

# Operation Dust Bowl

How Hugh Bennett saved Colorado—and the nation—from one of the worst environmental disasters in human history.



A dust storm on CO 59 in southeastern Colorado's Prowers County in March 1937

**O**n Friday, April 19, 1935, Hugh Bennett entered Room 333 in a U.S. Senate office building in Washington, D.C., and seated himself at a conference table alongside members of the congressional subcommittee for public lands and surveys. Bennett, 54, directed the Soil Erosion Service, a division established by the U.S. Department of the Interior two years earlier, and he'd been invited to testify about the erosion problem on American farms. While the senators present knew about the dust raking the High Plains—including all of southeastern Colorado—they considered the issue a localized nuisance. Congress had been deliberating House Resolution 7054, which would fund a national soil conservation service, managed under the U.S. Department of Agriculture (USDA). Bennett was there to tell the senators why the resolution needed to pass immediately.

That day in Washington, Bennett leveraged statistics, maps, field notes, and photographs to illustrate the scourge consuming the nation. But Bennett was a showman, too. He'd been keeping tabs on a monster dust storm that was barreling eastward and decided to use the phenomenon to his advan-

tage. During his testimony, he belabored his points, stalling until an eerie copper hue began to stain the skies over D.C.

"Is it getting dark?" one of the senators wondered, peering through a window. "Perhaps a rainstorm is brewing?"

Another senator chimed in: "Maybe it's dust?"

"I think you are correct, Senator," Bennett said. "It does look like dust."

Moments later, a thick grit consumed the air outside. Daylight became twilight.

"This, gentlemen, is what I am talking about," Bennett said, as dust wafted through the streets. "There goes Oklahoma."

Bennett continued his testimony, noting to the subcommittee members that a storm of this size could transport approximately 300 million tons of soil across the continent—from the Front Range to the Atlantic Ocean—traveling more than 2,000 miles. He reminded them that topsoil is unrecoverable. Once it blows away, it's gone forever.

Soon after, Congress passed the resolution. Never before had a government put forth federal legislation crafted solely to protect soil. President Franklin D. Roosevelt signed the Soil Conservation Act a week later.

**IN 1928, YEARS BEFORE** the Soil Conservation Act had become law, Bennett persuaded Congress to appropriate \$160,000 to the Bureau of Chemistry and Soils to conduct a nationwide investigation of soil erosion. His first task was creating 11 experiment stations around the country, where field agents would meet with farmers to demonstrate methods to protect the soil from practices that could lead to erosion. Soon, huge audiences were gathering to watch six-foot-tall, 200-pound “Big Hugh” Bennett, with his hair tousled, vest askew, and clothes dusty, unveil his “face-lifts”—before-and-after demonstrations of land that had been revived using his conservation methods. “When the Dust Bowl hit, Bennett was nearly three decades into his career,” Joe Otto, historian for the Iowa-based Soil and Water Conservation Society, says. “Bennett did a very good job of explaining scientific concepts in nonscientific terms.”

Although states such as Texas, Oklahoma, Kansas, and Nebraska often come to mind when one thinks of the Dust Bowl, the Centennial State was significantly impacted as well, with drought and storms scouring the soil in 15 counties across eastern Colorado.



Bennett dispatched a regional director to western Colorado in the '30s, and he found widespread damage underway in every river drainage system surveyed. The resulting 1935 Interior Department report attributed “serious depletion of available forage” to livestock grazing and called out sheet and gully

**Dust Warrior**  
Hugh Bennett points out severe erosion.

erosion in the San Juan drainage as “the most destructive noted in western Colorado.”

Conditions along the Dolores River, which crosses the Utah border, were “getting much more serious,” warned the report. Areas around the Rio Grande and the Colorado, Gunnison, and Yampa rivers were also enduring rampant erosion. But the pervasive damage was merely a precursor of what might come if measures weren’t taken to save the land. Soon, the same punishing dust storms occurring in the Great Plains could materialize in pockets within the Rocky Mountains and eventually spread westward into the Great Basin.

Bennett would make numerous trips to Colorado during the 1930s and 1940s, meeting with farmers and ranchers; many of his exhaustive notes are now archived in Denver Public Library’s Western History and Genealogy special collections. Southeastern Colorado made up a geographic portion of the Dust Bowl—Baca, Las Animas, and Prowers counties were devastated. Between 1930 and 1936, Baca County’s wheat harvests plummeted from 237,000 acres to a mere 150 acres, while the county experienced some of the worst of the

“black blizzards.” The dust formed drifts that swallowed homes and vehicles, some that remained buried for decades. After some particularly intense winds around five years ago, a farmer near Vilas, in Baca County, was surprised to see the weathered frame of a Ford Model T poking out of a field his family had been cultivating for generations.

**BORN IN 1881** in Anson County, North Carolina, Bennett was raised on a cotton

plantation—the eighth of nine children—where he helped his father dig graded terraces out of hillsides before seeding. “I can still recall my father’s reply to my question as to why we were doing the work,” Bennett said during a lecture he gave in 1958 at North Carolina State College in Raleigh. “‘To keep the land from washing away,’ was his laconic answer.... I could scarcely have understood it except in a vague sort of way.”

