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OKLAHOMA'S FORGOTTEN DROUGHT: REGIONAL AND FEDERAL RESPONSES TO CLIMATE CRISIS IN THE 1950s

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF HISTORY

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Abstract

Through much of the 1950s, intense drought afflicted the Southern Plains and American South. Dry conditions and dust storms fostered new soil and water conservation strategies, and stronger ties between agricultural producers and technical experts. Federal and state officials appreciated the disaster's broad economic implications and the need to consolidate relief administration. Oklahoma cattlemen integrated their industry as they responded to the drought. In southwest Oklahoma's WashitaBasin, state officials and local residents reversed their support for upstream flood control dams to protect agriculture in favor of bigger dams to supply municipal water. Following the drought, Congress passed new legislation to increase federal assistance for municipal water supplies.

This dissertation has two purposes. First, it examines a drought that has not received much attention from historians. Second, it argues that the 1950s drought revealed new priorities and tensions during the regional economic development that followed World War II. Unlike the 1890s and 1930s droughts, both of which have commanded extensive scholarship, the drought that seared the Southern Plains through most of the 1950s occurred during a relatively prosperous decade. Contemporaries identified the disaster's economic implications more broadly than before. In Oklahoma, the drought fostered statewide irrigation and complementary technology, and it increased the state's responsibility to administer relief. Across the Southern Plains, the drought fostered newassistance to small businesses and part-time farmers, and it catalyzed the region'scattle feeding industry. Nationwide, it contributed to more accessible municipal water supplies.

Introduction: The 1950s Drought in Oklahoma

Less than twenty years after the infamous 1930s drought and Dust Bowl, severe drought again afflicted the Southern Plains and large portions of the United States. From Arizona during the 1940s, dry conditions spread to Texas, then north and east, reaching up through Oklahoma to Missouri and neighboring states by 1952. By August 1954, states calling for emergency drought assistance stretched from New Mexico and Texas in the Southwest, to Alabama and Georgia in the Southeast, up through Kentucky and Illinois in the Midwest. For southern plains states, the drought was the most severe since officials had begun keeping records in 1895. By some accounts, it was the worst drought in nearly 300 hundred years. It fostered starving livestock, dust storms and economic despair. For disaster relief and to support livestock prices, the federal government spent nearly 800 million dollars from 1954 to 1956. As the drought finally neared its end in early 1957, one observer called it "the worst thing that has happened in modern history."[1]

In Oklahoma, the drought was widespread and intense. During just the last six months of 1952, sixty-five Oklahoma towns and cities faced water shortages.

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[1] R.L Nace and E.J. Pluhowski, *Drought of the 1950's with Special Reference to the Midcontinent*. Geological Survey – Water Supply paper 1804 (Washington: U.S. Government Printing Office, 1965), pp. 17-19; Falko F. Fye, David W. Stahle and Edward R. Cook, "Paleoclimatic Analogs to Twentieth-Century Moisture Regimes Across the United States," *Bulletin of the American Meteorological Society*, vol. 84, no. 7 (July 2003), p. 907; U.S., Congress, House, Committee on Agriculture, *Drought Program*, Hearing, 83rd Congress, 2nd Session, 6 August 1954, p. 2;*"Drouth," a report on drought in the Great Plains and Southwest*, prepared under the direction of the Special Assistant to the President for Public Works Planning (October 1958), p. 20; U.S., Congress, House, Committee on Agriculture, *Drought Relief Program*, Hearings, 85th Congress, 1st. session, 23, 25 January and 4 February 1957, p. 2. Texas congressman Ovie Fisher made the comment.

For two-thirds of the period 1952 to 1957, almost all of Oklahoma experienced unusually dry conditions. Some parts of the state suffered through drought for nearly fifty of those sixty months. "Never in the history of Oklahoma have we had such a general drouth throughout the state" declared Oklahoma Farmers Union secretary Z.H. Lawter in 1954. That year, cattlemen estimated their pasture and range conditions to be only 10-15% of normal. And during 1956 the state measured its lowest runoff on record. Custom haulers trucked drinking water to townsfolk, businesses closed, and Department of Agriculture (USDA) food relief activities spiked.[2]

Despite its magnitude, few historians have studied the 1950s drought.[3] This limited attention is surprising for two reasons. First, the drought was long, severe and widespread. For much of the 1950s, it affected farms, ranches, towns and cities across the southern United States. Second, historians have devoted considerable attention to other droughts, especially those of the 1890s and the 1930s. Studies of the 1890s drought have commonly emphasized the limited federal assistance to desperate farmers during the nineteenth century, as well as

[2]*Report to the Governor of Oklahoma on the Problem of Municipal and Industrial Water Supplies for Oklahoma*, p. 9; *Oklahoma State Board of Agriculture(OSBA) Annual Report for fiscal year ending 1953*, p. 51; Nace and Pluhowski, *Drought of the 1950's,* pp. 24, 36; *The Oklahoma Union Farmer*, September 1954, p. 13;Johnston Murray 21 July 1954 telegram to Dwight Eisenhower, p. 1, in OCA Papers, Series II, box 1, folder 42; *OSBA Annual Report for the year ending June 30, 1957*, pp. 64, 24; *"Drouth,"* p. 20.

[3] The few studies that have focused entirely on the 1950s drought include: R. Lambert, "Drought, Texas Cattlemen and Eisenhower," *Journal of the West* 16 (1977): 66-70; Rana Williamson, "The Heat From the Forge": Aspects of the Seven Year Drought of the 1950s in Texas, Ph.D. dissertation, Texas Christian University, 1993; and John Caraway, "The Texas Mohair Industry and the Seven Year Drought of the 1950's," *West Texas Historical Association Yearbook*, vol. 84 (2008): 74-84. R. Douglas Hurt ended his book on the 1930s dust bowl with a chapter focused on the events in the dust bowl area during the 1950s drought. This chapter was an extended version of an article he had written in 1979. See R. Douglas Hurt, *The Dust Bowl: An Agricultural and Social History* (Chicago: Nelson Hall, 1981). Additionally, novelist Elmer Kelton provided an astute fictional account of the drought; *The Time It Never Rained* (1973).

technical and legal innovations to mitigate dry conditions.[4] The 1930s drought included an ecological and social 'dust bowl' disaster as enormous dust storms scoured farms and ravaged communities on the Southern Plains. Historians have since debated its causes and consequences, and the unprecedented government relief and agricultural reforms that followed.[5] Extensive attention to the 1930s Dust Bowl owes partly to its dramatic presentation by photographers, filmmakers and novelists. So overwhelming was the disaster, observed historians Anne H. Morgan and H. Wayne Morgan, that "[t]he Dust Bowl became synonymous with drought." Indexes to histories and encyclopedias of the American West make their point. Many important books contain 'dust bowl' entries, but nothing for 'drought'.[6] This strong association magnifies the Dust Bowl's significance to the

[4] See, for instance: Sam Kepfield, "'They Were in Far Too Great Want': Federal Drought Relief to the Great Plains, 1887-1895," *South Dakota History*, 28 (Winter 1998), pp. 244-270;Sam Kepfield, "The Nebraska Drought of 1890," *Journal of the West* 34 (January 1997), pp. 47-53;Herbert Schell, "Drought and Agriculture in Eastern South Dakota during the Eighteen Nineties," *Agricultural History* 5 (October 1931), pp. 162-180; Kevin Sweeney, "'And the Skies are Not Cloudy All Day': Drought and the Cherokee Outlet Land Run," *Chronicles of Oklahoma*, vol. 81, no.4 (December 2003), pp. 436-457.

[5] See, for instance: Paul B. Sears, *Deserts on the March* (Norman: University of Oklahoma Press, 1935) and James Malin, *The Grassland of North America: Prolegomena to its History* (Gloucester: Peter Smith, 1967). Two other strongly divergent interpretations belong to Donald Worster and Paul Bonnifield. Worster contends that the 1930s dust bowl was the inevitable outcome of a capitalistic agricultural system and culture that ignored nature's limits. Bonnifield argues that southern plains farmers who lived through the dust bowl were heroes for withstanding nature's vicissitudes and the incompetence of federal planners. Somewhere between the two is R. Douglas Hurt, who explains that southern plains farmers rendered the region vulnerable by plowing submarginal lands, but also that they took lessons from the Dust Bowl to prevent subsequent disasters. See Donald Worster, *Dust Bowl* (Oxford: Oxford University Press, 1979); Paul Bonnifield, *The Dust Bowl: Men, Dirt, and Depression* (Albuquerque: University of New Mexico Press, 1979); and Hurt, *The Dust Bowl* (1981). In a subsequent essay William Cronon explains that the historians' different conclusions owes to their time frames and narrative end points. In William Cronon: "'A Place for Stories': Nature, History and Narrative, *Journal of American History* (March 1992): 1364.

[6] H. Wayne Morgan and Anne Hodges Morgan, *Oklahoma: A Bicentennial History* (New York: W.W. Norton and Company, 1977), 164. For indexes without 'drought' entries, see: Michael Malone and Richard Etulain, *The American West: AModern History, 1900 to the Present*(Lincoln: University of Nebraska Press, 2007); Richard White, *"It's Your Misfortune and None of My Own": A History of the American West* (Norman: University of Oklahoma Press, 1991); Clyde A. Milner II and Carol O'Connor, *The Oxford History of the American West* (Oxford: Oxford University

general exclusion of droughts beyond the Southern Plains and during other periods. Historians contend, for instance, that contemporaries understood soil and water conservation after the 1930s, as though later droughts produced few new lessons or solutions.[7]

This dissertation has two purposes. First, it examines a drought that has not received much attention from historians. This study does more than simply fill a 'gap' in drought historiography, however. Unlike the 1890s and 1930s droughts, both of which occurred during general economic depressions that smothered the nation, the drought that seared the Southern Plains through most of the 1950s occurred during a relatively prosperous decade. Consequently, the drought's economic implications appeared more broadly than before. Second, this study argues that the 1950s drought revealed new priorities and tensions during the regional economic development that followed World War II. In Oklahoma, the drought fostered a greater use of agricultural technologies, land consolidation, an expanded state apparatus to administer federal relief, protection for small businesses, integrated livestock production, and more accessible municipal water supplies.

Oklahoma is uniquely instructive (along with Texas, perhaps) as a case study for the 1950s drought. Because its climate ranges drastically from its semi-arid Panhandle to its more humid southeast, and because the 1950s drought afflicted the entire state, this study reveals responses to drought in typically wet

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Press, 1994); Charles Phillips and Alan Alexrod, editors, *Encyclopedia of the American West, vol II* (New York: Simon and Schuster, 1996); and Howard R. Lamar, editor, *The New Encyclopedia of the American West* (New Haven: Yale University Press, 1998).

[7] Hurt, *The Dust Bowl*, p. 154; Worster, *Dust Bowl*, p. 228.

areas beyond the area typically affected by southern plains droughts. The 1950s drought reached beyond the ranches and farms of the Southern Plains to penetrate all of Oklahoma. The drought fostered discussions, debates, and a new program for agricultural conservation, but it was more than just an agricultural disaster. To relieve part-time farmers, small businesses and thirsty towns required a new perspective and more inclusive policies.

"Oklahoma's Forgotten Drought" is divided into five thematic chapters. It draws mostly on the Carl Albert and Robert Kerr papers, the Oklahoma Cattlemen's Association papers, Oklahoma Governor Raymond Gary's papers, as well as congressional hearings and reports, state reports, newspapers and agricultural journals, especially *The Farmer Stockman*, which circulated widely in Oklahoma and Texas. In its editorial content, *The Farmer Stockman* clearly promoted its advertisers' interests, but the journal also served as a forum for advice, discussion and debate, with letters and articles from practicing farmers, college scientists, agricultural extension officials and federal soil conservation agents.

The opening chapter surveys Oklahoma's agricultural history to provide context for the state's experiences during the drought. From the cattle drives that crossed the state during the 1870s and 1880s to the technological revolution that followed World War II, Oklahoma agriculture continuously changed. Farmers came to expect federal support for crop prices and relief from periodic droughts and floods. Farm numbers shrank, farm sizes increased, and surpluses grew as technology facilitated crop production. During the 1930s depression and drought,

massive dust storms ravaged the Southern Plains. By decade's end, the federal government had introduced sweeping legislation and programs to limit overproduction, conserve soil and water, increase farm credit, relocate desperate farmers, and control vulnerable land. Agriculture's social and economic importance declined, especially after World War II, as towns and cities grew, small farmers took off-farm jobs, and state leaders pushed to industrialize their economy. The 1950s drought afflicted a state with persistent agricultural concerns but also growing municipal and industrial priorities.

The second chapter examines soil and water conservation and agricultural production techniques during the 1950s drought. Beginning with an overview of dust storms that afflicted the Southern Plains during the late 1940s and 1950s, this chapter traces the development of the Great Plains Conservation Program (GPCP), authorized by Congress in 1956. Instead of public control or ownership of broad areas, GPCP reflected the sense that flexible, long-term conservation plans for individual farms and ranches would best protect and enhance the diverse patchwork of Great Plains farms. The program signified that soil and water conservation efforts continued well after the profound lessons learned during the 1930s. But GPCP applied only to drier areas of the Plains – including western Oklahoma and the Panhandle – and so the program only partially reflected conservation and production initiatives during the drought. Consequently, this chapter examines techniques – like grassland farming and irrigation – that followed the drought eastward into Oklahoma's normally humid regions. The flexibility and independence that producers acquired through GPCP contrasted

with their heightened and growing reliance on new agrarian technologies and advice to produce crops in dry conditions.

The third chapter examines challenges facing officials tasked to identify the drought's physical and economic boundaries and to administer drought relief. To be expedient and to exclude undeserving speculators, the federal drought program restricted relief to designated counties and full-time farmers. Gradually, however, part-time farmers and urban small business owners pushed officials toward more inclusive policies. Amendments to the Small Business Administration Act and more relaxed Farmers Home Administration credit under the Rural Development Program signified a growing appreciation of drought's broad consequences. This chapter also examines local, state and federal administrative control over drought-related USDA commodity relief foodstuffs. Under federal pressure, the authority to certify relief recipients shifted permanently from local county commissioners to bureaucrats in the Oklahoma Department of Public Welfare during the drought. The process echoed relief distribution issues and patterns from the 1930s, including patronage, corruption, local resentment toward government "experts," and the expansion of state responsibility to administer federal assistance.

The fourth chapter examines challenges and changes to Oklahoma's cattle industry during the drought. By the early 1950s, the southern plains cattle industry faced ruin as the drought scorched pastures and ranges and cattlemen dumped their herds to avoid ballooning feed costs. Cattlemen organized to request an emergency federal cattle purchase program to stabilize prices, which they

received. However, Agriculture Secretary Ezra Taft Benson's aversion to price supports, along with practical and philosophical divisions among cattlemen, meant that the long-term solution to stabilize prices came through increased marketing to generate demand, not federal price supports to absorb surplus cattle. To increase beef consumption, cattlemen connected with marketing specialists and retailers. And as they fed relief grain to their herds, cattlemen connected to animal health and nutrition specialists. The experience convinced many local producers to fatten their cattle in Oklahoma instead of shipping them north and served as a catalyst for new feedlots and processing facilities. Through the drought, Oklahoma cattlemen integrated their industry through new and stronger relationships with state and federal agencies, college researchers, processors, retailers, and consumers.

The fifth chapter is a case study of changing local and state attitudes toward flood control and water supplies during the drought. The chapter begins by describing the inter-connected droughts, erosion, and flooding that plagued the Washita Basin in southwest Oklahoma through the 1930s. In 1937, following several exceptional flood disasters, Congress funded USDA upstream flood control research in the WashitaBasin. During the late 1930s and early 1940s, local residents and state officials opposed big dams on the WashitaRiver's main stem and at its mouth in favor of upstream agricultural flood control dams on its tributaries. During the 1950s drought, however, local and state priorities shifted away from the USDA upstream flood-control program as Washita basin towns and cities faced severe water shortages. Local booster organizations and Oklahoma's congressional delegation pushed for Bureau of Reclamation dams to avert future

water shortages and to meet anticipated future municipal demands. The region's desperate drought circumstances and political pressure convinced Congress and President Dwight Eisenhower to approve the dams despite their failure to meet existing cost-benefit requirements. Ultimately, the episode was an important ingredient of and pretext to greater federal assistance for municipal water supplies by the decade's end.

This study's title, "Oklahoma's Forgotten Drought," reflects the relative lack of attention paid by historians and the general public to the 1950s drought. The disaster's historical neglect by scholars seems ironic, at least partly since the Southern Plains' current demographic, technological and economic landscapes share more qualities with the 1950s than with the 1930s. Because the disaster was so pervasive and because it generated a rangeof responses from agricultural producers, relief administrators, small towns and public officials, its many themes contribute to fields including agricultural and environmental history, western history, and Oklahoma history. For instance, the study reveals changing perceptions about the term "farmer" during the 1950s and drought's role in the growth of mechanized production systems. Similarly, this study shows how the drought helped to reorient southern plains cattle producersas they reconsidered their region's agricultural and economic potential and their own production systems following World War II. This study also illustrates the national significance of small southern plains towns – not just big western cities like Los Angeles, Phoenix and Denver –to the municipal water supply and dam-building controversies that characterized the twentieth century.

Chapter 1 – Oklahoma's Agricultural History, 1870s-1950s

From the 1870s through the mid-twentieth century, three broad patterns characterized Oklahoma's agricultural development. First, agriculture in Oklahoma continually changed as producers adopted new technologies and land-use patterns to meet environmental and economic circumstances. Broadly, that change tended toward bigger, more highly capitalized farms in western Oklahoma and cattle's growing economic importance throughout the state. Second, drought and low prices eroded producers' sense of independence and increased the federal government's role in the agricultural economy. And third, agriculture's economic and social importance declined as cities grew and leaders pursued the state's commercial and industrial future. These three broad patterns accelerated after World War II, to intensify what political scientists have called the state's historical "struggle to emerge from a traditional rural background into a more modern and progressive state."[1]

Oklahoma lies above Texas, with Arkansas to its east, Kansas to its north, and New Mexico and Colorado at the state's western Panhandle extremity. So located, "at the seams of the American West[,]" the state represents a range of geographic and climatic features. With its northwest Panhandle squarely in the Southern Plains and its southeastern corner near Louisiana swamps, the state occupies a "transition zone" between cool, semiarid and subtropical, humid climates. Average temperatures range from about fifty-five degrees in the

[1] David R. Morgan, Robert E. England and George G. Humphreys, *Oklahoma Politics and Policies: Governing the SoonerState*(Lincoln: University of Nebraska Press, 1991), p. 4.

Panhandle to sixty-three degrees in the state's southeast. More drastically, average annual precipitation ranges from about sixteen inches in the Panhandle to more than fifty-five inches in the southeast.[2]

Throughout Oklahoma, summer temperatures routinely exceed 100 degrees and rainfall often comes during intense storms, so that "[w]ide, shallow rivers [can be] torrents one day, then sluggish, meandering streams…or broad strips of blowing sand on still another." High temperatures and strong winds intensify dry conditions, especially in the Panhandle, where evaporation rates can reach seventy inches per year. The unpredictable weather has prompted historians and geographers to call western Oklahoma and the Panhandle "a land of climatic extremes, of irregularities, uncertainties, and the unexpected in weather" where winds "descend with a biting cold in the winter…and in the summer searing blasts…seem to come from the bowels of hell." During the early stages of the 1950s drought, cynical journalists observed: "A summer drouth is so common an occurrence in the Southwest that we would almost be disappointed if it did not come."[3]

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[2] "One seam joined East and West;" wrote Donald Pisani and Donald Dewitt, "another joined South to West; and a third joined the Great Plains to the Rocky Mountain West." In Donald Pisani and Donald Dewitt, *Guide to Manuscripts in the Western History Collections of the University of Oklahoma* (Norman: University of Oklahoma Press, 2002), p. xix; H. Wayne Morgan and Anne Hodges Morgan, *Oklahoma: A Bicentennial History* (New York: W.W. Norton and Company, 1977), p. 7;Howard L. Johnson, "Temperature and Growing Season," in Robert Charles Goins, ed., *Historical Atlas of Oklahoma* (Norman: University of Oklahoma Press, 2006), p. 20.

[3] Morgan and Morgan, *Oklahoma*, p. 7.During the 1956 drought year, a county irrigation specialist reported seventy-two inches of open pan evaporation near Goodwell, in the Oklahoma Panhandle. In Arthur H. Doerr and John W. Morris, "The Oklahoma Panhandle: A Cross-Section of the Southern High Plains," *Economic Geography*, vol. 36, no. 1 (January 1960): 74-5. Arrell Gibson wrote: "One year might be wet, the next dry, even of drouth proportions. One-fourth to one-half of the annual quota of rainfall might fall in a single day." In Arrell Gibson, "Ranching on the Southern Great Plains," *Journal of the West*, vol. 6, no. 1 (January 1967): 136; *Farmer Stockman*, March 1953, p. 103.In 1957 they asked readers: "who ever saw a normal season in the Southwest?"In*Farmer Stockman*, March 1957, p. 51.

Two major rivers drain Oklahoma toward the Mississippi River. The Arkansas River flows through northeastern Oklahoma from Kansas and Colorado, and drains much of the state's upper half. The Red River flows from Texas along Oklahoma's southern border and drains most of the state's southern and southwestern regions. Oklahoma's eastern streams and lakes are relatively clear, but the state's western and central parts have sandy and red-colored water, reflecting the landscape's red sandstone, shale and clay surfaces. Gypsum also colors western Oklahoma water, particularly the WashitaRiver which drains much of southwestern Oklahoma into the Red River. To supplement surface water supplies, many Oklahoma farms and cities tap aquifers and other groundwater sources, including alluvium and terrace deposits along present-day and ancient streams.[4]

Like its climate, Oklahoma's soil and vegetation types range widely, from dry, mineral-rich aridisols under western Panhandle short-grasses, to wet and relatively infertile ultisoils under eastern Oklahoma forests. Darkly-colored mollisols support a wide variety of crops in much of the state, including irrigated grains and cotton in the Panhandle and southwestern region. Moving from west to east, the state's vegetation reflects different agricultural activities and climates. Where they have not been plowed up and converted to wheat or grain sorghum (milo) production, drought-hardy and protein-rich shortgrasses, especially blue

[4] Bruce Hoagland, "Arkansas and RedRiver Basins," in Robert Charles Goins, ed., *Historical Atlas of Oklahoma*(Norman: University of Oklahoma Press, 2006), p. 10. Kenneth Johnson explained: "The thickness of these aquifers generally ranges from 100 feet to several thousand feet. The depth to freshwater ranges from a few feet to more than 1,000 feet, and most wells producing water from these aquifers are 100-400 feet deep. Wells drilled into these aquifers generally yield 25-300 gallons per minute, although some wells yield as much as 600-2,500 gallons per minute." In Kenneth S. Johnson, "Aquifers," in Goins, *Historical Atlas*, p. 14.

grama and buffalo grass, support Panhandle grazing. Mixed-grass prairie, including dropseeds, little bluestem and sideoatsgrama are common in western Oklahoma. The state's more humid central region contains tall-grass prairie remnants including little bluestem, big bluestem, Indiangrass and switchgrass. And the state's eastern region contains oak-hickory and oak-pine forests in the Ouachita Mountains and Ozark Plateau.[5]

During the late nineteenth century, Oklahoma was Indian Territory, the land where federal officials relocated Native American tribes from across the country. In eastern and southern Indian Territory, sharecroppers who emigrated following the Civil War rented tribal land to grow cotton. By the mid-1880s, explains historian Arrell Gibson, "the Washita valley was almost one continuous farm for fifty miles, most of the holdings farmed by white and black tenants."[6]Western Indian Territory's expansive grasslands supported cattle drives and ranching. Between 1867 and 1887, nearly ten million head of Texas cattle moved through the region to Kansas railheads.[7] The industry's transitory nature fostered an early sense of independence; cattlemen in Indian Territory were less formally organized than other Plains stock-growers. In the south, cattlemen negotiated individual leases on Cheyenne-Arapaho and Kiowa-Comanche reservation land. Ranchers who grazed cattle on Cherokee land to the north

[5] Bruce W. Hoagland, "Soils," in Goins, ed., *Historical Atlas*, p. 17; Bonnie Lynn-Sherow, *Red Earth: Race and Agriculture in OklahomaTerritory* (Lawrence: University Press of Kansas, 2004), p. 67; Bruce W. Hoagland, "Vegetation," in Goins, ed., *Historical Atlas*, pp. 24-5.
[6]Arrell Morgan Gibson, *Oklahoma: A History of Five Centuries* (Norman: University of Oklahoma Press, 1981), p. 171; Morgan and Morgan, *Oklahoma*, 43-4; Lynn-Sherow, *Red Earth*, p. 19;
[7] Morgan and Morgan, *Oklahoma*, 43-4; Lynn-Sherow, *Red Earth*, p. 19.

organized the Cherokee Strip Livestock Association in the early 1880s only to resist a federal order to remove their recently-built fences.[8]

During a series of land runs in 1889 and the early 1890s, farmers settled much of western Oklahoma. Many of the settlers came from wetter sections of the country or from northern sections of the Great Plains where a wet cycle during the 1870 and 1880s reinforced the sense that the region was universally suited to agriculture and cultivation methods practiced in more humid climates. Following the provisions of the 1862 Homestead Act, they settled on 160 acre farms laid out in square grids. Many settlers believed that they were destined to civilize the region and that agriculture was a virtuous lifestyle. They were encouraged by pamphlets that advertised Oklahoma as a place "well watered, well timbered, rich in soil, [with] a most enchanting clime[.]" Scientific advice that 'rain follows the plow' reinforced their faith that they could succeed in Oklahoma and even change the climate.[9]

Settlers ignored warnings that 160-acre homesteads were "ill adapted to the realities of the arid West[,]" including the border region between western

[8] William W. Savage Jr., "Stockmen's Associations and the Western Range Cattle Industry," *Journal of the West*, vol. 14, no. 3 (1975): 56. Savage argued that "[i]f the federal government had not intervened over the enclosure question, the association would never have been incorporated." The episode foreshadowed later divisions since smaller-scale ranchers supported the government order afterbigger ranchers' enclosures had "crowded them from the range." In William W. Savage Jr., "Barbed Wire and Bureaucracy: The Formation of the Cherokee Strip Live Stock Association," *Journal of the West*, vol. 7, no. 3 (1968): 405-414.

[9] Ladd Haystead and Gilbert C. Fite, *The Agricultural Regions of the United States* (Norman: University of Oklahoma Press, 1955), p. 181. After the rains of the 1870s and 1880s, wrote historian John Opie, "farmers, scientists, promoters, and government agents agreed that the old arid shortgrass prairie had been only a troublesome temporary interlude." In John Opie, *The Law of the Land* (Lincoln: University of Nebraska Press, 1994), p. 97; A.P. Jackson and E.C. Cole, *Oklahoma! Politically and Topographically Described, History and Guide to Indian Territory* (Kansas City: Ramsey, Millet and Hudson, 1885), 150, 171, inMorgan and Morgan, *Oklahoma*, p. 47. After the 1860s, scientists including the explorer F.V. Hayden approved the idea that "'as the population increases the moisture will increase.'" In 1880, Nebraska scientist, Samuel Aughy explained that "'Rain follows the plow.'" In Opie, *The Law of the Land*, p. 100.

Oklahoma and the Texas Panhandle. From the 1870s, United States Geological Survey (USGS) head John Wesley Powell urged officials to classify western lands before settlement. He also recommended administrative boundaries that respected regional water supplies. Politicians, businessmen and settlers eager to populate the West and ignorant of the region's drought cycles dismissed Powell's suggestions. Consequently, many settlers occupied lands unfit for homesteading. In western Oklahoma during the 1890s, explains historian Michael Reggio, "[n]ot even food or water could be taken for granted….It was a happy event when one was lucky enough to find good water." The grid settlement system also affected subsequent municipal water supplies, explains historian Bonnie-Lynn Sherow, since "[s]mall towns emerged, not as a consequence of environmentally favorable location, but simply because of their placement on the survey."[10]

The first settlers to charge into OklahomaTerritory during the 1889 Land Run suffered through a drought that rendered many of them destitute in 1890. In an unusual departure from the prevailing belief that "government had neither the power nor the duty to provide relief and that to do so would weaken character[,]" Congress approved nearly fifty thousand dollars to relieve the Oklahoma settlers.

[10]The 'arid West' received less than 20 inches of rain per year and began at the 100th meridian, which formed the border between southwestern Oklahoma and the Texas Panhandle. In William de Buys ed., *Seeing Things Whole: The Essential John Wesley Powell* (Washington, D.C.: Island Press, 2001), pp. 19, 217.Drought cycles were misunderstood in the nineteenth century in large part because there was no framework to collect and analyze climatic data on the Great Plains. Only in 1870, with the creation of the U.S. Weather Bureau, did the Army Signal Corps begin to systematically collect temperature and precipitation data from western weather stations.In 1897 the Weather Bureau acknowledged "the primitive state of knowledge about precipitation and admitted that there were few observed patterns regarding droughts." And not until 1916 did the federal government establish a Division of Agricultural Meteorology to study weather patterns. In Gary D. Libecap and Zeynep K. Hansen, "'Rain Follows the Plow' and Dryfarming Doctrine: The Climate Information Problem and Homestead Failure in the Upper Great Plains, 1890-1925," *The Journal of Economic History*, vol. 62, no. 1 (March 2002): 93; Michael H. Reggio, "'Troubled Times': Homesteading in Short-grass Country, 1892-1900," *Chronicles of Oklahoma*, vol. 57, no. 2 (June 1979): 201; Lynn-Sherow, *Red Earth*, pp. 27-8.

Drought conditions also plagued settlers following the 1892 land run into the Cheyenne and Arapaho Reservation in western Indian Territory and the 1893 run into the Cherokee Outlet along the Kansas border. One settler later recalled that "the summer of 1893 was one of the driest ever known to Oklahoma, so terrible that no wheat was raised and no farm work was to be found anywhere." Sandstorms drove many farmers from the Cherokee Outlet in 1893, and many western Oklahoma settlers left their claims following crop failures in 1894 and 1895.[11]

Despite dire circumstances, the territorial booster press, needy settlers and legislators discouraged relief assistance during the 1890s. During the 1890 drought year, for instance, boosters feared the drought's adverse influence upon potential newcomers and investors. The *Oklahoma City Journal* feared that the new territory might acquire a repellant reputation like "'drouthyKansas'" after that state had similarly solicited assistance.[12] And settlers struggled to preserve their independence. After surveying conditions near Guthrie in 1890, one official reported to his superiors: "Many [homesteaders] are anxious to keep from the public the actual condition of things and seem to prefer to die rather than ask for

[11] Donald Wilhite and Deborah Wood explained that "[t]he federal government made its first drought disaster loans during the Wilson, Harding and Coolidge administrations, beginning with a 1918 measure providing $5 million to farmers for seed loans." In Donald A. Wilhite and Deborah A. Wood, "Revisiting Drought Relief and Management Efforts in the West: Have We Learned from the Past?" *Journal of the West*, vol. 40, no. 3 (summer 2001), p. 19; Kevin Sweeney, "'And the Skies are Not Cloudy All Day': Drought and the Cherokee Outlet Land Run," *Chronicles of Oklahoma*, vol. 81, no.4 (December 2003): 436-457; Hoagland, "Soils," p. 14; Reggio, "'Troubled Times,'" pp. 198-99.

[12] *Oklahoma City Journal*, reprinted in *Norman Transcript*, 16 August 1890, p. 4. To attract as many settlers as possible was important, explained the historian David Emmons, since each new settler "provided relief from the heavy tax burdens necessary in all new commonwealths. His coming meant better schools and roads, more and improved state services, expanding markets and more complete development of natural resources." In David M. Emmons, *Garden in the Grasslands: Boomer Literature of the Central Great Plains* (Lincoln: University of Nebraska Press, 1971), p. 19.

aid."[13] In September 1890, Oklahoma's newly-formed territorial legislature established strict guidelines for drought relief eligibility and distribution, including prison terms for misappropriating funds or falsely declaring need. Moreover, territorial legislators who had quickly spent $15,000 on a commercial exhibit at the Chicago World's Fair "debated long and hard" before loaning desperate western Oklahoma farmers $10,000 to purchase seed.[14]

In addition to drought, falling prices burdened Oklahoma farmers in the 1890s. Between 1889 and 1897, prices for wheat, corn, and cotton – key Oklahoma crops – fell 15, 17 and 30 percent respectively, so that typical Oklahoma farmers operated "with annual net losses" by the mid-1890s. Historian Theodore Saloutos attributed the low prices to federal land-grant, immigration and irrigation policies, and to new farm machinery that "accelerated agricultural production beyond all reasonable market demands." Low prices for territorial crops also reflected farmers' growing exposure to distant national and international markets.[15]

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[13] Thomas Newsham to John W. Noble, 15 August 1890, p. 1, in Western History Collections (WHC), Interior Department, Territorial Papers: Oklahoma, 1889-1912. The historian John Opie described similar attitudes among Kansas settlers during the period: "By losing their capacity to be self-sustaining, starving farmers felt betrayed and, paradoxically, believed that they had betrayed the American dream….Farmers believed it was unpatriotic (and possibly even sinful) to desert their homelands." In John Opie, *Ogalalla: Water for a Dry Land* (Lincoln: University of Nebraska Press, 1993), pp. 68-9.

[14] *Statutes of Oklahoma, 1890* (Guthrie: State Capital Printing Co., 1891), pp. 1058-61. A common theme to the territory's governments, according to historian Danney Goble, "was the reluctance to endanger the capital investment that was seen as essential for the territory's sustained growth." In Danney Goble, *Progressive Oklahoma: The Making of a New Kind of State* (Norman: University of Oklahoma Press, 1980), p. 106.

[15] Goble, *Progressive Oklahoma*, pp. 154, 156.By 1900, explained Theodore Saloutos, "the farmer was 86 percent more efficient as a producer than he was in 1870." In Theodore Saloutos, "The Agricultural Problem and Nineteenth-Century Industrialism," *Agricultural History*, vol. 22, no. 3 (July 1948): 162.

Disgruntled territorial settlers added their voices to the chorus of Plains farmers who had been struggling for decades to reform railroad rates and to secure cheaper credit and market control through remedial legislation, cooperative stores and marketing associations. Through the Alliance and Populist Party, Oklahoma farmers demanded currency inflation, increased federal regulation and ownership of railroads, and a 'subtreasury' credit and crop price protection plan for anyone who stored their crops in federal warehouses. The protest movement peaked in 1896 but was compromised by regional and occupational differences, and distance, and subsequently declined with the return of better crop prices in the late 1890s. The Populists' concerns later resounded in farmers' calls for the federal government to purchase surplus crops during the 1920s and New Deal programs to provide farm credit and crop price guarantees.[16]

Following Populism's decline, lingering poverty made many Oklahoma share-croppers receptive to socialist ideas. In Oklahoma's southern and eastern cotton-producing counties, support for Socialist candidates grew from 1907 to 1914, but it faded under patriotic pressure and high crop prices during World War I. The quick transformation prompted historian Garin Burbank to conclude that agrarian socialism in Oklahoma was merely an outlet for economic distress, not a commitment to collective ownership of resources. Consequently, explains historian R. Douglas Hurt,Oklahoma Socialists supported "the distribution of privately held land" to landless tenantsinstead of land nationalization in the 1912 federal election. Still, the region's poverty was the seedbed for a sense that federal

[16]Saloutos, "The Agricultural Problem," pp. 171-3; Goble, *Progressive Oklahoma*, pp. 159-60; Robert Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967), pp. 84-88.

programs and public works were vital to its economy.Recalled southeast Oklahoma's congressional representative Carl Albert decades later: "Because my state was poor and my district poorer, federal aid was no demon; it was a deliverer.[17]

Across the Plains, the 1890s drought fueled agricultural adaptations, technical innovations and legislative reforms. In USDA experimental station bulletins and promotional pamphlets, experts promoted new 'dry-farming' techniques to conserve moisture, including "deep plowing in the fall, packing the subsoil, frequently stirring up a dust mulch [and] leaving part of the ground unplanted each year to restore moisture." Farmers replaced their moldboard plows with one-way disk plows that "moved along faster," and "left a finely pulverized surface layer." And they switched from corn to more drought-resistant crops, including kafir corn, sorghum grain, broomcorn and Turkey Red, a hard winter wheat. Crusaders, including journalist-promoter William E. Smythe and USGS hydrologist Frederick H. Newell, urged settlers to irrigate portions of their land. In 1902, Congress passed the Reclamation Act to finance western irrigation projects through a revolving fund to be repaid by successful settlers. And in 1909 and

[17]After his first trip to Oklahoma in 1907, for instance, Socialist organizer Oscar Ameringer saw "'humanity at its lowest possible level of degradation and decay[,]'" including "'toothless old women with sucking infants on their breasts….youngsters emaciated by hookworms, malnutrition, and pellagra[.]'"In Morgan et al, *Oklahoma Politics and Policies*, xii;Morgan and Morgan, *Oklahoma*, pp. 97-8.Garin Burbank argued that "disappointed and embittered tenant farmers voted Socialist in great numbers because they expected to acquire land of their own, not because they wished to share in collectively owned land." In Garin Burbank, "Agrarian Socialism in Saskatchewan and Oklahoma: Short-Run Radicalism, Long-Run Conservatism," *Agricultural History*, vol. 51, no. 1 (January 1977): 177-8; R. Douglas Hurt, The Big Empty: The Great Plains in the Twentieth Century (Tuscon: University of Arizona Press, 2011), p. 19. "Directed to their schools," Albert continued, "Washington's dollars could deliver my people from ignorance. Federal dams could save their farms from floods, reclaim their soils from erosion, and ease their toil with electricity. Sensible farm programs could bring prosperity to the poor children[.]" In Carl Albert, *Little Giant: The Life and Times of Carl Albert* (Norman: University of Oklahoma Press, 1990), p. 156.

1912, Congress amended the homestead law to allow for 320 rather than 160-acre homesteads and to reduce both the cultivated acreage and residency terms required for title.[18]

In Oklahoma, the drought and depression crises strengthened expert authority, argued Bonnie Lynn-Sherow, because they "gave the scientists at Stillwater an entry that might not have existed otherwise." Oklahoma experiment station director John Field offered advice to the state's farmers: "'Grow many crops, do not depend upon one crop, but utilize stock to the greatest extent and thus secure greater returns and at the same time, keep up the fertility of the soil.'" In western Oklahoma, the USDA Woodward Research Station also emphasized diversified agricultural production. In 1921 the station added 160 acres for dairy cattle research and by 1924 the station had displayed over 100 varieties of trees and shrubs, more than 50 varieties of peaches, 35 varieties of apples, as wells as plums, apricots, pears, and 120 varieties of grapes. Oklahoma farmers who expanded to grow new crops, and those who became "part-time stock raisers [to] hedge against the failure from drought of their small grain crops[,]" increasingly relied on expert advice. By 1901, farmers from almost every county in Oklahoma and Indian Territory had requested information and assistance to combat blackleg, a dangerous disease that quickly killed healthy young cattle. Between 1900 and

[18] In Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979), pp. 87, 91;W. David Baird, "Agriculture in the Oklahoma Panhandle, 1898-1942," *Chronicles of Oklahoma*, vol. 72, no. 2 (June 1994): 127-8; Opie, *Ogallala*, pp. 86-9. Donald Pisani explained that the 1902 law reflected social, political and economic circumstances during the 1890s, including fears of urban unrest and growing monopoly power, a commitment to family farm ideals, and the power of western politicians and railroads eager to capture federal money and attract settlers. In Donald J. Pisani, *To Reclaim a Divided West: Water, Law and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992), pp. 273-325; Libecap and Hansen, "'Rain Follows the Plow,'" p. 98; John T. Schlebecker, *Whereby We Thrive: A History of American Farming, 1607-1972* (Ames: The Iowa State University Press, 1975), p. 142.

1913, the Oklahoma experiment station distributed 1,243,000 doses of blackleg vaccine. As a result of the blackleg scare, "farmers came to expect the station's material assistance in a number of other ways" including water testing, insect identification, and commercial seed testing. From 1899 to 1907, circulation of the Oklahoma Experimental Station's bulletin jumped from 13,500 to 25,000 copies.[19]

But farmers did not uniformly follow or benefit from scientific advice. In western Oklahoma, "[s]ettlers planted everything at first: corn, broom corn, oats, alfalfa, millet, cowpeas and cotton[,]" but gradually "turned to wheat." And large-scale grain farmers displaced many smaller-scale subsistence-oriented farmers in western Oklahoma. Elsewhere, cotton predominated and by 1907 "was the new state's economic mainstay[,]" especially among poor sharecroppers in southern and eastern Oklahoma. Partly these patterns reflected rising crop prices during the early 1900s. They also occurred because diversified farming and scientific stewardship was difficult for small farmers who could not spare the acreage for feed or soil-building crops.[20]

During the four-year period 1910-14, farm commodity prices compared favorably to prices for industrial goods. The trade balance, known as 'parity', became a subsequent benchmark for farmers' purchasing power. Through World

[19]Lynn-Sherow, *Red Earth*, pp. 55, 87, 98-9, 101-2, 148. Similarly, explained John Opie, "dry-farming advocates also insisted that if the farmer found the right combination of trees, shrubs, grains, fruits, and vegetables, he could succeed on less than a quarter-section."In Opie, *Ogallala*, p. 94. In 1936, the Woodward station's first superintendent, Frank Chilcott recalled: "'The Woodward station is the gateway to the Southern Plains. Practically all plant material, whether sorghums, wheat grasses or trees is first tested here. If it proves promising, it is further tested at stations with considerable less rainfall.'" In Louise Boyd James, "Jujubes, Grapes and Grass: The USDA Research Station at Woodward, 1913-1987," *Chronicles of Oklahoma*, vol. 65, no. 4 (December 1987): 360, 367.

[20] Reggio, "'Troubled Times,'" pp. 201-2; Lynn-Sherow, *Red Earth*, pp. 99, 148; Morgan and Morgan, *Oklahoma*, p. 147; Wiebe, *The Search for Order*, p. 15.

