty-five miles south down the valley through the winery towns of Calistoga, St. Helena, Rutherford, Oakville, and Yountville before reaching the city of Napa and emptying into San Pablo Bay north of San Francisco. Today, the river and its thirty tributaries drain the most expensive farmland in the United States.

As Napa’s wine country began its post-Prohibition rise to fame, a renaissance of vineyards in the 1960s, the decline of fisheries and habitat in the Napa River went largely unnoticed. The river channel narrowed and dug deep into the valley floor, becoming increasingly disconnected from its floodplain and its residents. Nor did the passage of the Ag Preserve, another visionary private-public partnership—the Napa River Restoration Project in Rutherford and Oakville—have began to reestablish an ecological and economic balance in the agricultural heart of the Napa Valley.

More than 4,000 years ago, the Napa River and its floodplain were central to the livelihood of the first peoples—mainly the Wappo—to settle the valley. Archeological surveys carried out in the 1940s by archeologist Robert Fleming Heizer at the University of California, Berkeley, discovered middens (re- fused mounds) eight feet deep, indicating long-standing village sites roughly ten miles, or one day’s travel, apart. “It’s not surprising that the Wappo lived along the river,” notes archaeologist Christopher Kimsey. “All the staples in their diet—deer, fish, and acorns—were tied to the riparian environment.” The remains of Wappo settlements can be found all along its banks, and after winter rains, local residents still find obsidian shards, arrowheads, and grinding stones in the river bed.

Although the Wappo were foragers, which in most set- tlements is a year of nomadism, Napa’s environment was rich enough to enable them to stay put most of the year, with seasonal forays to the coast to gather shellfish, seaweed, and salt. Men hunted and fished; women gathered berries, acorns, and bulbs from the tule (bulrushes) that grew in wetlands along the river.

In the early 1800s, when people of European origin began arriving in Napa Valley—first via Mexico and then from the Midwest—they brought great change both to the Wappo and to the watershed. By 1900, the Wappo and other aboriginal people had been so decimated by disease and conflict that scarcely any remained in the valley. Foraging gave way to cattle grazing, and, later, agriculture. Commercial trappers shipped covered “Napa leather”—cow hides, tans, and bulbs from the valley to markets in San Francisco. As the 1849 Gold Rush increased the demand for food to feed hungry prospectors, cattle ranching gave way to wheat production. When wheat prices slumped in the 1870s, farmers planted vineyards and orchards of apples, prunes, walnuts, and olives. Using horse-drawn, mold-board plows, they carved furrows and ditches to route rainwater from the fields. Stream channels changed in response to the new land use. Nineteenth-century sources describe a complex Napa River with multiple branches and sloughs spread across the valley floor interspersed with wetlands, providing rich habitat for wildlife, including ducks, yellow-billed cuckoos, black bears, deer, steelhead trout, and salmon. A few of these former waterways linger today as ghost images in the vineyards—faint, dark pathways that indicate their richer soils.

The incision of the Napa River, resulting from the practices of early farmers, accelerated dramatically after the 1970s as Napa’s wine industry took off and vineyards expanded across the valley floor and hillsides, displacing native vegetation. Rainwater pushed into the river, scouring the channel, undermining trees, and creating vertical banks susceptible to erosion and collapse. Trapped in a single deep, narrow channel, the Napa River could no longer distribute its flow over the floodplain each year and replenish the soil with deposits of sand, silt, and clay. These fine sediments instead deposited in the channel bed, clogging up the shrinking number of gravel bars that provide critical habitat for spawning salmon and the threatened steelhead.

As the river was becoming disconnected from its floodplain, so too were Napa’s inhabitants losing their ties to the river, once a popular site for recreation. Yountville resident Andy Juenger recalls, “We’d often be down there all day… When the moon was bright, we’d go exploring at night.” Folks of all ages scanned gravel bars for obsidian arrowheads. Above all, the river was a place to swim. One 84-year-old resident, Louise Pomermett, remembers that “just about everything we did as kids for fun was in the river. It was a magical place.”

The river was also a convenient place to dump trash—everything from car tires and batteries to old appliances. “When the river would come up in the wintertime,” remembers vineyard manager Davie Pihl, a fifth-generation Napan, “people would take all the garbage accumulated over the year and throw it into the rushing water to get it out of here. Pesticides, motor oil, any sort of thing. It wasn’t that people didn’t care about the river, they just didn’t know better.” Rivers all across America were subject to similar abuse.

