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The Great Plains: From Dust to Dust

A daring proposal for dealing with an inevitable disaster.

By Deborah Epstein Popper and Frank J. Popper

At the center of the United States, between the Rockies and the tallgrass prairies of the Midwest and South, lies the shortgrass expanse of the Great Plains. The region extends over large parts of 10 states and produces cattle, corn, wheat, sheep, cotton, coal, oil, natural gas, and metals. The Plains are endlessly windswept and nearly treeless; the climate is semiarid, with typically less than 20 inches of rain a year.

The country is rolling in parts in the north, dead flat in the south. It is lightly populated. A dusty town with a single gas station, store, and house is sometimes 50 unpaved miles from its nearest neighbor, another three-building settlement amid the sagebrush. As we define the region, its eastern border is the 98th meridian. San Antonio and Denver are on the Plains' east and west edges, respectively, but the largest city actually located in the Plains is Lubbock, Texas, population 179,000. Although the Plains occupy one-fifth of the nation's land area, the region's overall population, approximately 5.5 million, is less than that of Georgia or Indiana.

The Great Plains are America's steppes. They have the nation's hottest summers and coldest winters, greatest temperature swings, worst hail and locusts and range fires, fiercest droughts and blizzards, and therefore its shortest growing season. The Plains are the land of the Big Sky and the Dust Bowl, one-room schoolhouses and settler homesteads, straight-line interstates and custom combines, prairie dogs and antelope and buffalo. The oceans-of-grass vistas of the Plains offer enormous horizons, billowy clouds, and somber-serene beauty.

During America's pioneer days and then again during the Great Depression, the Plains were a prominent national concern. But by 1952, in his book The Great Frontier, the Plains' finest historian, the late Walter Prescott Webb of the University of Texas, could accurately describe them as the least-known, most fateful part of the United States. We believe that over the next generation the Plains will, as a result of the largest, longest-running agricultural and environmental miscalculation in American history, become almost totally depopulated. At that point, a new use for the region will emerge, one that is in fact so old that it predates the American presence. We are suggesting that the region be returned to its original pre-white state, that it be, in effect, deprivatized.

Last settled

As the U.S. spread into Indian territory in the late nineteenth century, the Plains became the last part of the nation to be settled by whites. The 1862 Homestead Act marked the beginning of sharp cycles of growth and decline, boom and bust. Federally subsidized settlement and cultivation repeatedly led to overgrazing and over-plowing (sodbusting, in Plains terms). When nature and the economy turned hostile again, many of the farmers and ranchers were driven out-and the cycle began anew. Most of the post-Civil War homesteaders succumbed to the blizzards of the 1880s and the drought and financial panic of the 1890s. Homesteading flourished again in the early 1900s, crested during World War I as European agricultural productivity fell, and once more slumped in the early 1920s when drought and locusts hit.

For much of the Plains, the Great Depression began before it struck Wall Street. By 1925, Montana had suffered 214 bank failures, and the average value of all its farm and ranch land had dropped by half. As the depression intensified, the Plains were perhaps the most afflicted part of the country. In 1935, the five states with the largest percentage of farm families on relief were New Mexico, South Dakota, North Dakota, Oklahoma, and Colorado, and conditions were far worse in the Plains portions of each of those states.

Thus the Plains had undergone a dozen years of depression before the onset of the Dust Bowl in 1934, which in turn was the ecological consequence of earlier decades of too-assertive agriculture. The shortgrass Plains soil in places was destroyed by an excess of cattle and sheep grazing and of cultivation of corn, wheat, and cotton. When drought hit with its merciless cyclically, the land had no defenses. By the late 1930s, the Dust Bowl covered nearly a third of the Plains. It kicked up dirt clouds five miles high and tore the paint off houses and cars. It sent the Okies west to California, inspiring both John Steinbeck's famous novel, The Grapes of Wrath, and Dorothea Lange's stark photographs.