It became more clear to Bennett while working for the Bureau of Soils, where he’d been hired as a civil servant in 1903, after graduating with a degree in science from the University of North Carolina. Bennett’s job was to survey farms in the Carolinas, Tennessee, and Virginia; during his forays, he often camped, sleeping beside his car.

On one particular outing in Louisa County, Virginia, in 1905, he observed two adjacent plots on a gentle slope—one cultivated, the other wooded and pristine. Where the land had been farmed, heavy rains had stripped off several inches of topsoil, exposing a dense red clay beneath. “Here was Bennett squatting down in the timber, pulling up a fistful of broken-down leaves, and having that ‘eureka’ moment,” Otto says today. Where most people saw natural gullies, Bennett saw “sheet erosion,” a term he coined.

As Bennett continued to document evidence of sheet erosion, factions within the USDA contradicted him. In 1909, Bennett’s boss, Milton Whitney, chief of the Bureau of Soils, published the USDA’s Bulletin No. 55, in which he wrote, “The soil is the one indestructible, immutable asset that the Nation possesses. It is the one resource that cannot be exhausted.” Later, Bennett would remark on the statement, “I didn’t know so much costly misinformation could be put into one brief sentence.”

In the meantime, Bennett embarked on a crusade to educate farmers, scientists, and politicians, while also receiving two honorary doctorates, one in law and the other in science. He traveled continuously, crisscrossing America and venturing abroad to conduct soil surveys. He also visited locales where dust storms had yet to materialize, attempting to prevent the severe erosion he deemed inevitable without intervention.

**MUCH LIKE TODAY’S** climate change deniers, there were authoritative figures—scientists, politicians, and farmers among them—who believed that the Dust Bowl was a natural phenomenon. It was unfortunate and unlucky, they surmised, that legions of homesteaders happened to freely snap up land and establish farms and ranches in the High Plains during a period of prolonged drought. Author Timothy Egan, in *The Worst Hard Time*, writes: “Within the Roosevelt Administration, there were conflicting views on what was happening. A Harvard geologist told the president that an irrevocable shift in nature was underway, that the climate itself had changed, the start of a cycle that would take a hundred

years or more and leave the southern plains a 'desert waste.'" *Popular Science Monthly* inferred that Bennett was an alarmist and "propagandist" and that "natural processes" could renew the eroded soils.

Big Hugh Bennett knew that climate had nothing to do with it. Periods of wind and drought were normal, he argued, endemic to the High Plains. The blame was on farmers who had systematically ripped out the native buffalo grass that anchored the soil, replacing it with water-hungry crops. Snowmelt runoff from the Rocky Mountains carried silt onto the High Plains, transforming the soil in eastern Colorado and neighboring states into a rich, fertile loam. But the prairie grasses that grew out of that loam were plowed under, undoing in a century or less a geological cycle that had been transpiring for tens of millions of years.

Fortunately, Roosevelt trusted Bennett, and the Soil Conservation Act provided \$125 million to further Bennett's mission, which would become his lifelong endeavor. The act funded a new Soil Conservation Service, to which Roosevelt appointed Bennett chief, a position he held until his retirement in 1951.

Bennett calculated that by 1935, erosion had already wrecked 325 million acres—an area five times the size of Colorado—and cost \$3.8 billion in lost agricultural revenues. Even today, it remains the largest human-caused ecological disaster in world history. Bennett's plan to reverse it entailed an effort that would enlist farmers and ranchers throughout the nation. He knew that "Operation Dust Bowl," as the endeavor was dubbed, would fail unless those impacted had a personal stake in their survival.

Later, in 1937, the USDA would form soil conservation districts, which gave farmers and ranchers financial and technical access to Bennett's land-use techniques to mitigate erosion. By the time Bennett retired, some 2,329 districts had been created, encompassing 4,886,487 farms on 1.3 billion acres—and the model was emulated worldwide. (Brazil's largest state, São Paulo, celebrates its annual Soil Conservation Day on April 15, Bennett's birthday.)

Sometimes Bennett and his field agents concluded that the best course was eschewing cultivation altogether. In these instances, the federal government would pay farmers and

ranchers for their lands, help families relocate, and then begin reintroducing native grasses to return the soil to its natural state. The program helped establish our National Grasslands—some 20 unique ranges in 13 states totaling 3.8 million acres. In Colorado and neighboring states, the buybacks eventually became a combined 4.7 million acres of protected grasslands.

Hugh Bennett died on July 7, 1960, and was buried in Arlington National Cemetery. During his life, he received countless awards and was even nominated for the Nobel Peace Prize in 1948. But apart from diehard soil conservationists, almost nobody has heard of Big Hugh, the man who orchestrated the most successful effort to rescue, restore, and protect arable land in American history. "Bennett is the patron saint of soil conservation, occupying a hallowed position," Sam Stalcup, a historian and expert on the early Soil Conservation Service, says. "I'm involved with soil conservation groups here in Oklahoma, and they still talk about Hugh Bennett." ▲▲

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**Michael Behar** is a writer based in Boulder. Email him at [letters@5280.com](mailto:letters@5280.com).