War I, favorable weather and rising crop prices increased farm prosperity. Steam and gasoline engines boosted yields, and farmers eager to capitalize from high grain prices borrowed money to acquire and cultivate more land. By 1918, write historians Anne and H. Wayne Morgan, "Oklahoma agriculture was clearly overextended. Cotton, a ruthless consumer of soil fertility, was planted in every county [and] [w]heat grew well beyond both its natural and economical boundaries." Additionally, by 1920 more than half of the state's farmers were tenants with little incentive to practice crop rotations or soil conservation. The situation prompted one observer to lament that the state's farmers were limited intellectually and practiced the "'most backward agricultural methods'[.]"[21]

In the early 1920s as European farmers recovered from the war, prices for wheat, cotton and livestock dropped significantly. Falling commodity prices and high production costs squeezed farmers with implement and mortgage debts. Between 1919 and 1924, complained an Oklahoma congressman, farmers' purchasing power dropped by more than half. Many farmers expanded their cultivated acreages to compensate for the low prices. In one Oklahoma Panhandle county, for example, wheat acreages rose 300 percent between 1920 and 1929. In 1925, the state's cotton acreage reached its high of 5,396,000 acres and accounted for seventy-five percent of farm commodity sales. Mechanization fueled the trend,

[21] David Danbom, *Born in the Country: A History of Rural America* (Baltimore: The Johns Hopkins University Press, 2006, first 1995), p. 191; Trudy Huskamp Peterson, *Agricultural Exports, Farm Income, and the Eisenhower Administration* (Lincoln: University of Nebraska Press, 1979), pp. 1-2.From 1914 to 1917, the price of wheat jumped from eighty-three cents per bushel to $2.07 per bushel. In Baird, "Agriculture in the Oklahoma Panhandle, 1898-1942," p. 128;Morgan and Morgan, *Oklahoma*, pp. 102, 149; Tommy R. Thompson, "'Milk and Honey and a Few Bad Apples': The Image of Oklahoma in Popular Magazines," *Chronicles of Oklahoma*, vol. 68, no. 3 (September 1990): 285. The quote comes from Burton Rascoe, "Oklahoma: Low Jacks and the Crooked Game," *The Nation*, 117 (11 July 1923): 34-36.

especially in the wheat belt. From 1920 to 1925, the number of tractors on Oklahoma farms jumped from 5,800 to 10,000. Agricultural scientist William Lockeretz subsequently observed: "mechanization…reinforced the conversion to mechanized methods. To be able to pay for the new machinery and the additional land [that would] make the new machinery economical, plains farmers had to become more commercialized than they had been under the older, more diversified and more self-sufficient systems."[22]

Through the decade, policy-makers struggled to solve farmers' corresponding crop surplus and income problems. In 1921, Oklahoma governor James Robertson warned of "grave danger thateven the normal production will cease unless the farmer and stock-raiser is enabled to obtain afair profit on his investment and for his labor." Like many of his contemporaries, Robertson rejected "paternalistic" assistance and "charity" to remedy the situation. Instead, he urged the state legislature to help agricultural producers organize cooperative marketing associations, provide for more timely market reports, and establish better product grades and packaging standards. State leaders soon called for more direct governmental assistance. In 1923, Governor John Walton requested state credit to help cooperatives build grain and cotton storage facilities. And in 1924, despite its overwhelming rejection in the House of Representatives, Oklahoma's

[22]Oklahoma Representative Thomas D. McKeown of Adamade the point before Congress. In Phillip Grant Jr., "'Save the Farmer': Oklahoma Congressmen and Farm Relief Legislation, 1924-1928," *Chronicles of Oklahoma*, vol. 64, no. 2 (June 1986): 76. The Oklahoma Panhandle county was TexasCounty, where acreages rose from 151,380 acres in 1920 to 475,478 acres in 1929. In Baird, "Agriculture in the Oklahoma Panhandle, 1898-1942," pp. 129-30. Between 1924 and 1929, Oklahoma farmers produced over a million bales of cotton per year, to make the state one of the biggest cotton producers in the country. In Haystead and Fite, *The Agricultural Regions*, pp. 204-5; William Lockeretz, The Dust Bowl: Its Relevance to Contemporary Environmental Problems," in Merlin Lawson and Maurice E. Baker, *The Great Plains: Perspective and Prospects* (Lincoln: University of Nebraska Press, 1981), p. 15.

representatives unanimously supported the controversial McNary-Haugen bill to raise key crop prices through federal purchases. After commerce secretary Herbert Hoover advised President Calvin Coolidge to veto another McNary-Haugen bill in 1927, Oklahoma Farmers' Union president John Simpson called Hoover "an enemy of farmers[.]"[23]

Coolidge repeatedly vetoed the McNary-Haugen plan, but in 1929, with Hoover as President, Congress established the Federal Farm Board to finance crop storage and marketing associations. After this approach failed to reduce agricultural surpluses, raise farm prices, or restore farmer purchasing power, in May 1933, Congress established the Agricultural Adjustment Administration (AAA), which paid farmers (from funds raised by taxing processors) to reduce their production of basic commodities including wheat, corn, cotton, and hogs. To stabilize farm incomes and reduce price fluctuations, Congress also established the Commodity Credit Corporation (CCC) which offered non-recourse loans to farmers against their federally-stored crops.[24]

As Congress struggled to raise crop prices and stabilize farm incomes, drought again afflicted Oklahoma and the Southern Plains. Grass shortages quickly threatened cattle producers already burdened by over-production and low

[23]James Robertson, 4 January 1921 State of the State address, pp. 1-2, 4, in ODL, James Robertson Papers (RG 8-D), http://www.odl.state.ok.us/oar/governors/addresses/robertson1921.pdf accessed 10 December 2009; John Walton, 8 January 1923 State of the State address, p. 1, in ODL, Jack Walton Papers (RG 8-E), http://www.odl.state.ok.us/oar/governors/addresses/walton1923.pdf accessed 10 December 2009.Oklahoma representatives supplied seven of the losing votes in the 1924 bill's 155-22 defeat. In Grant Jr., "'Save the Farmer,'" p. 78; James C. Milligan and L. David Norris, "'Organizing Wide-awake Farmers': John A. Simpson and the Oklahoma Farmers' Union," *Chronicles of Oklahoma*, vol. 74, no. 4 (December 1996): 371.

[24] If commodity markets priced a farmer's stored crop above the loan value, he could sell the crop and keep the difference. If not, the farmer surrendered the crop to repay the loan. In Harold Ottoson et al., *Land and People in the Northern Great Plains Transition Area* (Lincoln: University of Nebraska Press, 1966), pp. 68, 79; R. Douglas Hurt, *The Dust Bowl: An Agricultural and Social History* (Chicago: Nelson-Hall, 1984, 1981), p. 92.

prices. Early in 1933, Congress authorized federal loans for drought-stricken farmers and ranchers to purchase feed, and railroads discounted shipping rates for feed to the drought area. When these measures failed to raise prices and save herds, Congress also implemented a major cattle purchase program. And in 1934, officials added cattle to the list of eligible AAA commodities to benefit desperate and independent-minded cattle producers who had initially scorned federal production controls. The same year, Congress passed the Taylor Grazing Act, which removed from settlement nearly eighty million acres of the public domain to be managed by local grazing districts under the Interior Department's supervision.[25]

Decades of dry-farming had made soils especially vulnerable to wind erosion, and during the 1930s intense dust storms scoured the Southern Plains. The center of dust storm activity, known as the 'Dust Bowl,' included parts of the Oklahoma and Texas panhandles, eastern New Mexico, southeast Colorado and southwest Kansas. In 1934, the region experienced twenty-two dust storms. That figure rose to forty in 1935, to sixty-eight in 1936, and to a high of seventy-two dust storms during 1937. Conservation measures and rain helped to lower the number of storms during the 1940s. By 1941, only seventeen storms hit, and officials reported only one dust storm during 1945.[26]

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[25] The Drought Relief Service (DRS) implemented the cattle purchase program. DRS was established to "assume responsibility for all AAA and USDA relief work and to coordinate it with the activities of the Farm Credit Administration and Federal Emergency Relief Administration." In Hurt, *The Dust Bowl*, pp. 87, 105-6; Worster, *Dust* Bowl, p. 190.

[26] Douglas Brinkley and Patricia N. Limerick, eds., *The Western Paradox: A Bernard DeVoto Conservation Reader* (New Haven: YaleUniversity Press, 2000), p. 246; *New York Times*, 30 May 1950, p. 3.

The storms carried a range of social and spiritual implications. Blowing soil aggravated health issues including measles, strep throat, bronchial diseases and dust pneumonia. Dust Bowl residents struggled constantly to perform ordinary tasks. In June 1935, Caroline Henderson wrote from Eva, Oklahoma: "[W]e have been trying to rescue our home from…wind-blown dust[.] It is an almost hopeless task, for there is rarely a day when…the dust clouds do not roll over….and everything is covered again[.]" Hard times moved some people to humor. A newspaper editor jokingly complained from southern Kansas: "'[I] haven't heard a thing for hours, my ears are full, can't smell, my nose is full, can't walk, my shoes are full but not of feet.'" Others turned to religion for comfort and hope. Church membership grew throughout the Dust Bowl region during the 1930s, and many residents viewed the dust storms as signs of the coming apocalypse and punishment from God.[27]

The dust bowl's social and environmental devastation sparked fundamental discussions about the region's agricultural economy. Observing the devastation in his 1935 book *Deserts on the March*, the ecologist Paul Sears called the dust storms "a symptom and a symbol," of short-term land-use and management patterns, and "the inevitable result of a system which has ever encouraged immediate efficiency without regard to ultimate consequences." Soil scientist H.H. Finnell believed that the problem was not whether land should be cultivated,

[27]Bonnifield, *The Dust Bowl*, pp. 73-5;Caroline Henderson, "Letters from the Dust Bowl," and Brad Lookingbill, "'A God-Forsaken Place': Folk Eschatology and the Dust Bowl," in John R. Wunder, Frances W. Kaye and Vernon Carstensen, *Americans View Their Dust Bowl Experience* (Boulder: University Press of Colorado, 1999), pp. 94, 150-169.

but how it should be cultivated. The historian James Malin subsequently stressed that dust storms were a natural phenomenon common before western settlement.[28]

Some contemporaries tried to downplay dust bowl conditions. In 1938, for instance, an Oklahoma public health official downplayed "'exaggerated statements [and] 'mass hysteria'" surrounding the storms' health effects. But routine front-page newspaper accounts of the devastation, Dorothea Lange's vivid photographs of Dust Bowl survivors, and the widely-viewed film, *The Plow That Broke the Plains*, directed by Pare Lorentz, drew national attention to the disaster. Before the decade's end, Lange's photos and John Steinbeck's 1939 novel, *The Grapes of Wrath*, made iconic the image of blown-out farmers straggling away from wrecked farms.[29]

To fight the dust storms, in June 1933 Interior Secretary Harold Ickes established the Soil Erosion Service (SES) as a temporary agency to demonstrate soil and water conservation practices including contour plowing, terracing, and strip-cropping. After immense dust storms reached east coast cities during 1934 and 1935, Congress made SES activities a permanent function of the Department of Agriculture, to be administered by a new agency called the Soil Conservation Service (SCS). Since USDA had very little information on soil types and their

[28] Paul Sears, *Deserts on the March* (Norman: University of Oklahoma Press, 1954, first 1935), pp. 114, 120; Bonnifield, *The Dust Bowl*, pp. 74-5;James Malin, *The Grassland of North America: Prolegomena to its History* (Gloucester: Peter Smith, 1967, first 1947), pp. 134-41.
[29] J.A. Blue, "Dust: its effects on man from a medical standpoint with special reference to the Dust Bowl," *Southern Medical Journal*, vol. 31 (1938), pp: 1101-6, quoted in William Lockeretz, "The Dust Bowl," p. 23; Worster, *Dust Bowl*, pp. 54-8, 96.

distribution in the early 1930s, SCS also surveyed and classified southern plains soils.[30]

In 1936, the Supreme Court ruled that taxing processors to finance AAA crop reduction programs was unconstitutional, so Congress married crop reduction to soil conservation by paying farmers to shift "from soil-depleting to soil-conserving crops," including grasses, legumes, and feed crops. Congress also established the Agricultural Conservation Program (ACP) which provided SCS technical assistance and paid farmers to implement soil conservation practices from lists determined annually by local and federal officials. By 1938, the SCS mandate included flood control, sub-marginal land development, drainage and irrigation. To further mitigate drought and price problems, the 1938 Agricultural Adjustment Act added crop insurance, parity payments, mandatory non-recourse loans for corn, wheat and cotton producers, and permanently added the allotment program to the USDA budget.[31]

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[30] F. Dwain Phillips and Mark S. Harrison, *Out of the Dust: The History of Conservation in Oklahoma in the Twentieth Century* ([Oklahoma City]: Oklahoma Association of Conservation Districts, 2004), p. 10-12; Hurt, *The Dust Bowl*, pp. 46, 72-4, 76, 78;D. ChongoMundende, "Saving the Land: Soil and Water Conservation in Oklahoma," *Chronicles of Oklahoma*, vol. 82, no. 1 (Spring 2004): 7; Worster, *Dust Bowl*, p. 216.

[31] Richard Andrews, *Managing the Environment, Managing Ourselves: A History of American Environmental Policy* (New Haven: Yale University Press, 1999), p. 171. "This shift of emphasis from production controls to soil conservation provided more equitable aid to cooperating farmers[,]" observed R. Douglas Hurt, "because [farmers] could earn payments on any part of their crop lands which contributed to soil conservation instead of on only a few select crops designed to limit production" (p. 92). In particular, small-scale farmers benefited from the new program, in contrast with the first AAA "which primarily aided the large-scale farmers, who received most of the allotment money because they owned the most acres to remove from production." In R. Douglas Hurt, *Problems of Plenty: The American Farmer in the Twentieth Century* (Chicago: Ivan R. Dee, 2002), p. 81. More critically, Donald Worster observed that it "was a mere two-year program, and eventually impractical in the face of rising grain prices." In Worster, *Dust Bowl*, p. 217. ACP conservation practices included ponds, terraces, grassed waterways, gully shaping and grass planting. Phillips and Harrison suggest that local AAA committees listed necessary conservation practices. In Phillips and Harrison, *Out of the Dust*, p. 65; Mundende, "Saving the Land," p. 16; Richard Lowitt, *The New Deal and the West* (Norman: University of Oklahoma, 1993, first 1984), p. 60;Hurt, *Problems of Plenty*, p. 82.

After initial hesitation, Oklahomans responded favorably to soil conservation and crop control programs. In 1932, for instance, voters rejected an initiative petition for a new law to regulate the amount of soil-exhausting crops farmers could plant. And in 1936, they rejected a law that would fund and empower the Oklahoma Conservation Commission to help federal agencies designate suitable soil conservation projects under the Soil Conservation and Domestic Allotment Act.[32] After SCS drafted a 1936 model law to create soil conservation districts by local petition and referendum, however, Oklahoma quickly passed similar legislation the following year. The Oklahoma legislature's quick action owed partly to a new federal law requiring states to have soil conservation laws in order to qualify for SCS benefits. Farmers subsequently defeated some soil conservation districts at the polls, reported one Dust Bowl newspaper, because of "'the red tape and technicalities insisted upon by the government,'" and from the fear that land control "'might pass…from the hands of the individual farmer to a distant committee or supervising body.'" But soil conservation districts quickly occupied the landscape. Within a year, Oklahoma contained twenty-eight soil conservation districts covering one-third of the state. Many farmers adopted new cultivation techniques, including 'stubble-mulching' through which they left crop stubble in the ground after the harvest to anchor the soil and capture moisture. They also used duck-foot cultivators which minimized

[32] The proposed 1932 law would have made it illegal to plant more than thirty percent of soil-exhausting crops in fields cultivated the previous year, created a new commission to determine crop control limitations, given the Governor authority to "determine and limit planting of said crops" and provided injunctions against persons who violated the above terms. Voters rejected the proposal by a count of 290,136 to 130,327. Voters rejected the 1936 proposal by a count of 290,421 to 223,836. In *Oklahoma Elections: Statehood to Present, Volume I* (Oklahoma State Election Board, 1994), pp. C-207, C-251.

the soil's exposure to heat and wind by stirring it to cut weeds below the surface instead of turning it over.[33]

To qualify for federal subsidies, many landowners cut from production the acres they normally rented to tenant farmers. Since tenants operated more than sixty percent of Oklahoma farms in the early 1930s, this response carried significant social, economic and environmental implications. Many eastern Oklahoma tenant farmers left the state for California; a move that appealed to contemporary and subsequent observers. In 1937, for example, Oklahoma Governor Ernest W. Marland explained to the state legislature: "Farm tenancy is the major cause of rural Oklahoma's social and economic problems. It is inseparably tied to the problems of soil erosion and relief….because the transitory tenant farmers…make no effort to conserve the soil….[and] the relief load is always far greater in counties where there is the greatest percentage of tenant farming." Another contemporary observer concluded that Oklahoma's "'newly broken red plains are among the worst eroded, and its farm people are among the least rooted to the soil.'"[34]

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[33] Hurt, *The Dust Bowl*, p. 74. The federal law was the Standard State Soil Conservation Districts Act, passed in February 1937. The state law was the Conservation District Enabling Act, signed in April 1937. In Mundende, "Saving the Land," pp. 11-12. The quote is from *The Elkhart Tri-State News*, 13 May 1938, in Bonnifield, *Dust Bowl*, p. 130; Haystead and Fite, *Agricultural Regions*, pp. 182-3. In Beaver County, observed Richard Lowitt, some farmers resisted any plan by "'white collars'" to get their "'heads in a halter,'" but most farmers without any resources soon came to see the benefits of SCS assistance and equipment, and CCC labor to build ponds, drainage works and treat eroded slopes. They also appreciated the program's voluntary aspects. In Richard Lowitt, *American Outback: The Oklahoma Panhandle during the Twentieth Century* (Lubbock: TexasTechUniversity, 2006), pp. 55-6.

[34]During the 1930s, over 12 million acres were taken out of cotton production in the Southwest. And "[d]uring certain drought months in 1934, up to 90 percent of the population of particular eastern Oklahoma counties collected relief payments." In James M. Gregory, *American Exodus: The Dust Bowl Migration and Okie Culture in California* (New York: Oxford University Press, 1989), pp. 11-14, 30. Morgan and Morgan write: "the reduction of the farm population was beneficial….Oklahoma agriculture simply could not support marginal farmers any longer. Their

Oklahoma's tenant farmers were exceptionally mobile. In 1930, for instance, forty-four percent of Oklahoma farmers had inhabited their farms for fewer than two years. And a 1937 study of over 1,000 Oklahoma farm families from four counties showed that "the average Oklahoma farmer moved four times, five if he was a tenant." Aside from stewardship issues, this mobility affected the ways that farmers understood work. Over one-third of Oklahoma tenant farmers had nonagricultural work experience during the 1930s, "having left farming for a time then returned." This condition reflected broader circumstances. For much of the cotton-belt, explained historian James Gregory "[n]either occupational categories nor communities of residence enjoyed much constancy. Today's oil worker was yesterday's farmer and tomorrow's farm laborer."[35]

To help stabilize the farm population and eroded soil, the federal government purchased sub-marginal land, relocated residents and re-grassed drifting areas. The Resettlement Administration coordinated and directed land purchase and relocation programs from 1935 to 1937, when the Farm Security Administration (FSA) assumed the task.[36] FSA also granted loans to farmers "whose operations promised to be self-sustaining, provided they had adequate access to equipment, seed and livestock." Opposition from landowners unwilling

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departure helped stabilize the total state agricultural system." In Morgan and Morgan, *Oklahoma*, p. 167; Ernest W. Marland 15 January 1935 State of the State address, p. 3, in ODL, Ernest W. Marland Papers (RG 8-J), http://www.odl.state.ok.us/oar/governors/addresses/marland1935.pdf accessed 10 December 2009.

[35] Nationwide, twenty-eight percent of farmers resided for fewer than two years. The regional Farm Security Administration director called Oklahoma's tenant farmers 'tumbleweeds'; "rolling across the prairie until they lodge for a year against a barbwire fence, only to break loose next year and go tumbling again." In Gregory, *American Exodus*, pp. 30-1.

[36] During the fall of 1934, AAA's land policy section administered a submarginal land purchase through which the federal government purchased over 150,000 acres in Colorado, New Mexico and Kansas. In Hurt, *Dust Bowl*, pp 115, 159. FERA's Rural Rehabilitation Division ran the program during the spring of 1934. It was transferred to the Resettlement Administration in 1935. In Ottoson et al., *Land and People*, pp. 82-3.

to move or sell their land for its current appraised value, businessmen afraid to lose customers, and local governments afraid to lose tax revenues helped to end the land purchase program in the early 1940s. But by the 1950s, FSA's successor, the Farm Home Administration (FHA) was an important alternative for farmers unable to secure loans at commercial banks.[37]

Despite resistance to New Deal resettlement programs, the 1930s depression and drought changed farmers' expectations about government's economic and social roles. In 1930, for instance, Oklahoma Farmers' Union president John A. Simpson became president of the national organization because he vehemently opposed production limits. Also that year, Oklahomans elected as governor, William Murray, a fiscal conservative who resisted debt or inflation to solve the economic crisis, and who believed that charity was a private concern. In early 1931, newspapers boasted that Oklahoma's Panhandle counties refused drought relief assistance. Historians have noted too, that during the early 1930s "Oklahomans consistently defeated initiative petitions to increase state funds for relief."[38]

By 1932 however, most farmers began to support the domestic allotment plan that included acreage restrictions and taxes on processors of basic farm

[37] Hurt called them 'standard' loans. "These loans," he explained, "were granted to farmers whose operations promised to be self-sustaining provided they had adequate access to equipment, seed, and livestock [and] to enable farmers to shift emphasis from cash grain farming to mixed farming with greater emphasis on raising livestock." To give farmers the needed time to effect the shift, these loans were repayable over ten years. In Hurt, *The Dust Bowl*, pp. 95, 118. Congress also authorized land-purchase loans to farm tenants and 'rehabilitative' loans so farmers without alternative credit could purchase "livestock, equipment, and other farm-operating needs, and for family subsistence." In Ottoson et al., *Land and People*, pp. 84-5; R. Douglas Hurt, "The National Grasslands: Origin and Development in the Dust Bowl," *Agricultural History*, vol. 59, no. 1 (January 1985): 149.

[38] Instead of production cuts to raise farmers' incomes, Simpson wanted a public works program, currency inflation and farm mortgage refinancing. In Milligan and Norris, "John A. Simpson," pp. 373-4, 378-80; Bonnifield, *The Dust Bowl*, p. 38; Morgan and Morgan, *Oklahoma*, p. 126.

commodities. And as the depression deepened, "Murray joined other governors in seeking federal funds." In 1937 Oklahomans elected E.W. Marland as governor for his pledge to "bring the New Deal to Oklahoma." To cooperate with federal public works programs, Marland's administration established the Oklahoma State Planning Board (OSPB) to inventory "natural, agricultural, industrial and human resources…and [to] develop plans and programs for the conservation and better utilization of these resources." When he came to office in January 1939, Oklahoma Governor Leon Phillips explained: "Our people have come to the place where they demand more of the government than was expected when our State was first admitted."[39]

During the 1930s, reformers learned to mitigate drought through agricultural adjustments. That lesson appeared most clearly in the 1936 report *The Future of the Great Plains*, prepared by the Great Plains Committee (GPC), a group appointed by President Franklin D. Roosevelt to assess conditions on the Great Plains. To reduce the region's environmental and economic vulnerabilities, GPC emphasized agricultural adjustments including land surveys, resettlement, bigger farms, erosion control districts and crop production shifts. As he presented the report to Congress, Roosevelt explained: "The problem is one of arresting the decline of an agricultural economy not adapted to [its] climatic conditions….A new economy must be developed which is based on the conservation and effective utilization of all the water available [and] which represents generally a more

[39] Morgan and Morgan, *Oklahoma*, p. 130; Ernest W. Marland 15 January 1935 State of the State address, p. 3; Leon C. Phillips 10 January 1939 State of the State address, p. 1, in ODL, Leon C. Phillips Papers (RG 8-K), http://www.odl.state.ok.us/oar/governors/addresses/phillips1939.pdf accessed 10 December 2009.

rational adjustment of the organization of agriculture and cropping plans and methods to natural conditions." New Deal agricultural reform also contained fundamental tensions, explained historian Donald Worster, since "a large number of USDA bureaucrats [wanted] to enable the commercial farm sector to compete more successfully with manufacturing [while] other officials concentrated on the rural poor [and tried] to keep as many farm families on the land as possible."[40]

In several respects, Congress responded to FDR's call to conserve and effectively use great plains water, but the federal government did little to promote irrigation during the 1930s. The 1937 Water Facilities Act authorized $5 million to great plains water development projects and maintenance, but limited assistance for any single project to a maximum of $50,000. For several years, the 1939 Case-Wheeler Act authorized WPA and CCC relief labor to great plains irrigation projects.[41] Additionally, the 1939 Reclamation Project Act eased federal water

[40] Almost all of the Great Plains Committee's recommendations focused on agricultural adjustments, not regional economic development to mitigate dry conditions and improve the livelihoods of Plains residents. Only on its last point recommending federal action did the committee suggest that "[t]he development of other resources, such as the vast lignite deposits which underlie the northern part of the Great Plains area….would provide alternative occupation for some people." U.S. Congress, House, Committee on Agriculture, *The Future of the Great Plains* (H.Doc. 144), 75th Congress, 1st Session, 10 February 1937, p. i-vii, 8. The report informed subsequent interpretations. Studying reports of the 1890s and 1930s droughts several years later, for instance, SCS Climate and Physiographic chief C. Warren Thornthwaite concluded that "[i]n a semiarid climate like that of the Great Plains....[a] stable economy can be achieved only if agriculture is adapted to the entire range of climatic conditions." In C.W. Thornthwaite, "Climate and Settlement in the Great Plains," *Climate and Man: USDA Yearbook of Agriculture* (Washington: U.S. Government Printing Office, 1941), p. 186. Later, the historian Richard Lowitt concluded: "the essence of New Deal suggestions called for a shift from one-crop production to a greater emphasis on grazing[.]" In Lowitt, *The New Deal and the West*, p. 222. Similarly, the historian Douglas Helms identified two key themes to 1930s adjustments: "[c]ritically erodible land should be returned to permanent vegetative cover[;] [and] farmers [should] shift from extensive cash crop farming, wheat in particular, to a balanced livestock and farming operation, or…shift to a livestock operation and the growing of livestock feeds only." In Douglas Helms, "Conserving the Plains: The Soil Conservation Service in the Great Plains," *Agricultural History*, vol. 64, no. 2 (spring 1990), p. 61; Worster, *Dust Bowl*, p. 155.

[41] Historian Richard Lowitt observed that "Congressional appropriations, however, were sufficient for only a fraction of the requests for credit and technical assistance to farmers in the development

project repayment obligations for local organizations including irrigation districts and water users' associations, and it authorized the Bureau of Reclamation to supply municipal water as long as the agreement did not "impair the efficiency of the contract for irrigation purposes."[42]

More than a move to irrigate the Plains during the 1930s, these laws reflected organized western pressure for federal reclamation assistance.[43] Delegates to the 1932 Western Governors' Conference in Salt Lake City had organized the National Reclamation Association to cooperate with the Bureau of Reclamation "in urging desirable legislation and the speedy completion of projects[.]" These laws also pointed to growing federal spending for water development during and after World War II. By one account, "[f]ederal money for western water development rose from $33 million in 1939 to $230 million in 1949

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of water resources too small to fall within the scope of other public agencies. It was the [SCS] that provided the technical or engineering assistance for [activities under the Water Facilities Act] program." In Lowitt, *The New Deal and the West*, pp. 58, 90. Similarly, Donald Green wrote that the Water Facilities Act was: "insufficient for the needs of most farmers who wished to put down [irrigation] wells. It was used primarily to construct ponds, check dams, and small wells, because the national emphasis upon the heels of the Dust Bowl era was upon soil conservation rather than upon the exploitation of subsurface water for irrigation." In Donald Green, *Land of the Underground Rain: Irrigation on the Texas High Plains, 1910-1970* (Austin: University of Texas Press, 1973), p. 135.

[42] The 1939 law eased water project repayment provisions by authorizing the Interior Secretary to extend contracted repayment periods (following consultations with the Army Chief of Engineers) and to allocate some reservoir costs to flood control or navigation which would be assumed by the federal government. Respecting municipal water, the law authorized the Reclamation Bureau to supply municipal water through 40-year repayment contracts beginning the year the water *was first delivered*. InU.S. Department of the Interior, *Federal Reclamation Laws Annotated, Volume I: March 2, 1861 to August 14, 1946* (Washington: U.S. Government Printing Office, 1958), pp. 588-604.

[43] John Opie explained that during the 1930s, "no public agency, including the Reclamation Service, took an interest in plains irrigation." Further, that "federal policies first concentrated on better dryland farming through soil conservation rather than industrialization through irrigation" and that "the Great Plains Drought Area Committee concluded in 1936 that 'irrigation at best can cause only minor changes in the economic life of the Great Plains.' It identified only a few favorable areas with access to shallow underground water, and it generally discouraged federal financing. Additionally, irrigation would only mean more overproduction of wheat, alfalfa, and grain sorghums." In Opie, *Ogallala*, p. 140. "Through World War II," observed historian David Baird, "dryland farming characterized the [Panhandle] area[.]" In Baird, "Agriculture in the Oklahoma Panhandle, 1898-1942," p. 135.

and stayed on that higher plateau thereafter." And they reflected reclamation's expansion eastward during the 1930s, as Oklahoma and Kansas joined the organization in 1939. After the 1930s, the Bureau of Reclamation's focus moved "from the rural to the urban West."[44]

As federal agencies expanded their conservation, water development and flood control activities during and after the 1930s, their spheres collided.[45] Federal flood control activity increased following the 1936 Flood Control Act, which made the federal government responsible for flood control throughout the country. The law assigned major flood control responsibility to the Corps of Engineers but it also tasked USDA to study upstream flood prevention.[46] For federal agencies, the WashitaBasin, in southwest Oklahoma became contested terrain. In 1937, Congress appropriated nearly $1.5 million for USDA land and water conservation

[44]Lowitt, *The New Deal and the West*, pp. 90, 98. Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985), p. 266. Donald Pisani explained that the agency's vision shifted "from the rural to the urban West, from the land to be reclaimed to the dams themselves, and from homemaking to technology." He attributed the shift to a range of developments including the declining appeal of rural life, rural poverty, a changing economy with urban growth and increased agricultural productivity on fewer farms, and the increased jobs and power from bigger dams. In DonaldPisani, "The Bureau of Reclamation and the West, 1945-2000," in Richard Etulain and Ferenc M. Szasz, eds., *The American West in 2000: Essays in Honor of Gerald D. Nash* (Albuquerque: University of New Mexico Press, 2002), pp. 63-4.

[45]Worster, *Rivers of Empire*, pp. 267-69. Describing the tension between the Corps and the Bureau, historian Elmo Richardson observed that "[b]ecause the Army Corps of Engineers shared jurisdiction over river control with Interior's Reclamation Bureau….a certain rivalry developed between the two[.]" In Elmo Richardson, *Dams, Parks and Politics: Resource Development and Preservation in the Truman-Eisenhower Era* (Lexington: University Press of Kentucky, 1973), p. 9.

[46]*Congress and the Nation*, 1945-1964, p. 805. "The concept also required conservation practices such as grass planting, terraces, ponds and grade stabilization structures in the watershed above the dams to help reduce the runoff and sediment coming into the lakes." In Phillips and Harrison, *Out of the Dust*, p. 56.

on the WashitaRiver. By the end of 1938, the Corps of Engineers, the Bureau of Reclamation and the USDA were all surveying the Washita basin.[47]

The Army Corps of Engineers lobbied aggressively for congressional approval to construct large, multi-purpose dams on the Red River, especially the Denison Dam at the mouth of the WashitaRiver. Congressmen from Texas, Arkansas, Louisiana and Oklahoma supported the Denison Dam because it promised to control downstream floods. Opponents included upstream farmers and Oklahoma governor Leon J. Phillips, who adopted USDA arguments, saying: "To be economic and effective, a program of water conservation and flood prevention must have its beginning at the 'headwaters'….We want to hold every drop of water as near the place it falls as we can[.]" Despite this opposition, Congress authorized the Denison project in 1938 and the dam was completed in 1944.[48]

Congress also recognized the benefits to upstream flood control, and the 1944 Flood Control Act boosted USDA flood control work by tasking the Soil Conservation Service (SCS) to develop upstream erosion and flood prevention projects on eleven specific watersheds nationwide, including the Washita and its tributaries. By the 1950s, Sandstone Creek, in southwestern Oklahoma, was the

[47] This money was part of $4 million to be spent on three river valleys, one of which was the Washita Proceedings of the Second Annual Convention of the Washita Valley Improvement Association, 28 March 1941, p. 3, in Robert Kerr papers, Conservation Series, box 10, folder 14. The Corps survey focused largely on how upstream developments would affect the proposed Denison reservoir, an Interior survey focused on irrigation in the basin, and the USDA survey was to justify minor developments on the Washita's tributaries. In *Oklahoman*, 15 October 1938, p. 4.
[48] James Ware, "Soldiers, Disasters and Dams: The Army Corps of Engineers and Flood Control in the Red River Valley, 1936-1946," *Chronicles of Oklahoma*, vol. 57, no. 1 (March 1979): 29-32; 'The State of Oklahoma and the Washita,' Governor Leon C. Phillips address during 28 March 1941 Proceedings of the Second Annual Convention of the Washita Valley Improvement Association, p. 50, in Robert Kerr papers, Conservation Series, box 10, folder 14; *Oklahoma Water Atlas*, Oklahoma Water Resources Board Publication 135 (May 1990), p.39.

nation's first completed upstream flood prevention project. The project was so successful that Congress made upstream flood control a permanent federal activity with the 1954 Watershed Protection and Flood Protection Act.[49]

Tension between farmers and townsfolk during the Denison Dam controversy reflected broader technological and demographic changes. From 1940 to 1969, America's farm population dropped from over 30 million to less than 10 million, the number of farms dropped from over 6 million to about 3 million and average farm sizes rose from approximately 150 acres to over 350 acres.[50] Similarly, the percentage of Oklahomans involved in agriculture dropped from nearly 41 percent to only about 8 percent during the period 1907 to 1957. Partly these changes owed to technologies like tractors that made it easier to farm bigger acreages with less manpower. Tractor ownership that had grown substantially after World War I virtually exploded after World War II. In 1920, three percent of Oklahoma farms had tractors, a figure that rose to 11.4 percent in 1930 and 22.9 percent in 1940. From 1940 to 1950 that figure sky-rocketed to 50.4 percent. As tractors replaced manpower, farm sizes grew and farmers moved to towns and cities. Oklahoma's urban population grew by over twenty-five percent during the

[49] The law authorized over eleven million dollars in federal fundsto help farmers implement soil conservation practices and build small dams to control erosion and to slow and capture run-off before it reached a river's main stream. *Congress and the Nation, 1945-1964*, p. 805; Report of Regional Director of Bureau of Reclamation, 18 September 1951, in House Document No. 219, July 1953, pp. 50-1.

[50] Carroll Pursell, *Technology in Postwar America: A History* (New York: ColumbiaUniversity Press, 2007), p. 88. In 1963, land-utilization professor Edward Higbeenoted: "In 1935 there were 6.8 million farms. Now there are less than 3.7 million." And he explained that: "Today the top 3 per cent of all farms produce more than the bottom 78 per cent….By 1959 these big units, which were only 3.7 per cent of all farms, had acquired 49 per cent of all the land and their average size had reached 4,048 acres – more than 6 square miles apiece."In Edward Higbee, *Farms and Farmers in an Urban Age* (New York: The Twentieth Century Fund, 1963), p. 3.

1940s.[51] Urban growth owed also to opportunities in "factories and military airfields [that] dotted the prairies" during and after World War II. The change stressed water supplies because cities consumed more water per capita than their rural counterparts.[52]

Even as cities grew in stature and size, the return of adequate rainfall in the late 1930s and growing overseas markets during World War II benefitted farmers. To encourage agricultural production during WWII, the federal government guaranteed ninety percent of parity for key commodities, including corn, cotton, peanuts, and wheat. During 1944-45, the CCC guaranteed cotton farmers 100 percent of parity for their crops and USDA gradually relaxed acreage restrictions where farmers planted war crops. Their new tractors enabled many farmers to grow commercial crops on land formerly used to grow horse and mule feed. Consequently, many New Deal reforms lost momentum. Through World War II, by one account, "as much as 4,000,000 acres were replowed on the central and

[51] Agriculture represented only 24.3 percent of the state's total production in 1957, down from 67 percent in 1907. See Francis R. Cella, "Business Notes," *The Oklahoma Business Bulletin*, vol. 24, no. 6 (June 1957), p. 8; Haystead and Fite, *Agricultural Regions*, p. 188, with reference to *U.S. Census of Agriculture, 1950*, II, 226. These circumstances had frustrated depression-era policymakers trying to solve unemployment and relief needs. In 1937,for instance, Oklahoman governor Ernest Marlandlamented the nation's social and political "lag" behind technology. "[T]he labor- saving devices and methods that have gone into our plants and on our farms have far outstripped our political and social advance" he explained, "[t]he tractor….[the] harvester, the combine, have…enabled one man to do the work that required many men formerly." In Ernest W. Marland 5 January 1937 State of the State address, p. 2, in ODL, Ernest W. Marland Papers (RG 8-J), http://www.odl.state.ok.us/oar/governors/addresses/marland1937.pdf accessed 10 December 2009. By 1950, nearly fifty percent (49.6%) of Oklahomans lived in cities or towns. In *Oklahoma Long Range Water Program: Report to the Governor and Legislature*, prepared by the State-wide Engineering Committee, December 1954, pp. 11, 13.

[52] Morgan and Morgan, *Oklahoma*, p. 133. From U.S. Geological Survey Circular 115 (1951), geographer PeverilMeigs observed that "per capita use of water increases as the economic structure becomes more complex and the standard of living rises." Per capita consumption in cities (including water for domestic, city and some industrial uses) averaged 145 gallons per day during the 1950s, compared to rural consumption of from 80 gallons (in houses with running water) to 10 gallons (those without running water) per day.In PeverilMeigs, "Water Problems in the United States," *Geographical Review*, vol. 42, no. 3 (July 1952), p. 347.

southern High Plains, 3,000,000 of which had previously been labeled unfit for cultivation." In 1949, Oklahomans planted a record seven million acres of wheat.[53]

The Marshall Plan to secure post-war Europe and the Korean War compelled Agriculture Secretary Charles Brannan to maintain high price supports into the early 1950s. When the Korean War ended in 1953, however, growing surpluses and falling farm prices led to renewed acreage allotments. Farmers wishing to qualify for CCC loans in 1954 had to restrict their acreages of key commodities. To maintain their production, many farmers applied new technologies to their small acreages. For instance, nitrogen fertilizer use grew by nearly 650 percent per year from 1949 to 1968. Consequently, nationwide crop production rose nearly forty-five percent from 1949 to 1968 despite a sixteen percent decline in harvested acreage.[54]

As farmers invested in new technologies to increase their yields, farm capital requirements, operational costs and living expenses rose. In 1955, Oklahoma Governor Raymond Gary explained to the state legislature: "During the

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[53] Wayne D. Rasmussen and Gladys L. Baker, "Programs for Agriculture, 1933-1965," in V.W. Ruttan, A.D. Waldo, and James P. Houck eds., *Agricultural Policy in an Affluent Society* (New York: Norton and Company, 1969), p. 78. Between 1920 and 1950, observed agricultural economist Harold Ottoson, "roughly 70 million acres of U.S. cropland was freed from the production of feed for horses and mules to other uses." In Ottoson et al., *Land and People*, p. 94;Lowitt, *The New Deal and the West*, pp. 46, 222; Opie, *Ogallala*, p. 111; Haystead and Fite, *Agricultural Regions*, p. 208.

[54] John T. Schlebecker, *Whereby We Thrive: A History of American Farming* (Ames: The Iowa State University Press, 1972), p. 178; Rasmussen and Baker, "Programs for Agriculture, 1933-1965," p. 81; Farmers had to stay within acreage allotments calculated according to their acreages for the period 1951-53. Harold Ottoson explained: "The producer who complied with his allotment could either obtain a commodity credit loan on his crop or sell on the open market. Thus he was assured of a minimum price for his corn crop. If the market price remained below the 'loan rate,' as was usually the case, the farmer had the privilege of forfeiting his corn in settlement of his 'loan.'" In Ottoson et al., *Land and People*, pp. 101-2; Andrews, *Managing the Environment*, p. 188.

past 25 years the farmer's expenses have gone from 25% of his gross income to 75% or 80%." And more production inputs, like fuel and fertilizer, involved cash expenditures. Smaller profit margins, along with higher debt and cash costs made small and new farms especially vulnerable to environmental and market swings. In 1960, agricultural economist Harold Ottoson explained that "[a] few successive years of drought, coupled with high cash costs of operation, [can] severely cripple the capital and credit position of farmers who might be struggling to get established and who [have] comparatively small initial equities."[55]

By the 1950s, Oklahoma agriculture reflected other changes. Since the 1920s, wheat and cattle had replaced cotton as Oklahoma's major crops. From 1925 to 1952, Oklahoma's cotton acreage declined from 5.4 million acres to just over one million acres and its proportion of state crop revenues dropped from 75 percent to just 15 percent. In 1952, cattle brought $234 million compared to $52 million for cotton. In fact, except for one year during the period 1935 to 1952, livestock – and especially cattle – generated most of Oklahoma's agricultural revenues. The late 1940s were especially profitable for cattlemen, as beef prices and consumption reached record highs. Reflecting the change, from the mid-1940s to the 1970s, researchers at the USDA station in Woodward, Oklahoma, shifted from mixed farming and dairy studies to focus almost exclusively on range

[55] Raymond Gary 11 January 1955 State of the State address, p. 8, in ODL, Raymond Gary Papers (RG 8-O), http://www.odl.state.ok.us/oar/governors/addresses/gary1955.pdf accessed 10 December 2009.Harold Ottoson explained that "[m]achinery prices increased by 17 percent from 1941 to 1946, livestock prices were 75 percent higher, and land prices had gone up 60-75 percent" and that "[b]y 1959, farmers in the United States were purchasing 63 percent of their inputs, compared to less than half in 1940." In Ottoson et al, *Land and People*, pp. 97-100.

management and beef cattle. In 1953, the station closed its dairy and in 1964 ended its research on fruits, vegetables, trees and shrubs.[56]

Less dominant than cattle, but still significant, wheat generated $178 million in 1952. By mid-century, Oklahoma customarily ranked third in wheat production behind Kansas and North Dakota, and geographers included western Oklahoma in the 'American Granary' which stretched from Texas to the Canadian border. Since profitable grain production required big acreages and highly-mechanized operations, western Oklahoma wheat farms were bigger and more expensive than the state average. In 1949, western Oklahoma farms averaged 653 acres in size, compared to the state average of 253 acres, and the land and buildings on western Oklahoma farms were worth more than double the state average. Of western Oklahoma during the 1950s, geographers Haystead and Fite observed "farms are large and they are rapidly growing larger." The rapid change clashed with traditional values: "The tradition of the 160-acre homestead still holds its destructive grip on much farm thinking," they explained, "but on the whole, farmers must rely on extensive operations." Shortly afterward, land utilization professor Edward Higbee explained: "Farming has become a high-speed business rather than a philosophy or a way of life [and while] most of the land will continue to be devoted to husbandry, the newer ways of rural life will bear little

[56] Wheat and cattle receipts amounted to nearly 61 per cent of the state's overall agricultural income of $673 million. And like cotton, corn acreage dropped from nearly three million acres in 1929 to only 777,000 acres in 1952. In Haystead and Fite, *Agricultural Regions*, pp. 204-5, 207, 211. John Schlebecker attributed the boom to "(1) full urban employment, (2) the highest wage levels in history, and (3) an urbanite inclination to eat meat." In John T. Schlebecker, Cattle Raising on the Plains, 1900-1961 (Lincoln: University of Nebraska Press, 1963), p. 187.In 1978 the Woodward station was renamed as the Southern Plains Range Research Station. In James, "Jujubes, Grapes and Grass," pp. 369-70.

resemblance to those of the past. The culture, even more than the agriculture, of 185 million Americans is in flux."[57]

As many farms grew in size, smaller farmers who resisted the squeeze increasingly needed off-farm work. From 1930 to 1954, the number of part-time farmers in Oklahoma more than doubled, from approximately 18,000 to over 40,000. Where they had constituted less than twenty percent of the state's farmers in 1930, part-time farmers constituted nearly seventy percent of their number in 1954. These changes were nationwide. By 1958, USDA Yearbook editor Alfred Stefferud urged readers to consider recent changes, including "[t]he growth of population and cities, the growth of the size of farms [and] the expanding numbers of part-time and residential 'farms'[.]"[58]

New priorities and sensibilities accompanied the Oklahoma's changing demographic and economic structures. Previously, Oklahoma governors proclaimed agriculture's fundamental importance, calling it "our most important industry," "the substructure of civilization," and the state's "outstanding, predominating industry." During congressional hearings in 1926, Oklahoma Representative William W. Hastings had called agriculture the nation's "greatest basic industry," and warned that "'to further impoverish and destroy' the farm economy guaranteed that every type of business would be harmed." After World War II, however, state legislators and ambitious leaders increasingly emphasized the state's urban, commercial and industrial future. In 1947, for instance,

[57] "The startling thing" they stressed, "[was] the rapidity of the increase in size." In Haystead and Fite, *Agricultural Regions,* pp. 184-6, 188, 207, 210; Higbee, *Farms and Farmers,* p. 8
[58] *Report on Oklahoma's Economy*,prepared by the Governor's Economic Development Commission, December 1958, p. 38; *Land*, USDA Yearbook for 1958, p.vii.