The federal government responded by abolishing homesteading in 1934. The next year it established the Agriculture Department's Soil Conservation Service, which built windbreaks and shelter belts. Beginning in 1937, the federal government bought up 7.3 million acres of largely abandoned farm holdings of the Plains (an area bigger than Maryland), replanted them, and designated them "national grasslands." Today the national grasslands, which are administered by the Agriculture Department's Forest Service, are used primarily for low-intensity grazing and recreation. Often thick with shortgrass, they rank among the most successful types of federal landholdings.

After the Dust Bowl

After the trauma of the Dust Bowl, much of the recent history of the Plains seems anti-climactic. A measure of agricultural prosperity returned during World War II and after, although the Plains remained a poor region, falling further behind most of the rest of the country economically and continuing to suffer depopulation. To some extent, the picture looked rosier. New technologies came in -- custom combines, ever-larger irrigation pumps, center-pivot irrigation sprayers -- and the average size of farms and ranches grew steeply. Droughts persisted; after one in the 1970s, the National Oceanic and Atmospheric Administration estimated that, had it continued another month, the Dust Bowl might have returned.

The federal government found new ways to intervene. The crop subsidy programs introduced experimentally in the thirties were greatly expanded in the forties and fifties. The dam and irrigation projects begun in 1902, primarily in the intermountain West, accelerated in 1944 with the adoption of the $6 billion, 100-dam, Pick-Sloan plan for the Missouri River, an effort aimed primarily at the Plains portion of the watershed. It meant that Plains farmers and ranchers could, like their competitors farther west, get federal water at below-market prices.

With the creation in 1934 of the Interior Department's Grazing Service and its evolution after the war into the Bureau of Land Management, the federal government established public land grazing districts that rented grazing rights to ranchers at below-market rates.

More recently, the Plains benefited from the energy boom of the middle and late 1970s, which quintupled prices for oil and natural gas. Some 200 energy boomtowns suddenly sprouted in the Dakotas, Montana, Wyoming, and Colorado. The lessons of the 1930s were forgotten as agricultural commodity prices rose rapidly. Plains farmers and ranchers once again chopped down their windbreaks, planted from fencepost to fencepost, and sodbusted in the classic 1880s-1910s manner. This time, though, the scale was much larger, often tens of thousands of acres at a time.

A crisis looms

The 1980s punctured the illusion of prosperity. Today the pressures on the Plains and their people are as ominous as at any time in American history. The region's farm, ranch, energy, and mineral economies are in deep depression. Many small towns are emptying and aging at an all-time high rate, and some are dying. The 1986 outmigration from West and Panhandle Texas, for instance, helped make the state a net exporter of population for the first time ever.

Soil erosion is approaching Dust Bowl rates. Water shortages loom, especially atop the Ogallala Aquifer, a giant but essentially nonrenewable source of groundwater that nourishes more than 11 million acres of

agriculture in Plains Colorado, Kansas, Nebraska, New Mexico, Oklahoma, and Texas. Important long-term climatic and technological trends do not look favorable. Government seems unable to react constructively to these trends, much less to anticipate them.

In fact, the agricultural crisis is more serious on the Plains than in its more publicized neighbor region to the east, the Midwest's Corn Belt. Plains farmers and ranchers have always operated under conditions that their counterparts elsewhere would have found intolerable, and now they are worse. Farm bankruptcy and foreclosure rates are higher in the Plains than in other rural areas, as are many of the indices of resulting psychological stress: family violence, suicide, mental illness. In 1986, there were 138 bank collapses in the U.S., the largest number since the Depression. Texas had the most, 26, followed by Oklahoma with 16 and Kansas with 14. In contrast, the two Midwestern states in the most agricultural difficulty, Iowa and Missouri, had 10 and nine, respectively.

A series of mid-1980s federal agricultural initiatives -- new subsidies, such as the Payment in Kind (PIK) program; additional tax breaks; a national conservation reserve where farmers and ranchers are paid not to cultivate erodible soil (that is, not to sod-bust) -- seem to have little impact in the Plains. The national conservation reserve, for instance, can at most cover a quarter of any one county. The only federal measure that appears effective is a 1985 law that makes it easier for farmers and ranchers to declare bankruptcy.