By the early 1980s, most Napans had turned their backs on the river. It was no longer a desirable place to play.
or swim. Channel incision had eroded and steepened the banks. Environmentally reckless road building, logging, and vineyard planting on the valley’s steep hillside had turned loose massive amounts of silt that muddied the river and its tributary streams and degraded spawning beds. New vineyard acreage on the valley floor led to more pumping for irrigation from the river, reducing its volume and flow. For the first time in human memory, some up-valley reaches went dry in summer. And what water remained became increasingly polluted by slaughterhouses and effluent from a few up-valley towns that resisted treating their sewage.

Demographic changes also reduced interaction with the river. Fences and “No Trespassing” signs sprang up with the influx of new landowners, who came mostly from urban areas and were unfamiliar with the local custom of letting people walk across their property. Worried about vandalism, theft, loss of privacy, and liability, many landowners and vineyard managers became wary of doing anything involving the river. Tension also grew between landowners primarily concerned with protecting their property rights and those more environmentally conscious. All of these threatening conditions were exacerbated by general confusion over agencies’ differing jurisdictions, river management policies, and a lack of information about how watersheds function.

The growing consumption of and demand for fine wine in the United States also threatened the river. As grape prices increased and land became scarce, vineyards were pushed ever closer to the river, hastening the removal of the riparian forest that once buffered the banks from erosion. Filtered fine sediments from storm water runoff, and provided vital habitat. Willows, oaks, white alder, and California bay laurel once bordered the river channel to a width of 500 feet. But today, notes Robin Grossinger in his seminal Napa Valley: Historical Ecology Atlas, all that remains of this primordial forest are a few strands 50 to 100 feet in width. Some idea of Napa’s historic riparian forest can still be seen at the Yountville Ecological Reserve. This 73-acre remnant surrounded by vineyard is home to more than 150 bird and 230 plant species.

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flooding also caused destruction in the rural valley upstream. In 1997, John Williams, owner and winemaker of Frog’s Leap Winery, waded into the river near his recently purchased vineyard in Rutherford to check on a breach in the earthen berm that protected the property from flooding. He was shocked by the damage he found. “As I walked along the river, I saw my neighbors had similar damage,” he said. “I saw, too, that they were trying to protect themselves by building higher and higher berms, using riprap, car bodies,
just about anything, piled up high along the bank to keep the water out.” For years, people had been waging a losing “berm war” against the river, and with each other. Confining flood flows with longer and higher berms, thereby further pinching the flow of water and increasing the river’s erosive force, only exacerbated the problems caused by the already incising river. Adults who, as children, had clam-headed down five-foot banks to roam the river’s gravel beds now peered down 25-foot vertical drops and lamented the knocked erosion and disappearance of their farmland.

“But it wasn’t just the eroding banks and breached berms that landowners were dealing with,” recalled Williams. “They had a host of other problems as well. Racing banks, and beaver, salmon, and steelhead coming back. It’s such a beautiful sight with new terraces. I can’t imagine what has been achieved. None of us could have ever imagined what has been achieved. We were just down at the river this morning. It’s such a beautiful sight with new terraces.”

“The big challenges to making this a successful collaboration,” said an environmental scientist on the restoration team, “were ignorance of how watersheds function, concern over individual property rights, and distrust of government.” The costs were ultimately spread equitably between landowners and state and local agencies, including dry farming (no irrigation) to grow grapes. John Williams mused in June 2015 about the completion of the restoration project: “Looking back now, it is all a bit unbelievable. None of us could have ever imagined what has been achieved. I just don’t know what to say. None of us could have ever imagined what has been achieved. None of us could have ever imagined what has been achieved.”

“The restoration project has inspired other endeavors, such as saving the valley’s ancestral walnut trees and vineyards. Not many years ago, none of these projects would have seemed possible to many of the participating landowners. And their example is now spreading downstream, with another nine river miles slated for restoration. Those working to restore the Napa River today are continuing what an enlightened group of residents achieved nearly fifty years earlier when they created the Agricultural Preserve—the protection of their beautiful valley from urbanization, and the creation of a sustainable community.

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