Governor Roy J. Turner reversed earlier rhetoric and called industrial development "a boon to the economic stability and welfare of farmers and stockmen" because it created new markets. The same year, Oklahoma business leaders financed an exhibition of state products to attract investment from eastern cities, a move that helped boost industrial development by thirty-six percent in 1948, compared to a national increase of only ten percent.[59] In 1951, incoming governor Johnston Murray promised that one of his "first official acts [would] be to call a series of conferences with…experts in the manufacturing world, to try and determine what is the most feasible plan of offering inducement to outside capital to bring them into the State of Oklahoma." In January 1957, Oklahoma governor Raymond Gary proclaimed "a bright new era in Oklahoma" with the recent addition of nearly 45,000 non-agricultural jobs. Gary respected the state's agricultural heritage, but he envisioned a different future: "Our forefathers gripped firmly the handles of a moleboard plow, as they guided it behind a strong team of horses….We, too, have plow handles which we must grasp firmly. Ours is not a plow to turn new sod, but one to turn new ideas into new job opportunities." Reflecting the new orientation, during the summer of 1957 Oklahoma Agricultural

[59] James Robertson 14 January 1919 State of the State address, p. 5, in ODL, James Robertson Papers (RG 8-D), http://www.odl.state.ok.us/oar/governors/addresses/robertson1919.pdf accessed 10 December 2009; John Walton 8 January 1923 State of the State address, p. 1, in ODL, Jack Walton Papers (RG 8-E), http://www.odl.state.ok.us/oar/governors/addresses/walton1923.pdf accessed 10 December 2009; Martin Trapp 4 January 1927 State of the State address, pp. 1-2, in ODL, Martin Trapp Papers (RG 8-F), http://www.odl.state.ok.us/oar/governors/addresses/trapp1927.pdf accessed 10 December 2009; Grant Jr., "'Save the Farmer,'" p. 79; Roy J. Turner 14 January 1947 State of the State address, p. 10, in ODL, Roy J. Turner Papers (RG 8-M), http://www.odl.state.ok.us/oar/governors/addresses/turner1947.pdf accessed 10 December 2009; Morgan and Morgan, *Oklahoma*, pp. 137-8.

and Mechanical College (A&M) officially changed its name to Oklahoma State University (OSU).[60]

Central to Oklahoma's post-war industrial development was Robert S. Kerr, governor from 1943 to 1947 and senator through the 1950s. Like others of his generation, Kerr learned during the 1930s that economic "[s]tability and growth must clearly come through diversification, planning, and conservation." His rural Oklahoma roots and his experiences during the 1930s made him sympathetic to soil and water conservation. "Born into Oklahoma's rural poverty and raised with a passionate and intense identification with the land," wrote his biographer Anne H. Morgan, "Robert Kerr understood and cared about the problems of the little farmer." He held his Senate seat because of a willingness to stand "for hours in the blistering Oklahoma sun listening intently to weatherbeaten farmers' hard luck stories about the ravages of wind and drought."[61]

A devastating 1943 flood that ravaged northeast Oklahoma convinced Kerr that the state's security and economic vitality required water management. Following that disaster he wrote, "I began to set my sights on a remedial program [that] would control the water to prevent the terrible destruction of flood, and to conserve and use it, to lessen and mitigate the damage from drought." He explained water's industrial importance to National Reclamation Association

[60]Johnston Murray 8 January 1951 State of the State address, p. 10, in ODL, Johnston Murray Papers (RG 8-N), http://www.odl.state.ok.us/oar/governors/addresses/murrayj1951.pdf accessed 10 December 2009; Raymond Gary 8 January 1957 State of the State address, p. 2, in ODL, Raymond Gary Papers (RG 8-O), http://www.odl.state.ok.us/oar/governors/addresses/gary1957.pdf accessed 10 December 2009. The change from Oklahoma A&M to Oklahoma State University (OSU) was confirmed through personal correspondence with OSU Special Collections and University Archives coordinator David Peters in March 2012.

[61]Morgan and Morgan, *Oklahoma*, pp. 135, 167, 170; Anne H. Morgan, *Robert S. Kerr: The Senate Years* (Norman: University of Oklahoma Press, 1978, first 1977), pp. 141-3, 180-1.

members in 1947: "Time and again…our state has lost out on the establishment of new industries where thousands of men could find employment [because] we would not furnish ample and cheap industrial water." In the Senate, Kerr sat on influential committees including Finance and Public Works where he helped sympathetic colleagues develop their public works projects while building support for his own, especially the Arkansas navigation system, a 448-mile system of channels, dams and reservoirs that linked Oklahoma to the Mississippi River. His success with that project prompted Corps of Engineers Tulsa District historian William A. Settle Jr. to call him "one of the most powerful members the Senate has ever had."[62]

Kerr's success was especially remarkable given the political climate in Washingtonduring the 1950s. As President from 1953 to 1961, Dwight Eisenhower wanted to reduce federal spending through a "partnership" approach to natural resource development. He explained the principle in his first State of the Union address, saying "[t]he best natural resources program for America will not result from exclusive dependence on the federal bureaucracy. It will involve a partnership of the states and local communities, private citizens and the Federal government, all working together." This approach essentially reversed New Deal

[62] Robert S. Kerr, *Land, Wood and Water* (New York: Fleet Publishing Corporation, 1960), p. 14; William Settle, *The Dawning: A New Day for the Southwest (A History of the Tulsa District Corps of Engineers, 1939-1971)* (Tulsa: U.S. Army Corps of Engineers, 1975), p. 99. The historian Richard Andrews explained the power of Oklahoma's congressional delegation during the 1950s: "Throughout the 1950s, representation in Congress predominantly reflected the less urbanized demographic patterns of the preceding decades, and its seniority rules gave disproportionate power to representatives of agricultural and resource-extraction interests from rural districts over representatives from urban areas, where political turnover was more common. Rural representatives exercised these preferences to control committees of general power (such as Appropriations and Rules) as well as those dealing with their own district and state interests, such as Agriculture, Interior and Public Works." In Andrews, *Managing the Environment, Managing Ourselves*, p. 221.

Interior Secretary Harold Ickes' efforts to place "national control before state or local initiative." And it contradicted Kerr's belief "that prosperity following [World War II] would require the extension, not the contraction, of federal activity to develop natural resources and power to fuel industrial expansion" and "that Oklahoma's industrial development, as well as the expansion of her agricultural base, depended on federal development of national water resources." The "partnership" plan was significant to Oklahoma water development, explained Anne H. Morgan, because it "meant that [many] projects…would have to attract massive local funding to survive."[63]

Eisenhower also wanted to eliminate price supports and crop surpluses through a freer market for farm products. "[H]is ultimate goal[,]" explained biographer Stephen Ambrose, "was to end both parity and the government controls that went with it." To this end, he hired as Agriculture Secretary Ezra Taft Benson, who believed that "freedom, both personal and economic, was an inalienable and God-given right[,]" and that "[p]ersonal accountability for the moral or material consequences of freely arrived at decisions were a corollary to liberty." Benson was a Mormon. Along with a Master's degree in Agricultural Economics, he had practical and administrative experience that included time in the extension service, over four years as Executive Secretary of the National Council of Farmer Cooperatives, and service on the National Agricultural Advisory Committee during World War II. He believed firmly that federal

[63]*Congress and the Nation, 1946-1964*, p. 833; Richardson, *Dams, Parks and Politics*, pp. 5-6. Kerr believed "that Oklahoma's industrial development, as well as the expansion of her agricultural base, depended on federal development of national water resources." In Morgan, *The Senate Years*, p. 48, 156.

interference in the nation's economy could degenerate society. In 1950, he had warned an audience that "a planned and subsidized economy weakens initiative, discourages industry, destroys character, and demoralizes the people." In policy terms, these tenets meant smaller government regulation and support. According to his biographers, Edward L. and Frederick H. Schapsmeier, Benson believed that American farm policy after World War II "encouraged small and inefficient (or even marginal) farmers to cling to their land as a source of income," and he wanted to "reorient the USDA away from the acreage allotment-production control policy and prepare the way for more emphasis upon marketing, expansion of overseas outlets, and increased utilization and research."[64]

Benson's economic philosophy, Eisenhower's political vision, and Oklahoma's agricultural and industrial ambitions were all important ingredients to the state's drought experiences during the 1950s. As the disaster crept across the Southwest and into Oklahoma, struggling farmers, ranchers, and towns sought federal assistance to overcome economic hardships and water shortages. The tensions and solutions that emerged from the crisis reflected historic patterns and new priorities. As it had during the 1930s, the drought oriented agricultural producers with technical experts, and it heightened debate and discussion on appropriate soil and water conservation techniques. It also grew the state

[64] Stephen Ambrose, *Eisenhower (Volume II): The President* (New York: Simon and Schuster, 1984), pp. 159-60. The Benson quote is from Ezra Taft Benson, 'The Challenge for Cooperatives Today,' Address to the American Institute of Cooperation, Logan, Utah, 26 August 1950. In Edward L. Schapsmeier and Frederick H. Schapsmeier, *Ezra Taft Benson and the Politics of Agriculture: The Eisenhower Years, 1953-1961* (Danville: The Interstate Printers and Publishers, 1975), pp. 14, 30, 32, 52, 55-6. The historian Trudy Huskamp Peterson wrote that Benson: "held conflicting ideals….His belief in the yeoman farmer struggled with his promotion of aggressive agribusiness practices." In Trudy Huskamp Peterson, *Agricultural Exports, Farm Income and the Eisenhower Administration* (Lincoln: University of Nebraska Press, 1979), p. 9.

bureaucracy. During the 1950s, however, that debate produced a new approach to Great Plains conservation and a broader sense for the drought's economic consequences.

Chapter 2 – Agricultural Conservation during the 1950s Drought

As they had during the 1930s, dust storms scoured the Southern Plains during the late 1940s and 1950s. In contrast to the 1930s, however, most of the storms originated outside of the former Dust Bowl region, in parts of eastern Colorado and western Texas where farmers had broken land to capitalize on high crop prices during World War II. By the mid-1950s, blowing soil had damaged nearly as many acres as during the 1930s. Emergency tillage assistance and existing conservation programs to prevent soil erosion proved inadequate to protect farmers' long-term economic interests. To address the problem, federal and regional officials met during 1955 to reconsider conservation on the Great Plains. They developed the Great Plains Conservation Program (GPCP), authorized by Congress the following year. GPCP addressed a widely perceived need for flexible solutions to individual farm and ranch conservation needs. It protected farmers' allotments during drought and it gave farmers more time to implement comprehensive conservation programs on their farms. But the program only partially reflected soil and water conservation in Oklahoma during the 1950s drought. It only applied to the state's western region. During the 1950s, production techniques to mitigate dry conditions – like grass farming and irrigation – followed the drought into normally humid areas east of GPCP boundaries. And the control farmers acquired through the program ran counter to their heightened and growing reliance on technical systems and expert advice to conserve soil and water.

As drought conditions intensified during the late 1940s, dust storms increasingly afflicted the Southern Plains. In August 1948, soil scientist H.H. Finnell observed: "Three years ago…in the whole plains country…there was only one major dust storm. Last year three big dust storms sprang up in the cotton, sorghum and bean area of Texas and New Mexico. This year in the blow season from January to May, there were [seventeen]." During the spring of 1950, dust storms "swirled from Texas to North Dakota" and University of Kansas Geography department chairman Walter M. Kollmorgen warned of "worse dust storms than those experienced in the 'Thirties'." In December 1951, dust storms ravaged the Texas Panhandle and threatened nearly 500,000 acres of wheat in Oklahoma. During the winter and spring of 1953, dust storms from Colorado and Kansas "engulfed" Oklahoma, reducing visibility in some areas to less than a mile. As they had during the 1930s, May 1953 dust storms reached the Atlantic coast and left "reddish, sandy dirt" on cars in New York City. From January to August 1953, officials estimated that wind erosion had damaged 5.5 million acres of southern plains land. In February 1954, the worst dust storm in nearly twenty years blew from Nebraska to Mexico, leaving three inches of silt on sidewalks in southwest Kansas and more than 116 pounds of dust per acre on farms in southwest Oklahoma. That year, observers joked that Kansas was the best place to get a Colorado farm.[1]

[1]Finnell warned: "yellow clouds have begun to rise from the naked land[,]" and "[t]he specter of a new dust bowl haunts the Great Plains." In H.H. Finnell, "The Dust Storms of 1948," *Scientific American*, vol. 179, no. 2 (August 1948), p. 7;*New York Times*, 2 April 1950, p.146; *Oklahoman*, 7 December 1951, p. 1; *Oklahoman*, 21 February 1953, p. 31; *New York Times*, 2 May 1953, p. 17;

More seriously, in March 1954 the Soil Conservation Service (SCS) reported that the acreage under active erosion on the Southern Plains was over 9.2 million acres, a figure "only slightly less than the total acreage damaged by wind storms and drought in the Dust Bowl days of the [1930s]." By June, the agency reported that wind erosion had damaged 16,760,000 acres on the Southern Plains, with another 14,830,000 acres still vulnerable. Most of the blowing soil came from an area spanning eastern Colorado and western Kansas, and from the West Texas cotton farms south of Lubbock. Eastern Colorado had for several years been especially problematic, having produced 6 of the 11 southern plains dust storms in 1952, 17 of 41 storms in 1953, and 21 of 29 storms during the spring of 1954.[2]

Contemporaries attributed the storms to sub-marginal land cultivation during and after World War II. Following spring 1950 dust storms, for instance, the *New York Times* explained: "A rush to cash in on the wartime and post-war boom in agricultural prices brought about the intensive plowing and sowing to wheat of land unsuited for crops." Despite lessons learned during the 1930s, Great Plains Council members, including PMA, SCS, and extension service personnel were "ready to abandon long-delayed conservation work and turn to all-out food and fiber production" during the Korean War. For 1951, officials raised the nation's wheat allocations from 71.5 million acres to 72.8 million acres. USDA

New York Times, 4 August 1953, p. 23;*New York Times*, 20 February 1954, p. 19; Noble Foundation agricultural research director Dr. Horace J. Harper credited the storm for adding mineral-rich dust to southwest Oklahoma's mostly sandy soils. In *Oklahoman*, 25 February 1954, p. 29; Bernard DeVoto, *The Western Paradox: A Conservation Reader*, Douglas Brinkley and Patricia Limerick Nelson, eds. (New Haven: YaleUniversity Press, 2001), p. 248.

[2]*New York Times*, 25 March 1954, p. 31;*Farmer Stockman*, June 1954, p. 6;H.H. Finnell, "The Dust Storms of 1954," *Scientific American*, vol. 191, no. 1 (July 1954), p. 26.

statistician Sherman Johnson explained that the increase "'was a safeguard in view of the changing world situation, and the need for a contingency reserve.'" Another USDA official explained to reporters that in order to meet anticipated demand: "'We'll have to gamble with a greater breaking out of sod, especially in marginal areas where rainfall is the governing factor.'"[3]

Some officials foresaw the erosion threat. During the mid-1940s, for instance, an SCS drought specialist told conservationist Bernard DeVoto that the next dust bowl would come in Colorado. And after southeast Colorado produced ominous dust storms during 1948, H.H. Finnell identified a "marginal zone of major risk….along the western fringe of dry farming….beyond the former Dust Bowl areas….where semi-arid climate breaks off into arid climate…[and] where the sandy loams merge into shifty, loose sands[.]" In 1951, renowned soil conservationist H.H. Bennett warned that while "'people in the heart of the old dust bowl country aren't breaking out much new land….[t]rouble may come, however, on the fringes of this country, where some people are planting cotton, peanuts and wheat on land that isn't suitable for crops in drouth." Within that fringe area, in southeast Colorado's KiowaCounty, for instance, wheat acreage ballooned from 4,939 acres in 1942 to 225,000 acres in 1953. By 1954, over half of the county was blowing. That year, SCS reported that from seventy-five to ninety percent of the nearly 3.5 million acres broken on the Southern Plains since

[3]*New York Times*, 30 May 1950, p. 1; *New York Times*, 28 July 1950, p. 9. In 1935, the Resettlement Administration established advisory committees to coordinate state and federal soil erosion work in the Plains. Called the Regional Advisory Committees on Land-Use Practices in the Southern (and Northern) Great Plains, during the 1940s these groups merged to become the Great Plains Agricultural Council, with a permanent committee concerned with "research and surveys, area planning, conservation districts, AAA, land retirement, and credit policies."In Harold Ottoson et al, *Land and People in the Northern Great Plains Transition Area* (Lincoln: University of Nebraska Press, 1966), pp. 87-8.

1942 should not have been cultivated. By contrast, the 1930s Dust Bowl region, including large portions of the Texas and Oklahoma panhandles, comprised "a fairly well-stabilized area[.]"[4]

Observers credited farmers in the old Dust Bowl region for having learned valuable lessons during the 1930s. SCS chief Donald Williams explained, for instance, that farmers in the old Dust Bowl knew more than they did in the 1930s and had better tillage equipment. During the 1930s, many Panhandle farmers had learned to hold dry soil against the wind by cultivating crops in alternate rows (strip-farming) and by keeping stubble in the ground after the harvest. Additionally, ranchers had learned not to over-graze their ranges. In the spring of 1954, the *New York Times* reported: "unlike the tragic days of the first Dust Bowl, the [Oklahoma] Panhandle is now covered with better stands of crops and the grassland is more fully protected. Some winter wheat is up high enough to hold down the soil, and the stubble from some of last year's sorghum is also serving as an effective anchor." CimarronCounty agent Pete Williams explained to the *Tulsa Tribune* that where most farmers had cut their wheat too low during the 1930s and had not adequately furrowed to catch blowing soil, by the 1950s, they "'left their stunted wheat in the ground and pastured it lightly.'" Historian R. Douglas Hurt subsequently concluded, "the Dust Bowl did not return to the distressing and tragic

[4]DeVoto, *The Western Paradox*, p. 248; Finnell, "The Dust Storms of 1948," p. 11. During the 1920s and 1930s, Finnell was director of the experiment station at the Panhandle Agricultural and MechanicalCollege. Beginning in 1934 he led the federal government's program to fight wind erosion on the Southern Plains. In Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (Oxford: Oxford University Press, 1977), p. 215; *New York Times*, 18 February 1951, p. 97; *Soil Conservation*, vol. 20, no. 2 (September 1954), p. 27;*New York Times*, 13 April 1954, p. 38;Finnell, "The Dust Storms of 1954," p. 26.

conditions of twenty years earlier [because] farmers now understood the relationship between soil conservation and successful farming."[5]

The Oklahoma Panhandle was not entirely stable, however. In January 1953, observers described "more bare lands subject to wind erosion in Oklahoma and west Texas than at any time since the dust storms of the 1930s." During the spring of 1954, the *Tulsa Tribune* called the Oklahoma Panhandle, "an area of distress in between two regions of disaster" and warned that "the topsoil in much of western Oklahoma is getting to the dangerous powder stage where it can blow from between the crop rows." Aware that their farms were increasingly vulnerable to erosion, especially as the drought continued, Oklahoma farmers joined a delegation in Washington to request federal assistance to stop the dust storms.[6]

In March 1954, before the Senate Forestry and Agriculture Committee, witnesses from southern plains states emphasized conditions within and near the blowing areas. Lamar, Colorado farmer Lail Schmidt explained that for sixty hours the previous week "we could not see the sun." Boise City, Oklahoma, farmer Roy Nall explained: "It is so bad that a man cannot….even see the radiator cap on his tractor[.]" Farmers wanted money to pay for emergency tillage. "Our

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[5]*Oklahoman*, 22 May 1955, p. 145. The historian R. Douglas Hurt later explained that federal land-use and demonstration projects established during the 1930s "helped to ensure the best conservation and land-use…following the return of normal precipitation to the dust bowl." In R. Douglas Hurt, "The National Grasslands: Origin and Development in the Dust Bowl," *Agricultural History*, vol. 59, no. 1 (January 1985), p. 156; Richard Lowitt, *American Outback: the Oklahoma Panhandle in the Twentieth Century* (Lubbock: TexasTechUniversity, 2006), pp. 44, 51-2. Texas Panhandle farmers were similarly well-prepared for drought, reported *The New York Times*, since "'[t]hey know more about combating erosion than they did in the first Dust Bowl.'" In *New York Times*, 11 April 1954, p. 82; *Tulsa Tribune*, 3 April 1954, p. 11;R. Douglas Hurt, *The Dust Bowl: An Agricultural and Social History* (Chicago: Nelson-Hall, 1981), p. 154. Where soil was blowing, historian Donald Worster saw a cultural failure, not a lack of understanding. "[I]t should have been clear to everyone that the persistent problem of the plains was not…incompetence or ignorance," he explained, "but motivation." In Worster, *Dust Bowl*, p. 228.

[6]*Oklahoman*, 1 January 1953, p. 1; *Tulsa Tribune*, 3 April 1954, p. 11.

difficulty now is keeping the other man off of us[,]" explained Schmidt. "Why does he not stay off of us? Because he does not have the money to do it. We have people who have [two] or [three] tractors. They are running [one] themselves but cannot afford to hire somebody to run the other [two]." Southwest Kansas farmer Merlin Carter explained that some farmers did not work their land because "they did not have any money and they were too proud to admit it."[7]

Following the hearings, Congress authorized USDA to provide $2.5 million in emergency funds for state and local governments to control wind erosion. Farmers could also apply for existing USDA assistance including Farmers' Home Administration (FHA) production and subsistence loans, water facilities loans and Agricultural Conservation Program (ACP) payments.[8] In May, after southern plains governors from New Mexico, Texas, Oklahoma, Colorado and Kansas appealed for more assistance, Congress authorized an additional $15 million to fund emergency conservation activities including $1.25 per acre for deep-plowing, a tillage technique that broke and stirred hard-packed soil on the cultivation floor to help anchor light and easily-blown sand.[9]

To the county level, the emergency assistance respected local conditions. In Oklahoma Panhandle counties, for instance, state Agricultural Stabilization and Conservation (ASC) committees determined which farmers and practices qualified

[7]U.S. Congress, Senate, Committee on Agriculture and Forestry, *Emergency Assistance for Drought Areas*, Hearing, 23 March 1954, pp. 2, 17, 3-4, 13.
[8] The $2.5 million came from the President's $10 million emergency allocation to transport hay to farmers and ranchers in drought areas the previous summer. During 1954, the ACP program included temporary federal cost-sharing for tillage operations to control the immediate soil-blowing problem and to establish protective vegetative cover. In K.L. Scott 6 April 1954 letter to C.M. Mouser, in *Emergency Assistance for Drought Areas*, Hearing, 23 March 1954, pp. 21, 23.
[9] They also requested more and longer credit and lending programs for Plains farmers. In *The New York Times*, 27 April 1954, p. 22; *National Union Farmer*, June 1954, p. 8.

for assistance. Below the county level, however, the program was less flexible. Across TexasCounty, for instance, two practices qualified for assistance. Eligible farmers could receive payments of $1.25 per acre for field strip cropping and $1 per acre for planting broomcorn, sorghums or Sudan grass. Cover crops had to be planted before 15 July 1954 and farmers were required to keep at least four inches of stubble through the following spring. Strip-crops had to be alternated with listing or chiseling and planted at right angles to the wind. Furthermore, assistance to plant cover crops was limited to a maximum of half the cropland area planted, and only on land not eligible for wheat allotments.[10]

Farmers wanted more flexible assistance. In the March 1954 hearings, for instance, Colorado farmer Lail Schmidt had recommended that deep-plowing assistance "be set up, not only by counties or by States or anything like that, but to the area that is affected by this disaster[.]" Witnesses had also described to Congress constantly changing winds, a circumstance that challenged rigid planting requirements. Boise City, Oklahoma, farmer Roy Nall explained that "one day the wind [comes] from the north; the next day from the south; the next day from the west[.]" To remedy effectively the situation also required time, explained H.H. Finnell: "at least a year to grow an effective cover crop on the acreage of bare soil now exposed [and] time required to sell the idea of planting cover crops to the owners and operators of marginal farms."[11]

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[10]*Guymon Daily Herald*, 12 May 1954, p. 1.

[11]*Emergency Assistance for Drought Areas*, Hearing, 23 March 1954, pp. 5, 17; H.H. Finnell, "The Dust Storms of 1954," p. 26. He also explained: "Today's conditions took several years to develop and it will take several years to undo the damage[.]"" In*New York Times*, 12 April 1954, p. 47.

How to preserve their allotments during the drought also concerned farmers.[12] Because the commodity surplus program assigned allotments according to individuals' cropped-acreage histories, drought-area producers wanted their allotments to account for acreages unplanted and lost because of the drought. For this reason, Oklahoma Cotton Ginner's Association Secretary J.D. Fleming emphasized to Oklahoma congressman Carl Albert that the state had lost nearly 250,000 acres to drought during 1953. In 1954, CimarronCounty farmers complained to Agriculture Secretary Benson that their wheat acreage allotments had dropped nearly twelve percent more than the national average because they had been practicing drought-related cropping strategies. And southern plains SCD supervisors meeting in Amarillo to discuss the wind erosion problem agreed that "[t]he present system of granting acreage allotments on the basis of past history rather than proper land use has seriously aggravated the erosion problem and penalizes the conservation farmer or rancher."[13] USDA officials kept a rigid approach to the issue. When Oklahoma congressman Victor Wickersham pushed for changes to the allotment program, USDA Agricultural Credit Services director K.L. Scott bluntly informed him that the 1938 Agricultural Adjustment Act

[12] To stabilize agriculture during the 1930s drought and depression, the 1938 Agricultural Adjustment Act had instituted a two-fold program of production controls and price supports. By agreeing to limit their production to an 'allotted' amount, participating farmers received a guaranteed price for their crops. To qualify for the program, farmers had to remain active. For instance, a key provision of the law state that cotton farmers must have produced a crop during one year in the previous three. In *Land*, USDA Yearbook for 1958, pp. 310-11, 132.

[13] J.D. Fleming 14 July 1953 letter to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 14, folder 40. Fleming did not give the source of his estimate, but USDA reports suggest he may have inflated the figures to benefit his organization. USDA reported that Oklahoma's average harvested cotton acreage for 1943 to 1952 was 1,203,000 acres. In 1953 the state harvested 1,020,000 acres. See, 1 December 1954 USDA Cotton Report, USDA Agricultural Marketing Service, Crop Reporting Board, 8 December 1954, p. 2, in Carl Albert papers, Departmental Series, box 19, folder 31; *BoiseCity News*, 10 June 1954, p. 1; *BoiseCity News*, 8 July 1954, p. 1.

provided "no authority whereby cotton acreage allotments may be suspended for a particular area because of adverse weather conditions."[14]

Despite the emergency provisions to control wind erosion, the damage continued the following winter and spring. From November 1954 to March 1955, wind damaged 3,023,000 acres in Colorado; 706,000 acres in Texas; 525,000 acres in Kansas; 238,000 acres in Oklahoma; and 152,000 acres in New Mexico. During the single month of March 1955, widespread dust storms damaged nearly two million acres across the Southern Plains. And the problem was spreading. In early April 1955, Oklahoma Association of Soil Conservation Districts president F.C. Dunaway warned Oklahoma senator Robert Kerr: "I live 250 miles from the dust bowl and even here the visibility is so low that the sun is sometimes obscured at 4:30 p.m. by the dust." Later that month, blowing soil blanketed Oklahoma with a reddish-brown dust cloud that stretched from Albuquerque, New Mexico, to Arkansas. In Colorado, Denver-based journalists who had driven 100 miles east to reach dust storms during 1954 remarked that by April 1955, "highways just East [sic] of the city were repeatedly closed to avoid traffic crashes in the choking, blinding dust." In May 1955, the *National Union Farmer* reported that altogether nearly thirteen million acres, "an area equivalent in size to the states of Massachusetts, Connecticut and New Jersey, lumped together" had been completely blown out across the Southern Plains. And the *Oklahoman* reported: "the danger is growing….Last year there were two bowls of serious

[14] K.L. Scott 21 April 1955 letter to Victor Wickersham, p. 3, in Victor Wickersham papers, box 1, folder 15. Wickersham's western Oklahoma congressional district raised nearly seventy-five percent of the state's cotton acreage. He had previously requested that the national allotment be increased to account for drought. In Victor Wickersham 18 January 1954 letter to Clifford Hope, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 33.

damage….Now there are four. For the first time the destruction has pushed northward into southeast Wyoming and into the western section of Nebraska." To assess the situation, Agriculture Secretary Benson traveled to the Southern Plains. During his trip, by one account, he realized the need for long-term strategies to stop soil blowing, because "[p]ast emergency measures ha[d] not done so[.]"[15]

In May and July, following Benson's inspection, federal and state officials from the Great Plains met to draft a new program for Great Plains land use and conservation. Carl Albert, who had for years served on the House Agriculture Committee, supported the idea. To prepare Oklahoma governor Raymond Gary for the meetings, Albert explained: "Our difficulty in the past has been that we have always waited for trouble to arise and then we have simply hit at it piece meal where it was hurting most….we have never seen a really comprehensive statement on the causes and effects of drought. Nor have we ever considered long-range plans and steps that should be taken to alleviate its effects." To remedy the situation Albert proposed a catch-all list of measures, including increased drought research funding to experimental stations and agricultural colleges in drought-stricken states; more accessible and longer-term loans; accelerated irrigation projects; increased sub-marginal land purchase or long-term lease by the federal government; and revised acreage allotment and quota programs.[16]

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[15]*Oklahoman*, 26 March 1955, p. 7; *New York Times*, 26 March 1955, p. 7; F.C. Dunaway 7 April 1955 letter to Robert S. Kerr, p. 1, in Robert Kerr papers, Conservation Series, box 12, folder 9; *Oklahoman*, 24 April 1955, p. 87; *Oklahoma Union Farmer*, May 1955, p. 4; *Oklahoman*, 22 May 1955, p. 145; *Oklahoman*, 27 April 1955, p. 51.

[16]U.S. Congress, *Program for the Great Plains*, House Document No. 289, 84th Cong. 2d. Session, 1956, pp. 1-2; *Daily Oklahoman*, 20 May 1955, p. 53; *Oklahoma Union Farmer*, May 1955, p. 4; Carl Albert 9 May 1955 letter to Raymond Gary, p. 1, in Carl Albert papers, General Series, box 7, folder 34; *'Drought Conference' – 9 May 1955 memorandum from Carl Albert to Raymond Gary*, pp. 1-5, in Carl Albert papers, General Series, box 7, folder 34. Additionally, Albert recommended

Albert's concern for the allotment program built on earlier points. "Under the present law," he stressed to Gary, "farmers feel compelled to plant their allotments annually under penalty of losing them or having them diminished in size." This meant cultivating land made vulnerable to wind erosion by the drought. As a flexible alternative to this situation, Albert suggested that "if the basic crops which are grown in the dust bowl were planted only once in every three years, there would be much less danger of erosion." Because this plan would also help to reduce national surpluses, Albert stressed, it would also benefit farmers in more humid areas.[17]

Albert's proposal for the federal government to purchase or lease sub-marginal lands also echoed recent ideas, as well as grazing legislation and land-use programs implemented during the 1930s. In May 1954, SCS officials had recommended to Benson several remedies to the blowing soil, including restrictions on federal and private loans and crop subsidies to farmers on threatened southern plains lands, and the federal purchase of cultivated marginal lands for re-grassing and grazing leases. And in an August 1954 meeting, the Great Plains Agricultural Council had suggested that "[p]roper land use may in some cases be facilitated through the exercise of some public control…or limited public ownership."[18]

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a comprehensive drought survey to delineate federal, state and local responsibilities, price supports for livestock, flood control and upstream watershed conservation and water storage projects.

[17] *'Drought Conference' – 9 May 1955 memorandum from Carl Albert to Raymond Gary*, p. 3.

[18] *New York Times*, 4 May 1954, p. 25;*Great Plains Agricultural Conference, 31 May – 2 June 1955, 'Background,'* p. 3, in Records of the Great Plains Agricultural Council, Series 4, box 5, folder 35.

At the May 1955 Great Plains conference, participants produced a series of land-use and conservation "guides" to be reviewed by interested local, state and federal officials who could then direct their comments either to Great Plains Agricultural Council Secretary W.H. Brokaw or to Undersecretary of Agriculture True D. Morse. Instead of federal control or ownership of marginal areas, however, the 'Guide to a Successful Long-Range Program in the Great Plains,' emphasized local, flexible solutions to production and conservation problems, including accelerated soil surveys and land classification under local leadership, accelerated on-site technical guidance for conservation, and more flexible repayment terms for farmers in conservation cost-sharing agreements.[19]

The emphasis on flexible and locally-determined solutions reflected a sense for the diverse economic and agricultural circumstances on the Great Plains, even within dry areas, and the importance of local and flexible conservation plans. In April 1954, for example, H.H. Finnell had explained: "There is good land in the Great Plains. Under proper management, it can withstand the natural hazards of the long dry spells common in this country." During the late 1940s, Finnell had emphasized to the Great Plains Agricultural Council that even within the Southern Plains' marginal western edge "'Second class, fourth class, and sixth class lands lie every-which-way in relation to each other.'" Instead of "'generalized zones' [which were] of little use to plan soil and water conservation programs," Finnell advised the Council that "'[t]he land use planner, the conservation planner, the land owner, and the operator [….] have all got to go deeper [to recognize] the

[19]*Great Plains Agricultural Conference, 31 May – 2 June 1955, 'Guides to a Successful Long-Range Program in the Great Plains,* pp. 1-7. The guide also recommended accelerated and enlarged surface and underground water supply surveys to improve irrigation.

various uses and farming methods for different tracts in close proximity to each other.'" Similarly, in 1952, the National Reclamation Association had reported to Congress that a conservation program for western states should respect specific circumstances on individual farms. "The farmer….has a whole army of specialists to serve him," reported the organization, "but he is left mainly to his own devices for working out the specialized job of fitting together their varied recommendations into a workable system for his own farm….many of the pieces handed to him cannot possibly be fitted together without some alteration." And in a July 1954 meeting to discuss the wind erosion problem, more than 200 southern plains SCD supervisors had agreed that "[t]he final solution to the wind erosion problem must come from local people who live on and farm the land[.]"[20]

The sense that soil and water conservation should be flexible and locally-determined also reflected practical experiences and experiments which demonstrated that even popular techniques like deep-plowing and the planting of legumes and grass did not suit every situation. In tests during 1953, for instance, deep-plowing successfully halted erosion and supported grain sorghum and cotton crops at the Sandyland Research Station in southwest Oklahoma. Oklahoma A&M soil scientist Dr. Horace J. Harper quickly encouraged its wide use and HarmonCountyFHA administrator Carl Harris withheld loans from farmers whose

[20]*New York Times*, 12 April 1954, p. 47.Finnell had made the point in 1949. Hargreaves uses the example to argue that after World War II, "[t]here was a continuing call for more thorough and localized land classification." She argues too, that "'flexibility' became the keynote regional recommendation for postwar drought adjustment" on the Northern Great Plains after World War II. In Mary W.M. Hargreaves, *Dry Farming in the Northern Great Plains: Years of Readjustment, 1920-1990* (Lawrence: University of Kansas Press, 1993), pp. 189, 200; U.S. Congress. Senate.Agricultural Research Committee of the National Reclamation Association.*Soil and Water Problems and Research Needs of the West* (Document No. 98). 82nd Congress, 2d Session, 24 January 1952, pp. 17-9;*BoiseCity News*, 8 July 1954, p. 1.

land needed the treatment. By 1955, southwest Oklahoma farmers had deep-plowed nearly 75,000 acres.[21] But agricultural researchers elsewhere in Oklahoma and Kansas reached different conclusions about the practice. For instance, tests at the Southern Great Plains Field Station in Woodward, Oklahoma indicated that tillage timing affected yields more than tillage depth or implement type. And tests at Kansas State College showed that "[d]eep tillage [had] little value, either to improve yields or for improving conservation of moisture." In at least one of the KansasState tests, sub-soiling actually cut down the water intake rate.[22]

Farmers and ranchers increasingly used legumes to build the fertility and moisture-holding capacity of their soils during the drought, but as with deep-plowing, experts disagreed about their value. In 1953, SCS administrator Dr. Robert Salter observed that in Nebraska, Texas and Oklahoma, "acreages planted to vetch have greatly increased in the last few years." In Oklahoma the trend was especially pronounced. In its production of Hairy Vetch seed, for instance, the state ranked third nationwide during 1953, first during 1954 and 1955, and second during 1956. And in its production of alfalfa seed, Oklahoma ranked eleventhnationwide during 1953, sixth during 1954 and 1955, and fifth during 1956. During 1954, Oklahomans seeded 604,000 acres to alfalfa, compared to a

[21]*Farmer Stockman*, February 1953, p. 52; *Farmer Stockman*, November 1954, p. 50-B; *Farmer Stockman*, February 1955, p. 60. During the 1930s, Farm Security Administration officials similarly conditioned their loans. During 1939, observed historian Richard Lowitt, "[t]he Farm Security Administration, to curtail wheat production, required that land have a moisture penetration in the soil at seeding time to a depth of at least two feet before a loan would be made." In Richard Lowitt, *The New Deal and the West* (Norman: University of Oklahoma Press, 1993, first 1984), p. 55.

[22]*Farmer Stockman*, January 1953, p. 72; *Farmer Stockman*, February 1956, pp. 43, 50. Additionally, in the 1957 UDSA Yearbook, soil scientists W.A. Raney and A.W. Zwing explained that: "[i]f dry conditions prevail after shattering, water loss by evaporation [from below the shattered zone] will be greater than from untreated areas, and the yield of the subsequent crop may be reduced." In W.A. Raney and A.W. Zwingg, "Principles of Tillage," in *Soils*, USDA Yearbook (1957), p. 278.

ten-year average of 398,200 acres. The most popular variety sewn was hardy and drought-resistant Common.[23]

Despite their growing use, however, agricultural advisors did not agree that legumes benefitted production and conservation programs. Texas A&M extension specialist Jack Barton explained: "[T]he important thing, is to get large quantities of organic matter into the soil….[s]ome farmers use legumes, green manure crops, or crop-pasture rotations, while others use cotton burs or barnyard manure to do the job." By contrast, southwestern Oklahoma farmer and former SCS soil scientist John Underwood used a cotton-fallow-wheat cropping sequence without legumes, and counseled: '"the loss of moisture from growing a winter legume like sweet clover does more harm than good.'"[24]

Many farmers and ranchers also used more grass during the 1950s, but like deep-plowing and legumes, officials and experts qualified their support for the technique. Grass reduces erosion, increases infiltration and conserves fertility. Oklahoma farmers and ranchers testified to its benefits during drought. From the Panhandle, for example, Texas County livestock operator A.P. Atkins explained: "'The best protection against drouth on my tightland range is a natural cover of grass which lets the soils absorb moisture whenever it falls, protects new growth, stimulates natural reseeding and provides a reserve of feed during a long dry spell.'" And central Oklahoma farmer Johnny Reininger favorably said of his grass: "'It doesn't wash, it doesn't blow and I don't have to farm it every year.'"

[23]*Farmer Stockman*, February 1953, p. 74-5;*Oklahoma State Board of Agriculture (OSBA) Annual Report for 1957*, p. 70;*OSBA Annual Report for 1965*, p. S-28;*Farmer Stockman*, February 1956, p. 24.
[24]*Farmer Stockman*, January 1956, p. 33; *Farmer Stockman*, September 1954, p. 13.

By the drought's end in early 1957, Oklahoma A&M extension range specialist Clarence Bunch said interest in planting native grass was the highest he had ever seen.[25]

Despite its virtues, however, officials qualified grass' place in production and conservation systems. Texas Commissioner of Agriculture John C. White explained that "'[p]rolongeddrouth and serious soil blowing have made [it] necessary to retire the less productive and erosive soils to permanent pasture,'" but he stressed that "'it is possible to overemphasize the return of grass to the detriment of our present economic system.'" Oklahoma soil scientist Dr. Horace J. Harper explained, "'when you take land out of cultivated crops and put it to grassland, you reduce its income to one-third of what it was in cultivated crops'" *Farmer Stockman* editors noted that "during World War II and post-war years…it required a yield of only [eight bushels] of wheat to beat income from grazing the land in native pasture."[26] And Clarence Bunch warned farmers that native grasses were not suited to all types of operations. "'A man with a small farm hasn't any business with native grass,'" he explained, "'because native grasses just won't stand overgrazing. You've got to spread cattle thin on native grass acres.'" Bunch also counseled patience since good native grass stands could take several years to

[25] Atkins was also Secretary of his local SCD. He operated a 9,000 acre spread near Hardesty. He had become a cooperator with the Texas County Soil Conservation District in 1941. In*Farmer Stockman*, April 1953, p. 72; *Farmer Stockman*, May 1959, p. 50; *Farmer Stockman*, February 1957, p. 15.