The situation is comparable in the energy sector. Oil prices have fallen drastically since 1983. Many large Plains oil and natural gas companies have laid off most of their employees. The energy boomtowns have long gone bust. Between 1985 and 1986, the number of active oil rigs in West Texas's Permian Basin dropped from 298 to 173, reducing local income by an estimated $50 million.

Ripple effect

The local collapses reverberate. When local banks fail or are endangered, the remaining ones lend more conservatively and charge higher interest. When a heavily agricultural county's farmers and ranchers cannot make a living, neither can its car dealers, druggists, restaurants, and clothing stores. Local public services, which have never been exactly generous in the Plains, fall off. Items like schools, roads, law enforcement, and welfare are always relatively expensive to provide and administer in large, lightly populated areas; they are especially expensive because of the traditional Plains pattern of many comparatively small local governments, which cannot take advantage of economies of scale.

Faced with a choice between higher local taxes and fewer services, most Plains localities chose the latter. In the late 1970s, for example, Oklahoma towns rode the oil boom to become early leaders in school reform; now a tenth of the state's teachers have lost their jobs, many others have had their salaries frozen, classroom size has grown, buses are not repaired, and textbooks go unreplaced.

The quality of life also declines. The service cutbacks fall hardest on the poor: Montana farm laborers, South Dakota Indians, Mexican-Americans along the Rio Grande, clients of social work and public health agencies across the Plains. Agricultural market towns get smaller, older, and poorer. Already modest downtowns become gap-toothed streets of increasingly marginal businesses. Entire counties lack a single doctor or a bank, and many more are about to lose them.

The long-term outlook is frightening. Climatologists note that, over the last 50 years, rainfall in the Plains has actually been comparatively stable. Future droughts are inevitable, and they're likely to hit harder and more often. The greenhouse effect -- the buildup in the atmosphere of carbon dioxide from fossil-fuel combustion -- is expected to warm the Plains by an average of at least two to three degrees, making the region even more vulnerable to drought. The longstanding attempts to seed clouds or otherwise artificially induce rain continue to be unavailing.

Water supplies are diminishing throughout the Plains, primarily because of agricultural overuse. Farmland has already been abandoned for lack of water in the Pecos River Valley of New Mexico and between Amarillo and Lubbock in Texas. In 1950, the Kansas portion of the Ogallala Aquifer was 58 feet deep; today

in many places it may be less than six feet. As parts of the aquifer approach exhaustion within a decade or so, Plains water prices are sure to rise steeply. Moreover, our huge national and regional agricultural surpluses argue against further irrigation initiatives to stimulate yet more agriculture.

Some farmers and ranchers and some localities are undertaking serious water- and soil-conservation measures, but it may already be too late to halt the erosion. Such counties as Gaines in Texas and Crowley and Kiowa in Colorado appear to be nearing Dust Bowl conditions. The federal Council on Environmental Quality has classified the desertification of West Texas and eastern New Mexico and parts of Colorado, Kansas, and Oklahoma as "severe."

Already today, when Plains farmers and ranchers, small or large, give up land, the big agribusiness corporations are usually unwilling to buy it, even at a bargain price. Because the big companies are not interested -- in clear contrast to their behavior elsewhere in the country -- the price of Plains land drops lower still. The brute fact is that most Plains land is simply not competitive with land elsewhere. The only people who want it are already on it, and most of them are increasingly unable to make a living from it.

The tragedy of the commons

"Grass no good upside down," said a Pawnee chief in northeast Colorado as he watched the late-nineteenth-century homesteaders rip through the shortgrass with their steel plows. He mourned a stretch of land where the Indians had hunted buffalo for millennia. It grew crops for a few years, then went into the Dust Bowl; farmers abandoned it. Today, it is federal land, part of the system of national grasslands. Like most of the Plains, it is an austere monument to American self-delusion. Three separate waves of farmers and ranchers, with increasingly heavy federal support, tried to make settlement stick on the Plains. The 1890s and 1930s generations were largely uprooted, as the 1980s one soon will be.

Our national experience in the Plains represents a spectacular variant on the tragedy of the commons, Garrett Hardin's famous ecological fable of how individual short-term economic rationality can lead to collective long-term environmental disaster. To the Indians and the early cattlemen, all of the Plains was a commons. The Homestead Act and the succeeding federal land subsidies for settlers amounted to attempts to privatize the Plains, to take them out of the federal domain and put them permanently in individual or corporate hands. Today's subsidies for crops, water, and grazing land amount to attempts to buttress the privatization.

But private interests have proved unable to last for long on the Plains. Responding to nationally based market imperatives, they have overgrazed and overplowed the land and overdrawn the water. Responding to the usually increasing federal subsidies, they have overused the natural resources the subsidies provided. They never created a truly stable agriculture or found reliable conservation devices. In some places, private owners supplemented agriculture with inherently unstable energy and mineral development.

Now that both the market imperatives and federal subsidies seem inadequate to keep the private interests on the Plains, these interests are, as Hardin would have predicted, rapidly degrading the land and leaving it, in many places perhaps forever. As a nation, we have never understood that the federally subsidized privatization that worked so well to settle most of the land west of the Appalachians is ineffective on the Plains. It leads to overproduction that then cannot be sustained under the Plains' difficult economic and climatic conditions.

Bleak future

It is hard to predict the future course of the Plains ordeal. The most likely possibility is a continuation of the gradual impoverishment and depopulation that in many places go back to the 1920s. A few of the more urban areas may pull out of their decline, especially if an energy boom returns. And a few cities -- Lubbock and Cheyenne, for example -- may hold steady as self-contained service providers. But the small towns in the surrounding countryside will empty, wither, and die. The rural Plains will be virtually deserted. A vast, beautiful characteristically American place will go the way of the buffalo that once roamed it in herds of

millions.

Little stands in the way of this outcome. New mineral or energy sources might discovered on the Plains. New crops might be developed, such as the cereal triticale (a high-protein cross between wheat and rye) or a Plains equivalent of the Southwest's jojoba bush, whose oil is now finding applications ranging from facial creams to industrial lubrication. Several groups in Kansas are exploring uses for oils from amaranth and rapeseed plants. Other Plains states are trying to create a llama or donkey industry that will meet the demand for horse substitutes, unconventional pets, or exotic wool. But most conceivable replacement crops for the Plains do not yet exist or are more economically and abundantly produced elsewhere, usually in the Midwest.

For some parts of the Plains, tourism and recreation might be plausible options. Growing numbers of ranchers offer their land for hunting, wildlife photography, backpacking trips, and wilderness expeditions in addition to the usual dude-and-tenderfoot packages. In places within three or four hours' drive of big cities -- most noticeably in West Texas -- ranches are being carved into ranchettes for weekend cowboys. But tourism cannot offer much to the Plains as a whole. Farmers typically cannot tap the recreation market, and many ranchers feel that tourism demeans them, compromises their independence.

Bring back the commons

The most intriguing alternative would be to restore large parts of the Plains to their pre-white condition, to make them again the commons the settlers found in the nineteenth century. This approach, which would for the first time in U.S. history treat the Plains as a distinct region and recognize its unsuitability for agriculture, is being proposed with increasing frequency. Bret Wallach, a University of Oklahoma geographer and MacArthur fellow, has suggested that the Forest Service enter into voluntary contracts with Plains farmers and ranchers, paying them the full value of what they would cultivate during each of the next 15 years but requiring them not to cultivate it. During this time, they would instead follow a Forest Service-approved program of planting to reestablish the native shortgrasses. Afterwards, the service would, as part of the original contract, buy out their holdings except for a 40-acre homestead.

Similarly, Charles Little, former editor of American Land Forum, suggests that by expanding the national grasslands, the grazing districts operated by the Bureau of Land Management, and the anti-sodbusting national conservation reserve, we could retire enough agricultural land to slow the depletion of the Ogallala Aquifer. Robert Scott of the Institute of the Rockies in Missoula, Montana, urges that 15,000 square miles of eastern Montana, about a tenth of the state, be transformed into an East African-style game preserve called the Big Open. With state and federal help, fences would come down, domestic animals would be removed, and game animals stocked. According to Scott, the land could support 75,000 bison, 150,000 deer, 40,000 elk, 40,000 antelope. A ranch of 10,000 acres (nearly 16 square miles), by now a normal size for the area, would net at least $48,000 a year from the sale of hunting licenses alone. Some 1,000 new jobs -- for outfitters, taxidermists, workers in gas stations, restaurants, motels -- would develop in this sparsely settled area.