[26] As beef prices plummeted in the early 1950s, the editors warned: "If you think grassland is a gold mine from the standpoint of producing beef profits, you'd better guess again[.]" In *Farmer Stockman*, November 1953, pp. 10-11.

establish. "'[F]orget your native grass the first year[,]'" he advised, "'[d]on't even look to see if you got a stand.'"[27]

Different perspectives on the value of deep-plowing, legumes, and grass reflected the sense that soil and water conservation plans should respect specific circumstances. In 1951, for instance, Red Plains Conservation Station researchers concluded from Guthrie, Oklahoma: "The exact combination of [erosion control] practices…must be determined by the various soil capabilities and climatic conditions where they are applied." Officials reached this conclusion throughout the Plains. In her study of the Northern Plains during the twentieth century, for instance, the historian Mary Hargreaves observed that after World War II, regional recommendations for conservation repeatedly stressed the need for "flexibility" in farm operations and available credit, and that disagreements and conflicting advice from agricultural experts "made it evident…that individualized technical guidance rather than formalized regional recommendations was required." National Farmers' Union (NFU) president James G. Patton put the idea directly to Agriculture Undersecretary Morse following the May 1955 Great Plains conference. Instead of uniform farming adjustments, Patton urged USDA to provide more flexible credit and to "place the necessary technical staff with the lending group to work out farm by farm or unit by unit the needed changes."[28]

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[27] "The biggest downfall of native grass plantings is from people looking for a thick stand the first year," Bunch said, "[t]hey don't find it, cuss whoever told them to plant it and plow the whole thing up." In *Farmer Stockman*, February 1957, pp. 15, 64-5.

[28] Daniel Harley, Harry M. Elwell, and Maurice B. Cox, *Red Plains Conservation Experiment Station Soil and Water Conservation Progress Report*, Oklahoma Agricultural Experiment Station Circular M-219 (April 1951), p. 1; Hargreaves, *Years of Readjustment*, pp. 189, 199, 222-23; James G. Patton 6 July 1955 letter to True D. Morse (and copy to Carl Albert), p. 2, in Carl Albert papers, Departmental Series, box 20, folder 73.

Early in 1956, USDA recommended a new Great Plains conservation program that reflected the region's practical and experimental experiences. Among its key features, the program would expand ACP cost-sharing for long-term conservation practices, research the allotment system's implications for appropriate land use, accelerate USDA land classification activities and technical assistance to farmers, and promote "an orderly and economically sound transition into grazing and livestock" in areas unsuited to arable farming. As he presented the plan to President Eisenhower, Benson explained: "The objective of the Program for the Great Plains is to assist farmers and ranchers to develop for themselves a land-use program which will help them avert many of the hazards that come with the recurring droughts common to the region."[29]

That summer, Congress authorized the Great Plains Conservation Program (GPCP). The enabling law amended the 1936 Soil Conservation and Domestic Allotment Act and the 1938 Agricultural Adjustment Act to authorize USDA to enter long-term (ten-year) conservation contracts with Great Plains farmers and ranchers, and to protect farmers' acreage allotments during contract periods. Congress authorized $150 million for the entire program, with a maximum of $25 million for any one year. The federal government would pay eighty percent of the cost for practices including chiseling, establishing permanent plant cover on cultivated land, contour cultivating, and improving irrigation dams and stock

[29] Additionally, the plan would extend federal crop insurance, research weather patterns, expand and accelerate existing education and demonstration programs,supplement existing FHA credit sources, and encourage private lenders to supply intermediate and long-term credit. Eisenhower quickly presented the program to House Speaker Sam Rayburn, with the reminder that "[s]ome of the [area's] most critical problems are the outgrowth of war when farmers and ranchers in the Great Plains States patriotically and energetically responded to their Government's call for greatly increased production by converting grasslands to cultivation." In U.S. Congress, House, *Program for the Great Plains*, House Document No. 289, 84th Cong. 2d.Session, 1956, pp. iii-iv, 2-11.

ponds. Participating farmers who violated the contract's terms would not receive subsequent payments and would refund payments already received. The program was scheduled to run for fifteen years, from 1957 to 1972.[30]

The program was flexible and it respected local circumstances. As Assistant Agriculture Secretary E.L. Peterson explained in the program's congressional hearings, "we cannot have conservation or care of land unless there is an understanding and conviction in the minds of the landowner that doing these things is good for him and in his interest[.]" The program also gave farmers control over the nature and pace of their conservation programs because they could adopt practices in piecemeal fashion. "A long-time program of conservation and land use adjustment [will] be worked out with the producer," Peterson explained, "in accordance with the capabilities of each farm or ranch." Long-term contracts, he continued, gave participating farmers and ranchers time "to make, in orderly progression over a period of years, changes in their cropping systems and land uses…and to install the [needed] soil and water conservation measures[.]" Indicating an important measure of regional support for the plan, Guymon stock-grower and National Association of Soil Conservation Districts (NASCD) official A.P. Atkins declared, "It's the kind of program a man can live with."[31] University

[30]U.S., Congress, House, Committee on Agriculture, *Great Plains Conservation Program*, Hearing, 84th Congress, 2d. Session, 28 June 1956, p. 1; "Great Plains Program," CQ Press Electronic Library, CQ Almanac Online Edition, http://library.cqpress.com/cqalmanac/cqal56-1350220 (accessed December 14, 2009); *Farmer Stockman*, October 1957, p. 29.

[31] "Projects will be carried out on farms and ranches moving as fast and as far as the operators are able to do with their own financial resources." Peterson explained. SCS administrator D.A. Williams said "one of things that the proposed legislation would do that is not now readily available is to make it possible over a period of years to transition from the low-producing croplands…into grass cover." He later added, "I think a period of 3 to 8 or 10 years may be necessary for much of those sandy lands to be converted[.]" In U.S. Congress, *Great Plains Conservation Program*, Hearing, 28 June 1956, pp. 1, 12-15, 22, 27.

of Nebraska agricultural economists said the program's "time schedule for land-use changes [was] a major innovation."[32] And agricultural historian Douglas Helms observed that the GPCP's long-term contracts "became the standard procedure in other conservation programs."[33]

The program added another new ingredient to soil and water conservation by applying contracts to entire farms or ranches. To the House Agriculture Committee, Peterson explained that instead of the "'practice' by 'practice'" and "'commodity' by 'commodity'" approaches inherent to the ACP and surplus reduction programs, both of which effected partial production shifts, the GPCP approached conservation "for a farm or ranch in its entirety." Like the program's other features, this approach reflected contemporary developments on the Plains. In 1953, for instance, the Great Plains Conservation Station, in Guthrie, Oklahoma, reported that it had entered a new phase of research. From mechanical and vegetative erosion control research during the 1930s and 1940s, the station planned to emphasize the "integration of erosion control and fertility restoration into a complete farm program."[34]

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[32] Howard Ottoson et al., *Land and People in the Northern Plains Transition Area* (Lincoln: University of Nebraska Press, 1966), p. 108. In his discussion of the Great Plains Program, Robert J. Morgan observed: "[t]he idea using contracts to achieve proper land use is not new, of course, since the Soil Erosion Service required farmers to sign binding 5-year agreements as a condition for receiving technical assistance, labor, and materials." In Robert J. Morgan, *Governing Soil Conservation: Thirty Years of the New Decentralization* (Baltimore: Johns Hopkins Press, 1965), p. 166. New in the GPCP was the provision that not all conservation practices needed to be immediately implemented.

[33] Douglas Helms, "Conserving the Plains: The Soil Conservation Service in the Great Plains," Agricultural History, vol. 64, no.2 (spring 1990), pp. 67, 69. The Food and Agriculture Act of 1962 contained a Cropland Conversion Program with ten-year contracts with farmers to convert their land use. In Morgan, *Governing Soil Conservation*, p. 169.

[34] Peterson explained: "the first thing that would be done is that a survey would be made of the farm to determine the capability of the land in the farm. A comprehensive review…to the problems of erosion and the capability of the land would be made. In consultation with the farmer, a conservation farming program for the entire farm, all of the acreage on it, would be developed." In

For the program's first year, Congress appropriated $10 million, to be made available beginning 1 July 1957. Farmers in Oklahoma's thirty westernmost counties were originally eligible to participate. Great Plains farmers soon pushed for more aid. During the spring of 1958, Atkins urged Oklahoma senator Robert Kerr to help increase program appropriations for the upcoming fiscal year. "Thirty-six additional counties in the ten Great Plains states are asking to be included in the program," Atkins told Kerr. And he explained that the federal government's initial $10 million appropriation would not be able to absorb the incoming counties. By May 1961, farmers across 347 Southern Plains counties had signed 6,400 conservation contracts under the program, with 2,791 applications outstanding.[35]

Oklahomans responded positively to the program. Panhandle farmer W.H. Williams was among them. By the spring of 1961, he had developed a livestock water source that enabled him to return nearly 400 acres to pasture. He had also built nearly fifty-five miles of waterways, nearly 100 miles of channel-type terraces, ten miles of diversion terraces, and an irrigation water reservoir to irrigate twenty-five acres of feed crops. By the fall of 1960, fourteen western-Oklahoma counties had 783,143 acres in the program. By 1962, over 500 Oklahoma farmers had 1,225,000 acres in the program and Congress had extended it for an additional

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U.S. Congress, Great Plains Conservation Program, Hearing, 28 June 1956, pp. 12-14; Harley et al., Summary of Soil and Water Conservation and Management Research, p. 1.

[35]*Farmer Stockman*, February 1957, p. 10; F. Dwain Phillips and Mark S. Harrison, *Out of the Dust: The History of Conservation in Oklahoma in the Twentieth Century* ([Oklahoma City]: Oklahoma Association of Conservation Districts, 2004), p. 66; A.P. Atkins 7 April 1958 letter to Robert S. Kerr, p. 1, in Robert Kerr papers, Conservation Series, box 12, folder 12; USDA Liaison Committee on the Great Plains, *Progress in the Program of the Great Plains*, 27 July 1961, p. 4, in Records of the Great Plains Agricultural Council, Series 5, Subseries 5.8, box 21, folder 20.

five years, to end in 1976.[36] By 1976, Oklahoma had more active GPCP contracts than any other state. Oklahoma Conservation Commission historians subsequently called it one of the state's "most successful conservation programs."[37]

The Great Plains Conservation Program was significant because it reflected the contemporary sense that soil and water conservation activities should suit specific geographic and economic circumstances and be flexible. It represented practical experiences and it gave farmers and ranchers control over the nature and pace of their conservation programs. But the program only partially reflected conservation and production developments in Oklahoma during the drought. It did not include eastern Oklahoma. During the 1950s, production techniques to mitigate dry conditions – like grass farming and irrigation – followed the drought into normally-humid areas east of the GPCP boundaries. And the control farmers acquired from the GPCP contrasted with their growing reliance on new technologies and research.

Grass farming expanded during the 1950s drought, not just in dry western regions, but also in normally humid areas. In western Oklahoma, more adaptable

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[36]*Farmer Stockman*, March 1961, pp. 52-3; *Farmer Stockman*, September 1960, p. 30; *Farmer Stockman*, June 1962, p. 27. The article mistakenly says 581 farmers in one paragraph, and 518 farmers in another paragraph. Sixteen of the twenty-eight eligible Oklahoma counties participated in the program. Beaver county had the most participants, with 107, whereas the two (2) new participating counties had only one (1) participant each. The federal cost-sharing contribution was $2,647,000.

[37] "In all," writes historian ChongoMunende, "the government and farmers planted more than 184,000 acres of grass, drilled 3,700 wells, built 3,200 ponds, established 7,000 acres of waterways, built 52 million feet of terraces, built 1,475 erosion-control dams, and leveled 15,000 acres for irrigation." In D. ChongoMundende, "Saving the Land: Soil and Water Conservation in Oklahoma," *Chronicles of Oklahoma*, vol. 82, no. 1 (spring 2004), p. 22. From 1958 to 1995, after another extension, Oklahoma farmers applied to the program to more than six million acres. The 1996 Farm Bill terminated the program and replaced its cost-share programs with the Environmental Quality Incentives Program (EQIP). In Phillips and Harrison, *Out of the Dust*, p. 66.

grass varieties played an important role. In November 1956, for instance, Bob Kneebone, a grass-breeding specialist at Woodward optimistically predicted: "[W]e can look for better and better grasses for the Plains area," especially from Side Oats Grama and Sand Bluestem varieties. At the Woodward Station, plant researcher J.A. Harlan developed Tucson side-oats grama, notable for its early and late growth and heat tolerance. Southern Plains experimental station researchers demonstrated how reseeded pastures produced heavier cattle than native pastures. Researchers also released Coronadosideoatsgrama, a new pasture grass that was "adaptable throughout most of the western part of the state." New harvesting technology also made grass more accessible. Unlike the 1930s, when "[t]he technology of harvesting seed of the native grasses, processing the seed for planting, and methods of planting had not been developed[,]" explained SCS administrator Dr. Robert Salter, farmers wanting to seed native grass during the 1950s had a range of technical options, including "lime spreaders, fertilizer spreaders, cotton planters, special [grass] seeders and by airplane." Furthermore, special grass seeders could be rented from almost any Oklahoma soil conservation district.[38]

The drought also helped to foster new attitudes and to spread grass farming to normally humid areas. Salter explained that in the normally humid South, "many grasses and legumes are in wide use that were unknown to farmers just a few short years ago. In this region of usually abundant and evenly distributed rainfall during the long growing season, cotton, corn, tobacco, peanuts, and other

[38]*Farmer Stockman*, November 1956, p. 58; *Grass*, USDA Yearbook for 1948, pp. 520, 507; *Farmer Stockman*, July 1957, p. 37; *Farmer Stockman*, February 1953, p. 75; *Farmer Stockman*, February 1957, p. 64.

row crops were until recently the principal farm crops produced. Grass was more likely considered a weed, or pest, rather than as a useful and valuable farm resource."[39]Eastern Oklahoma farmers reflected the new attitude. In a 1954 survey of outstanding soil and water conservation problems, north-central and southeast Oklahoma farmers requested research and information on "[c]rops or grasses that would improve the rate of infiltration" and "what crops can be profitably grown with what types of grassland[.]" In 1956, *Farmer Stockman* editor Ernest Shiner observed "a big difference" in the way southeast Oklahoma farmers used their land. Instead of row cropping the land every year as they had in the past, many farmers began to rotate grasses with legumes and feed crops, like oats. That year, for instance, nearly sixty drought-afflicted PontotocCounty farmers sowed 2,460 acres of Bermuda grass for summer grazing. In one operation a farmer harvested an oat crop and two cattle 'crops' from land seeded to Bermuda grass and oats. In another operation, a dairy farmer planned "a long time rotation with a feed crop, then oats and vetch, and back to Bermuda." In yet another instance, northeastern Oklahoma farmer E.W. Pogue shifted from corn to cattle and irrigated grass. Pogue owned a bottomland corn farm near the confluence of the Cimarron and Arkansas rivers north of Tulsa. In 1949, after regularly losing crops to floods and dry weather, he planted Bermuda grass on fifty acres to raise cattle. After drought

[39] The grass and legume varieties being seeded in the South, he wrote, "include bahia, pangolia, Coastal Bermuda, Tift Sudan, the Tall Fescues, kudzu, Hard-Seeded Crimson, lupines, Button clover, rotalaria, lespedezas and others." In *Farmer Stockman*, February 1953, p. 73. Other factors at work to spread grass farming in the southeast after World War II included new hybrid corn varieties and fertilizers, which enabled farmers to concentrate their grain production on fewer acres, to provide space for forage crops. Additionally, post-war urban and industrial opportunities and demand for livestock products meant fewer farm laborers and more impetus to grow forage. In *Land*, USDA Yearbook for 1958, pp. 457-58.

withered his grass and forced him to purchase supplemental feed during the winter of 1954, he began to irrigate.[40]

Pogue's decision to irrigate his grass reflected a major development. Irrigation exploded in Oklahoma during the 1950s. From 1941 to 1947, before the Altus-Lugert irrigation project was completed in Southwest Oklahoma, the state's irrigated acreage only once exceeded 651 acres.[41] By 1957, Oklahomans irrigated nearly 300,000 acres. Most of this growth occurred in the state's dry, western region. But the phenomenon was statewide. Farmers irrigated in all but four of the state's seventy-seven counties during 1957, prompting observers to declare: "Irrigation was once regarded as an operation for the arid and semi-arid regions only, but no longer."[42]

Groundwater irrigation grew quickly in western Oklahoma during the 1950s. From its first irrigation well in 1950, for instance, HarmonCounty, in southwest Oklahoma, had over 200 wells by 1954. And nearly 120 irrigation systems operated in GreerCounty by 1956, where there had been almost none a

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[40] Various Oklahoma SCD replies to 1954 NASCD questionnaire, n.p., in Robert Kerr papers, Conservation Series, box 12, folders 7 and 8; *Farmer Stockman*, January 1956, p. 16; *Farmer Stockman*, October 1956, p. 23; *Farmer Stockman*, March 1956, p. 24.

[41] The figures represented water rights applications filed in the office of the Division of Water Resources. OPRB qualified their accuracy, saying: "In many cases the farmer puts down more acreage than he can irrigate [and] there are several farms being irrigated without filing an application [which] do not show up in the Division's records." *The Water Witch*, vol.1, no. 2, (July-August 1953), p. 4. Richard Lowitt explained that at least two Panhandle farmers had built privately-owned irrigation facilities in the 1930s to irrigate tracts of 700 acres and 3,200 acres. In Lowitt, *American Outback*, pp. 52-4. In 1948, the Altus-Lugert Irrigation District in southwest Oklahoma had added nearly 50,000 irrigable acres, mostly in JacksonCounty. During drought years, however, farmers irrigated only a fraction of the district's potential. In 1953, the district irrigated 15,000 acres; in 1954, 16,600 acres; and in 1955, 20,000 acres. In Ira C. Husky, "A Report on Irrigation in Oklahoma covering the calendar years 1953, 1954, 1955," (n.d.), p. 1, in Carl Albert papers, General Series, box 7, folder 75.

[42]OklahomaStateUniversity extension irrigation specialist Robert B. Duffin reported that during 1957 Oklahoma farmers irrigated 294,684 acres. Farmers in four southwest Oklahoma counties irrigated 117,000 acres and farmers in Oklahoma's Panhandle irrigated 76,500 acres that year. In *Farmer Stockman*, February 1958, p. 20; *Farmer Stockman*, March 1958, p. 14;*Farmer Stockman*, May 1957, p. 12.

few years earlier. By the spring of 1957, county agents estimated that over 400 farms used irrigation wells in northwest Oklahoma and the Panhandle. That year, Oklahomans west of the line separating Alfalfa and Grant counties irrigated 257,800 acres, a substantial amount of the state's 297,684 total.[43]

Western Oklahoma's irrigation growth reflected regional trends. On the Texas High Plains, for instance, the number of irrigation wells jumped from approximately 8,400 in 1948 to more than 42,200 by 1957. From 1945 to 1954, irrigation on the Southern Plains grew by nearly 3.5 million acres, mostly in Texas, which accounted for forty-five percent of irrigation growth among the seventeen reclamation states over the period. New technology – including plastics, rubber, concrete and aluminum developed during World War II – fueled the trend. In particular, more efficient pumps helped to push irrigation outward from shallow water areas into areas of deep groundwater. So did federal support for groundwater development and irrigation on the Plains.[44] During the 1950s, USDA subsidized irrigation installation procedures. In 1954, for instance, the ACP program paid CimarronCounty farmers to drill wells, and during 1956 it paid them nearly half the cost to install underground irrigation pipe. SCS technicians and ACP funds also helped farmers to level their land. Over the winter of 1955-56, for

[43]*Farmer Stockman*, November 1954, p. 50-B. Geographers Haystead and Fite explain that: "HarmonCounty had only 13 irrigated farms in 1949, but by 1954 the total had grown to about 220." See Ladd Haystead and Gilbert C. Fite, *The Agricultural Regions of the United States* (Norman: University of Oklahoma Press, 1955), 190; *Farmer Stockman*, March 1956, p. 114; *Farmer Stockman*, March 1957, p. 69. By contrast, during the spring of 1954, CimarronCounty had only thirty-five completed wells. In*Farmer Stockman*, April 1954, p. 20; *Farmer Stockman*, February 1958, p. 20.

[44] Donald Green, *Land of the Underground Rain: Irrigation on the Texas High Plains, 1910-1970* (Austin: University of Texas Press, 1973), p. 148-9; Frederick, Kenneth D. and James C. Hanson, *Water for Western Agriculture*(Washington, D.C.: Resources for the Future, 1982), pp. 15-6; John Opie, *Ogallala: Water for a Dry Land* (Lincoln: University of Nebraska Press, 1993), p. 145; Walter Rusinek, "Western Reclamation's Forgotten Forces: Richard J. Hinton and Groundwater Development," *Agricultural History*, vol. 61, no. 3 (summer 1987), p. 35.

instance, Cimarron county farmer Carlisle Brown leveled his land at a cost of $40 per acre. He received $20 per acre from ACP funds for the job. During 1956, the FHA loaned nearly $12 million to 2,200 farmers and eighty-one (81) farmer associations to develop irrigation and farmstead water systems, and for conservation.[45]

The new technology and government support contrasted circumstances earlier in the century. From WWI through the 1920s, irrigation on the Southern Plains was delayed by wartime demand for dry-land products like wheat and livestock, adequate rainfall, high war-time metal costs, inexperience, a lack of adequate credit, and low post-WWI crop prices, among other factors. Local entrepreneurship grew irrigation in Texas during the 1930s, but federal policies during the 1930s focused mostly on "better dryland farming through soil conservation rather than industrialization through irrigation[,]" and farmers spent AAA subsidy checks "mostly [o]n trucks and tractors rather than wells, pumps, motors and pipes." By the 1950s, New Deal subsidies and credit were entrenched so many farmers felt "secure enough to invest in risky technological innovations, ranging from tractors to irrigation wells to synthetic fertilizer." And cheap fuel on the Texas and Oklahoma Panhandles encouraged farmers to purchase irrigation systems.[46]

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[45] As a result, explained John Opie, "[b]y 1958, 50 percent of the irrigated farms on the Texas High Plains had installed a closed-conduit system, mostly between 1954 and 1958." In Opie, *Ogallala*, p. 145. ACP cost-sharing represented approximately fifty percent of an underground line's installation costs. To receive federal funds, farmers' irrigation systems had to be approved by SCS officials. In *BoiseCity News*, 26 November 1953, p. 1; *BoiseCity News*, 2 February 1956, p. 1; *Farmer Stockman*, February 1956, p.43; *Farmer Stockman*, May 1957, p.13.

[46] Green, *Land of the Underground Rain*, pp. 102-120, 125-144, 150-53. In contrast to Green, John Opie explained that "the Great Plains Drought Area Committee concluded in 1936 that 'irrigation at best can cause only minor changes in the economic life of the Great Plains.' It identified only a

As in western Oklahoma, irrigation's stretch into humid eastern Oklahoma reflected broad regional developments, new technology, new attitudes, new policies and the drought. In 1952, the geographer PeverilMeigs explained that the idea of irrigating in humid areas "has begun to 'catch on' extensively, as the result of effective experimentation and increased publicity by state, federal, and private agricultural agencies" with "[t]he basic natural justification for the current trend [being] the occurrence of droughts during the growing season in all parts of the East." From 1945 to 1954, Oklahoma and Texas excluding the High Plains, comprised twelve percent of all irrigation growth in the West. And from 1949 to 1954, irrigation in USDA's East South Central region – including deep-South states from Louisiana to the Atlantic coast – grew by 2563 percent.[47]

In Oklahoma, the trend reflected new attitudes and new types of operators. In March 1953, for instance, *The Farmer Stockman* reported from KingfisherCounty, in central Oklahoma: "If there are [two] places where you wouldn't expect to find irrigation farming, a dairy farm in a central Oklahoma county is probably both of them. First, because most farmers in a 30-inch rain belt usually aren't so hard up for water they'll dig for it. Second, a dairy farmer can always find plenty to do without taking on another more than full time job like

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few favorable areas with access to shallow underground water, and it generally discouraged federal financing." In Opie, *Ogallala*, pp. 137, 140.Until the 1950s, explained Water Rusinek, government policy favored surface works, not groundwater development. In Rusinek, "Richard J. Hinton and Groundwater Development," p. 35; Geoff Cunfer, *On the Great Plains: Agriculture and Environment* (College Station: TexasA&MUniversity Press, 2005), p. 180. Richard Lowitt explained: "without natural gas, the irrigation boom that began in the 1950s probably would never have taken place." In Lowitt, *American Outback*, p. 92.

[47] The 1911 USDA Yearbook contained an article entitled, 'Possibilities and Need of Supplemental irrigation in the Humid Region.' See PeverilMeigs, "Water Problems in the United States," *Geographical Review*, vol. 42, no. 3 (July 1952), p. 348. During the period 1945-1954, the Southern High Plains, including the Texas and Oklahoma Panhandles, comprised thirty-three percent, and California comprised twenty-nine percent of western irrigation growth. In Frederick, *Water for Western Agriculture*, p. 18; *Farmer Stockman*, May 1957, pp. 12-13.

irrigating." KingfisherCounty dairy farmer George Yoeman irrigated anyway, telling the magazine: "'You've got to have some feed insurance to keep production up and stay in the dairy business.'" And in a 1954 NASCD soil and water conservation survey, Oklahoma farmers requested information on "[i]rrigation…in areas of [the] 24 [inch] to 35 [inch] rainbelt[,]" and "irrigation in Central and Eastern Oklahoma." In December 1954, the *Farmer Stockman* magazine reported from northeastern Oklahoma: "[three] years of extreme drouth…[made] farmers…consider the possible benefits of irrigation….Where only [three] irrigation systems were in use in Tulsa county [eighteen] months ago, some [thirty] farmers are now watering truck, field and pasture crops."[48]

Agricultural researchers and federal lawmakers responded to the interest. From 1954 to 1956, for instance, the Oklahoma experiment station tested underground water sources in central Oklahoma.[49] And in 1954 Congress amended the 1937 Water Facilities Act to raise the law's loan limits and to make irrigation loans available nationwide, not just within the seventeen semi-arid western states. In hearings before the law's passage, Agriculture Under-Secretary True D. Morse explained: "[i]n areas of the country normally considered humid, there has been an increasing interest by farmers in water facilities to supplement rainfall in the production of some crops, in the maintenance of year-round

[48]*Farmer Stockman*, March 1953, p. 82; Various Oklahoma SCD 1954 replies to National Association of Soil Conservation Districts (NASCD) questionnaire, n.p., in Robert Kerr papers, Conservation Series, box 12, folders 7 and 8; *Farmer Stockman*, December 1954, p.23.The May 1957 *Farmer Stockman* reported that "In eastern Oklahoma, with more plentiful rainfall, irrigation has developed mainly around specialty crops with a high value per acre. Strawberries, spinach, beans and other truck crops are being grown under sprinkler irrigation on small tracts in several counties" (p. 34).

[49] Robert M. Reed and John J. Micka, "Suitability for Irrigation of Water Samples Tested During 1954, 1955, and 1956," Pamphlet 331, Oklahoma Agricultural Experiment Station (Stillwater: OklahomaA&MCollege), September 1959.

pastures, and in the introduction of other practices for increasing production." Arkansas senator J.W. Fulbright added that "[w]ith the impetus of the disastrous droughts of recent years, farmers, dairymen, and stockmen are interested in irrigation as never before. New techniques and new equipment have been developed, making irrigation possible where it never was before."[50]

New sprinkler technology and portable aluminum pipe helped to spread irrigation because they adapted well to a range of circumstances. Texas A&M agricultural engineer R.V. Thurmond explained that the technology could be applied to "uneven, hummocky ground or steep slopes upon which leveling would not be economically feasible….Sandy soils…subject to erosion and [with] high water intake rates….Water supply inadequate to cover the land by surface methods….Shallow soils underlain by gravel, caliche and high water table…[and] [a] [w]ater supply so located that it must be pumped." Much of these geographic features characterized central and eastern Oklahoma. By the mid-1950s, sprinkler systems watered nearly one-fifth of Oklahoma's irrigated acreage, and almost all of central and eastern Oklahoma's irrigated acreage. At the end of 1954, observers noted that in a recent surge of irrigation in northeastern Oklahoma, "[t]he sprinkler

[50] The new law raised the loan limit from $100,000 to $250,000 for any one project, and it provided $25,000 for any individually-owned project. Higher loan limits were necessary, explained Agriculture Under-Secretary True D. Morse, to replace outdated provisions for WPA and relief labor in existing project justification formulas, and to close the funding gap that separated smaller Water Facilities Act projects and bigger Bureau of Reclamation projects. True D. Morse 10 March 1954 letter to the Senate President, in U.S. Congress, Senate, Committee on Agriculture and Forestry, *Extension of Water Facilities Act*, Hearing, 83rd Congress, 2nd Session, 5 May 1954, pp. 2-3, 7.

system is the predominant method of applying water and in Tulsa county [ninety percent] of the applied moisture comes from sandpoints in the Arkansas Valley."[51]

The new technology gave farmers more control to water crops "when needed and where needed[,]" without losses to seepage, weed growth or evaporation in exposed ditches. TillmanCounty irrigator William Conrad, who replaced his southwest Oklahoma ditch system with 3,500 feet of 6-inch aluminum pipe estimated that it would save more than one-half of his irrigation water. "'One thing I like about the pipe,'" explained his neighbor Joe White, "'is that I can put water in places I can't with ditches.'" And since they drew from groundwater, not large systems of tunnels and aqueducts, explained John Opie, Plains irrigators were relatively "free from distant technological breakdowns[.]"[52]

Irrigation meant new and more crops. From 1954 to 1959, alfalfa acreages rose slightly in Oklahoma from 37,652 to 42,717 acres. Pasture acreages more than doubled, from 7,123 to 15,240 acres, and peanut acreages jumped from 6,562 to 22,691 acres. But the biggest increases came in cotton and sorghum acreages. Cotton acreages rose from 60,507 to 87,838 acres, while sorghum soared from 31,783 to 81,355 acres. Regionally, sorghum was the most irrigated crop on the Southern Plains by the end of the 1950s. Increased sorghum production owed to

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[51] The information came from a September 1955 Texas A&M extension service survey. In *Farmer Stockman*, June 1956, p. 18-19, 32; *Farmer Stockman*, December 1954, p. 23. Sand points were shallow wells drilled on flood plains. They benefited farmers who wanted to pull water from shallow depths at relatively low costs. But they required relatively high water tables and supplied relatively limited water per unit. In *Farmer Stockman*, May 1957, p. 32.

[52] *Farmer Stockman*, June 1956, p. 32; Opie, *Ogallala*, pp. 18, 146-9. On the Texas Panhandle, from 1935 through 1960, explained historian Geoff Cunfer, the predominant irrigation method was flood irrigation, by which water was directed from the pump to ditches and furrows, one at a time. While the process was relatively cheap, it was labor-intensive and inefficient since evaporation consumed the exposed water. In Cunfer, *On the Great Plains*, p. 180; *Farmer Stockman*, February 1956, p. 44.

its drought-resistance, federal restrictions on wheat and cotton, and new sorghum strains suited to combine harvesting. Irrigated sorghum and alfalfa became key feedstuffs for new cattle feedlot operations. On a smaller scale, northeast Oklahoma farmers irrigated strawberries and other small fruits and vegetables. And southwest Oklahoma farmers irrigated sweet potatoes, lettuce, melons and onions. To irrigate some of the new crops required local initiative and self-direction. In HarmonCounty, for instance, farmers struggled to grow cantaloupes until a local grower traveled to the Rio GrandeValley to see how irrigators there produced the crop.[53]

As it increased their technical control and production capacity, irrigation committed farmers to additional inputs including fertilizers, pesticides, herbicides and new machinery. By 1958, nearly 67 percent of Texas High Plains' irrigators used fertilizer. Irrigated cotton had a longer growing and fruiting period that favored boll weevil buildups, for instance. In 1954, the *Farmer-Stockman* reported: "It's…common now for a cotton farmer with irrigation to spend $20-$30 per acre for insect control. The hot sun used to do the job for nothing just a few years ago." Later, the magazine's editors observed that in addition to wells and rigs, irrigators needed money for "fuel, fertilization, insecticides and other essentials of a successful operation. Something must be set aside for extra labor

[53]*Farmer Stockman*, June 1960, p. 14; *Farmer Stockman*, March 1958, p. 14. A 1959 High Plains irrigation survey of 4,752,570 irrigated acres across forty-two counties showed grain sorghum on 2,050,180 acres, cotton on 1,518,435 acres, wheat on 686,280 acres, and vegetables on 42,491 acres. See*Farmer Stockman*, August 1959, p. 42; Green, *Land of the Underground Rain*, p. 157; Lowitt, *American Outback*, pp. 93, 96; *Oklahoma Agricultural Extension Service, 1952 Annual Report*, n.p. The mistake southwest Oklahoma cantaloupe irrigators made was to allow the melons to lie in the furrows where they became wet. As one farmer said, "'we were just growing 'em wild.'" In the Rio GrandeValley, they learned how deep and wide to make the furrows and to walk along the rows to "flip" the vines with sticks so that "the fruit never touches wet ground, equipment doesn't crush the vines and workers don't trample them." In *Farmer Stockman*, June 1957, p. 21.

too. Leaving out one of these essential operations may offset the gain of irrigation." For this reason, Oklahoma Soil Conservation Board executive director Word Cromwell urged Agriculture Secretary Ezra Taft Benson to increase federal assistance to irrigation farmers. "Even after…arrangements ha[ve] been made for irrigation water," wrote Cromwell in 1955, "it still costs a lot of money to complete the job….We do not want the farmer to be placed in the position [of] the new tractor owner [whose] financial limitations had been reached [though he] had not yet acquired any gang-plows, discs, drills, combines or other machinery to which the tractor could be applied."[54]

The need to complement irrigation equipment with other technologies represented a broad process, according to the historian Judith Fabry. Nineteenth-century farmers had "adopted technology in a piecemeal fashion," she explained, but "in the early decades of the twentieth century, and more predominantly after 1945, agricultural producers adopted *systems* of technology, not pieces of equipment." Machines, plants and chemicals became "so interrelated that one input could not function effectively in the absence of some or all of the other inputs." The historian David Danbom similarly observed that "innovations emerging during World War II reinforced and built on one another[.]"[55]

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[54] Green, *Land of the Underground Rain*, p. 156; *Land*, USDA Yearbook for 1958, p. 486; *Farmer Stockman*, November 1954, p. 50-B; *Farmer Stockman*, May 1957, p.35; Word Cromwell 12 January 1955 letter to Ezra Benson, pp.1-2, in Robert Kerr papers, Conservation Series, Box 12, Folder 9.

[55] Judith Fabry, "Agricultural Science and Technology in the West," in R. Douglas Hurt, ed. *The Rural West Since World War II* (Lawrence: University Press of Kansas, 1998), pp. 169, 177 (italics in the original); David Danbom, *Born in the Country: A History of Rural America* (Baltimore: The Johns Hopkins University Press, 2006, first 1995), p. 235. Danbom explains, for instance, that herbicides and defoliants facilitated mechanical cotton harvesting by eliminating weeds and unwanted foliage (p. 239).

This process worked across the full spectrum of soil and water conservation and production activities. For instance, stubble-mulch practitioners faced several inputs, including "specialized equipment for planting and fertilizing in an undisturbed trashy surface, and chemical herbicides" to control weeds. Irrigation in sandy areas benefitted from deep-plowing, which "'tightened' sandy soil by bringing clay to the surface." Likewise, experts urged farmers to complement deep-plowing with other techniques. In August 1956, for instance, SCS agent Fred Dries praised a northeastern Oklahoma farmer who understood that "breaking the plow-pan by deep tillage operations is good in itself, [but] [to] make the treatment…effective over a long period of time [requires] liberal quantities of fertilizers and…deep-rooted legumes in the conservation crop rotation." Legumes also complemented fertilizers. On eastern Oklahoma's clays and heavy black soils, reported the *Farmer Stockman*, "[c]ommercial fertilizers became effective after we learned to plant sweet clovers to open up the subsoil and enhance the moisture-holding capacity of the upper soil[.]" And fertilizer performance improved with irrigation. In 1951, Bureau of Reclamation Regional Director H.E. Robbins reported that "[e]ven in the heavier rainfall sections of [Oklahoma] it has been found that the best results from fertilizers are obtained in conjunction with irrigation." Researchers fueled the process. During 1956, for instance, Oklahoma A&M officials sought Panhandle irrigation farmers to grow registered seed of new native grass strains Caddo Switchgrass and Coronado Side Oats grama. And in 1957, Oklahoma Agricultural Experiment Station

agronomists combined the state's three top forage-producing crops to get "the highest possible production under high fertilization and irrigation."[56]

Drought-stricken farmers who adopted the new technology altered agricultural production patterns across the state. Just as turn of the century Oklahoma farmers who adopted cattle to mitigate dry conditions needed additional advice and medical technology to fight livestock diseases, farmers who irrigated to beat the 1950s drought needed mechanical advice and additional technologies including fertilizers and pesticides to successfully water their crops. Not all farmers made the change, but for some who did, the process completely changed their lifestyles.

Post-WWII farmers were not completely beholden to technical systems and expert advice. In a study of Corn Belt farmers after World War II, for instance, the historian Joe Anderson observed that farmers selectively adopted new farming technologies and that "[f]ew of them either took up or rejected every technological innovation." Many farmers "use[d] the [insecticide] chemicals they believed would do the job," he explained, "ignoring both government restrictions and advice from entomologists, manufacturers, and journalists." Respecting herbicides, he observed: "Rather than passively accepting manufacturers' specifications and extension service guidelines, farmers determined how much to

[56] Judith Fabry, "Agricultural Science and Technology in the West," p. 176; Green, *Land of the Underground Rain*, p. 149; *Farmer Stockman*, August 1956, p. 32. In March 1956, the magazine reported that "deep-rooted legumes will keep the plow pan open."*Farmer Stockman*, March 1956, p. 34; *Farmer Stockman*, November 1960, p. 21; *Report of the Regional Director of the Bureau of Reclamation*, 18 September 1951, in House Document No. 219, July 1953, p. 46; *BoiseCity News*, 2 February 1956, p. 1; *BoiseCity News*, 27 December 1956, p. 1; *Farmer Stockman*, July 1957, p. 11.

apply and how often to apply it." They also used less fertilizer during the 1950s drought despite expert calls to increase applications.[57]

Anderson's argument stands in opposition to a key theme from this chapter – that drought accelerated farmers' connections to technical systems and expert advice during the 1950s. But his point has merits, especially because Oklahomans proved noticeably unresponsive to expert recommendations that fertilizers would mitigate drought. Oklahoma fertilizer consumption had been growing steadily since World War II. By 1952, Oklahomans used nearly seventeen times more fertilizer than they had a decade earlier. As drought crept into the state, analysts expected fertilizer consumption to rise further. In the fall of 1952, for instance, Oklahoma State Board of Agriculture (OSBA) Seed, Feed and Fertilizer Division head Parks A. Yeats predicted higher than ever demand for nitrogen fertilizer from farmers looking "to speed the growth of fall and winter pastures and thereby offset hay and feed costs." During the drought, lengthy *Farmer Stockman* articles with titles like "Dry Years Call for Reseeding, Fertilizer," "Fertilizer Proves its Worth as Good Dry Weather Insurance," and "Here are the Facts on How Fertilizer Can help Beat the Drouth" contained promotional testimony from farmers and researchers. "Farmers have told us," they exclaimed in one instance, "that even in a dry year, proper use of fertilizer will enable them to make as much as they would from unfertilized ground in a wet year." "Fertilizer helps to get a crop going quickly," the magazine continued, "enabling it to send down a more extensive root system." In 1956, SeminoleCounty farmer Homer McMullen explained that

[57] Joe Anderson, *Industrializing the Corn Belt: Agriculture, Technology, and Environment, 1945-1972* (DeKalb: Northern IllinoisUniversity Press, 2009), pp. 11, 33-4, 61.

"fertilizer gave [his] corn a jump on hot weather and built a good root system that could go deep in the ground for all the moisture that was there." Oklahoma State University (OSU) agronomy professor Lester Reed said that fertilizers provide "[a] deeper and more vigorous root system," which meant "more drouth resistance and more resistance to freeze damage." And OSU extension agronomist Gaylord Haynes explained that by accelerating vegetative growth, fertilizers helped to protect soil from wind and water erosion. Since fertilizers fueled leaf growth, they increased shade and reduced evaporation.[58]

Despite the promotional rhetoric, fertilizer consumption dropped in Oklahoma during the drought. Park Yeats reported in early 1953 that dry weather had caused a drop in commercial fertilizer sales in Oklahoma since the previous summer. Analysts blamed dry weather for a further 45% drop in fertilizer sales during the summer of 1954. The pattern continued until, in March 1957, *Farmer Stockman* editors finally admitted that "drouth has had the effect of limiting the use of fertilizer in the Southwestern states." It quickly proclaimed, however, that "[a]s the dry spell ends, sales are expected to pick up again."[59]

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[58]*Farm News*, August 1952, p. 1. By 1957, most fertilizer use in Oklahoma was distributed relatively evenly throughout the state, except for the northwest and Panhandle counties which showed substantially less use. That year, a ten-county area in the southwestern corner of the state used 15,939 tons; a ten-county southeastern area used 13,229 tons; an eleven-county area in the northeast part of the state used 17,753 tons; but the ten-county northwest and Panhandle area used only 2,779 tons. In *Farmer Stockman*, February 1958, p. 12; *Farm News*, 12 September 1952, p. 1;*Farmer Stockman*, March 1957, pp. 14-52; *Farmer Stockman*, October 1962, p. 28; *Farmer Stockman*, March 1955, p. 12; *Farmer Stockman*, October 1956, p. 74; *Farmer Stockman*, July 1958, p. 20.

[59]*Farm News*, 13 May 1953, p. 1; *Farm News*, 27 September 1954, p. 1. In its 1954 annual report, OSBA traced a two-year drop in fertilizer sales. From 171,807 tons during 1951-52, fertilizer consumption in Oklahoma fell to 146,507 tons during 1952-53 then fell again, slightly, to 144,232 tons during 1953-54. In *OSBA Annual Report for 1954*, p. 12; *Farmer Stockman*, March 1957, p. 14.

Farmers were not completely beholden to new technologies during the 1950s. Some farmers custom-built and modified the technology to cut costs and increase efficiency. For instance, an Ada-area farmer unable to find an affordable pump had a local blacksmith manufacture one to fit on his tractor for about ten percent of the dealer cost estimates. A CaddoCounty farmer stood his irrigation pump engine on its end instead of laying it flat like conventional engines to generate more power from his drive shaft. Another farmer built "a monster-sized irrigation rig that [could] water 100 rows of corn at a time." And the decision on when or how much to irrigate did not necessarily require technology. OSU agronomy professor Dr. Marlow Thorne urged farmers to "observe [and feel] both crop and soil closely for signs of moisture deficiency" before irrigating. Curled or rolled corn leaves were moisture deficient, he explained. And with their hands, farmers could determine whether their soil was "[p]owdery dry" with zero moisture, "[c]rumbly" with a quarter to half of the necessary moisture, or "pliable" and in excellent shape.[60]

And farmers did not uniformly follow expert advice. In 1956, for instance, the ecologist Paul Sears warned: "Evangelists of conservation ought to remember that….many human beings have a built-in mechanism which protects them against extreme forms of evangelism." Agricultural engineers explained too that regional custom and educational levels often determined responses to new technologies. Farmers' decisions on whether to irrigate, they argued, "often lie outside of the

[60]*Farmer Stockman*, October 1954, p. 73; *Farmer Stockman*, September 1957, p. 23.The rig included two 70-foot sprinkler booms supported by a 21-foot tower which sat on a trailer. The sprinkler booms housed a variety of nozzle sizes and covered a circle 450 feet in diameter. In *Farmer Stockman*, December 1956, p. 25; *Farmer Stockman*, August 1957, pp. 28-9.

realm of [economic] calculation and even of logic." The technical training necessary to operate pump and portable irrigation systems dissuaded some operators. Other farmers objected to the lifestyle change, including the longer hours. Donald Green explained that since irrigators usually raised several crops, "work became more extensive as well as more intensive," including year-round labor and 2:00 A.M. irrigation appointments. In 1960, OSU irrigation specialist Robert Duffin explained that "night moving of pipe, shut-down systems [and] too high application rates for the soil made many Oklahoma irrigation farmers come to the conclusion that if this were irrigation they wanted no part of it."[61]

Despite these limits to their technical dependence, however, farmers requested drought-related research and advice during the 1950s. In a 1954 survey of outstanding soil and water conservation problems, for instance, soil conservation districts from across the state requested research and advice for a range of drought-related concerns, including wind erosion, tall grasses adapted for dry conditions, irrigation and fertilizer requirements, and crops and grasses to improve infiltration rates. In February 1954, Oklahoma Association of Soil Conservation Districts (OASCD) president F.C. Dunaway suggested to Oklahoma Senator Robert Kerr that more money for research would "increase crop production and prevent erosion to the extent that we can maintain a livestock program without 'Drouth Relief'." He attached to the letter resolutions passed at OASCD annual meetings over the previous four years that requested more

[61] Paul B. Sears, "Science and Natural Resources," *American Scientist*, vol. 44, no. 4 (October 1956), p. 341; Herman J. Finkel and DovNir, "Criteria for the Choice of Irrigation Method," *Transactions of the American Society of Agricultural Engineers*, vol. 3, no. 1 (1960), p. 96; Green, *Land of the Underground Rain*, p. 161; *Farmer Stockman*, June 1960, p. 14.

research funding, including $100,000 to support activities at the Red Plains experiment station in Guthrie and the Wheatland experiment station in Cherokee. Amidst spring 1955 dust storms, Dunaway again complained to Kerr: "The soil and water conservation research experiment stations…servicing this area [are] operating on shoestring appropriations wholly inadequate to meet the problems presented in salvaging this multi-million acre, drought-stricken dust-bowl area." Similarly, in 1952 the National Reclamation Association had requested federal research for a range of soil and water conservation topics. "Wind and water erosion are common in many parts of the West[,]" the organization proclaimed, "[and] [w]e all remember the Dust Bowl days of the thirties[.]" These drought-related calls for research and advice contrasted with circumstances during the wet 1940s, when farmers dropped connections with conservation experts. Before the Senate committee to investigate soil blowing in March 1954, for instance, Colorado Wheat Growers Association president Murray Giffin explained: "As long as the wheat farmers of Colorado were doing very well, they did not need any help so they just dropped by the wayside."[62]

As they advised and assisted drought-stricken farmers and ranchers, SCS officials, extension agents, and academic researchers collaborated with manufacturers and implement dealers to promote new technological systems and

[62] F.C. Dunaway 15 February 1954 letter to Robert Kerr, p. 1, in Kerr Papers, Conservation Series, box 12, folder 7; F.C. Dunaway 7 April 1955 letter to Robert S. Kerr, p. 1, in Kerr papers, Conservation Series, box 12, folder 9; U.S. Congress. Senate.*Soil and Water Problems and Research Needs of the West* (Document No. 98), p. 15; U.S. Congress, Senate, Committee on Agriculture and Forestry, *Emergency Assistance for Drought Areas*, Hearing, 23 March 1954, p. 14.

expert consultation.[63] In July 1953, for instance, SCS officials encouraged interested Panhandle farmers to contact the local SCD or a local farm equipment dealer for information on stubble-mulching. Later that year, Oklahoma A&M extension irrigation specialist Robert B. Duffin arranged "irrigation information school[s]" throughout the state. At the Cimarron County school, a Portland Cement Company representative discussed underground concrete pipe, while SCS and extension officials discussed sprinkler irrigation systems, land preparation and methods of applying water. In the fall of 1954, more than ninety people attended an irrigation short-course in HaskellCounty. Two electric cooperatives sponsored the course, which included talks on irrigation research, well installation, and a ground water lecture by USGS geologist Joseph Barclay. To convince farmers that they should consult experts, Duffin later stressed: "an irrigation well is an engineering structure, not just a hole in the ground." Oline-Mathieson Chemical Corporation agronomist William O. Trogdon counseled: "Irrigation is not a plaything." More fully, *Farmer Stockman* editors encouraged farmers to consult government and industry technicians through the entire irrigation process. "Because of the uncertainty of water supplies and the technical skill required to find it and get it to the surface," they recommended, "the best advice to a prospective irrigator is to contact experts in the Soil Conservation Service before doing anything else." As the wells were installed, they advised farmers to "have the pump dealer and sprinkler dealer on hand." And they explained that "as

[63] Here, my evidence contrasts Harold Ottoson's conclusion that with the new scientific information that emerged after World War II, "[c]ounty agents found themselves in competition with magazines, feed dealers, fertilizer dealers, and equipment salesmen as sources of technical information."In Ottoson et al, *Land and People*, pp. 111-12.

irrigation systems get more use it is wise to have wells checked for efficiency by SCS engineers or another expert."[64]

Practically, the new technology increased the relationship between farmers and technicians. Farmers increasingly requested that county farm agents test their soils to determine fertilizer needs. In 1952, Oklahoma State Board of Agriculture (OSBA) Seed, Feed and Fertilizer division head Park Yeats reported "many farm agents have been receiving [requests for] soil analysis preparatory to fall planting." And new crops consolidated authority in state agencies and experiment stations. During 1953, for instance, OSBA received heavy demand to investigate and certify sweet potato seed stocks. That year the *Farmer Stockman* reminded farmers that the Oklahoma Crop Improvement Association was the official state agency for seed certification, with a "program [that] includes only those crop varieties which are recommended for the state by the Oklahoma Agricultural Experiment Station." In 1956, the magazine warned farmers to "be careful when someone tries to sell you a new variety of drought-proof grass, cotton, wheat or anything else." The reason for the warning, they explained, was because of a Sorghum "'miracle-crop'" being promoted which tests at the Oklahoma Agricultural Experiment Station had found "not up to par with other varieties."[65]

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[64]*BoiseCity News*, 2 July 1953, p. 1; *BoiseCity News*, 3 December 1953, p. 1; *The Water Witch*, vol. 2, no.2 (July-August 1954), p. 4;*Farmer Stockman*, July 1957, p. 36; *Farmer Stockman*, May 1956, p. 36; *Farmer Stockman*, July 1957, p. 36;*Farmer Stockman*, June 1960, p. 14.

[65]*Farm News*, 17 January 1952, p. 1.Oklahoma A&M extension service agent Jack Drummond explained that "'guess and by-gosh' methods of fertilizing are a thing of the past.'" *Farmer Stockman*, September 1953, p. 11; *Farm News*, 12 September 1952, p. 1; *Farm News*, 3 December 1953, p. 1. For a variety to be 'improved' it had to pass tests over three years in different soils and climates, and prove that its was superior in at least one characteristic (for example, yield, adaptation to soil and climate, or resistance to disease) to varieties already available. In *Farmer Stockman*, April 1953, p.16; *Farmer Stockman*, November 1956, p.10.

During and after World War II, the pace of scientific research accelerated and industrial growth increased the nation's capacity to produce new chemicals. By the mid-1950s, reported a conservative estimate, "[m]ore than 50 basic chemicals for agriculture that were not in commercial existence before World War II [were] being manufactured." For this reason the National Reclamation Association requested regional facilities to consolidate research on new equipment and procedures. "In our age of science," the organization explained, "more precise equipment and better means of chemical and physical investigations are being developed daily [and the] brains and know-how of scientists could be better utilized if concentrated in a regional laboratory." Similarly, in 1958, Cornell agricultural economics professor Howard Conklin explained: "The choice of the most profitable input levels and practices…is a job that can be done more efficiently by specialists who can study the combined experiences of many farmers, who can conduct controlled experiments on various kinds of land, and who can relate both the experimental and farm experience to physical differences in land." ACP and SCS officials concurred, saying; "The amount of scientific information on land-use practices has itself become something of a problem. Not only is it voluminous; much of it is fairly technical and not ready for use in specific situations without further interpretation or adaptation."[66]

[66] Geoff Cunfer explains that the nation's capacity to produce synthetic nitrogen doubled during World War II. In Cunfer, *On the Great Plains*, p. 221. New chemicals included "insecticides, fungicides, weed killers, seed disinfectants, fertilizer materials, feed ingredients, and soil conditioners." In *Farmer Stockman*, November 1956, p. 15; U.S. Congress.Senate.*Soil and Water Problems and Research Needs of the West*, p. 19; *Land*, USDA Yearbook of Agriculture for 1958, pp. 107-8, 323.

Once they began to irrigate, some farmers were compelled to produce at maximum capacity. Southwest Oklahoma FHA administrator Carl Harris put the point clearly, saying: "With high [irrigation] costs you've got to keep production high every year." The result could mean a complete transformation to their production regime. In Kansas, irrigators remembered to John Opie that "when they put in their first well in 1956, farm experts from Kansas State University came and stressed 'push, push, push for more yields." Another Kansas couple who began irrigating cattle feed in the mid-1950s told Opie that "their untested skills involved costly new machinery – pumps, engines, gearboxes, pipes, and later sprinklers – set permanently on their fields. They had to learn how to finance and manage their operation as if it were a small industrial factory." For them, the process was all-encompassing: "Irrigation…was at the center of the new venture to which they had committed their lives." It was also an irreversible financial commitment: "[they] could not turn back; if [they] failed [they] could only go bankrupt and [would be] out of farming entirely."[67]

Soil and water conservation strategies and technologies during the 1950s drought reflected divergent strands. Farmers who requested advice and assistance to battle dry conditions were steered toward a concert of technical solutions that functioned best when accompanied by additional inputs. Some farmersfelt captivate to the new systems they had adopted. The Great Plains Conservation

[67]*Farmer Stockman*, November 1954, p. 50-B; Opie, *Ogallala*, pp. 200-1, 207. A 1961 fertilizer advertisement declared: "Applying Phillips 66 Ammonia on cotton land….means about $65 extra income per acre, which helps a lot to pay for needed equipment like irrigation wells." In *Farmer Stockman*, May 1961, p. 37.

Program, by contrast, was a flexible plan for farmers to manage soil and water conservation activities. GPCP respected geographic and economic circumstances on individual farms and ranches. It also gave farmers time to implement new conservation practices. By doing so, the program implicitly respected that the drought's physical and economic consequences extended beyond the immediate erosion crisis. And it represented a significant innovation to Great Plains soil and water conservation policy decades after the 1930s Dust Bowl disaster. In contrast to this flexibility, USDA administrators applied rigid geographical and occupational boundaries to determine relief eligibility during the drought. Like soil and water conservation, however, drought relief administration was a process that reflected contemporary circumstances during the 1950s. By the drought's end, pressure from agricultural producers outside of the official drought area, part-time farmers, and town-based small business operators forced officials to reconsider the disaster's boundaries and to introduce more flexible and inclusive assistance policies.

Chapter 3 – Drought Relief in Oklahoma during the 1950s

In the March 1954 congressional hearings to assess wind damage on the Southern Plains, Oklahoma senator A.S. Mike Monroney asked Colorado farmer Lail Schmidt the following: "is it not always a fact that as devastating as it is to a farmer, in cities and towns 150 miles distant from that area, business takes a nosedive and it takes a week to recover any kind of retail sales pattern after one of those duststorms?" Schmidt replied that soil blowing in the region "is affecting the whole economy, the whole State and all of these States. Eventually it comes right on down to the Nation."[1] While referring specifically to dust storms, not drought, their exchange reflected a sense for the disaster's widespread physical and economic consequences. Initially, for the sake of expediency, and to exclude speculators and "suitcase" farmers from its benefits, federal policies confined drought relief to full-time farmers in designated counties. By the drought's end, however, new measures extended drought assistance to municipal businesses and to part-time farmers. The shift signified the growing sense that drought is not just an agricultural disaster and that its consequences extend throughout a region's economy. The state government's authority to administer relief also grew during the drought, as Oklahoma City-based officials assumed certification responsibilities from local officials. The process revealed themes from the 1930s, including patronage, corruption, local resentment toward government "experts" and consolidated authority during the drought and economic disaster.

[1]U.S. Congress, Senate, Committee on Agriculture and Forestry, *Emergency Assistance for Drought Areas*, Hearing, 23 March 1954, pp. 14-15.

Federal drought relief had been working since the previous summer, when desperate livestock industry officials and southern plains governors convinced Congress to pass the Farmers and Stockmen Emergency Assistance Act (HR 6054 – P.L. 115). The law contained three key provisions: emergency feed to drought areas; 'economic disaster' loans for any agricultural purpose to disaster area farmers and stockmen without alternative credit; and nationwide "special livestock" loans of $2,500 or more, on a temporary, two-year basis to "established ranchers or stockmen [with] a reasonable chance of working out of their difficulties[.]"[2]

Through its emergency feed program, the federal government helped pay the cost to transport hay to drought-stricken areas and provided discounted surplus CCC grains to help eligible farmers and ranchers in designated drought areas maintain their foundation (breeding) herds of cattle, sheep and goats. Economic disaster loans were available only to drought-area farmers and could be used for any agricultural purpose except to refinance outstanding debts. They bore three percent interest, and were to be repaid within five years. Special livestock loans bore five percent interest and were available nationwide. They represented the understanding expressed by House Agriculture Committee Chairman Clifford Hope that the drought "has had an adverse effect on the cattle [price] situation over the entire country…even in the areas which are not affected by the drought."[3]

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[2] Benson met with livestock producers in Lubbock, Austin, San Antonio and Oklahoma City.In *Farmer Stockman*, August 1953, p. 12."Drought Aid" CQ Press Electronic Library, CQ Almanac Online Edition, http://library.cqpress.com/cqalmanac/cqal53-1365740 (accessed December 10, 2009); U.S. Congress, House, Committee on Agriculture, *Emergency Drought Program*, Hearings, 83rd Congress, 1st Session, Washington, D.C. 25, 26 June and 6 July 1953, pp. 75-6.

[3] U.S. Congress, House, Committee on Agriculture, *The Drought Program*, Committee Print, 83rd Congress, 2d Session, 10 August 1954, pp. 2-4. Oklahoma Cattlemen's Association spokesman

Special livestock loans were flexible and inclusive solutions to drought-related economic and environmental problems. With them, policy-makers respected the drought's implications beyond the immediate feed, crop and dust-storm emergencies. The emergency livestock feed program and economic disaster loans, by contrast, were restricted to specific producers and regions. USDA officials charged to assess drought conditions and administer the federal drought relief program also grappled with the drought's boundaries. They emerged from the crisis with a more comprehensive view of drought disasters.

To administer drought relief, USDA drought committees comprising the state ASC chairman, the state directors of the Agriculture Extension Service, the FHA and Civil defense, a prominent rancher or farmer, and a prominent banker operated in each drought state. These committees surveyed drought conditions in their respective states and forwarded the information to the Secretary of Agriculture who, with information from additional USDA assessments, could recommend that the President designate the State a drought disaster area. Once the President included a state in the drought disaster area, the Agriculture Secretary designated which of that state's counties qualified for disaster assistance. Local FHA committees then determined individual eligibility within each county.[4]

John I. Taylor explained that the movement of "distress cattle…to market….is affecting the price all over the country." And Texas representative W.R. Poage asked "[u]nless we stop this tremendous dumping of cattle from this drought-stricken area, we are going to continue to break the market in every part of the country, are we not?" In *Emergency Drought Program*, Hearings, 25-26 June and 6 July 1953, pp. 26, 49.

[4]Asked how his agency designated drought areas, USDA Emergency Drought Program director Kenneth L. Scott replied that sometimes USDA sent officials to check conditions but at other times "it is a matter of checking with leading individuals over the State who are interested in the agricultural field, people whom we know, who are thoroughly familiar with conditions and who will, we believe, give us an unbiased appraisal of the situation." In U.S. Congress, House, Committee on Agriculture, *Drought Program*, Hearing, 83rd Congress, 2nd Session, 6 August 1954,

To complicate the task facing assessors, administrators and policy-makers, the drought area occurred gradually and changed continuously. U.S.G.S. Water Resources Group Chairman S.K. Jackson explained the problem: "in contrast to…dramatic…floods, [droughts] are insidious events which develop gradually….just when a drought can be said to have begun in a given region is rather difficult to establish." The Council of State Governments called such conditions "creeping disasters." A *New York Times* writer called the disaster "Slow Lightning" because it was gradual, but fierce. USDA Emergency Drought Program director Kenneth L. Scott attributed a "pulsing" quality to the disasterand asserted "conditions change; sometimes they get better and sometimes they get worse." And during the summer of 1954, Scott described "[a] spotted drought condition" in which "[o]ne county will have had quite good rains and maybe an adjoining county or even part of the same county is decidedly different."[5]

To further complicate the assessment task, politicians and local residents distinguished their plight and pressured officials to include their home counties in the drought area. When House Agriculture Committee members from the Midwest and East inquired about assistance under the drought program, for instance, Colorado representative William Hill blasted "Don't let anybody consider a few counties in Illinois the same as what we have out West….Colorado

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p. 18; *The Drought Program*, Committee Print, 10 August 1954, p. 1;Local FHA committees consisted of three farmers in each county with experience assessing FHA loan applications to "insure a very equitable and realistic consideration of those applications."In*Drought Program*, Hearing, 6 August 1954, p. 6.

[5] S.K. Jackson, "The Present Drought in Oklahoma" [1953], p. 1, in Robert S. Kerr papers, Conservation Series, box 11, folder 3; *Message from the President of the United States Relative to Alleviating Emergency Conditions Brought About by Prolonged Drought and Other Severe Natural Disasters*, U.S. Congress, House Document No. 110, 85th Cong. 1st. Session, 5 March 1957, p. 24;*New York Times*, 15 August 1954, p. SM7;*Drought Program*, Hearing, 6 August 1954, pp. 13, 27.

farmers…haven't had a good crop for [three] or [four] years." And irritated that portions of New Mexico were included in the 1953 drought disaster area while their own southeastern Oklahoma county was not, Mr. and Mrs. Z.H. Nabershnig complained to Senator Robert S. Kerr: "If the drought is estimated according to the average rainfall in an area….there was less rain in Bryan County [Oklahoma]…because actually New Mexico is a known arid area." Congressman Carl Albert's southeastern Oklahoma constituents besieged him with similar requests. One concerned observer wrote, "[s]ome of the counties in the Southeast [part of the state] are in worse shape than those in the [drought] area[.]" Another complained: "[w]e can't understand why Arkansas just a few miles from us [has] every county except [four] in the drouth area when the same weather conditions have prevailed here as there."[6]

Farmers and ranchers organized to strengthen their claims. In early July 1953, for instance, the recently-formed Resolution Committee of Distressed Farmers and Ranchers in Poteau, Oklahoma demanded that PoteauCounty immediately be included in the drought area. And in September 1953, the United Livestock Producers Association urged the federal government to "immediately reinvestigate for reinstatement…counties, which have been temporarily suspended, for additional drought relief funds[.]" In August 1954, CimarronCounty ranchers appealed to state and federal officials the recent USDA decision to omit their county from the drought disaster area. And in September 1954, Oklahoma

[6]*Drought Program*, Hearing, 6 August 1954, p. 12;Mr. and Mrs. Z.H. Nabershnig 8 August 1953 letter to Robert S. Kerr (carbon copy to Carl Albert), p. 1, in Carl Albert papers, Department Series, box 14, folder 45;Viley Johnson 30 June 1953 letter to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 14, folder 45; Marvin Cox 7 December 1953 to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 14, folder 67.

Farmers Union secretary Z.H. Lawter stressed that "[s]urveys by the different county farm agencies and the Farmers Union disclose there is practically no difference in the drouth area in different counties of the state."[7]

Against these complaints, USDA officials defended the agency's drought area designation procedures. When Colorado representative William Hill complained that "[a] county line has nothing to do with where the rain stops….There should be a leeway of [ten] or [twenty] percent from the county line[,]" for instance, USDA Emergency Drought Program director Kenneth L. Scott responded "that is by far the most difficult decision our drought committee and the Department has[sic] to make." Scott described the subtle factors that informed FHA designations, including a county's spring hay harvest, its potential for late fall rains and the number of years certain areas had suffered drought. "[W]e have not[sic] rule of thumb in determining these things," he continued "[w]e certainly realize…that these drought conditions do not stop at county lines….but we do have to draw the line some place or other." Once designated, however, the line was firm. When Missouri representative Paul C. Jones asked, "if it so happens that a fellow is living in a disaster area that is not within the county that is declared a disaster area, he is just out of luck; is that right?" Scott replied, "[t]hat is right."[8]

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[7] F.L. Holton 2 July 1953 letter to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 14, folder 46; *Resolutions of United Livestock Producers Association Annual Meeting,* 14 September 1953, p. 1, in Carl Albert papers, Department Series, box 14, folder 45;*Boise City News*, 5 August 1954, p. 1; *Oklahoma Union Farmer*, September 1954, p. 13.

[8]*Drought Program*, Hearing, 6 August 1954, pp. 13, 14, 27. House Agriculture Committee Chairman Clifford Hope (Kansas) helped to explain USDA's reluctance to add borderline cases, saying: "[i]t is easier to put [counties] in [the program] than it is to get them out" (p. 14).

Impatient with USDA's approach, the House Committee on Agriculture in a July 1954 executive session resolved that Agriculture Secretary Benson "use to the fullest extent the authority and funds available to him for combating or alleviating the results of the drought as soon as conditions in the various affected areas warrant action on the part of the Federal Government." That August, the entire Oklahoma congressional delegation visited Benson's office to request disaster relief for all Oklahoma counties. On Benson's behalf, Scott replied that a bigger state relief contribution could resolve their concerns. "[L]egislation which would result in the States sharing at least substantially the same load as the Federal Government in these emergency programs," explained Scott, "would undoubtedly…give the States much more discretion in handling important phases of these programs which obviously are extremely difficult to handle directly out of Washington." Before the House Agriculture Committee that month, Scott explained the agency's position further: "[m]any of these decisions need to be made out in the country, but it is our judgment in the matter that so long as the Federal government is putting up the funds that we need to make some decisions on territory eligibility…which perhaps should be made…definitely could be made, to better advantage in the States."[9]

Scott's explanation did little to diminish criticism toward Benson and the USDA. "They say nothing and promise less," an exasperated Carl Albert declared

[9] House Committee on Agriculture 16 July 1954 press release, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 37; Oklahoma Congressional delegation (Kerr, Belcher, Albert, Jarman, Monroney, Edmondson, Steed, Wickersham) 11 August 1954 letter to Ezra Taft Benson, pp. 1-2, in Carl Albert papers, Departmental Series, box 19, folder 39; K.L. Scott 10 August 1954 letter to Oklahoma Congressional delegation, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 39; *Drought Program*, Hearing, 6 August 1954, p. 7.

to one needy constituent during the fall of 1953. To another he proclaimed: "The administration of this program has been the unfairest[sic] thing I have ever seen done in the Department of Agriculture[.]"[10] Other congressmen shared Albert's sentiments. With his constituents desperately needing feed during the fall of 1954, for instance, Kentucky congressman Frank Chelf wrote to Benson, "why don't you and your group of political hacks serving as assistants get the facts on agriculture by getting out into the fresh country air[.]" Chelf shared the telegram with Albert, and asked, "In the name of heaven what has to happen to a country or to a farmer before he is entitled to consideration for drought emergency relief?"[11]

In addition to its geographical limits, the federal drought program's economic shortcomings concerned Albert. As federal officials formulated the emergency program during the summer of 1953, he identified the issue to a concerned constituent: "there is a fallacy in the emergency law….that the limitations extend to the type of relief given in a natural disaster as opposed to economic disaster."[12] Albert's observation pointed to several inconsistencies in the federal drought program. First, it produced economic disparities by confining relief to strictly-defined drought areas. Congress had partly acknowledged this

[10] Carl Albert 6 October 1953 letter to Gladys Meyers, p. 1, in Carl Albert papers, Department Series, box 14, folder 45; Carl Albert 10 December 1953 letter to Marvin Cox, p. 1, in Carl Albert papers, Department Series, box 14, folder 67. Albert held a dim view not just of Benson and his USDA staff, but also of Eisenhower. "[H]e knew very little…about the complex issues of the time[,]" Albert said of Eisenhower in his autobiography, "Ike's staff and his aides by and large ran the government in his name….often to the president's sorrow and the nation's misfortune." In Carl Albert, *Little Giant: The Life and Times of Speaker Carl Albert* (Norman: University of Oklahoma Press, 1990), pp. 207-8, 211.

[11] Frank Chelf 5 November 1954 letter to Carl Albert, p.1, in Carl Albert papers, Departmental Series, box 19, folder 37.

[12] Carl Albert 2 July 1953 letter to Viley Johnson, p. 1, in Carl Albert papers, Department Series, box 14, folder 45. In the statement's immediate context Albert was criticizing the federal government for its tardy response to the cattle crisis, but he sensed deeper problems with the drought program.

issue by making special livestock loans available to producers outside the drought area in order to protect nationwide cattle prices. But the drought program's other benefits including production emergency loans and feed were available only within designated drought areas. Albert received complaints about the problem. In late July 1953, for instance, Tulsa-area resident Morris Fears wrote, "I don't see how I can afford to pay $100 a ton for cake when the man a few counties to the West pays only $50 a ton – our cattle will sell for the same price on the market[.]" In congressional drought hearings during August 1954, Albert presented the issue: "if your neighbor just across the [county] line is getting [a] subsidy on feed, if he is getting freight subsidy on hay…and if he is also in an FHA disaster area and is getting emergency credit, it….can be very serious if a man is in competition." Aside from the obvious disparity in feed costs to producers on either side of the drought line, businesses outside of designated disaster areas suffered under the program. During 1953, for instance, feed grain dealers outside of disaster areas lost some of their trade because railroads granted reduced freight rates only to disaster counties.[13]

Second, as administered by FHA, emergency feed and production loans benefitted only those farmers that met the agency's mandate to develop solvent family farms. An FHA official explained to Oklahoma congressman Victor Wickersham, "the [FHA] insures and makes loans to qualified persons on farms that when purchased, improved, or developed will be adequate family-type

[13] Morris S. Fears 19 July 1953 to Carl Albert, pp. 1-2, in Carl Albert papers, Department Series, box 14, folder 45; *Drought Program*, Hearing, 6 August 1954, pp. 13-14, 30.

units."[14] Local FHA committees and Washington-based administrators applied this mandate to drought relief by restricting emergency loans to full-time farmers whose farm size guaranteed their success and the loan's repayment. FHA county committees were instructed to reject applicants who "did not have an economic unit for [an] area." In congressional drought relief policy hearings, Colorado representative William S. Hill explained the rationale for this policy: "we do not want the Federal Government to be in the position of trying to finance something that can never come out in the world[.]"[15]

At the same time, however, FHA rejected loans to part-time farmers whose off-farm incomes may have helped them to withstand the crisis.[16] To Oklahoma Panhandle farmers and ranchers, for instance, *The Boise City News* explained in July 1953: "there is no intention to provide feed to those who have feed, those for whom farming or ranching is only a sideline, or for commercial feeders[.]" That November FHA denied emergency assistance to part-time Sapulpa-area rancher

[14] H.C. Smith (Acting FHA Administrator) 25 June 1956 letter to Victor Wickersham, p.1, in Victor Wickersham Collection, box 1, folder 20. In another instance, Oklahoma FHA Director J.G. Powers explained: "'[FHA] has the primary purpose of building and establishing quality farmers on family-type farms, where it is determined at the local level that finance with supervision will accomplish that goal.'" He emphasized that "'The [FHA] is not a relief agency nor a welfare agency, and funds located through this agency must be paid back. Through various types of loans, the [FHA] can take care of the financial needs of the farmers and ranchers in Oklahoma where there is a reasonable chance of future success in their farming operations under normal conditions.'" In *Drought Relief and Area Development Recommendations*, compiled by Oklahoma Planning and Resources Board and U.S. Department of Commerce (Oklahoma City, 1954), p. 20.

[15] K.L. Scott 31 July 1956 letter to Victor Wickersham, p.1; in Victor Wickersham Collection, box 1, folder 22. Scott added, "[i]t must be determined that the applicant's farming operations will return sufficient income to assure payment of necessary farm operating and family living expenses and pay the Farmers Home Administration loan and other debts" (p. 1); *Drought Program*, Hearing, 6 August 1954, p.33.

[16] FHA policy in this regard represented an effort to dissuade 'suit-case' farmers who gambled on good weather and expected the federal government to cover their losses. R. Douglas Hurt explained that during the 1930s drought "[w]hen suitcase farmers abandoned their land, they seldom returned to apply the proper soil conservation techniques to keep it under control." In R. Douglas Hurt, *The Dust Bowl: An Agricultural and Social History* (Chicago: Nelson-Hall, 1981), p. 28.

Albert L. Means because "[he] has resumed his off farm work and plans to continue earning the major portion of his income from that source for an indefinite period." And in early 1954, the local FHA committee denied a loan to Pushmataha dairy farmer Jessie Hairrell because his first occupation was as CountyClerk.[17]

Forced to account for cases like this one, in August 1954 USDA Emergency Drought Program director Kenneth L. Scott explained that the program "is intended for people who are really in the farm-stock-raising business, and not just have a little sideline deal. As a rule, we think the professional people in towns and cities, who have a little operation out here in the country are generally able to go along and take care of themselves." FHA rigidly applied the rule. Asked by Arkansas representative E.C. Gathings whether a shoe salesman whose savings had been invested in eighty acres of land and cattle would qualify under the program, Scott replied, "[t]his assistance is intended for farm people….There may be some hardship cases show up, but I believe that this is intended to be of assistance to…the farm people." On 14 December 1954, Lowell Childers, a part-time rancher from Durant, Oklahoma, complained to Albert that he had been denied FHA emergency feed "because 51% of my earnings were derived from the job I have with Amarando Petroleum Oil Co[.]"[18]

[17]*Boise City News*, 16 July 1953, p.1;R.L. Farrington (FHA Agricultural Credit Services Director) 15 January 1954 letter to Carl Albert, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 45. Means first approached Albert with the problem in November 1953; Joe Stamper (attorney) 7 January 1954 letter to Carl Albert, p. 1, Carl Albert papers, Departmental Series, box 19, folder 45.

[18]*Drought Program*, Hearing, 6 August 1954, p.29; Lowell Childers 14 December 1954 letter to Carl Albert, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 35. Albert replied several days later, saying, "I have had letters like yours before….If the FHA Committeemen are not convinced that there is a need, or if they think the applicant is well-fixed, financially, they are

To downplay the idea that its policies discriminated against operators based on their farm sizes, on 20 July 1956 FHA Acting Administrator H.C. Smith explained to Oklahoma congressman Victor Wickersham that "[t]he question of whether an applicant is a large or small operator has no bearing on eligibility. In either case, an applicant…whose principal occupation is other than ranching or farming, does not qualify for assistance."[19] USDA officials including Secretary Benson had repeatedly explained that this provision was designed to exclude speculators with non-farm occupations. Still, because it excluded part-time farmers, the drought relief program neglected and accelerated post-war circumstances including high land prices, land consolidation, and rural poverty that forced many small farmers to supplement their incomes through off-farm jobs. The relief program also neglected the drought's economic implications for businesses in the rural communities where many part-time farmers worked and shopped.[20]

Farm consolidation during the 1950s owed to a range of factors, including new technologies that increased production scales and farm finance systems that favored bigger operations. Oklahoma A&M and USDA farm economists Robert L. Tontz and William Schofield attributed the trend to several factors, including

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authorized to deny sale….This is the way they are operating this thing and it is, in my estimation, unfair. Apparently, you are not the only one." In Carl Albert 17 December 1954 letter to Lowell Childers, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 35.

[19] H.C. Smith 20 July 1956 letter to Victor Wickersham, pp. 1-2, in Victor Wickersham Collection, box 1, folder 22. Some people found these terms invasive.One relief applicant complained to Albert, "my financial status does not enter into this program, and I am sure the local Board does not have to know my personal business." In Dee Porter Ray 8 December 1954 letter to Carl Albert, p.1, in Carl Albert Papers, Departmental Series, box 19, folder 36.

[20] *New York Times*, 28 June 1953, p. 42. As mentioned in chapter one, from 1930 to 1954, the number of part-time farmers in Oklahoma more than doubled, from approximately 18,000 to over 40,000. In *Report on Oklahoma's Economy*,prepared by the Governor's Economic Development Commission, December 1958, p. 38.

acreage allotments, increasing agricultural productivity in the Southwest, and insurance company and Federal Farm Bank lending policies that benefited bigger farms.[21]

That so many factors contributed to farm consolidation makes it difficult to isolate drought's role to the process. But statistics show accelerated farm consolidation during the late stages of the 1930s and 1950s droughts. For instance, the average size of Oklahoma farms increased by 28 acres during the dry years from 1935 to 1940, but increased by only 25 acres during the relatively wetter period from 1940 to 1945. Similarly, from 1950 to 1955, as drought crept in to Oklahoma again, average farms sizes increased by 46.6 acres, but from 1955 to 1960, after its impact had been more fully felt, they increased by 77.7 acres. Historians and contemporaries made the connection. In CimarronCounty during the 1930s drought, for instance, Donald Worster observed that average farm sizes increased from 1204 acres in 1930 to 1536 acres in 1940 "as small fry were eaten up by big snappers."[22] And in April 1950, *New York Times* reporters observed that drought-related crop losses "may have a healthy over-all effect by squeezing out some marginal producers[.]" In April 1955, Verden, Oklahoma resident Parker Woodall testified to Congress that farm sizes in Grady County had

[21] According to the economists, insurance companies and the Federal Land Bank had since December 1953 issued loans worth approximately 10% more of the land's value (40%, instead of 30-35% before that date). Additionally, in late 1954 the Federal Land Bank revised farm and timber land appraisals upward. Despite these more liberal lending policies, however, Tontz and Schofield noted that a recent survey of real estate reporters revealed "that there was little change in the general availability of credit during the last year." Together, these trends made it easier for large farms to expand, by borrowing against their rising land values, and difficult for new farmers to borrow for their first land purchase. In *Farmer Stockman*, January 1956, p.17.

[22] Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (Oxford: Oxford University Press, 1979), p. 115.

increased nearly seventeen percent since 1945 because "small farmers were not able to withstand recurring droughts and were forced to abandon their farms."[23]

Rapidly rising land prices, farm consolidation, and the pressure on small farms likely also boosted the trend toward part-time farming and blurred the meaning of the term 'farmer' to some observers. In 1959, *Farmer Stockman* editor F.J. Deering explained: "Once there were comparatively few very large operators and a small proportion of the total number were part-time…farmers. The term 'average farmer' was a fairly good description of most….Now the term 'average farmer' means almost nothing….Consolidation of thousands of farms into larger units and breaking up of thousands of others into smaller units has left only a small part of the total as 'average farms.'"[24]

Rigid adherence to the idea that only 'family farms' should benefit from federal drought relief and that relief should be restricted to specific 'drought areas' characterized the federal relief program during the disaster's early stages. Gradually, however, pressure from small producers, part-time farmers, small municipal businessmen and their congressmen compelled federal officials to rethink drought's boundaries and the criteria for relief eligibility.

Albert's sensitivity to these problems reflected economic conditions in his southeastern Oklahoma congressional district where the drought ravaged part-time farmers' livelihoods on and off their small farms. By the fall of 1954 over 33,000

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[23]*Farmer Stockman*, November 1960, p. 16; Worster, *Dust Bowl*, p. 115; *New York Times*, 30 April 1950, p. 20; U.S., Congress, Senate, Committee on Interior and Insular Affairs, *Washita Project*, Published Hearing, 84th Congress, 1st Session, 25 April 1955, p. 35.From 1945 to 1954, farm sizes in the county had increased from 188.7 acres to 220 acres.

[24]*Farmer Stockman* (February 1959), p.10. He added, "[n]either small nor large farm and ranch operators can now be classified as 'average'."(p.10)

eastern Oklahomans needed emergency USDA relief food, and state officials predicted nearly 60,000 needy recipients in the region during the coming winter.[25] Consequently, that September state and federal representatives surveyed twenty-three eastern Oklahoma counties and met with local leaders to assess the region's drought-related economic problems.

The surveyed region was hilly and mountainous, comprising mostly small livestock farms. Less than one-third of the region's inhabitants lived in urban communities and only two of the twenty-three surveyed counties reported median family incomes at or above the state average of $2,050. Over 20,000 farm operators in the region had worked at off-farm wage and salary jobs to supplement their incomes during 1949, over half of them for over 100 days. "Many of the small farmers in this area are marginal operators," observed investigators, "and they and members of their families are forced to seek wage employment off their farms as an income supplement, even in good years." Investigators concluded that while the region had been declining economically for years, "the present acute [unemployment and relief] situation…has reached the distress stage primarily because of three years of insufficient rainfall[.]" From 1950 to 1954 the number of employed workers in the region had fallen from 48,259 to 27,550. Investigators emphasized the drought's pervasive effects. "[F]ood cannery employment is only a fraction of what it would be in a good crop year," they reported, "and then trade and service activities have suffered because of a general shrinkage in local buying power." Further afield, the drought had reduced employment in Great Lakes

[25]*Oklahoman*, 19 September 1954, p. 74. OPRB reported that "approximately 43,844 persons [in eastern Oklahoma] are receiving direct assistance relief in the form of surplus commodities." In *Drought Relief and Area Development Recommendations*, p. 4.

canneries and southwestern Oklahoma harvests, both of which normally attracted seasonal migrant workers from the surveyed region.[26]

Locals saw broad solutions, mostly to be supplied by the federal government.[27] During the September surveys, county leaders requested a range of economic stimulus measures, including federal contracts to area canners, more hay and feed grain relief, highway improvement and construction programs, water resource development and upstream soil conservation, school improvement and repair programs, more food and clothing, and home improvement programs. In the report that followed the investigation, representatives from at least nine federal and state agencies identified a range of state and federal programs to meet the emergency and proposed new programs to mitigate the drought's broad economic effects. U.S. Corps of Engineers District Engineer (Tulsa) Stanley G. Reiff described a variety of short-term and long-term public-works projects to employ area people, ranging from immediate jobs on public-use facilities (including access roads, parking lots, toilets and shelters) to longer-term work on current and authorized (but not yet funded) Corps projects including dam-building, bank stabilization and channel rectification. Bureau of Reclamation Area Development

[26] Only 30.5 percent of the region's population lived in urban communities, compared to 50.1% for the whole state. Oklahoma Employment Security Commission (OESC) policies compounded the region's problems because the agency exempted agriculture and smaller firms (employing eight or fewer employees) from its unemployment insurance coverage and because it designated only urban areas for preferential treatment (including tax write-offs) to attract new industries and defense contracts. In *Drought Relief and Area Development Recommendations*, pp. 6, 4, 11-12.

[27] On 24 July 1954, for instance, Tahlequah Chamber of Commerce Secretary-Manager Elmer Davis wrote to Albert: "Since…drouths…have practically wiped out the stockmen and agriculturalists in this area, it is urgent that some type of works program be inaugurated whereby the people can earn their living by day labor." In Elmer Davis 24 July 1954 letter to Carl Albert, p. 1, in Carl Albert papers, Departmental Series, box 19, folder 35; Carl Albert later recalled, "Because my state was poor and my district poorer, federal aid was no demon; it was a deliverer." In Carl Albert, *Little Giant*, p. 156.

Engineer M.G. Barclay recommended "[a] program of irrigation…to stabilize the economy….[n]ot only to…circumvent the drought, but….[to] insure the operation of canneries, and, in turn…insure a market for the produce[.]" And Small Business Administration officer O.C. Jones reported that his agency could counsel and assist area businesses eager to attract federal procurement contracts.[28]

On their own, developments with the Small Business Administration (SBA) revealed a growing sense for drought's economic implications and tension over who should administer economic assistance to drought areas. Congress had created the agency in 1953.[29] Its purpose, explained SBA administrator Wendell Barnes in a 1954 article, was to "preserve free competitive enterprise [and] to insure that a fair proportion of [government] purchases and contracts be…placed with small-business enterprises." In addition to financial counseling and assistance, the agency made loans to help small businesses build, equip and expand their operations. It also had "the humanitarian task of making loans to help rehabilitate business concerns and homes damaged by storms, floods, or other

[28]*Drought Relief and Area Development Recommendations*, pp. 3, 12-15, 19, 24, 26-30. The Board of County Commissioners for several eastern Oklahoma counties petitioned the Oklahoma Congressional delegation to develop water projects, schools, bridges and roads (p. 26). The participating agencies were: FHA, SBA, Corps of Engineers, U.S. Department of Commerce, OPRB, Oklahoma Employment Security Commission, OERB, Oklahoma Highway Department, and the Oklahoma Department of Agriculture (p. 3). Barclay thought that small-scale individual irrigation from groundwater was the most feasible approach to the region. He suggested that "ground-water potentialities should be evaluated first because, in most cases, it would appear cheaper to develop the ground-water on an individual farm basis," for which, he added "there are methods of financing under some form of the Department of Agriculture program" (p. 19).