Scott's approach, unlike Wallach's and Little's, lets ranchers and farmers keep all their land by treating it as free range. Yet all three proposals would be costly and provoke great resistance from the landowners because they would constrain their property rights.

We believe that despite history's warnings and environmentalists' proposals, much of the Plains will inexorably suffer near-total desertion over the next generation. It will come slowly to most places, quickly to some; parts of Montana, New Mexico, South Dakota, and Texas, especially those away from the interstates, strike us as likely candidates for rapid depopulation. The overall desertion will largely run its course. At that point, the only way to keep the Plains from turning into an utter wasteland, an American Empty Quarter, will be for the federal government to step in and buy the land -- in short, to deprivatize it.

If the federal government intervenes late rather than early -- after the desertion instead of before it -- the buy-back task will, ironically, be easier. The farmers and ranchers will already have abandoned large chunks of land, making it simpler for the government to reassemble the commons (and to persuade the holdouts to

sell). Those parts of the Plains where agriculture, energy development, mining, or tourism remains workable will have become clear, and here government would make no deprivatization attempts. We suspect, however, that there won't be many such places.

In practical terms, a federal deprivatization program would have two thrusts, one for Plains people, the other for Plains land. On the people side, government would negotiate buy-backs from landowners -- often under distress-sale circumstances. Some of the landowners will be in a position to insist on phased sales or easements that allow them to hold on to their land somewhat longer.

It will be up to the federal government to ease the social transition of the economic refugees who are being forced off the land. For they will feel aggrieved and impoverished, penalized for staying too long in a place they loved and pursuing occupations the nation supposedly respected but evidently did not. The government will have to invent a 1990s version of the 1930s Resettlement Administration, a social work-finance-technical assistance agency that will find ways and places for the former Plains residents to get back on their feet.

On the land side, the government will take the newly emptied Plains and tear down the fences, replant the shortgrass, and restock the animals, including the buffalo. It will take a long time. Even if large pieces of the commons can be assembled quickly, it will be at least 20 to 30 years before the vegetation and wildlife reassert themselves in the semiarid Plains settings, where the land changes so slowly that wagon-trail ruts more than a century old are still visible. There may also be competing uses for the land. In South Dakota, several Sioux tribes are now bringing suit for 11,000 square miles, including much of the Black Hills. The federal government might settle these and other longstanding Plains Indian land claims by giving or selling the tribes chunks of the new commons.

Recreating the commons

The federal government's commanding task on the Plains for the next century will be to recreate the nineteenth century, to reestablish what we would call the Buffalo Commons. More and more previously private land will be acquired to form the commons. In many areas, the distinctions between the present national parks, grasslands, grazing lands, wildlife refuges, forests, Indian lands, and their state counterparts will largely dissolve. The small cities of the Plains will amount to urban islands in a shortgrass sea. The Buffalo Commons will become the world's largest historic preservation project, the ultimate national park. Most of the Great Plains will become what all of the United States once was -- a vast land mass, largely empty and unexploited.

Creating the Buffalo Commons represents a substantial administrative undertaking. It will require competent land-use planning to identify acquisition areas, devise fair buyout contracts, and determine permitted uses. It will demand compassionate treatment for the Plains' refugees and considerable coordination between huge distant, frequently obtuse federal agencies, smaller state agencies whose attention often goes primarily to the non-Plains parts of their states, and desperate local governments. To accomplish these tasks, the federal government will, for the first time, have to create an agency with a Plains-specific mandate -- a regional agency like the Tennessee Valley Authority or a public-land agency like the Bureau of Land Management, but with much more sweeping powers.

By creating the Buffalo Commons, the federal government will, however belatedly, turn the social costs of space -- the curse of the shortgrass immensity -- to more social benefit than the unsuccessfully privatized Plains have ever offered.

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