[29] U.S. Congress, Senate, Subcommittee of the Committee on Banking and Currency, *Extension of Small Business Administration*, Hearings, 84th Congress, 1st Session, 5, 9 and 11 May 1955, p. 1. Essentially, the SBA was created to replace the Reconstruction Finance Corporation, which was liquated by the same law. Quoting from the law, SBA administrator Wendell Barnes explained that the 1953 law "authorize[d] appropriations totaling $257 million to a revolving fund in the Treasury, of which not to exceed $150 million would be available for business loans, $25 million for disaster loans, and $100 million for the taking of prime contracts and the subcontracting of the work to small business" (p. 112). The new law assigned to the agency "the disaster-loan responsibility formerly exercised by RFC" (p. 114).

catastrophes." During SBA's first years, however, its staff excluded drought from their disaster loan mandate because of the administrative challenge to assessing a drought's economic implications and because they considered drought to be an agricultural problem best solved by authorizing FHA to make refinance loans in drought areas.[30]

Drought-area congressional representatives soon pressured SBA to take a more inclusive approach to its disaster loan assistance policy. In the August 1954 drought program hearings, for instance, Texas representative Walter Rogers complained, "we have a great number of little-business men who…have been carrying farmers on open account [and who] are going to go broke because those farmers cannot get funds to pay these back debts….[T]he small merchants cannot get any relief from the Small Business Administration." For several years, bankers and business leaders in small Texas towns had been complaining of the drought's adverse economic effects, including increased REA disconnects, rising unemployment, plummeting farm implement and automobile sales, and dropping bank deposits. In the spring of 1955, Texas senator Lyndon Johnson co-sponsored a bill to make drought area small-business disaster loans an additional SBA priority. At Senate subcommittee hearings on the bill that May, Johnson

[30] Barnes quoted from the text of the Small Business Act. The SBA could lend a maximum of $150,000. By October 1954, the agency had approved over 700 loans, totaling more than $40 million. Significantly, Barnes described SBA disaster assistance to counties in Oklahoma, Texas, Arkansas, and Iowa that had been hit by tornadoes but did not mention any assistance related to the drought disaster (p. 2). In Wendell Barnes, "The Small Business Administration: What It Is – What It Does," *Oklahoma Business Bulletin*, vol.20, no.10 (October 1954), pp. 1-2. By the spring of 1955, the agency had approved 2,528 loans totaling $79,875,000. In *Extension of Small Business Administration*, Hearings, 5, 9 and 11 May 1955, p. 113.

explained, "the cumulative effects of several years of severe drought….upon business and commerce in the drought areas has been largely overlooked."[31]

SBA officials remained reluctant to accept the added responsibility. In a 3 May 1955 letter to Senate Small Business Subcommittee Chairman Wayne Morse, Barnes explained the agency's position, saying:

> the disaster loan authority now contained in the Small Business Act of 1953 relates to damage or destruction caused by physical flashtype phenomenon, such as storms, tornadoes, hurricanes, etc, where questions of 'proximate cause' of the financial need can be virtually pinpointed to the "hour and minute." Drought cannot be so pinpointed; it is a kind of economic erosion and it is submitted that the [causal] question, i.e., whether the economic reverses are attributable to drought also involves essentially agricultural considerations….it is [also] submitted that this essentially agricultural problem should be resolved by amendment of the FHA authority to permit farmers to pay past indebtedness.

In his subsequent testimony, Barnes added: "The drought is an insidious thing that comes over a period of time and it may be other business judgments which caused the situation in which the business owner finds himself."[32]

With sympathy for drought area businesses left outside FHA and SBA lending procedures, on 17 May 1955 the Senate Executive Committee on Banking and Currency approved Johnson's bill. That summer Congress authorized SBA to provide emergency loans to businesses in USDA designated drought areas. Accordingly, Barnes held meetings with bankers in the Southwest to draft a loan program for drought-afflicted businesses. Barnes wanted local banks to distribute

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[31]*Drought Program*, Hearing, 6 August 1954, pp. 36-37. The Texas Employment Commission attributed to the drought a 20,000 person rise in unemployment the previous June. In*The New York Times*, 3 August 1953, p. 17;*Extension of Small Business Administration*, Hearings, 5, 9 and 11 May 1955, pp. 60-1.

[32]*Extension of Small Business Administration*, Hearings, 5, 9 and 11 May 1955, pp. 66-7, 148.

application forms and to assess potential borrowers. Sample application forms stipulated ten-year terms at three percent interest, with no limits on the amount a business could borrow. Any "bona fide" business was eligible for the loans, except for businesses established during the drought period. Loans were to be used "[s]olely to effect relief from injury attributable to drought conditions." To prove their losses, applicants had to explain how drought had injured their businesses and submit financial and operating statements covering "[the] period of normal operations prior to the drought and the current [drought] period for comparative purposes."[33]

This change to SBA policy signified a growing appreciation for drought's broad economic implications, especially the sense that the drought was not strictly an agricultural disaster. As the drought persisted, pressure for more liberal lending policies continued. On 15 August 1956, for instance, Madill, Oklahoma resident Glenn Northcutt wrote to state representatives Marvin Bryant and Roy Lockhart to stress the drought's adverse impact near his community. "As it appears now there is going to be very little work in the harvesting of crops in this community this fall[,]" Northcutt wrote, "[i]t looks now [like] several families in this community will be moving out of the country seeking employment." Their forced out-migration, Northcutt emphasized, would be felt throughout the community, including "our Churches, our Schools and our communities in particular." A

[33] To safeguard against widespread calls for SBA loans in future droughts, the executive committee emphasized the need for Presidential drought designations to qualifying areas. U.S. Congress, Senate, Executive Committee on Banking and Currency, *S. 16 and Various Other Small Business Administration Bills*, Transcript of Proceedings, 17 May 1955, p. 6. Barnes explained that the SBA authority to provide loans to drought-area farmers derived from 1955 (84th Congress) amendments to the 1953 Small Business Act. In Wendell B. Barnes 9 September 1955, 'To Banks', pp. 1-2, Carl Albert papers, Departmental Series, box 22, folder 63.

nearby Fob and Willis-area resident similarly wrote to Governor Gary: "[w]e have had only 3.41 inches of rain, exclusive of some snow in January, for 1956. The entire Fob, Willis Community won't make 25 bales of cotton, no corn, peanuts or any other crops….The school will have to close if even one leaves….If the women could get work, as at the garment factory we could hold them until maybe some things could develop creating employment[.]" On 21 August 1956, Marshall County attorney O.C. Barnes, wrote to Governor Gary from south-central Oklahoma: "[w]ithin the near future many families will leave these communities. This drouth [sic] has caused a local condition that is even more desperate than in any other part of this country….There is no employment for these farmers." Barnes wanted Gary to help advance a local highway project to generate short-term jobs.[34]

Recognizing the connection between small farms and off-farm jobs, during the summer of 1956, Congress expanded FHA's scope within its new Rural Development Program to allow FHA loans for refinancing existing debts and to provide loans to farmers and stockmen with part-time jobs "in industry, trades and other employment."[35] In nationwide pilot counties funded by the Rural

[34] The pressure on available jobs fostered parochial sensitivities. Northcutt stressed that women from beyond MarshallCounty worked in the local garment shop while Madill women and their families were being forced to leave. "These women are home owners and hate to leave here," he stressed, while out-of-county laborers "do not spend their money in MarshallCounty, they even bring their lunches with them." In Glen Northcutt 15 August 1956 letter to Marvin Bryant and Roy Lockhart, p. 1, in Raymond Gary papers, box 72, folder 7;G.B. [?] 15 August 1956 letter to Raymond Gary, p. 1, in Raymond Gary papers, box 72, folder 7;O.C. Barnes 21 August 1956 letter to Raymond Gary, p. 1, in Raymond Gary papers, box 72, folder 7.

[35] 27 August 1956 USDA press release (#USDA 2512-56), p. 1, in Carl Albert papers, Departmental Series, box 23, folder 47. The aim was to "promote well-coordinated farm-industry expansion in disadvantaged rural areas" (p. 3). Most of the states with pilot counties had State Rural Development Committees with representatives from farm organizations, civic, business, banking, educational, and church leadership along with such agencies as the Extension Service, College of Agriculture, Farmers Home Administration, Soil Conservation Service, Industrial

Development program, state and federal extension workers and SCS soil scientists developed economic and agricultural improvement programs for individual families and communities, and Agricultural Marketing Service and Agricultural Research Service personnel planned regional economic development. USDA also provided "technical, educational, administrative and farm credit aid [to move] forward with balanced agricultural, industrial, and other development."[36]

The new Rural Development program recognized that economic circumstances during the 1950s inhibited viable, full-time and small-scale farms. But it qualified its support to part-time farmers by stipulating that "loans…for operating and developing less than family-type farms [would be issued only] if the applicants are established bona fide farmers who have historically resided on farms and depended on farm income for their livelihood, and who are conducting substantial farming operations and spending a major portion of their time farming." And the new program applied only to "farmers who live in areas designated for the Rural Development Program, who are unable to obtain enough land resources to develop full-time farms."[37] By 27 August 1956, only two Oklahoma counties (among fifty-five nationwide) were included in the Rural Development Program and the program received no large-scale appropriations until the Area Redevelopment Act of 1961.[38]

Development Board, Department of Health, Education Department, Agricultural Stabilization and Conservation Committee, and others" (p. 3).

[36] 27 August 1956 USDA press release (#USDA 2512-56), p. 2, in Carl Albert papers, Departmental Series, box 23, folder 47.

[37] 7 August 1956 USDA press release (#USDA 2313-56), pp. 1-3, in Carl Albert papers, Departmental Series, box 23, folder 33. And the "interest rates and terms…for operating and developing less than family-type farms [would] vary depending upon the purpose for which the loan is obtained."

[38] *Congress and the Nation, 1945-1964*, p. 701.

The following year, officials appreciated the need for a more inclusive and integrated federal drought policy. In January 1957, following another disastrous drought year, President Dwight Eisenhower toured the drought-stricken Southern Plains to observe conditions, and Agriculture Secretary Benson invited farmers, scientists and policy-makers to Wichita, Kansas to examine the drought problem. The Wichita meeting involved 190 participants, including farmers, ranchers, state drought committees, bankers, businessmen, agricultural college researchers and state and federal representatives. Their recommendations became the *Report on Drought and Other Natural Disasters*, which Benson presented to Eisenhower in late February 1957.[39]

The report contained a mix of old and new lessons. "Most recommendations made would modify or supplement what is already being done," Benson wrote to Eisenhower. In this regard, the report recommended soil surveys, emergency tillage payments to farmers, and incentives to establish cover crops and bigger stock-water ponds, among other soil and water conservation measures. The report also offered recent lessons. It suggested, for instance, that the "closer the administration and support of emergency programs can be kept to the people concerned, the better in terms of meeting the situation satisfactorily and making full use of resources." To build administrative accuracy and consensus, conference participants recommended joint inspections by Washington

[39] Eisenhower toured the drought area from 13-15 January 1957. The Wichita Conference was held 14-16 January 1957. According to the report, the meeting involved "190 participants [including] farmers and ranchers, members of the executive committee of the Great Plains Agricultural Council, representatives from of State drought committees, bankers, businessmen, farm and commodity organizations, agricultural colleges, and workers from State and Federal agencies." In *Message from the President of the United States Relative to Alleviating Emergency Conditions Brought About by Prolonged Drought and Other Severe Natural Disasters*, U.S. Congress, House Document No. 110, 85th Cong. 1st. Sess., 5 March 1957, p. 9.

representatives and State drought committees. To prevent economic disparities produced by rigid relief boundaries, they recommended that henceforth "[e]very effort…be made to see that normal market processes are allowed to operate during periods of drought emergency feed-purchase assistance." And to moderate drought-related income fluctuations, they recommended new income-tax laws "to provide for payment of income tax on the basis of income tax averaged over a 5-year period."[40]

Respecting the drought's broader economic implications, the conferees reached some general conclusions and recommended some specific changes. They proclaimed, for instance, that "[t]he impacts of drought…are felt in all segments of the economic life of the region attended" and they recommended that "in developing long-range programs designed to cushion the impact of recurring natural disasters, action should be taken to strengthen the allied fields of commercial and industrial activities of the region along with those of agriculture." This conclusion reflected a broader perspective than the agricultural adjustments recommended by the Great Plains Committee in its 1936 report *The Future of the Great Plains*. The 1957 report reflected other new lessons. It suggested, for instance, that "[t]he interdependence of farmers and ranchers and businessmen make it necessary to consider the problems of small business in drought areas as well as those of the farmers and ranchers." To mitigate farmers' economic exposure to droughts, they recommended "[f]acilities…to assist farm and ranch people to find non-farm employment….Off-the-farm employment is an important source of income [and] [a]ny program which leads to an expansion of employment

[40]Ibid., pp. 11-15.

opportunities in disaster areas…will make an important contribution[.]" Specifically, they recommended extending FHA loan amortization periods, authorizing FHA to refinance debt and modifying the FHA loan provision "requiring the owner and operator to live on the land[.]" These recommendations were significantly different than the agricultural solutions proposed in 1936. They represented a broader sense for drought's implications. Aside from changes to FHA lending policy, however, participants to the Wichita meeting stopped short of recommending any specific plans to integrate agriculture, industry and commerce in drought-prone areas.[41]

The lack of a specific federal action plan to integrate agriculture, industry and commerce in drought areas frustrated Oklahoma governor Raymond Gary. That March, he wrote to Benson: "I am somewhat at a loss to explain why, in reading your message [introducing the Wichita Report] to the President, that with the exception of the so-called 'Rural Development Program,' there was no recognition of the fact that a portion of agriculture's problems lie quite outside the area of agriculture itself." For that reason, he explained, "I am dismayed to find no recognition on the Part[sic] of the Federal[sic] agricultural leaders to a partial solution of the problem which lies within the capacity of the Federal Government to affect[sic]."[42]

[41]Ibid., pp. 16, 19-20.

[42] Missing from Benson's recommendations, Gary specified, was "an accelerated program of industrial dispersion coupled with an accelerated program of water resource development in the Great Plains area." To strengthen his point, Gary stressed: "Due to the mechanized character of agriculture in our State, it is our judgment that ninety percent of our farmers can combine a forty-hour week in industry, or in commerce, within the framework of their present agricultural operations." In Raymond Gary 19 March 1957 letter to Ezra Taft Benson, pp. 1-2, in Raymond Gary papers, box 72, folder 7.

The 1957 *Report on Drought and Other Natural Disasters* had as its "main purpose…more effective coordination of efforts and more adequate sharing of responsibilities between individuals, local communities, and governments – local, State, Federal – in helping prevent disasters and alleviating distress when disasters come." Effectively, this purpose reflected what historian Elmo Richardson has called the Eisenhower administration's "conviction that the [federal] government should do only those things which the states and the people could not do for themselves." When he presented the document to Congress, Eisenhower stressed two of its conclusions: "first[,] that administration of emergency disasters must be kept close to the local people [and] second[,] that State and local governments [should] assume a greater part in alleviating human distress and hardships[.]" Benson added: "Participation by the States should include administrative responsibility so as to provide necessary local guidance and supervision."[43]

Oklahoma governor Raymond Gary's dissatisfaction with the report, by contrast, reflected the sense that economic development to mitigate drought was not primarily a state responsibility.[44] This sense was reflected too in the state's contribution to relief administration, which since at least the 1930s had largely seen local county officials qualify recipients for federal money. During the mid-1950s, however, federal officials tested this assumption by threatening to withhold

[43]*Message from the President*, 5 March 1957, pp. 3-5, 10. Elmo Richardson put the same point another way, writing that the Eisenhower administration tried to reduce federal spending, "dismantle federal bureaucracy and restore reliance upon local and private initiative." In Elmo Richardson, *Dams, Parks and Politics: Resource Development in the Truman-Eisenhower Era* (Lexington: University Press of Kentucky, 1973), pp. 114-15.

[44] As his recommendation to drought-plagued eastern Oklahoma, for instance, Oklahoma Highway Department administrator Mike Donnelly offered to "cooperate fully…and to be of assistance wherever we possibly can," but also reminded readers, "the Highway Department is not a relief organization." In *Drought Relief and Area Development Recommendations*, p. 9.

USDA relief food shipments until local officials met federal eligibility standards. The episode fit a long-running pattern of patronage and corruption. Its resolution illustrated how the drought crisis enlarged the state government's scope. Ultimately, the Oklahoma legislature's response to the threatened cut-off shifted administrative authority from local officials to state bureaucrats.

From the late 1940s, the federal government operated several domestic food programs to benefit needy persons, school-children, and low-income families across the country. Through the programs, USDA acquired and distributed surplus commodities to county warehouses where local governments distributed the foodstuffs to eligible recipients including hospitals, orphanages, schools with lunch programs and victims of natural disasters such as floods and droughts. State or local public welfare authorities approved commodity recipients. In Oklahoma, county commissioners performed this task until the early 1950s. State-wide by 1955, the program fed over 177,000 Oklahomans in fifty counties.[45]

Due partly to the drought, USDA surplus food donations reached record highs during the 1950s. Excluding school donations, nationwide USDA surplus commodity distribution jumped to 644 million pounds in 1957 from a previous high of 238 million pounds in 1951. Oklahoma received a disproportionate amount of this assistance. During 1957, Oklahoma ranked third in surplus foodstuff receipts, behind only Pennsylvania and Alabama. And during the peak drought years from 1953 through 1956, Oklahoma's USDA commodity surplus

[45] Willard W. Cochrane and Mary E. Ryan, *American Farm Policy, 1948-1973* (Minneapolis: University of Minnesota Press, 1976), p. 281. Historians Wayne Rasmussen and Gladys Baker traced the program back to USDA's distribution of surplus pork in 1933. In Rasmussen and Baker, "Programs for Agriculture, 1933-1965," p. 77;*Daily Oklahoman*, 22 February 1955, p. 12. The paper reported 177,160 recipients.

receipts towered above the state's southern plains neighbors, including Texas. Despite its relatively small population, Oklahoma received approximately $10.2 million worth of commodities during those four years, compared to approximately $2.7 million and $2.5 million respectively for Texas and New Mexico, $510,000 for Colorado and only $31,000 for Kansas. The discrepancy drew national press attention, with the *Wall Street Journal* reporting that southern states including Oklahoma benefited unfairly from the program. It also drew federal (USDA) investigators.[46]

In February 1955, barely a month into Raymond Gary's governorship, federal officials ordered the state to assume county commissioners' certification duties amidst allegations that some commissioners had used their positions to coerce votes for the Democratic Party during the previous fall's general election. More broadly, explained Gary, "'[t]hey feel we have too many people on relief lists.'" To cull ineligible commodity recipients, Gary assigned the certification task to the Oklahoma Emergency Relief Board (OERB). OERB relief certification responsibility lasted just over one year. In August 1956, USDA officials again confronted Gary with audit and administrative review results that threatened the state's surplus food program eligibility. The governor responded quickly, this time

[46] According to a USDA press release, "Distribution domestically was increased to 1,043,000,000 pounds, up 32 percent over the total for fiscal year 1956….In this country, the biggest increases were made in distribution of surplus commodities for use in school lunch programs [and] large quantities of surplus foods were used…in the relief of victims of natural disasters." For fiscal 1957 Pennsylvania had 582,460 recipients, Alabama had 217,056 recipients and Oklahoma had 203,887 recipients. In 11 July 1957 [USDA] press release, pp. 1-2, in Oklahoma Department of Human Services (ODHS), Commodity File (RG23-3-13), box 4, folder 1; Cochrane and Ryan, *American Farm Policy, 1948-1973*, p. 282; U.S., Congress, House, Committee on Agriculture, *Drought Relief Program*, Hearings, 85th Congress, 1st. session, 23, 25 January and 4 February 1957, p. 49. The monetary figures are for fiscal years 1954 to 1957 (through 30 November 1956).

issuing an executive order for the Oklahoma Department of Public Welfare (DPW) to supervise OERB's relief certification responsibilities until the legislature reconvened the following year.[47]

Another political scandal surrounding the State Senate race in Okmulgee and Wagoner counties in northeast Oklahoma overshadowed Gary's response. During the contest, incumbent Senator John Russell's campaigners used OERB relief funds that had been illegally issued to some of the candidate's supporters. The scandal tarnished Gary's credibility because Russell was his political ally and because the governor had personally appointed OERB director Frank Easley who was ultimately convicted for conspiracy in the affair. Contemporaries saw Gary's executive order as a way to minimize short-term political damage.[48] More deeply, his move reformed relief distribution issues that went back to at least the drought and depression of the 1930s. Public Welfare Department chief E.L. Rader's experiences as a relief agent help to illuminate the process.[49]

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[47] *Oklahoman*, 22 February 1955, p.12; Public Welfare Commission Staff Meeting, 2 January 1957, pp. 1, in ODHS, Commodity File, box 5, folder 12; Public Welfare Commission Meeting, 11 February 1957, pp. 1-2, in ODHS, Commodity File, box 5, folder 13.

[48] The OERB's field agent for Wagoner County had issued relief checks to "well-heeled Russell supporters," who then donated the money to the Russell campaign. The scandal went to the State Supreme Court where Easley pleaded guilty to conspiracy charges. In James R. Scales and Danney Goble, *Oklahoma Politics: A History* (Norman: University of Oklahoma Press, 1982), pp. 300-301. Reporters attributed the reform measure to an "absentee vote and relief check" scandal in Wagoner County, but quoted Gary as saying: "'It is a reform measure and the department will operate more efficiently and I believe it will no longer be known as a patronage department.'" In *Oklahoman*, 23 January 1957, p. 42.

[49] Department of Public Welfare head E.L. Rader subsequently explained that "[c]ontrary to the belief of the majority of people and the general public in general, [Gary's executive order] was not the result of the Wagoner deal." in Meeting of Field Representatives, 29 January 1957, p. 1, inODHS, Commodity File, box 5, folder 13. And to explain the Oklahoma legislature's rapid ratification of Gary's executive order the following January, Scales and Goble write that the measure "corrected the long-standing problems that made the WagonerCounty case possible." In Scales and Goble, *Oklahoma Politics: A History*, pp. 300-302.

Rader's career in relief and public welfare management began during Oklahoma governor "Alfalfa" Bill Murray's administration (1931-1935). Like other governors of his time, Murray used Federal Emergency Relief Administration (FERA) funds to consolidate political power. President Franklin D. Roosevelt's administration had established FERA in 1933 to distribute unemployment relief funds to the states.[50] To control the money that came to Oklahoma, Murray carefully and secretively selected local relief agents. He hired Rader to set up the first county relief departments in western Oklahoma. "[H]e told me not to talk to any chamber of commerce or any politician but certain people he told me to talk to….[h]e also told me if it got out what I was doing he would fire me," Rader later recalled.[51] His task in western Oklahoma finished, Rader was himself subsequently assigned as a relief agent in CusterCounty. That position revealed to him the important and powerful role that local officials occupied in the relief process. "We were our own case workers, certifiers, etc[,]" he recalled, "Who did we lean on? Naturally, the school superintendents, and Boards of County Commissioners, to find out about…people and eligibility." The county commissioners were especially powerful, Rader recalled in another instance: "our primary source of information was the county commissioner….[a]s

[50] The agency was to distribute $500 million to the states. Half of that amount went to the states on a matching basis of one federal dollar to three state dollars, and the other $250 million was given as a straight grant. In James Patterson, *The New Deal and the States: Federalism in Transition* (Princeton: Princeton University Press, 1969), p. 50.

[51] In 1932, as a twenty-four year old car salesman, Rader had sold a car to Governor Alfalfa Bill Murray's campaign manager, Sam Hawks. Rader asked for a job and Hawks subsequently introduced him to the governor. In Public Welfare Commission Meeting, 11 February 1957, p. 3, in ODHS, Commodity File, box 5, folder 13. The historians James Scales and Danney Goble observed that that by "adroitly dispensing patronage, a gubernatorial weapon in a time of spectacular unemployment, Murray was able to take firm control of state government and make the party machinery totally subject to his personal command." In Scales and Goble, *Oklahoma Politics: A History*, p. 164.

the [relief program] developed down through W.P.A. and C.W.A., they more or less controlled the thing[.]"[52]

Patronage and corruption during Murray's administration led eventually to an investigation by FERA liaison officer Aubrey Williams, who reported to Washington "'thieving and favoritism on all sides….[E]very Tom, Dick and Harry in the state was getting relief whether they were unemployed or not.'" In early 1934 federal authorities took over relief administration in Oklahoma for the year. Relief administration remained a problem through the 1930s, however. Under Governor Leon Phillips' administration (1939-1942), recalled Rader, "The rolls began [again] to get out of hand….They came down here and shut us off in 1939. They said….[s]ome people were being put on who were not eligible and some persons were denied assistance who were eligible." To receive further funds, the state had to recertify its case load.[53]

In addition to corruption and mismanagement, conflicting expectations and attitudes complicated relief administration during the 1930s. "[T]he discontented had come to look to the federal government as the instrument of their deliverance from misery," observed Oklahoma historians James Scales and Danney Goble, but state legislators, businessmen and local officials resisted consolidated federal and

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[52] Public Welfare Commission Meeting, 11 February 1957, p. 3. "The County Commissioners were the only people with offices in every county and by law they [were] the custodians of the poor," Rader continued, "and naturally they were called upon…to assist in the certification of eligibility." In Public Welfare Commission Meeting, 2 January 1957, p. 1, in ODHS, Commodity File, box 5, folder 12.

[53] Another noteworthy obstacle to FERA effectiveness, observed historian James Patterson, was that "some states seemed to exaggerate their inability to pay, infuriating impatient FERA agents and leading to constant federal-state friction." In Patterson, *The New Deal and the States*, pp. 54, 61, 65. The 1934 federal take-over, recounted Scales and Goble: "[gave] Oklahoma the dubious honor of joining Huey Long's Louisiana with a federalized relief program." In Scales and Goble, *Oklahoma Politics: A History*, p. 177; Public Welfare Commission Meeting, 11 February 1957, pp. 3-4.

state power. 'Alfalfa' Bill Murray's successor, E.W. Marland, won the 1934 gubernatorial race on a slogan to "Bring the New Deal to Oklahoma," but he faced "insurmountable obstacles," including legislators who "refused to limit their own prerogatives to the higher cause of efficient state planning[,]" and local officials who "declined to relinquish their powers to appointed experts in Oklahoma City or Washington." The Oklahoma business community was particularly opposed to the tax increases necessary to fund Marland's proposed new state agencies to combat the depression. During Marland's administration, observed Scales and Goble, "Oklahomans were psychologically unprepared for the swift transition of an agrarian, patronage-minded commonwealth to a social welfare state supporting vast new agencies and requiring a high degree of administrative skill."[54]

This situation changed quickly, however. By the end of the 1930s, contend Scales and Goble, "the state's responsibility for what had always been purely local obligations was now accepted – in welfare, education, and…in law enforcement." Symbolizing this transformation, legislators created the Department of Public Welfare (DPW) to meet the Social Security Act requirement that each state establish a central agency to administer federal matching grants. But the transformation extended throughout state government. By the late 1940s, they continued, "Oklahomans [had] moved generations away from Bill Murray and his rustic values….As in social welfare, the state's new activities in public education

[54]Marland proposed five new agencies, including a planning board to manage natural resources, a housing board to build over 100,000 subsistence homes, a flood control board modeled on the TVA, a new industries board and a highway board. Ultimately only "a limited flood control measure with a weak supervisory board, along with a hollow state planning board," were approved and with only a combined twelve percent of Marland's initially requested appropriations. In Scales and Goble, *Oklahoma Politics: A History*, pp.179, 181-91.

and economic planning had forever ended any resemblance between modern public administration and running a farm."[55]

Despite these observations, the relief situation during the 1950s limits the conclusion that the experiences of the 1930s had completely transformed attitudes or administrative procedures. Expectations for federal assistance had grown among individual recipients and state legislators, but the state government's sense of responsibility for relief and welfare dragged. Despite the phenomenal growth in welfare spending since the 1930s, the number of case workers had barely grown. During the 1950s, explained E.L. Rader, "there was[sic] not any more people in the field to take care or take on this large job of certification…than there had been [during the 1930s]." In 1953 the DPW resisted responsibility for relief certification in CusterCounty because the agency had neither the mandate nor funds for the task. The limited number of field workers to certify recipients had led to the USDA's August 1956 ultimatum, explained Rader in another instance, since "it was impossible to meet the standards of certification as required by the USDA for the distribution of commodities. Some…people…had any place from 700 to 800 cases. One or two had 4,000 families. And I don't suppose he could even write their names down, much less spend any time investigating."[56]

Associated with these institutional obstacles to relief administration were persistent ideological and political obstacles. In early 1957 staff meetings, Rader

[55]Ibid., pp. 193, 200, 240. In another passage, Scales and Goble argued that: "In little more than a decade, Oklahoma's reluctant acceptance of welfare had grown to become a major responsibility of state government. By 1946, the State Department of Public Welfare was spending $44.4 million annually, an increase of 562 percent from its modest level of only nine years earlier" (p. 244).
[56] His full statement was that "there was not any more people in the field to take care or take on this large job of certification of 55,000 to 60,000 additional families. There was not any more money appropriated to do that job than there had been when the Department was distributing $10 and $20 checks." In Public Welfare Commission Meeting, 11 February 1957, pp. 1-2.

recalled his own initially limited sense for drought relief's regional economic implications: "I took the attitude….why be grumbling and tight about surplus food commodities because we have been dumping them and throwing them away…and I did not consider [that] there were two sides to all questions – there is the side of the merchant and there is the side of the needy hungry people." In a more principled objection to the expanded DPW functions, long-time DPW staffer S.H. Singleton argued: "it is not the duty of the [DPW] or the objective to show eligibility….if you had any duty at all, it would be to try to keep [recipients] from becoming eligible and being sure they meet the requirements…the burden is on them[.]" The issue had broad economic and moral implications for Singleton. "We are $276,000,000 in debt now," he continued, "[t]his is a gratuity coming to the people of Oklahoma and should not go to others than those who meet eligibility qualifications from an economic standpoint down to the last number, because if you don't…you will eventually destroy the Government [and] the moral fibre of the citizens[.]"[57]

Politically, governor Johnston Murray exacerbated the problem as he successfully campaigned for the governorship in 1950. For his pledge to "increase pensions by reducing the spending on 'snooping' caseworkers," Murray received substantial support from the Oklahoma Welfare Federation (OWF). The OWF was a powerful group that reflected the state's high proportion of older welfare

[57] Notably, Singleton also identified himself as "one of the oldest people in the room," and with a sense of pride he recalled earlier hard times "when my congressman used to send me a big bag of turnip seed[.]" In Public Welfare Commission Staff Meeting, 2 January 1957 staff meeting, pp. 1, 6, in ODHS, Commodity File, box 5, folder 12. Singleton's point of view revealed a long-running attitude towards self-reliance and individualism. Respecting relief distribution during the 1930s, for instance, James Patterson observed that a "fundamental difficulty was the loyalty of state relief employees to the time-honored American principle of self-reliance." In Patterson, *The New Deal and the States*, p. 64.

recipients, especially in eastern Oklahoma, and the power of rural constituents in Oklahoma politics after World War II.[58] Those voters resisted efforts to reform spending and centralize authority in state agencies. For instance, farmers and county commissioners resisted efforts to consolidate road and highway building authority in the State Highway Commission. In 1954, OWF head Ora J. Fox campaigned for the governorship by pledging "to raise monthly stipends to the elderly…provide their medical care [and] to eliminate the Welfare Department's caseworker system." By the time he left office, following that election, Johnston Murray was frustrated with the type of rural power wielded by OWF. In his final State of the State address before leaving office, he criticized the state's "archaic" tax structure. And a few months later, he wrote a scathing *Saturday Evening Post* article titled "Oklahoma is a Mess," to criticize the power of county commissioners "who inevitably retained narrow views," and "the legislative apportionment that allowed rural politicians to govern an urban state…undergoing industrialization."[59]

Rural officials resented efforts to reform relief administration, at least in Rader's interpretation. Privately to his key staffers, Rader suspected that during the fall of 1956, following governor Raymond Gary's executive order to transfer

[58]Scales and Goble, *Oklahoma Politics*, pp. 243-44, 270, 289-90. During the period 1930 to 1960, "the proportion of people aged over sixty-five more than doubled," explained historians Anne Morgan and H. Wayne Morgan, and "[b]y the mid-1960s, welfare checks would be the largest form of payroll in many rural counties, especially in the depopulated southeastern quadrant." In H. Wayne Morgan and Anne Hodges Morgan, *Oklahoma: A Bicentennial History* (New York: W.W. Norton and Company, 1977), p. 136.

[59]*Johnston Murray 4 January 1955 State of the State address*, p. 12, in ODL, Johnston Murray Papers (RG 8-N), http://www.odl.state.ok.us/oar/governors/addresses/murrayj1955.pdf accessed 10 December 2009. Writing in the context of the Prohibition issue, but relevant here respecting rural resistance to centralized relief administration, Morgan and Morgan write: "After WWII…rural counties continued to dominate state politics. They controlled the legislature and could destroy any governor who threatened repeal." In Morgan and Morgan, *Oklahoma*, pp. 116, 136, 144.

relief administration from OERB to DPW, that OERB head Robert Wilson and the State Organization of County Commissioners deliberately delayed and obstructed recertification and compliance with the USDA standards in order to embarrass the Gary administration and Public Welfare Department experts. "They would like to get in a position to say, 'The Welfare Department's smart boys have…failed to get it straighten[sic] out and they lost the commodities,'" Rader suggested to staffers. DPW staffers were generally better trained and educated than county commissioners and OERB employees and they brought higher standards to the certification process. In his 10 August 1956 press release to explain Governor Gary's executive order, Rader publicized the difference, by asserting that the OERB "does not have the trained personnel that the Department of Public Welfare has in making proper investigation and certification."[60]

When it reconvened, in January 1957, the state legislature abolished the OERB and transferred its responsibilities to the state Department of Public Welfare. Indicating the situation's gravity, this was the first bill to reach Governor Gary's desk that year. County commissioners would still manage the emergency relief program and commodity distribution, but they would receive direction from a constitutional board in Oklahoma City.[61] The State Department of Public Welfare published a brochure indicating the state's increased authority over USDA commodity distribution. The *Plan for Making USDA Commodities Available to Cities and/or Counties for Distribution to Needy Persons* stipulated that

[60] 10 August 1956 DPW Press Release, p. 1, reprinted in Public Welfare Commission Meeting, 11 February 1957, p.1; 8 January 1957 Staff meeting - Office of the Director [of Public Welfare], pp. 1, 15, in ODHS, Commodity File, box 5, file 12; Meeting of Field Representatives, 29 January 1957, p. 9, in ODHS, Commodity File, box 5, file 13.
[61] *Oklahoman*, 23 January 1957, p. 42.

"[a]llapplications for USDA commodities for welfare distribution will be processed through the State Office of the Commodity Distribution Division of the State Department of Public Welfare," and that "[t]he standard of eligibility adopted by a city or county may not exceed the limitations of the State Standard of Eligibility[.]" Counties were required to designate a local authority and to provide the office space and personnel to support a state program to determine regularly individual and family eligibility. Rader explained the change: "I am old fashioned….Dad was Chairman of the town Board. Each little town was like a little board of CountyCommissioners. But time marches on and that day is gone….to participate…you meet certain rules and regulations and basic requirements [so] you can qualify for Federal funds….[t]hat is what the majority of the people wanted during the depression and it developed as a result of the depression times or what have you. We developed a highly centralized form of government."[62]

Like it had during the 1930s, relief administration during the 1950s drought crisis increased the state government's size. The drought also heightened a sense that stronger connections between agriculture and industry could mitigate future disasters, especially for the state's growing number of small farmers. Oklahoma's cattlemen made their own connections during the drought as they struggled to keep their herds. By the disaster's end, their industry was reoriented and integrated.

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[62]*Plan for Making USDA Commodities Available to Cities and/or Counties for Distribution to Needy Persons*, (unpublished guide – revised 1956), pp. 1-3, in ODHS, Commodity File, box 4, file 13. "In the future," reported the Oklahoman, "all commodity cases will be reviewed and eligibility redetermined[sic] at least once each six months." In *Oklahoman*, 4 January 1957, p. 1; Public Welfare Commission Meeting, 11 February 1957, p. 2, in ODHS, Commodity File, box 5, file 13.

Chapter 4 – Oklahoma Cattlemen and 1950s Drought

To open the Oklahoma Cattlemen's Association Luncheon, on Friday February 8, 1957, Dr. C.Q. Smith offered the following supplication:

> "Oh Lord! Our GreatRange Boss
> "We are the Cattle of Thy Pastures
> "Thou has spared us for another Roundup….
>
> "Thou hast led us through green pastures
> "And by still waters
> "Thou has sheltered and fed us
> "Through drought and threatening blizzards
> "Though has vaccinated us against range diseases….
>
> "Grant that we may continue to browse
> "On the succulent plants
> "That give only health and growth
> "The protein and forage that will raise us
> "To premium quality
> "And when Shipping Time comes
> "Register us in Thy Great Book[.][63]

Smith's prayer covered many issues central to the cattlemen's recent experiences. Through much of the decade, drought had parched Oklahoma pastures, bringing with it grass and water shortages, high feed costs and low cattle prices that threatened to bankrupt many livestock producers and cripple the foundation herds they needed to fully recover from the disaster. Oklahoma Cattlemen's Association (OCA) members had been "spared" from bankruptcy and the loss of their herds by federal feed relief, emergency credit, and government cattle purchases. They had also struggled with a variety of drought-related herd and pasture issues. And they

[63] Oklahoma Cattlemen's Association (hereafter OCA), 7-8 February 1957 Annual Meeting Minutes, p. 1, in Oklahoma Cattlemen's Association Papers (hereafter OCA papers), Series I, box 1, folder 9.

had integrated their industry to make feedlot finishing and marketing important steps for producing and selling 'premium' beef.

This chapter explores these developments. During the crisis, state and federal officials advised and assisted Oklahoma ranchers and farmers on issues including disease, weed and predator control, animal nutrition, and fire prevention. The drought also brought cattlemen together to push for their chief concern in the early 1950s, a federal cattle purchase program to stabilize prices. Just as the drought forced federal officials and relief agents to qualify deserving emergency farm loan recipients, the crisis fostered a debate among cattle producers over what it meant to be a legitimate rancher, who should qualify for federal assistance, and the shape that assistance should take. Agriculture Secretary Ezra Taft Benson's firm resistance to price supports, along with practical and philosophical divisions among cattlemen, meant that the solution to low prices came through increased marketing to generate demand, not federal price supports to absorb surplus cattle. Beef promotion integrated the industry by connecting producers with marketing specialists and retailers. With the assistance and advice of animal health and nutrition specialists, farmers and ranchers fed more cattle in confined lots during the drought. The experience convinced many local producers to change their operations: instead of raising cattle for shipment to northern feeders, they began to fatten their cattle in Oklahoma.

Indirectly, the drought pressured Oklahoma grasses and herds even before conditions became critically dry across the state. In 1951, for instance, many

Texas ranchers looked to neighboring states, including Oklahoma, for feed and pasture. By February 1952, Oklahoma State Board of Agriculture (OSBA) president Harold Hutton had received over twenty inquiries from Texas and New Mexico livestock owners eager to move their herds to Oklahoma. One Fort Worth rancher found "the grazing and quality of grass so good in [Oklahoma] that we are moving our cattle up to your state….permanently." Word of quality Oklahoma grazing conditions attracted friends and family. In June 1954, for instance, Oklahoma Senator Mike Monroney received a letter describing a Hugo-area rancher who had relocated to Oklahoma the previous May "due to sustained drouth conditions" in New Mexico. His father had come to the Hugo area three years earlier, and his grandfather had arrived the previous winter.[64]

Not only did incoming cattle pressure Oklahoma grasslands and feed supplies, but malnourished and stressed cattle brought diseases and pests. In January 1952, for instance, Oklahoma State Veterinarian Dr. D.H. Ricks reported that anthrax was "striking at a time of year when it does not ordinarily affect cattle." The spore-based disease can quickly and violently kill infected livestock and humans without previous symptoms. Connecting the outbreak to the dry conditions, Hicks explained that the anthrax organism "has been known to live in the soil for a number of years" and usually involves "heavy losses…during dry seasons when the grass is poor and livestock graze close to the ground." Since the disease could also be transmitted by direct contact with infected carriers, by flies,

[64]Rana K. Williamson, *The Heat From the Forge: Aspects of the Seven Year Drought of the 1950s in Texas*, Ph.D. dissertation, Texas Christian University, 1933, p. 44; *Farm News*, 4 February 1952, p. 1; Ennis M. DeWeese 17 June 1954 to Mike Monroney (copy to Carl Albert), p. 1, in Carl Albert papers, Department Series, box 19, folder 45.

or through inhalation, cattle coming from drier regions of Texas and New Mexico threatened Oklahoma herds. In his annual report for 1952, Hicks reported anthrax outbreaks in twelve Oklahoma counties, eleven of which had no previous history of the disease. In April 1953, an Atoka farmer was hospitalized for an anthrax infection he had acquired while skinning one of his infected cows. And during 1957, an anthrax outbreak killed 400 head of cattle in three northeastern Oklahoma counties.[65]

Incoming livestock threatened Oklahoma producers with other diseases and pests including ticks, screw-worm fly, mange, and shipping fever. In June 1952, OSBA entomology and plant industry division head Clyde Bower reported a "heavier than normal infestation" of spinos ear ticks in Oklahoma cattle herds and two instances of the GulfCoast ear tick, even though "that pest is not usually found as far north as Oklahoma." Increased numbers of Texas cattle moving to Oklahoma during the drought increased the screw worm threat which "spreads northward from southern Texas into areas of Oklahoma in average years[.]" Similarly, drought-related livestock shipments threatened Oklahoma livestock producers with mange. Mange ("scab") is a contagious skin disease caused by mites that can be transmitted directly or indirectly. It causes "intense irritation and hypersensitivity, which can lead to debilitation and possibly death." In early 1954, OSBA's Veterinary Division warned farmers that "sheep scab, found in a number

[65] Alternately the publication referred to him as State Veterinarian or OSBA Veterinary Division Head. In *Farm News*, 8 January 1952, p. 1; Clarence M. Fraser, ed., *The Merck Veterinary Manual, 7th ed*. (Rahway, N.J.: Merck and Company, 1991), p. 320; A 1,200 head Waurika ranch had recently been quarantined. In *Farm News*, 8 January 1952, p. 1; *OSBA Annual Report for 1952*, p. 14. By May 1952, the State Board of Agriculture had banned the use of imported bone meal that might contain anthrax organisms. In *Farm News*, 16 May 1952, p. 1; *Farm News*, 27 April 1953, p. 1; *Farmer Stockman*, September 1957, p. 17.

of imported flocks last winter, is making its appearance again over the state." That February, the agency encouraged Oklahoma farmers and ranchers to examine carefully health certificates meant to accompany inter-state livestock shipments. By doing so, farmers could avoid the problems facing a Laverne, Oklahoma rancher who had imported 212 infested cattle from Colorado, then mixed them with his own herd before selling several bunches in Kansas. To prevent similar problems, OSBA assigned a veterinarian to help Panhandle sales operators and truckers ensure that "any cattle moving through or into the area are accompanied by health certificates." The Laverne case also prompted Oklahoma to issue a temporary embargo against eastern Colorado cattle imports.[66]

Animal diseases commanded OSBA's attention during the drought crisis. In yet another case, during October 1954 OSBA reported recent Oklahoma outbreaks of the sheep disease Blue Tongue and explained that the disease "ha[d] been traced to importations of sheep from southern Texas areas, where [it] ha[d] existed in flocks since 1950." In the 1954 OSBA annual report, Acting State Veterinarian Dr. George Moreland reported that field inspections of diseased animals and "regulation of the importation of livestock to prevent the introduction of diseased animals into Oklahoma," were among the agency's major activities during the year. The agency also encouraged producers to be vigilante for signs of shipping fever. That disease afflicts animals that have recently been weakened by

[66]*Farm News*, 4 June 1952, p. 1; *Farm News*, 22 June 1954, p. 1; Fraser, *The Merck Veterinary Manual*, p. 812; TwoCanadianCounty flocks had recently been found infected with the scab mites and were being dipped under state supervision. A McClainCounty herd had also been placed under quarantine for scab mites. In *Farm News*, 15 January 1954, p. 1; Authorities traced these cattle back through Colorado and Texas, to Mexico. In *Farm News*, 12 February 1954, p. 1; *Farm News*, 15 February 1954, p. 1; The outbreak had prompted Nebraska to issue an embargo against shipments of cattle from Colorado, Oklahoma, Kansas, Texas, Arizona and California. In *Farm News*, 3 March 1954, p. 1.

stressful experiences like transportation, including "fear, crowding, change in feed, inadequacy of feed or water, exhaustion and exposure to cold[.]" Its symptoms include potentially-fatal bronchopneumonia and influenza viruses which easily become epidemics, especially in confined herds. A recent observer said the disease "can run through a herd like flu through a kindergarten."[67]

Dangerous plants and parasites in poor and inadequate pastures posed another significant risk to drought-stricken livestock producers. In March 1952, D.H. Ricks reported outbreaks of 'oak-bud' poisoning in cattle that had grazed green sprouts on trees and shrubs in grass-deficient pastures. That fall he warned farmers that "[h]ot, dry weather, dust, inadequate water supplies and poor pastures have caused many cattle to be in a weakened condition and herds should be watched closely for signs of respiratory trouble[.]" Weakened and malnourished cattle were also vulnerable to parasites. In October 1952, Ricks predicted that "livestock parasites are due to take a heavy toll during the next four to five months in Oklahoma unless measures are taken to offset the feed shortage and scarcity of good winter pastures." In November 1954, Acting State Veterinarian George Moreland reported that "[i]nternal parasites are causing greater losses to the livestock industry than most producers, particularly in eastern Oklahoma, realize." Pasture infestations usually increase during wet, warm weather. But during the drought, OSBA officials later explained, over-grazed pastures had the potential to

[67]*Farm News*, 22 October 1954, p. 1; *OSBA Annual Report for 1954*, p. 18; *Farm News*, 13 February 1952, p. 1; H.H. Cole and MagnarRonning, eds., *Animal Agriculture: The Biology of Domestic Animals and Their Use by Man* (San Francisco: W.H. Freeman and Company, 1974), p. 639; Betty Fussell, *Raising Steaks: The Life and Times of American Beef* (New York: Harcourt, Inc., 2008), p. 185. Fussell noted that the disease is also known as bovine respiratory disease (BRD).

infect cattle with stomach worms and other internal parasites "when…animals are eating close to the ground where the parasites can be found."[68]

Pastures deficient in Vitamin A and protein also threatened Oklahoma herds, especially calf crops. In May 1952, Ricks reported that "'malnutrition has…this year…given more trouble than we have seen in several years.'" Particularly lacking in drought-area livestock diets was the Vitamin A that occurs in green feeds. Specialists recommended that cattle receive "from two to five pounds of green, leafy alfalfa hay daily per animal" to meet their Vitamin A needs, and that "protein and mineral requirements be rounded out with from a pound and a half to two pounds of cake along with steamed bone meal and salt, fed free choice." Pregnant cows and cows with calves required six to ten times more Vitamin A than dry cows or steers. To aggravate the situation, some producers mistakenly blamed disease instead of malnutrition for their sick and dying cattle, and so neglected to add the necessary supplements to their herds' diets. In January 1953, as Oklahoma cattlemen prepared for calving season, OSBA predicted significant losses over the next ninety days unless farmers and ranchers supplemented the state's phosphate and vitamin A-deficient pastures and hay stocks. The following month, OSBA Veterinary Division Head Dr. D.H. Ricks reported that because of vitamin A, protein and other feed deficiencies, "calf losses have been exceptionally high" in communities "where dry weather has prevailed

[68] By consuming the green sprouts, cattle ingest tanic acids which cause "loss of weight due to dehydration, a diarrhea…and the animals going off feed." In *Farm News*, 24 March 1952, p. 1; *Farm News*, 23 September 1952, p. 1; To reinforce his point, Ricks said "'[l]ivestock heavily infested with external parasites, such as lice, ticks and grubs in the winter months cannot show satisfactory weight gains or maintain normal milk production even when they are being fed properly and have good pastures on which to graze[.]" In *Farm News*, 28 October 1952, p. 1; *Farm News*, 9 November 1954, p. 1; *Farm News*, 8 December 1954, p. 1.

for several years[.]" In the most severe cases, CottonCounty ranchers were losing fifty percent or more of their calf crops. To protect their cattle, Ricks advised farmers and ranchers to add commercial vitamin supplements to their herds' diets, as well as alfalfa where it could be found. He added that by allowing their herds to graze wheat fields where available, farmers and ranchers could reduce the nutritional deficit. But farmers and ranchers grazing grain fields had to be careful. In November 1953, OSBA warned farmers not to graze cattle on corn stubble where fungus poisoning had appeared. And in September 1954, State Veterinarian Dr. George Moreland explained that 'Prussic Acid' livestock poisoning could occur where cattle grazed stubble fields or Johnson and Sudan grass "particularly when new growth is showing up after prolonged dry weather, such as Oklahoma has experienced this summer." Where farmers faced these problems, OSBA instructed that "cattle should be moved to dry lots and provided good feed."[69]

Since the drought made nutritious home-grown feed scarce, some Oklahoma cattlemen relied on processed supplemental feed to survive the crisis. In a bizarre pattern that signified the drought's indirect nutritional and health hazards, this heightened reliance aggravated an occasional but severe condition that had afflicted state herds and baffled ranchers and livestock health specialists

[69]*Farm News*, 23 May 1952, p. 1;*Farm News*, 9 September 1954, p. 1; *Farmer Stockman*, January 1953, p. 1; *Farm News*, 8 April 1953, pp. 1-2; *Farm News*, 13 January 1953, p. 1;*Farm News*, 11 February 1953, p. 1; Of the symptoms in the CottonCounty herds, Ricks reported: "'[t]he cows are weak, have little udder development, their eyes are watering and calves are born dead or in very poor condition [and] there are some cases of blindness, attributed to vitamin A deficiency.'" Calves could die also from secondary causes of Vitamin A deficiency, reported the Farmer Stockman that month, including "scouring or pneumonia, caused by a lack of sufficient vitamin A in their mothers' milk." In *Farm News*, 11 February 1953, p. 1; *Farm News*, 17 November 1953, p. 1; The disease typically occurred during late summer and early fall. Where there were signs of the sickness, including "'uneasiness, rapid respiration, depression, stupor, convulsions and cyanosis of the mucous membranes,'" Moreland advised livestock owners "a veterinarian should be called as soon as possible….one should not try to treat ailing animals with home remedies before calling his veterinarian[.]" In *Farm News*, 15 September 1954, p. 1; *Farm News*, 17 November 1953, p. 1.

since the late 1940s. Initially called X-disease because officials could not determine its cause, the condition's symptoms included "severe loss of weight, constant watering of the eyes…loss of calves as well as older animals…and skin and mouth lesions." During the spring of 1953 the disease fatally struck herds in several Oklahoma counties and parts of Texas. Officials finally traced the problem (hyperkeratosis) to supplemental feed that had been contaminated with chlorinated naphthalene (a machine lubricant) by a Texas-based cotton-seed pellet processor. Because the chemical made it impossible for afflicted animals to digest vitamin A, some ranchers and specialists had mistakenly attributed the symptoms to malnutrition.[70]

More broadly than the X-disease episode, unprocessed feed and seed that entered the state during the drought threatened farmers and ranchers with weeds and other unwanted plant varieties. To help offset the problem, during 1953 the SBOA Market Division sent inspectors to northern states to purchase emergency hay for Oklahoma. Monitoring shipments was difficult, however, because relief hay came to Oklahoma not just by rail, but also in relatively small and scattered truck-sized shipments, and because the federal government did little to administer the program besides reimbursing states that purchased hay.[71] These circumstances put the onus on individual dealers and relief recipients to ensure the quality of incoming feed and seed supplies. In September 1953, for instance, after the drought had reduced seed grain harvests in the state, OSBA Feed and Seed

[70]*Farm News*, 31 March 1953, p. 2; *Farmer Stockman*, May 1953, p. 63.
[71]*OSBA Annual Report for 1953*, p. 40. A measure of the hay quantities entering the state, during 1956, OSBA approved nearly 65,000 relief hay payment certificates. In *OSBAAnnual Report for the year ending June 1957*, p. 24.

Division head Park A. Yeats "urged dealers to make a careful check of varieties of seed," because "[t]ruckers…coming into Oklahoma from the north...may be offering for sale spring varieties of barley, rye or oats or varieties that are grown further south and would not be winter-hardy in Oklahoma unless we should have an exceptionally mild winter[.]" And in August 1954 Yeats warned that farmers and ranchers buying feed grains "direct from truckers may be taking a needless risk of infesting their land with bindweed, wild mustard, and other weeds if weed-infested grain is fed to livestock or if it is planted." By September that year, at least two truckloads of oats from northern states had been banned from sale in Oklahoma because they contained Bindweed. Feed could also contain unwanted insects. In December 1954, the OSBA Entomology and Plant Industry Division prepared to "quarantine against unfumigated seed and feed grain imports from areas of [the] khapra beetle infestation in California, New Mexico and Arizona."[72]

Like diseases, weeds and pests, fire threatened the state's livestock producers. In December 1951, the OSBA reported "a good many grass fires" due to hunters' carelessness. By that point, hunters' disregard for the fire danger and other farmer and rancher concerns – including fastening gates and careless shooting – had caused many farmers to prohibit hunting on their land. In September 1953, OSBA encouraged Oklahomans to "help save livestock producers… many dollars in feed cost by being careful to avoid starting grass and timber fires[.]" Oklahoma Rural Fire Control Committee Chairman John Burke

[72] Yeats added: "'[e]xisting state laws do not cover the sale of varieties of seed not recommended for Oklahoma, but in our official seed work we have constantly urged dealers to guard against handling seed that has not been tested and proven to be acclimated." In*Farm News*, 1 September 1953, p. 1; *Farm News*, 11 August 1954, p. 1;*Farmer Stockman*, September 1954, p. 7; *Farm News*, 15 December 1954, p. 1.

reported that 316,000 acres of grassland and timber had been burned over the previous year. Fire threatened farmers and ranchers throughout the drought. Because of the fire hazard, in August 1954 the OCA protested the state Game and Fish Commission's approval of open season deer hunting for the upcoming fall. And near the end of the blistering 1956 summer, a concerned Duncan, Oklahoma resident wrote to Governor Raymond Gary: "one cigarette could set the world afire….Will you caution the people in papers and on t.v.? I almost got burned up or could have fighting pasture fire 3 yrs ago. also[sic] last year. most[sic] every year theres [sic] a fire."[73]

By threatening already scarce feed supplies, fire touched the issue of cattle prices that primarily concerned most cattlemen during the 1950s. Pasture and feed shortages hit Oklahoma cattle producers hard. For the 1952 season, the OSBA reported "a disastrous decline in cattle prices….[a] serious shortage of feed…[and] record hay and forage prices." Feed costs rose dramatically during the drought. In 1949, Oklahomans had spent $55.4 million on feed. In 1952 that figure was $92.9 million. Unable to afford the ballooning feed costs, many Oklahoma ranchers sent cattle to market at big losses. In 1952, receipts from livestock sales in Oklahoma were down by $25 million over the previous year, despite an eighteen percent increase in cattle sales. And the situation got worse. For the first half of 1953, Oklahomans sold sixty-eight percent more cattle and calves than for the same period in 1952. Yet overall for 1953, cash receipts from sale of cattle and calves

[73]*Farm News*, 10 December 1951, p. 1; *Farm News*, 19 November 1951, p. 1. Governor Johnston Murray had recently named the committee to study means for preventing fire losses. In *Farm News*, 11 September 1953, p. 1; 18 August 1954 OCA Board of Directors Meeting Minutes, p. 4, in OCA papers, Series III, box 2, folder 14; Mrs. Joe Aldridge 4 September 1956 letter to Raymond Gary, p. 1, in Raymond Gary papers, WHC, box 72, folder 7.

dropped by nearly $70 million, to $162,777,000 from $234,619,000 the previous year. In 1953, observed historian Rana Williamson, "cutter canner cows that had sold for 15 cents a pound in 1951 brought only five [cents a pound] and bull calves worth $35-$40 fetched a mere $5 a hundredweight." That summer, a Valliant, Oklahoma rancher wrote to Carl Albert: "I have attended six local livestock auctions in the last two weeks, cattle did not sell, they were given away. Some as low as three [cents] a pound. Today at the Idabel Auction I saw first quality white face yearling steers at the best 450 to 600 pounds…sell for $6.75 to $9.90 per hundred pounds. One year they would have sold for $22.00 to $25.00 per hundred pounds."[74]

As cattle prices plummeted during the spring of 1953, members of the Oklahoma Cattlemen's Association (OCA) met in Oklahoma City to establish offices and spread their organization throughout the state. The organization had been conceived in 1947 and incorporated in 1950 but had not met regularly or campaigned seriously for members until the drought crisis. Its goals reflected many of the industry's drought-related concerns. Broadly, the association aimed "to promote the welfare of the cattle industry throughout the state of Oklahoma….[to] promote educational and scientific programs affecting the cattle industry of the State; provide for the dissemination of useful information; prevent cattle theft; promote breeding and pasture improvement; to aid in the control of

[74] Hay was Oklahoma's second-most valuable crop in 1952. In*OSBA Annual Report for 1953*, pp. 48-9, 53; K.D. Blood, Statistician in Charge of the Federal and State Crop and Livestock Reporting Service attributed the decline to a drop of $8.00 per hundredweight in cattle prices. He reported, "[t]he number of cattle slaughtered in commercial plants in Oklahoma during the first six months of 1954 was 6 percent above the corresponding period of 1953 and calf slaughter increased 28 percent." In *OSBA Annual Report for 1954*, pp. 49-51; Rana K. Willliamson, *The Heat From the Forge*, p. 48;M.R. Barton 9 July 1953 to Carl Albert, p. 2, in Carl Albert papers, Department Series, box 14, folder 45.

cattle diseases[.]" Specifically, the association wanted federal help to stabilize beef prices during the drought crisis.[75]

In early June 1953, the OCA Executive Committee urged the federal government to purchase 500 million pounds of canner, cutter and utility grade beef, and another 500 million pounds of frozen domestic beef for export. To frame their appeal as broadly as possible, the cattlemen claimed that "canned meat [would help] to guard against [a] food shortage in the case of national emergency or disaster due to atomic attack." At the end of June, the USDA announced that its drought relief program included the purchase of 200 million pounds of beef over twenty weeks for the school lunch program, $8 million in Commodity Credit Corporation [CCC] feed grains for drought areas, and reduced railway shipping rates on hay, feed and livestock into and out of the drought area. These measures did not satisfy the OCA Executive who subsequently criticized Agriculture Secretary Ezra Taft Benson for "the mild form [of] the Government buying program" and for refusing to purchase processed and frozen beef at non-competitive prices. By late August, the OCA executive committee resolved that Benson's approach had "utterly failed to give cattle producers the needed relief."[76]

[75] 5 March 1947 OCA Annual Meeting Minutes, p.1, in OCA papers, Series I, box 1, folder 2; Untitled document, p. 1, in OCA papers, Series III, box 2, file 15. At the drought's end, in 1957, the OCA research committee described a continued need for "a study group [to] be formed to work with A. & M.College to gain information on the control and treatment of parasites, and to disseminate the information to the cattle producer….additional research and education in native grassland management." See 8 February 1957 OCA Annual Meeting Minutes, p. 1, in OCA papers, Series I, box 1, folder 9.

[76] 5 June 1953 OCA Executive Committee Meeting Minutes, p.2, in OCA papers, Series III, box 2, folder 13; Untitled resolution from 5 June 1953 OCA Executive Committee Meeting Minutes, p. 1, in OCA papers, Series III, box 2, folder 13; According to Williamson, "[i]n the 1934-35 Drought Cattle Purchase the government bought more than 8 million head at a cost of $112 million. The 1953 measure calling for the purchase of 200 million pounds consumed approximately 800,000 head of low grade cattle." In Willliamson, *Heat From the Forge*, pp. 84-7; 27 August 1953 OCA

In addition to a federal beef purchase plan to relieve distressed producers, many cattlemen wanted government price supports to stabilize the industry. The issue divided cattle producers for practical and philosophical reasons. Generally, smaller operators favored the security provided by price supports while larger operators opposed them because they feared government control over the industry. Oklahoma congressman Carl Albert's southeast Oklahoma constituency contained many smaller operators who favored price supports for livestock. On 9 July 1953, for instance, Choctaw County Livestock Association president William Wyatt Jr. informed Albert that his association, representing at least 150 producers, had recently voted to encourage government purchases of low-grade cattle and support prices for cattle at 90% of parity. The same week, the Pittsburgh County Livestock Association declared, "Our association is practically 100% in favor of government price supports of cattle at 90% or parity." Other southern Oklahoma farm organizations requesting 90 percent parity prices on livestock included the McCurtain County Livestock Association and the Latimer County Farm Bureau. And nearly 200 livestock producers meeting in Tishomingo (southeast Oklahoma) to demand livestock price supports declared, "the Oklahoma Cattlemen's Association does not represent the cattlemen of Oklahoma or the man who directly makes his livelihood from the cattle business."[77]

Executive Meeting Minutes, pp. 1, 3 (and attached resolution), inOCA papers, Series III, box 2, folder 13.

[77] According to United Livestock Producers Association President S.E. Brown, the producers to benefit most from price supports would be those with 50-100 head in their herds. Packers and bigger producers, he thought, would most oppose the plan. In *Farmer Stockman*, September 1953, p. 39; William Wyatt Jr. 9 July 1953 to Carl Albert, p. 1, W.E. Allford 11 July 1953 to Carl Albert, p. 1, J. Baird 11 July 1953 to Carl Albert, p. 1, Fred Knight Jr. 11 July 1953 to Carl Albert, p.1,

In March 1953, while their numbers were still relatively small, OCA members had voted against the idea of price supports, because, as one member later explained, "price supports…would inevitably bring controls, which would possibly make a man a living but would not enable him to regain excessive losses he had encountered during the disastrous period." Many full-time OCA ranchers also shared the opinion of McAlester rancher and farmer Carl Smith, who complained to Carl Albert that in the Pittsburg County Cattlemen's Association, "[f]ifty percent of [the] men are Lawyers, Doctors, Judges, Bankers and big business men…who have only been in the cattle business a short time." These men, he argued, "caused all the trouble in the first place and need no help."[78] The publishers of the *American Hereford Journal* explained the attitude that price supports would degenerate the industry. In August 1953 they wrote:

> most cattlemen always have been unenthusiastic about the idea of having someone tap them on the shoulder and tell them what to do – and they still are….It is their conviction that they can't have supports without ultimate controls….[T]he end result in all probability would be to pull the most successful cattlemen down…and possibly also 'tail up' the least progressive toward the general average.

They argued, too, that "if the beef price is supported to the point that everyone is assured of a profit at all times…there is bound to be too much beef." *Tulsa Daily World* writer William G. Davissen observed: "the most weighty reason so many producers do not believe in subsidies or price supports…is that they regard this

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Tom Ferris 5 July 1953 to Carl Albert, p. 2, all in Carl Albert papers, Department Series, box 14, folder 45.

[78] 31 October 1953 OCA Executive Committee Meeting, pp. 1-4, in OCA papers, Series III, box 2, folder 13. Smith continued: "this aid should go strictly to Farmers and Cattlemen that receive 100% of their livelihood off of the farm or ranch." In Carl Smith 8 July 1953 to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 14, folder 45.

whole system of price controls as socialistic and inimical to the best interests…of the country as a whole." Even more fundamentally, McAlester resident William Thompson wrote to Albert, "We don't need parity….That is against all rules of God." And OCA President Wayne Rowe exhorted his associates to "tell the evils of controls[.]"[79]

The issue challenged OCA executives who wanted to increase membership. In August 1953, OCA Executive Secretary W.E. Van Vacter reported that during recent eastern Oklahoma meetings to encourage new members at Clinton, Waurika, Okmulgee, and Colgate, "it appeared that about 80 per cent of those attending…had been led to believe that price supports at 90 per cent of parity was the only program which would bring recovery to the cattle industry." Vacter felt that "the price support controversy was the deterring factor to the procuring of new members at open meetings such as those attended." At a fall 1953 OCA meeting, Harold Davis spoke for many new members: "I am a wheat and cotton farmer and a cattle producer. One group wants price supports, another wants removal of a cow crop, and they don't talk to each other."[80]

Many small-scale ranchers saw the OCA executive position as an effort to capitalize on circumstances. On 9 July 1953, Valliant, Oklahoma cattleman M.R.

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[79]*American Hereford Journal*, 15 August 1953, p. 13;*Tulsa Daily World*, 6 December 1953, in Carl Albert papers, General Series, Box 5, folder 83; William Thompson June 1951 letter to Carl Albert, p.1, in Carl Albert papers, Departmental Series, Box, 11, folder 13;31 October 1953 OCA Executive Committee Meeting, pp. 1-4, in OCA papers, Series III, box 2, folder 13. The timing of that vote and subsequent campaign for members suggests that they tried to make the vote speak for more producers than it actually did.

[80] Membership grew substantially during the drought. In March 1955, the OCA president reported "[o]ur membership has increased from 703 to 3276" (p. 1), in OCA Annual Meeting Minutes 11 March 1955, p. 1, in OCA papers, Series I, box 1, folder 5; 27 August 1953 OCA Executive Meeting Minutes, p. 1, in OCA papers, Series III, box 2, folder 13; 31 October 1953 OCA Executive Committee Meeting Minutes, pp. 1-4, inOCA Papers, Series III, box 2, folder 13.

Barton wrote to Albert, "I have a ranch and raise beef for a living….It is not a hobby with me like some of our oil industrial millionaires who are head of the Cattlemen's Association….when all small ranchers have been forced out they can take over and make a very handsome profit for years to come." Atoka State Bank president C.C. Stephens agreed with this view: "The fellow who does not want support prices for cattle is the wealthy fellow who has income to weather him thru[sic] this terrible situation, and then he will make plenty of money on the upturn of the prices[.]" Echoed an officer of the Panhandle-based North Plains Cattle Growers association: "They aren't making a living from cattle….[t]hey can afford to urge rugged individualism.'" Producers throughout the Southern Plains shared these opinions. In early 1954, Arizona State Senator and United Livestock Producers' Association president Jim Smith explained to Albert, "The American National Cattle Growers' Association with its state affiliates….are the well-to-do cattle people. They can speak only for the aristocracy of the business….This same group of men have made no attempt to reduce their breeding herds….[t]hey have allowed the small cattlemen, who are going broke, to liquidate their entire herds. After the small men are out of the business then, naturally, the cattle business will be remunerative for a few years to come." Smith included for Albert a memorial recently passed by the Arizona legislature that attributed the cattlemen's problems to drought and government price supports for feed-related grains and urged Eisenhower and Benson to implement an accelerated government beef purchase program and cattle price supports at 90 percent of parity.[81]

[81] M.R. Barton 9 July 1953 to Carl Albert, p. 1, and C.C. Stephens 13 July 1953 to Carl Albert, p. 1, both in Carl Albert papers, Department Series, box 14, folder 45; Boise City News, 9 July 1953,

Some reluctant producers and their bankers saw supports for cattle as the only fair response to government supports for grain. One concerned observer wrote to Albert, "I am utterly opposed to price guarantees by the government, but on the other hand, if the prices of all things which the cattlemen must buy are to be upheld by the government, then…grant [cattlemen] the same supports." Atoka State Bank president C.C. Stephens told Albert, "corn, oats, cotton seed products, soy beans, rice, wheat, all feed are supported and how can anyone expect the cattleman to feed this high price feed to these low price cattle…it's just out of reason." Similarly, McAlester National Bank Executive Vice-President C.L. Priddy explained, "they cannot feed $75.00 cake…to these 8c and 10c cows, it just cannot be done that way[.]" To these concerns Albert replied, "the Secretary of Agriculture has not only been cold, but is rabidly against the idea of supporting cattle prices." Following a July 1953 meeting to press Benson for price supports, Albert wrote to another constituent, "the Secretary is convinced that what I said to him does not represent the thinking of the cattle people." Albert recalled Benson as having said "that on his trip to Texas, every group before which he appeared was opposed to support prices." To still another concerned constituent Albert wrote, "the present Agriculture Department has shown itself opposed to the idea of price supports, not only on cattle but generally. I am hopeful that the present trouble will cause some shift in their thinking."[82]

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p. 1; Jim Smith 23 February 1954 to Carl Albert, pp. 1-2, in Carl Albert papers, Department Series, box 19, folder 31. Unfortunately," he wrote, "this particular group of people are using the above tactics to eliminate surplus number[sic] of cattle" (pp. 1-2).

[82] William Davisson 3 July 1953 to Carl Albert, p. 1,C.C. Stephens 13 July 1953 to Carl Albert, p. 1, C.L. Priddy 13 July 1953 to Carl Albert, p. 1, Carl Albert 15 July 1953 to C.L. Priddy, pp. 1-2, Carl Albert 9 July 1953 to Mungle, p. 1, Albert 2 July 1953 to Johnson, p. 1,all in Carl Albert papers, Department Series, box 14, folder 45.

To encourage this shift in thinking, in early fall 1953, a delegation of livestock producers traveled to Washington to request livestock price supports at 90 percent of parity or a federal price floor that would guarantee livestock producers prices no lower than ten percent below the cost of production. Among the delegates was United Livestock Producers Association president (and Dallam, Texas rancher) S.E. Brown, who explained, "[w]e're just asking for fair play. Every product we use in our business is subsidized or supported. Prices for livestock will have to be supported if the industry is to survive." And in late October 1953 the National Farmers' Union sent to Washington a "cattle caravan" comprising over 250 livestock producers from twenty western and mid-western states.[83]

Holding firm to his original position, Benson rejected the caravan's request and "read to reporters a sheaf of telegrams urging him 'not to submit to pressure tactics.'" Aside from his philosophical opposition to government intervention in the agricultural economy, Benson stood firm in his opposition to cattle price supports because he did not perceive a nationwide problem and because he saw no outlets for the supported cattle. "Information from our field agencies and an evaluation of all reports," he explained to Albert in July 1954, "leads us to feel that while some localities have experienced hardship from drought, the cattle industry throughout the country as a whole is basically in a sound position." Respecting the storage and marketing problems that would follow federal price supports, he explained, "[i]t would be wholly impractical for the Department to attempt to support cattle prices, particularly at the minimum level suggested, in view of the

[83]*Farmer Stockman*, September 1953, pp. 12, 42; *Oklahoman*, 24 October 1953, p. 1.

perishable nature of the commodity and products involved and without having outlets available for the large quantities which might be acquired in such a support operation."[84]

Instead of federal price supports to guarantee feed-strapped cattlemen a profit, Benson urged producers to generate demand themselves through promotional strategies to increase beef consumption.[85] While the cattlemen disagreed on the issue of federal price supports, most of them agreed that they needed to promote beef consumption. At its January 1953 annual convention, for instance, the American National Cattlemen's Association urged the National Livestock and Meat Board "to pay particular attention to the necessity for expanding markets for commercial and utility meats." And Benson personally pushed the strategy. In the summer of 1953 he urged the National Restaurant Association to give beef a prominent place on menus and for waiters to recommend beef to customers. Retailers also promoted beef consumption in stores across the country. In December 1953, Safeway Stores division manager W.A. Christensen sent to Carl Albert the 'Retailers' Report on America's Beef Problem.' According to the report (from 7,024 stores across the country), fall 1953 beef, calf and veal sales were up 51 percent, 132 percent and 49

[84] *Oklahoman*, 28 October 1953, p.1; Ezra Taft Benson 23 July 1954 to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 19, folder 39. Benson continued "Much of the marketing responsible for the decline comes from normal culling of wornout breeding stock, some of which is being marketed earlier than normal because of weather and crop conditions….Prices of Intermediate and higher grades of slaughter cattle and of feeders have continued fairly good. Too often the condition of the cattle industry and of the cattle market is measured by price trends for those animals which bring the lowest prices" (p. 1).

[85] Benson's biographers recount that the normally tight-fisted Agriculture Secretary encouraged this approach to agricultural surpluses because "[b]y increasing consumption or discovering more useable means to divert farm-produced surpluses into industrial channels…future expenses for storage would decline proportionately." In Edward L. Schapsmeier and Frederick H. Schapsmeier, *Ezra Taft Benson and the Politics of Agriculture: The Eisenhower Years, 1953-1961* (Danville, IL: The Interstate Printers and Publishers, 1975), p. 66.

percentrespectively compared to fall 1952. The report attributed rising beef consumption to lower retail prices that had followed declining beef prices but also to an aggressive marketing campaign. As the retailers saw it, "our job in the present beef crisis is helping America to 'eat its way out.'"[86]

Encouraged by these trends, early in 1954, OCA appointed a committee to study beef promotion. Oklahoma cattlemen needed professional marketing help. Among OCA's meeting minutes for the period 1952 to 1955 is an anonymous report revealing an immature relationship with consumers. Entitled "How to Double Consumer Consumption of Beef in 10 Years," the report explains: "Vegetarians are poor customers for beef. Religious injunctions limit meat consumption. People with gout are not apt to eat much beef.…Thus, there are physical, economic and psychological problems involved in increasing the sale of beef." To meet and cultivate demand, the document recommended a variety of new and technological merchandising strategies, including "'beef bacon'….incorporating [beef] into breakfast cereals and crackers…. [and] research to determine the adaptability of beef…to 'electron' cooking…in automatic vending machines by the Raytheon tube[.]"[87]

Addressing the OCA Executive Committee later that spring, American National Cattlemen's Association assistant executive secretary Radford Hall indicated that ranchers throughout the Southwest shared the OCA's concerns.

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[86] "Resolutions adopted at the Fifty-Sixth Annual Convention of the ANCA, held at Kansas City, Missouri, 5-7 January 1953," p. 7, in Carl Albert papers, Departmental Series, box 14, folder 46; Howard Biggar, "Along the Agricultural Front," *American Hereford Journal* (15 August 1953), p. 70; "Retailers' Report on America's Beef Problem" pp. 3, 16, inCarl Albert papers, General Series, box 5, folder 83.

[87] 15 April 1954 OCA Board of Directors Meeting Minutes, p. 5, inOCA papers, Series III, box 2, folder 14;"How to Double Consumer Consumption of Beef in 10 Years," pp. 1, 7, in OCA papers, Series III, box 2, folder 12.

"We must have beef promotion or strict regulations on production and controls which would go with price supports," he argued. Making his own organization's preference clear, Radford continued, "[We] consider price supports and controls a negative approach. We believe in increased consumption and increased production….We need…more advertising of beef….[and] cooperation through all segments of the industry[.]" With Radford was a representative of the Chicago-based National Live Stock & Meat Board who discussed several strategies his organization used to promote beef consumption, including cooking schools, radio programs, and two motion pictures, entitled "Meat and Armies" and '"Way to A Man's Heart".[88]

Through 1954 the OCA expanded its promotional effort. At the 18 August 1954 OCA Board of Directors meeting, Beef Promotion Committee chairman John Robertson reported that his committee had arranged for local auction markets and for the Farm Bureau to distribute nearly 70,000 "ENJOY BEEF" stickers and for retail grocers in Oklahoma's major cities to conduct meat cutting demonstrations in their stores. Robertson introduced USDA commodity sales promoter Thurston Blakely who described to members USDA's fall plans to conduct a special nation-wide marketing campaign for economy cuts of beef, including beef stew and beef pot pie. He also offered to help promote the OCA in food journals that reached grocers and chambers of commerce across the country. In the discussion that followed Blakeley's presentation, one member moved that OCA request USDA to assign a full-time meat extension specialist to Oklahoma. That fall, the

[88] Radford Hall 15 April 1954 Speech to OCA Executive Committee, p. 2, and Mr. Franklin 15 April 1954 to OCA Executive Committee, p. 1, both inOCA papers, Series III, box 2, folder 14.

organization formally made this request, along with other services and appointments from state and federal agencies, including better facilities to test feed. At one meeting, OCA directors discussed plans to have processors and feed manufacturers set aside a fraction of their receipts to finance a beef promotion program.[89]

Meanwhile, beef consumption continued to rise. In his address to the association's March 1955 annual meeting, OCA president J.B. Smith explained that during the previous fall's nation-wide marketing campaign, beef consumption reached a "new all-time high [of] 80 pounds per person." Smith credited this success to a long list of sources, including "newspapers, radio, television, magazines, processors and marketing people, and retail market and chain store associations [the] National Live Stock and Meat Board, American Meat Institute, OklahomaA & MCollege, extension service…and U.S. Department of Agriculture." But he warned his audience, "We must not look through rose-colored glasses….Cattle numbers are still high. The public is not well enough acquainted with the many virtues of beef." The association subsequently resolved to appoint a research committee to work with the A. & M.College on market research problems.[90] At the end of 1956, OCA President Jack Houser reported,

[89] 18 August 1954, OCA Officers and Board of Directors Meeting Minutes, pp. 1-2, in OCA papers, Series III, box 2, folder 14;18 November 1954Officers and Board of Directors Meeting Minutes, pp. 1-2, 4, in OCA papers, Series III, box 2, folder 14.This strategy shared important qualities with that of the 1933 Agricultural Adjustment Act. In both cases, processors paid the cost to raise commodity prices. But, instead of using the processor tax to subsidize lower production through land retirement, the 1950s tax on processors funded marketing to increase consumption.

[90] One member urged the committee to investigate the possibility of selling cattle according to carcass weights and official grades, complaining "We are using the same method of marketing cattle that we have used ever since I can remember." In 3 March 1955 OCA Annual Meeting Minutes, pp. 2, 20, 44, in OCA papers, Series I, box 1, folder 5.

"'[w]e have set a pattern….(1) Promotion; (2) Work with College on research and education; (3) Close association with State officials; [and] (4) Relations with markets[.]'" The OCA continued to request services from the A & MCollege at Stillwater and from USDA information agencies, including more efficient and coordinated market research information, full-time beef cattle extension specialists, short courses for county agents, and more research and education in native grassland management. Into 1958, the OCA continued to hold promotional meetings with retail grocers, auction markets, processors and restaurant buyers, and it pushed for federal legislation to use a portion of cattle receipts for meat research and promotion.[91]

The drought had thus fostered a more integrated industry, with stronger relationships between Oklahoma cattlemen, state and federal veterinarians and extension officials, and marketing and retail specialists. Cattlemen forced to substitute drought-relief feed grains for vulnerable and depleted pasture and hay stocks also relied on advice and information from specialists in the fields of animal nutrition, health, and processing. The experience fostered a new attitude and approach to cattle feeding and fattening which helped to permanently alter the state's livestock industry.

In the early 1950s, few local cattlemen fattened or processed their herds in Oklahoma. In the 1948 USDA Yearbook of Agriculture, D.A. Savage and D.F.

[91]7-8 February 1957 OCA Annual Meeting Minutes, p. 1, inOCA papers, Series I, box 1, folder 9; 27-8 March 1958 OCA Annual Meeting Minutes, pp. 11, 15, in OCA papers, Series I, box 1, folder 13. The bill (H.R. 11330 and S. 3538) to amend the Packers and Stockyards Act in order to provide for "a voluntary check off [at the place of market] to further research and promotion of meat[,]" had been written the previous year, but had been voted out of the Agriculture Committee because "some of the farm organizations failed to see the benefit of this legislation to the livestock industry[.]"

Costello explained: "The Southern Great Plains is outstanding in the production of feeder cattle, most of which are fed on native grass alone or with a limited supply of protein concentrates." In 1952, the Oklahoma extension service reported that its "feeder calf marketing program [was] gaining momentum," with the animals "going direct to farm feed lots in the corn belt." In March 1953, an Oklahoma businessman observed that "livestock is shipped out to Kansas City and somewhere else and if you want a good Kansas City steak in Oklahoma, you just ask for a Kansas City steak, it isn't an Oklahoma steak." Later that year, another observer declared "'[i]n some sections, cattle have been treated too much as a sideline, and they have been handled haphazardly. If some farmers handled their crops like they do their cattle, they would get lots of crop failures."[92]

This attitude changed through the decade. In January 1953, for instance, Oklahoma A&M Animal Husbandry Department researcher L.S. Pope told the state's farmers, "Cattle Get Fat Here Just as Well as in the North."Local feeding had several advantages, wrote Pope, including "completely utilizing feeds produced on the farm [and providing] an outlet for labor during the slack winter season" as well as benefits to local feed dealers "through increased sales of protein supplements, and minerals, as feedlot production increases." For drought-stricken Oklahoma farmers and ranchers concerned that they did not have enough feed to fatten marketable beef, Pope reminded them that "lighter 'baby beef' carcasses are

[92]*Grass*, USDA Yearbook for 1948, p. 505; *Oklahoma Annual Extension Service 1952 Annual Report*, n.p., in Carl Albert papers, Department Series, box 14, folder 48; The businessman was Public Service Company Vice-President Victor E. Hulett. He was urging federal assistance for water development in southwest Oklahoma in part to support local food processing facilities. In U.S., Congress, Senate, Committee on Interior and Insular Affairs, *Washita Project*, Unpublished Hearing, 23 March 1953, p. 84; *Farmer Stockman*, November 1953, p. 11.

the ones most in demand," and that "good-to-choice slaughter grade [carcasses]…take less time in the feedlot, carry enough finish to meet consumer demand, and…make more economical gains than cattle fed to higher grades."[93] Observers noted too, that many southern plains farmers could convert to grass and livestock production many of the acres they currently used to produce surplus grains.[94]

A regional cattle-feeding industry had not developed in part because Oklahoma farmers and ranchers did not have much experience with grain-based cattle diets. The historian Geoff Cunfer explained that because of the region's relatively warm winters, "farmers could pasture their cattle nearly year-round." Ardmore soil scientist Dr. H.J. Harper offered another explanation: "[f]orty percent of the fall seasons [between 1901 and 1951] have been so dry that fall planted small grain did not produce enough growth to supply grazing before low winter temperatures retarded plant development." During the drought, Oklahoma dairy operators struggled to find the right balance as they transitioned from pasture and roughage-based diets to diets that included larger amounts of relief feed grains. In June 1954, the OSBA reported "[t]here are too many dairy cows being fed beef cattle rations in Oklahoma, whereas a dairy cow needs a higher standard

[93] *Farmer Stockman*, January 1953, p. 8. In his article, Pope described a 170-day winter feeding regimen using local feeds that produced a desirable slaughter finish on yearling steers. In *Farmer Stockman*, January 1953, p. 8.

[94] Since crop production was increasingly efficient during the 1950s, farmers and ranchers could return their allotted acres to grass to pasture cattle and then feed the same cattle any excess grain produced on their cultivated acreages. In *Farmer Stockman*, November 1953, p. 11.In January 1958, the *Farmer Stockman* reported that acreage restrictions on cotton, wheat, rice, and peanuts had led many producers to grow grain sorghum instead. "This valuable feed crop has been widely planted," reported the magazine, "In addition to the huge supplies in Texas, Oklahoma and Kansas, the crop is spreading across the entire middlewest and Corn Belt." In *Farmer Stockman*, January 1958, p. 11.

of living to reach profitable production." In February 1956, by contrast, the *Farmer Stockman* magazine reported that in a recent survey Oklahoma dairy cattle were being overfed because their grain and concentrate to roughage ratios were too high. "Due to the drouth a high rate of grain feeding was anticipated because of roughage shortages," observed the magazine; however, some operators without feeding experience overcompensated for hay shortages with grains, legumes, and concentrate mixtures.[95]

To maximize feed efficiency and avoid animal health problems, Oklahoma A&M researchers and county agents instructed cattlemen on various winter feeding strategies. In January 1953, for instance, farmers with "unanswered questions about the best way to handle [their] livestock feeding" could request the Oklahoma Extension Service circular "Facing Winter Feeding Problems," which described the content of incoming feeds and "the most economical rations to feed when feed is short." That spring, USDA experiments showed feed-strapped farmers how "growing calves, getting only enough feed to keep them from losing weight, will grow fast and economically later when put on adequate feed." Encouraging its readers, the *Farmer Stockman* observed that "cattle may be able to survive drouths, feed shortages or severe winters and snap back to normal growing conditions when feed supplies again become plentiful." In another instance, a Pontotoc rancher whose registered cattle had been losing weight during winter months learned through OklahomaA&MCollege researchers that by adding

[95] Geoff Cunfer, *On the Great Plains: Agriculture and Environment* (College Station: Texas A&M University Press, 2005), p. 96; H.J. Harper, "Oklahoma Rainfall and Crop Production – Appendix 'B'," in *Oklahoma Long Range Water Program: Report to the Governor and Legislature*, prepared by the State-wide Engineering Committee, December 1954, p. 5; *Farm News*, 24 June 1954, p. 1; *Farmer Stockman*, February 1956, p. 57.

minerals to his soil, his home-grown winter feed would contain enough protein to maintain their weights without the need for additional expensive protein cake feed. Oklahoma A&M college researchers conducted other noteworthy feeding experiments. By August 1954, for instance, the college had conducted seventeen operations, each to remove part of a single steer's liver to "see which feed has the most vitamins[.]"[96]

Without much pasture during the drought, Oklahoma farmers and ranchers innovated and experimented with confined feeding. By April 1956 in BlaineCounty, for instance, the *Farmer Stockman* reported that "farmers are literally getting into farm feeding of cattle by the dozen." One farmer (Ronald Shawver) who had fed twenty-eight heifers and steers during the previous winter had simply gone into his harvested wheat fields to bale "uncut wheat, weeds and anything that would make some roughage," then "raised about half enough maize to feed out his small bunch [and] bought more at low, harvest prices." With his roughage and feed together, he "rigged up a barrel and trough and bought molasses because…it was cheap feed." Ninety days of feeding added about 200 pounds to his animals and that spring he sent his first bunch of heifers to the packers at "a high choice grade" weighing nearly 800 pounds each. Another BlaineCounty farmer (Edgar Edsell) had grown wheat and maize as cash crops until about 1955, when "[l]ow maize prices, wheat crop failures, [and] the drouth made him wonder if he could stay on the farm…" Edsell began to run cattle on his stubble, then feed them home-grown maize, silage and guar before marketing them to packers.

[96]*Farmer Stockman*, January 1953, p. 27; *Farmer Stockman*, April 1953, p. 58; *Farmer Stockman*, April 1954, p. 16; *Farmer Stockman*, August 1954, p. 66.

"Feeding looks like the most profitable thing I've gotten into in a long time," he declared the following year. "Other Blaine county feeders are carrying on similar operations[,]" reported the magazine in April 1956; "[s]ome are feeding their own feed to their own calves. Others are buying either calves or feed. And at least one bought both calves and locally grown feed and showed a profit. They've proven in Blaine county [sic] that farm feeding is a good bet in Oklahoma."[97]

The OCA sought and shared expert cattle feeding advice. At a fall 1956 meeting, the OCA executive committee unanimously approved Secretary Jack Houser's idea of "getting out releases on how to feed." Houser had also proposed that the association meet with Oklahoma A. & M. livestock specialists "to discuss the possibilities of different grains and how to use them." And he "believed A & M would put out a leaflet and information on radio and television." Houser understood Oklahoma's inexperience in feeding cattle winter grain rations to be shared by other southern plains states. In late November 1956, he wrote to Horace Hening and Charles Stewart, the respective secretaries of the New Mexico Cattle Growers Association and the Texas and Southwest Cattle Raisers Association, to say that "the short supply of locally produced grains is making it necessary to ship in Northern grain at the present time." Anticipating that cattlemen in New Mexico and Texas would share Oklahoma's need to feed cattle through the winter, Houser enclosed for both secretaries an Oklahoma A&M leaflet "which recommends maximum grain and minimum forage feeding in wintering cow herds. Reflecting the growing cattle feeding industry in the state near the drought's end, the OCA's marketing committee in February 1957 resolved that United States Crop and

[97]*Farmer Stockman*, April 1956, p. 18.

Livestock Reporting Service statistical reports should be made available earlier in the year, that Oklahoma should be included in reports of cattle and calves on feed, and that those reports should be made available monthly instead of quarterly. It also requested special fall and winter reports to cover wheat and other small grains used for fall and winter pastures, as well as expanded research by Oklahoma A. & M. College and other agencies dealing with markets for beef.[98]

The OCA also repeatedly pressured bankers and politicians to reassess lending policies and to reduce taxes on slaughter cattle, and they urged the Oklahoma legislature to exempt feed, seed, fertilizer and farm machinery from the Oklahoma Consumers' Tax Law. This last request was especially significant. Oklahoma farmers paid consumer taxes on their raw materials (including seed, feed and fertilizer) and equipment because of a tax commission ruling that dated to the 1930s, when relatively few farmers purchased commercial feeds, seeds or fertilizer. These items had since become more important to agricultural producers, and by the late 1950s the tax had been an issue before at least six legislative sessions. Many producers saw the tax as unjust. Grady county resident D.L. Frederick explained the tax's inequities: "a brewer can buy grain and machinery to make beer without sales tax, but when a dairyman buys grain and a milking machine to produce milk, he pays sales tax. A baker can buy flour to make bread

[98] 13 November 1956 OCA Board of Directors Meeting Minutes, p. 1, in OCA papers, Series III, box 2, folder 16; Jack Houser 26 November 1956 to Horace Hening and Charles Stewart, p. 1, in OCA papers, Series I, box 1, folder 44; 8 February 1957 OCA Annual Meeting Minutes, p. 2, in OCA papers, Series I, box 1, folder 10.

without sales tax, but when a poultryman buys feed to produce broilers or eggs, he pays sales tax."[99]

To request the tax exemption was especially controversial, however, because taxes on feed, seed, and fertilizer contributed a significant portion of state revenues used for public assistance. According to the Oklahoma Tax Commission, annual revenues from the tax totaled nearly $2.5 million in the mid-1950s. To cut the tax meant cutting nearly two million dollars (43 percent) for old-age assistance; $310,000 (28 percent) for Aid to Dependent Children; $48,000 (50 percent) for Aid to the Blind; $60,000 for Aid to the Disabled; and $154,000 in cuts to Child Welfare programs. In October 1956, the *Farmer Stockman* observed the tax exemption's political implications: "Old age pensioners have been told that such action would reduce their welfare fund, and it seems legislators are more fearful of defeat at the polls by indigent voters than they are concerned with fair treatment of farmers and stockmen." Furthermore, the tax exemption's opponents often framed the issue as a benefit to wealthy ranchers. "The first thing they have always said is "Look at the millionaire cattlemen, you are going to be feeding their show cattle," explained one former state representative to OCA members in February 1956.[100]

Cattlemen were not alone in pushing to eliminate the tax, however. During the summer of 1953, the Oklahoma Agricultural Advisory Council, comprising

[99] W.W. Van Vacter 21 May 1954 to Oklahoma Legislative Council, p. 1, in OCA Papers, Series III, box 2, folder 12; *The Oklahoman*, 14 April 1957, p. 26; *Farmer Stockman*, October 1956, p. 13; *Farmer Stockman*, August 1956, p. 37.

[100] "Oklahoma Tax Commission Estimate on Sales Tax Revenue Loss by Exemption of Feed and Seed per Year of $2,381,708.60," in ODL, Department of Human Services, Commodity File (RG 23-3-13), box 5, folder 7. This figure was for the June 1953 to May 1954 year; *Farmer Stockman*, October 1956, p. 13; 3 February 1956 OCA Annual Meeting Minutes, pp. 30-1, in OCA papers, Series I, box 1, folder 8. Bert Larson made the comment.

representatives from fifty-seven farm-related Oklahoma organizations, called the state legislature's work "'a failure'" for having largely overlooked agriculture. In a statement, the Council criticized the legislature because "'[m]ost of the bills that would have benefited agriculture were overlooked or were passed in such a form that they did not help[.]'" Removal of the state sales tax on feed, seed, and fertilizer headed the list of the Council's legislative priorities. And by the end of 1955, the Governor's Economic Commission had determined that Oklahoma should do more commercial feeding and have more commercial feedlots. The commission had also determined that the Oklahoma consumer sales tax on feed put Oklahoma commercial feed lots at a disadvantage relative to the same type of operation in other states.[101]

Encouraged by this support, OCA members continued to request the tax exemption. At their 1956 meeting, former state representative Bert Larson urged the association to frame the issue in regional economic development terms. "Here is the way I would like to approach it[,]" explained Larson. "[W]e are going to ask for exemption on those commodities that are very definitely making a finished product….That would encourage new industries in this state in the form of Commercial feed lots, finish feeding more cattle on the ranch, caged hens, broilers, and competition with the Wisconsin Dairy people." In October 1956, the *Farmer Stockman* asserted, "All of Oklahoma's farm organizations agree that the sales tax

[101]*Farmer Stockman*, August 1953, p. 17; 15 December 1955 Meeting of OCA Officers, Directors and Advisory Council, p. 2, in OCA Papers, Series III, box 2, folder 15. During the spring of 1956, Oklahoma was the only state collecting sales taxes on feed for livestock or poultry. In *Farmer Stockman*, May 1956, p. 8.

should be removed from raw materials farmers use…[because the tax] is driving much business out of Oklahoma into adjoining states."[102]

Oklahoma governor Raymond Gary recognized the growing pressure and made the tax issue a priority. In his January 1957 State of the State address, he declared:

> During recent years, our farmers and ranchers have been badly hurt by the drouth and low farm prices. I feel we should, during this session, enact legislation to benefit these farmers and ranchers….I know none of you want to enact legislation that would reduce the amount of payments to our aged and needy people of this state. But I feel we should grant the farmers and ranchers of Oklahoma the same rights and privileges we grant to manufacturing industries of our state.[103]

As a compromise to satisfy the agricultural community and the state's older constituents, the loss to the state welfare fund would be replaced by funds from the state's gross sales tax. And Gary's proposal required farmers, ranchers, and commercial feeders to file refund claims for sales taxes paid on livestock feed instead of cutting the tax at the point of sale.

He saw economic momentum to follow from the tax exemption. "If we enact this legislation," he continued,

> we will not only aid our farmers and ranchers through a savings on their feed purchases, but we will encourage the establishment of commercial feed lots in this state….When such feed lots become established in Oklahoma, they will provide additional employment for our people, cause a greater demand for Oklahoma feeder cattle, and help develop a better market for our feeder cattle. It would

[102] 3 February 1956 OCA Annual Meeting Minutes, pp. 12, 29-30, in OCA papers, Series I, box 1, folder 8; *Farmer Stockman*, October 1956, p. 13.
[103] Raymond Gary 8 January 1957 State of the State address, pp. 7-8, in ODL, Raymond Gary papers, http://www.odl.state.ok.us/oar/governors/addresses/gary1957.pdf, accessed 20 December 2009.

> actually be of great benefit to our packing industries in this state, thereby contributing to Oklahoma's economic growth.

This view resonated broadly. By May 1957, *Farmer Stockman* editor F.J. Deering observed that the tax exemption "has more support than any other farm issue before the public today." And later that spring, the Oklahoma legislature finally authorized a sales tax exemption on livestock and poultry feed and on used farm machinery. The law represented a partial success to agricultural producers because farmers had wanted the tax exemption to also include seed, fertilizer, new farm machinery and insecticides. But it signified a new attitude toward agriculture in the state. Exclaimed Gary, "[t]he farmers are in the manufacturing business too."[104]

In the fall of 1957, after the drought had ended, OCA Executive Secretary Jack Houser summarized the association's recent accomplishments for OCA President J. K. Haley. In addition to the sales tax exemption on feed and used farm machinery, the OCA had helped to secure appropriations to inspect packing plant sanitation and had worked with packers to promote beef to school lunch personnel throughout the state. OklahomaStateUniversity planned to hire increased meat education and research personnel. And beginning in January 1958, Oklahoma would be included in quarterly USDA Cattle on Feed reports.[105]

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[104] Ibid., pp. 7-8; *Farmer Stockman*, May 1957, p. 11; *Oklahoman*, 8 June 1957, p. 23; *Farmer Stockman*, July 1957, p. 33.

[105] Notably, he said of the association's marketing programs: "In many cases [the] public relation effort has had to start from scratch." In Jack Houser 15 November 1957 to J.K. Haley, p. 2, inOCA papers, Series I, box 1, folder 12. By March 1958, the quarterly feeder survey listed nearly seventy Oklahoma cattle feeders. In *Farmer Stockman*, March 1958, p. 52.

Haley, in turn, summarized the drought's significance to OCA members at the organization's fifth annual convention, in March 1958. "The livestock situation has changed," he explained: "an over-supply of cattle – accelerated by an extreme drouth….caused the Producer to do some thinking. First about production controls, and second, about distribution and merchandising….Re-evaluation of government grades of beef…and research on carcus[sic] qualities of beef was begun." Haley then added, "my working with the Association and with the Industry, has brought me to a very deep conviction….Cattlemen's problems go much further than just producing cattle. We must work with the packers – marketing and retail people, and take a positive stand in developing policy in merchandising our product[.]"[106]

That work was already under way. In March 1958, the association invited Armour& Company general manager Russell Mank to attend their feeder committee meeting."We hope that you can attend this meeting along with the people in your cattle buying and beef departments[,]" wrote the OCA, "so that we can have the benefit of your advice and counsel of a program to enlarge cattle feeding and production of slaughter cattle in the state[.]"[107] The relationship quickly grew. By September 1958, Armour& Company announced that it was planning new cattle processing facilities for Oklahoma City. Following the

[106]J.K. Haley Report to fifth OCA Annual Convention, 28 March 1958, p. 1, in OCA Papers, Series I, box 1, folder 13.

[107] [OCA] 20 March 1958 to Russell Mank, p. 1, in OCA Papers, Series I, box 1, file 12. At the time, wrote OCA, the feeder committee comprised representatives of "feed lot operators and other cattlemen who are interested in feeding cattle," but the OCA planned to enlarge the meeting "to include representatives of retail food chains, restaurants, packers, commission men, market people and college people so that all of the factors in beef production, marketing, processing, and retailing are represented. The purpose of this meeting is to see what can be done to feed out more cattle in Oklahoma and if possible, to secure more co-ordination among all of the interested groups" (p. 1).

announcement, *Farmer Stockman* editor F.J. Deering observed that while "[s]uccessful ventures have proved that Oklahoma cattle fattened on Oklahoma feed yield just as good beef as can be produced anywhere….Oklahoma's major agricultural opportunity does not appear to be in the direction of greater wheat acreage. It's not in cotton or peanuts, nor in corn, sorghum or other grains as cash crops. The opportunity glows brightly in the realm of livestock." And the Oklahoma City Armour plant, like others in the state, gave momentum to cattle feeding throughout the state. By May 1961, for instance, a new 10,000 head capacity feedlot was being erected in TillmanCounty, southwest Oklahoma. Its co-owner, Nebraska feeder John Quam said "the TillmanCounty location…was ideal because it is near several packing plants at Oklahoma City and other Oklahoma and Texas towns."[108]

Oklahoma's cattle industry changed during the drought. Forced by drought conditions to feed their cattle grain, and reluctant to adopt price controls, Oklahoma cattlemen developed new relationships with various segments of their industry including specialists in the fields of animal nutrition, health, marketing and processing. The industry became more integrated during the crisis. John Quam's decision to build a feedlot in southwest Oklahoma was significant in another respect. The decision reflected his confidence not just in nearby markets but also nearby feed and water supplies. For many communities in the

[108] He added that "a major portion of Oklahoma's calf crop now is sold as stockers and feeders for shipment to the Corn Belt for fattening….but nowadays Oklahoma can grow feed too." In *Farmer Stockman*, September 1958, p. 10. This optimism included a feeling of independence from Cornbelt feedlots. In October 1958, *Farmer Stockman* editors observed "[o]ften in the past range cattlemen have had to sell their feeder and stocker calves for just about whatever feedlot operators wanted to pay….This year it's different….If the Corn Belt boys don't want to pay the prices, Oklahomans can feed their calves right at home. They have the feed to do it this year." In *Farmer Stockman*, October 1959, p. 12; *Farmer Stockman*, May 1961, p. 27.

WashitaBasin just north of TillmanCounty, secure water supplies had only recently been acquired. In that process too, drought played a key role.

Chapter 5 - Flood Control, Drought and Water Supply in the WashitaBasin 1930s-1950s

With its headwaters just inside the Texas Panhandle, the Washita River winds on a southeasterly course for about 650 miles through southwestern Oklahoma before meeting the Red River along the state's southern border. The river drains about 8,000 square miles (approximately five million acres) of mostly agricultural land and it passes through a variety of soil types including significant areas of easily eroded clays and sands.[1] Combined with agriculture and an erratic regional climate that includes intense spring storms and extended droughts, these soils contribute to dangerous flash floods, heavy erosion and excessively mineralized water. During intense droughts and floods from the 1930s to the 1950s, local residents, state officials, and the United States Department of Agriculture (USDA) made the basin a laboratory and leader in upstream flood control and water conservation. Over the same period, and especially during the 1950s drought, reliable water supplies became a priority to most basin townsfolk and their elected officials. Their struggle to acquire as cheaply as possible two Reclamation Bureau dams during the early 1950s drought reversed local and state support for USDA upstream flood control and conservation activities, successfully tested the Eisenhower administration's efforts to coordinate and limit federal spending on multiple-purpose water development projects, and pointed to increased federal provisions for municipal water supplies.

[1] Address made by Gordon E. Textor, Major, Corps of Engineers, United States Army, before the Washita Valley Improvement Association at Chickasha, Oklahoma on 28 March 1941, p.28, in Robert Kerr Papers, Conservation Series, box 10, folder 14.

Through the late 1940s, the Washita basin economy was based almost entirely on agriculture and it was compromised, especially during the 1930s, by drought, crop failures, floods, and declining soil fertility.[2] Insecure tenancy aggravated erosion problems and regional economic stability. And economic downturns exacerbated tenant insecurities. Observed the Oklahoma Planning and Resources Board (OPRB) in 1939, "[w]hen times are prosperous [Washita basin] land-owners move to town and tenancy increases. When conditions are unfavorable and crops are cheap and poor, the owners must return to the farm and the tenants are forced to find homes on poor soils, making mere existence a struggle." Rural poverty made the region receptive to federal assistance during the 1930s. For instance, of the eleven Oklahoma counties selected to receive farm tenant loans from the Farm Security Administration in early 1938, WashitaCounty had the greatest number of applicants. And the connection between unstable farming, erosion and runoff made it clear to USDA observers that the region needed agricultural flood control remedies. In 1941, SCS officer Louis P. Merrill observed about the basin's upper portions: "many farms…are abandoned [or] so severely eroded that they cannot be operated profitably. The owners consequently are not able to establish the necessary soil and water conservation measures

[2] By 1953, Victor E. Hulett, who was Assistant to the Vice-President of the Public Service Company of Oklahoma, estimated that nearly ninety-eight percent of the basin's economy derived from farm cash incomes. In U.S. Congress, Senate, Committee on Interior and Insular Affairs, *Washita Project*, Unpublished Hearings, 83rd Congress, 1st Session, 23 March 1953, p.84; *Report of Regional Director of Bureau of Reclamation, 18 September 1951*, in Report of the Secretary of the Interior, Washita River Sub-basin, Red River Basin, Oklahoma and Texas, 83rd Congress, 1st Session, House Document No. 219, July 1953, p.36.

[which] contribute[s] much of the water and silt which damage nearby farms [and] are a flood hazard and a menace to reservoirs."[3]

Drought compounded the problem. Like cultivation and heavy grazing, drought magnifies erosion and run-off problems by limiting the plants that help to catch and draw rainfall into the soil. During the 1930s, for instance, drought-stricken Kansas farmers who lived outside of the Dust Bowl "found most extraordinary" the giant gullies that accompanied dry conditions.[4] In 1941, to a Washita basin audience, SCS officer Louis P. Merrill explained: "soil and water conservation and flood control are the same." More fully, Oklahoma soil conservationist Harrel Allen noted: "[t]here is a direct relationship between drouth conditions and flooding….[d]routh reduces the vegetative cover, thereby reducing in-soak and compounding erosion losses."[5] During the 1950s drought, federal observers reported that in some of the river's upper sections, "the entire valley floor is reduced to a sandy waste." Over longer terms this process creates other problems, as eroded sediment fills reservoirs and reduces their capacity to supply water during shortages.[6]

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[3] '*Washita River and Drainage Basin*,' OPRB Division of Water Resources Report, September 1939, pp.7-8, in Robert Kerr papers, Conservation Series, box 10, folder 13; *Oklahoman*, 4 February 1938, p. 5; Louis P. Merrill, '*The Department of Agriculture and the Washita River Watershed,*' Address,28 March 1941 *Proceedings of the Second Annual Convention of the Washita Valley Improvement Association*, p.41, in Robert Kerr papers, Conservation Series, box 10, folder 14.

[4]Neil Maher, "'Crazy Quilt Farming on RoundLand': The Great Depression, the Soil Conservation Service, and the Politics of Landscape Change on the Great Plains during the New Deal Era," *Western Historical Quarterly*, vol. 31, no. 3 (Autumn 2000), p. 329;Merrill, *'The Department of Agriculture and the WashitaRiver Watershed'*, pp. 38-9;

[5]Harral Allen 9 May 1957 to Carl Albert, p.1, in Carl Albert papers, Departmental Series, box 25, folder 50. Relatedly, in September 1957, after the 1950s drought had run its course, observers reported "[o]nly a few of the drouth years have been 'no flood' years for farmers on Barnitz Creek [southwest Oklahoma]." In *Farmer Stockman*, September 1957, p. 15.

[6] In 1955, Washita Basin resident Houston Hulin told officials that his town of Cordell "for several years has had a small reservoir that furnished…water, and then in the last [fifteen] or [twenty] years

Erratic and intense precipitation patterns contribute to the basin's erosion and runoff problems. Average annual precipitation in the Washita basin ranges from approximately twenty inches at its headwaters to nearly forty inches at its mouth on the Red River. But annual precipitation ranges widely. Before it was dammed significantly, the river's annual and seasonal flows varied drastically. For instance, during 1936-37 the river's flow at the town of Clinton measured 23,600 acre-feet, but during 1949-50 it measured 752,400 acre-feet. And much of the basin's precipitation occurs in condensed patterns. To the 1950s, nearly fifty percent of the river's annual flow occurred from April to June, often following severe local storms. One basin resident proclaimed, "when we get our [annual] 30 inches of rain, it may come 12, 8, or 7 inches at one time." Joked another resident, "[w]e get 29 inches. The farmers…remember the night it fell."[7] Seasonal and intense precipitation patterns meant that many of the river's tributaries, and even the river itself near the Texas Panhandle, flowed for only part of the year. It also meant flood damage from heavy, localized storms.[8] Oklahoma senator Mike

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the reservoir has silted in so that there is not a supply of water through the summer." See, U.S. Congress, Senate, Committee on Interior and Insular Affairs, *Washita Project*, Published Hearing, 84th Congress, 1st Session, 25 April 1955, p. 42.

[7] *Oklahoma Water Atlas*, Oklahoma Water Resources Board Publication 135 (May 1990), p.16; *Report to the Governor of Oklahoma on the Problem of Municipal and Industrial Water Supplies for Oklahoma*, prepared by the Oklahoma Society of Professional Engineers, Conservation of Natural Resources Committee, 8 January 1953, p. 24; U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, p. 73; U.S. Congress, *Washita Project*, Hearing, 25 April 1955, p. 49.

[8] Explaining the nature of Washita floods, regional Bureau of Reclamation director Harold Robbins said, "The basin is long and narrow with its axis generally transverse to the usual stormtracks of the region; consequently floods of major magnitude have occurred in the upper, middle, and lower reaches, without effecting [sic] other portions of the basin." In *Report of Regional Director of Bureau of Reclamation, 18 September 1951*, pp. 38, 48. For the same reason, Army Corps of Engineers Major Gordon Textor explained, "Floods rarely extend through the entire stream course during any one flood period." In Address made by Gordon E. Textor, Major, Corps of Engineers, United States Army, before the Washita Valley Improvement Association at Chickasha, Oklahoma on March 28, 1941, pp. 28-9, in Robert Kerr papers, Conservation Series, box 10, folder 14.

Monroney explained to Congress: "During long periods of drought the Washita is a slow, sluggish stream….On the other hand, we experience disastrous flash floods which…cause untold damage[.]" A basin newspaper editor identified eleven major floods in the basin from 1908 to the 1950s.[9]

During the 1930s drought, the Washita basin suffered some of its worst floods. During an April 1934 storm, flooding on the river's upper portions killed at least twelve people and destroyed more than $500,000 in property and livestock. During the disaster, a measuring-station near Cheyenne, about twenty miles from the Texas Panhandle, reported fourteen inches of rain in only six hours. The official state report on the disaster called it "by far the greatest flood that has ever occurred on the Washita." One survivor later remembered that during the flood "a wall [twelve] feet high…came across the valley that hit their house." After an October downpour later that year, farmland along the river near FortCobb was "inundated to a depth of six feet, destroying many late crops[.]"[10]

Disastrous flooding brought federal attention to the basin. By February 1935, Federal Emergency Relief Administration (FERA) district engineer W.C. Burnham had mapped twenty-three dam sites to mitigate droughts and floods. Burnham explained that "'[with] this system of dams…a disastrous flood, such as the one in the Hammon and Clinton territory last spring, would be impossible,'"

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[9]U.S. Congress, *Washita Project*, Hearing, 25 April 1955, pp. 44, 46.*Clinton Daily News* editor Charles Engleman explained that, "records show that major floods causing significantly large damages occurred in 1908, 1923, 1927, 1934, 1936, 1938, 1941, 1941, 1943, 1945, 1949, and 1951. The area subject to flooding is about 183,000 acres of land most of which is under cultivation or grazed intensively" (p. 40).

[10]*Drought of the 1950s with Special Reference to the Midcontinent*, USGS Water Supply Paper 1804 (1965), pp. 36-7; *Oklahoman*, 6 April 1934, p. 1; 'WashitaRiver, Hammon Flood, April 3-4, 1934' published by the OPRB Division of Water Resources, February 1939, pp. 2-3, in Robert Kerr papers, Conservation Series, box 10, folder 13; U.S. Congress, *Washita Project*, Hearings, 23 March 1953, p.73; *Oklahoman*, 20 October 1934, p. 1.

and "'the uniform flow of the Washita River, and all of its tributaries would be assured[.]'" Federal activity in the basin increased following the 1936 Flood Control Act, which made the federal government responsible for flood control throughout the country. The law assigned major flood control responsibility to the Corps of Engineers but it also tasked the USDA to study and apply upstream flood prevention methods.[11] Louis P. Merrill explained the law's significance to a Washita basin audience: "For the first time provision was made for flood treatment measures on the land – the gathering grounds of flood waters." Following the law, SCS officials quickly developed the small watershed concept to control floods, which combined conservation practices including contour tillage, terraces and grass planting with small tributary dams to isolate and store run-off. The concept broadened USDA's scope from individual farms to entire watersheds. To accelerate its activities, in 1937 Congress appropriated nearly $1.5 million for USDA land and water conservation on the WashitaRiver. By the end of 1938, the Corps of Engineers, USDA and the Bureau of Reclamation were all surveying the basin for flood control and irrigation.[12]

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[11] *Oklahoman,* 3 February 1935, p. C7; *Congress and the Nation, 1945-1964*, p. 805. To control costs, the 1936 Flood Control Act "directed that projects should only be approved 'if the benefits, to whomsoever they accrue, exceed the estimated costs.'" In Richard N.L. Andrews, *Managing the Environment, Managing Ourselves: A History of American Environmental Policy* (New Haven: Yale University Press, 1999), p. 166. The historian Donald Pisani explained that "in 1939, Congress decided that the cost of flood control as well as navigation should be non-reimbursable; after the war, it added fish and wildlife conservation to the list of non-reimbursable expenditures, for which farmers and other water users did not have to pay back project costs." In Donald J. Pisani, "Federal Water Policy and the Rural West," in *The Rural West Since World War II*, ed. R. Douglas Hurt (Lawrence: University Press of Kansas, 1998), p. 128.

[12] Merrill, *'The Department of Agriculture and the WashitaRiver Watershed'*; F. Dwain Phillips and Mark S. Harrison, *Out of the Dust: The History of Conservation in Oklahoma in the Twentieth Century* ([Oklahoma City]: Oklahoma Association of Conservation Districts, 2004), p. 56; This money was part of $4 million to be spent on three river valleys, one of which was the Washita. *Proceedings of the Second Annual Convention of the WashitaValley Improvement Association, 28 March 1941*, p. 3. The Corps survey focused largely on how upstream developments would affect

Especially significant for the response it generated from Washita residents and state officials, in February 1936 the federal government authorized the Corps of Engineers to survey a flood control and power project at the river's mouth, near Denison, Texas. The next month, as surveys for the big dam began, local and state opponents argued that the dam would inundate thousands of acres of valuable agricultural land and would do little to control floods and erosion along much of the river and its tributaries, where it was most needed. Former Oklahoma water commissioner E.E. Blake spoke for many state and basin residents when he argued that "a dam at [the Denison] location [would] not only be valueless for flood control, but [would] inundate more than 96,000 acres of the best Red River and Washita river valley land[.]" Moreover, siltation would quickly destroy the reservoir. As a cheaper and more practical alternative to the big dam, Blake advocated flood control through small dams and reservoirs along the upper portions of the river's tributaries. In late February 1938 more than 200 Washita basin farmers and businessmen testified at soil conservation and flood control meetings that "irrigation water impounded by a proposed series of dams in the Washita river valley would serve as protection against drouth." And in January 1939, during his first message to the state legislature, Oklahoma's new governor Leon 'Red' Phillips attacked the Denison dam project as an unwanted federal intrusion, calling it "the most shocking disregard of states' rights that has yet occurred." Like the big dam's other opponents, Phillips argued for small dams: "If the government intends to spend $56,000,000 for flood control, I would like to see

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the proposed Denison reservoir, an Interior survey focused on irrigation in the basin, and the Agriculture survey was to provide economic justification for minor developments on the Washita's tributaries. In *Oklahoman*, 15 October 1938, p. 4.

56 dams costing $1,000,000 each, or possibly 100 dams costing $500,000 each constructed up and down the Washita river and Red river." Two years later, his position unchanged, Phillips explained to the second annual meeting of the Washita Valley Improvement Association (WVIA): "To be economic and effective, a program of water conservation and flood prevention must have its beginning at the 'headwaters'….We want to hold every drop of water as near the place it falls as we can[.]" Despite this opposition, Congress authorized the Denison project in 1938 and the dam was completed in 1944.[13]

Aside from its significance as a barometer for local and state opinions, the Denison dam controversy renewed interest in earlier state conservation commission plans for a series of smaller dams in the basin. During the late 1930s and early 1940s, the Oklahoma Planning and Resources Board (OPRB) issued several reports proposing a system of twenty-five Washita basin reservoirs to control floods and to conserve water for agricultural purposes. In its September 1939 report, for instance, OPRB water resources director F.L. Vaughan explained: "the [twenty-five] proposed reservoirs…are intended for flood control and stream regulation….If rainfall can be supplemented with reservoir water…crops can be made to more than double the average yield. This is the purpose of the regulated stream flow plan." The 1939 OPRB report anticipated urban water supply needs

[13]*Oklahoman*, 26 February 1936, p. 5; *Oklahoman*, 5 March 1936, p. 9; *Oklahoman*, 8 March 1936, p. 58;*Oklahoman*, 25 February 1938, p. 3;*Oklahoman*, 11 January 1939, p. 7. *Oklahoman* writer Harold Johnson later wrote that Phillips "went off the deep end in his inaugural address," but on 31 January 1939 the newspaper supported Phillips' position and asked "If the government is going to build dams to prevent floods, why does it build so many of the dams below where the floods form and the worst damage is done?" In *Oklahoman*, 31 January 1939, p.8; *'The State of Oklahoma and the Washita,'* Governor Leon C. Phillips address during 28 March 1941 Proceedings of the Second Annual Convention of the Washita Valley Improvement Association, p. 50; *Oklahoma Water Atlas*, Oklahoma Water Resources Board Publication 135 (May 1990), p.39.

but rooted future regional prosperity in flood control for agriculture. It concluded: "the most advantageous form of development for the basin in general would be: (a) intensive agricultural use of the Washita River bottomlands, with irrigation and control of floods; (b) extensive (dry) farming of the uplands where the soil is good, with terracing and other erosion control practices; (c) consignment of the poorer soils areas to permanent pasture and timber[.]"[14]

Washita basin residents and their congressional representative Jed Johnson assertively pursued flood control and water conservation. To "promot[e] the improvement of the WashitaValley through flood control, soil conservation, and proper use of the land and water[,]" basin residents formed the Washita Valley Improvement Association (WVIA) in February 1940. The association's first President, Otto Wray, was from the town of FortCobb. Its vice-presidents were from Pauls Valley, Foss, and Chickasha. The thirty-six member WVIA board of directors represented the entire basin. In just over one year, the association counted 473 paid members. With no concrete federal plan for the Washita basin by year's end, the association met in December 1940 to organize and push for a series of twenty-five tributary dams during the coming year. Despite the organization's urban leadership, municipal water supplies were not its key priority.

[14] Report of Regional Director of Bureau of Reclamation, 18 September 1951, p. 51. According to the Reclamation Director, H.E. Robbins, the OPRB submitted reports in 1936, 1938 and 1942, but Kerr's files contain a report dated 1939.The Oklahoma Planning and Resources Board (OPRB) was formed from the Oklahoma Conservation Commission in 1935. *Report of Regional Director of Bureau of Reclamation, 18 September 1951*, p. 51; On 18 July 1937, *The Oklahoman* reported that the Army Corps of Engineers would review state conservation commission plans for a series of nearly twenty dams on the river and its tributaries. In *Oklahoman*, 18 July 1937, p. 34; *'Washita River and Drainage Basin'*, pp. 2, 8-9, 25. The report defined water's 'beneficial uses' as those which would "insure consistent good crop yields…to supplement rainfall through the months of June, July, August and September" (p. 50).

"This is strictly a flood control program," Wray declared at the meeting "the association is interested in dam sites on…tributaries of the Washita."[15]

Following his constituents' lead, through much of 1940, the basin's congressional representative Jed Johnson pushed to have federal surveys correlated so that a flood control project could be authorized and started as soon as possible. When questioned about a concurrent Army Corps of Engineers plan "to build two large dams across the Washita proper near Chickasha and Anadarko[,]" for instance, Johnson explained to reporters, "I told them they were just wasting time sending men up and down the river for that purpose because the people here were not going to permit the fertile Washita valley to be destroyed….I told them to stop these waters before they got into the river and there would be no floods."[16] Following this logic, on 25 February 1941, Oklahoma state senator Homer Paul introduced in the Oklahoma Senate a resolution requesting that the federal government "lend its wholehearted support to the end that the soil and water resources of the Washita River Basin may be fully protected and developed by the construction of tributary reservoirs and by a coordinated soil conservation program[.]"[17]

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[15]*Proceedings of the Second Annual Convention of the WashitaValley Improvement Association, 28 March 1941*, pp. 1-2; *Oklahoman*, 20 December 1940, p. 4.

[16]*Oklahoman*, 8 December 1940, p. 76; *Oklahoman*, 21 December 1940, p. 7. Several days later editors agreed, arguing that "Army engineers want to attack the flood problem on the Washita by building two mammoth dams on the Washita: one near Chickasha and one near Anadarko….It is the old plan of the army engineers, a plan…to curb a flood after that flood has already been formed….the valley of the Washita…never can be saved by the outmoded plan of the army engineers." In *Oklahoman*, 23 December 1940, p. 10.

[17] WVIA Resolutions Committee chairman F.T. Chandler said Paul's statement "fairly represent[ed] the aims and purposes of this Association and is the basis on which we should proceed[.]" In *Proceedings of the Second Annual Convention of the Washita Valley Improvement Association, 28 March 1941*, pp. 14-15.

The following month, on 28 March 1941, state and federal representatives from the OPRB, Army Corps of Engineers, the Reclamation Bureau and USDA attended the second annual WVIA meeting in Chickasha to explain their water development priorities and procedures. In attendance were nearly 190 people that signified the WVIA's broad base, including auto dealers, bankers, insurance agents, grocers, iron works operators, milling agents, teachers, nearly seventy farmers, and various government agents. The second annual WVIA meeting confirmed local and state agricultural priorities including support for small, tributary flood control dams. The organization opened the meeting by unanimously opposing legislation then pending in Congress to authorize corporate control over the basin through the Arkansas Valley Authority (AVA), a conservation and power project modeled after the Tennessee Valley Authority (TVA). Congress had created the TVA in 1933 as a federal agency to fight poverty in the Tennessee Valley by building and administering dams to improve navigation, supply electricity and fertilizer, control floods and prevent soil erosion, among other functions. By the late 1930s, TVA had improved living standards in the valley, but it had also brought disappointment, explains Donald Pisani, because "valley residents often opposed the suggestions of TVA officials regarding how they should run their farms and their lives" and because it was difficult to reconcile national leadership with 'home-rule' over state and local agricultural agencies. Western congressmen who wanted to transplant the model to other river basins during the 1940s faced additional opposition from critics who feared that private power companies could gain control of federally-built hydro-electric plants

and subsequently "enslave a region[.]" Critics feared "collectivization" and "sovietization" during the 1930s and 1940s, and "creeping socialism" during the 1950s.[18] Washita Basin residents opposed the project on the grounds that "the Washita Valley…is essentially agricultural territory…and it is necessary, for the welfare and prosperity of the population thereof, to utilize for agriculture and domestic purposes, all the entire water flow of the Washita River, and to benefit the people of such territory."[19]

At the meeting Oklahoma Governor Leon Phillips proclaimed, "Out here in Western Oklahoma we….know that if we could catch and hold these floods, and put the water on the ground where we have drouths, we could raise many things to eat that we now have to go to the store and buy[.]" Phillips ranked water development activities in the basin, arguing that "[t]o be economic and effective, a program of water conservation and flood prevention must have its beginning at the 'headwaters.'….We want to hold every drop of water as near the place it falls as we can….The construction of farm ponds…would be the next step….[then] a series of larger ponds and lakes which would provide community water supplies and recreation….[then] the storage reservoirs, properly designed to fit the general basin-wide scheme." Regional SCS officer Louis P. Merrill stressed that agricultural conservation practices including contour tillage, strip-cropping,

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[18] Other reasons for opposition included concerns that "river basin authorities would delay the construction of [other] water projects"; the idea that comparisons to TVA would "frighten off private capital"; and fears among other federal agencies like USDA and the Bureau of Reclamation that river basin authorities would cut into their respective spheres. In Donald J. Pisani, "Federal Water Policy and the Rural West," pp. 121-25. For specific Bureau of Reclamation fears, see also Donald J. Pisani, "The Bureau of Reclamation and the West, 1945-2000," in *The American West in 2000: Essays in Honor of Gerald D. Nash*, eds. Richard Etulain and Ferenc M. Szasz (Albuquerque: University of New Mexico Press, 2003), p. 58.

[19] *Proceedings of the Second Annual Convention of the Washita Valley Improvement Association, 28 March 1941*, pp. 13-4, 53-7.

terracing and grass seeding would provide a range of benefits, including fewer and smaller floods, less silt in streams and reservoirs, bigger crop yields and regional agricultural stability with consequent benefits to regional industry and commerce.[20]

These benefits resonated with state conservation officials. In the early 1940s, the OPRB recommended that "[i]n addition to the construction of the twenty-five reservoirs as proposed by this office, it is our recommendation that the 'Program for Watershed Improvement in Aid of Flood Control' as proposed by the Department of Agriculture be installed." This position reflected the agency's belief that USDA soil conservation and upstream flood prevention would benefit the basin. This recommendation was partly qualified, however, by the OPRB's growing support for an additional Army Corps of Engineers dam on the Washita's main stem to control floods, reduce sedimentation buildup on the river's alluvial floodplain, and store irrigation waters.[21]

Against the perceived need for a main stem dam, the USDA aggressively asserted its role in the basin. In a 1943 report the agency attributed over ninety-five percent of flood damages in the basin's upper half to agriculture best remedied through agricultural adjustments, including improved cropping systems, better land use selection to prevent erosion and run-off, vegetative cover for marginal lands, and structural installations to facilitate the land-treatment programs. To

[20] "It will be obvious to all clear-thinking people that these reservoirs should be progressively distributed on the tributaries of the drainage shed," Phillips explained, "so as to give to each community affected the maximum benefits." In Phillips, *'The State of Oklahoma and the Washita,'* pp. 48-9, 50; Merrill, *'The Department of Agriculture and the WashitaRiver Watershed,'* pp. 35-45.
[21] '*Washita River and Drainage Basin,*' [in pencil on cover is: 'Office copy of Oklahoma Planning and Resources Board'] p. 33, 35, in Robert Kerr papers, Conservation Series, box 10, folder 15.

defend its turf from the Corps of Engineers, the agency declared that "any reservoir program…recommended by the War Department would not affect flood damages in the upper 70 miles of the main stream ….[and would] ignore agricultural flood control [benefits]…in the lower 200 miles of the valley." The following year, the 1944 Flood Control Act boosted USDA flood control work in the basin by tasking the Soil Conservation Service (SCS) to develop upstream erosion and flood prevention projects on eleven specific watersheds nationwide, including the Washita and its tributaries. The law authorized over eleven million dollars in federal funds to help farmers implement soil conservation practices and build small dams to control erosion and to slow and capture run-off before it reached a river's main stream.[22]

During the late 1940s, the Sandstone Creek tributary watershed on the Washita's upper reaches became the flagship USDA-SCS upstream flood control project. The Sandstone Creek Watershed had been particularly prone to flooding and erosion. During the period 1920 to 1939, for instance, observers had recorded floods on the watershed during 184 separate storms. Average annual flood damages to the 69,000 acre watershed included $40,000 to crops and pastures; $2200 in streambank cutting; $3900 in lost livestock, fences and equipment; and $5700 in sediment deposition on valley lands. To control flooding, SCD supervisors, land owners, and SCS officers planned and built nearly 400 miles of

[22] The USDA reported in 1943 that "Floods on the WashitaRiver and its tributaries do most of their damage to agricultural lands and crops. Very few towns of more than 1,000 [people] are located on flood-plain areas subject to damage." In USDA '*Watershed of the WashitaRiver (Oklahoma and Texas)*' House Document No. 275, 78th Congress, 1st Session, September 1943, pp. 6, 12; *Congress and the Nation, 1945-1964*, p. 805; *Report of Regional Director of Bureau of Reclamation, 18 September 1951*, pp. 50-1. The law authorized $11,243,000 over a fifteen-year period. In *Congress and the Nation, 1945-1964*, p. 805.

terraces; seeded 5800 acres of eroded and idle cropland to grass; built 125 farm ponds, twenty-four flood-retarding dams, thirteen sediment-control dams; and improved pasture and range management on 58,500 acres. By the early 1950s its effectiveness in controlling floods and regulating stream flow won broad support.[23] In 1952, when the project was completed, Oklahoma congressman Carl Albert confidently predicted to Oklahoma Soil Conservation District chairman C.E. Barnhill: "I think this movement will spread throughout the country[.]" And in March 1953 the National Farmers Union (NFU) petitioned Eisenhower for "legislation to fill the present gap in national soil conservation flood-prevention flood-control programs [by authorizing] anyone to build small flood prevention installations on the up-stream and watersheds."[24]

In 1954 Congress made upstream flood control a permanent USDA activity with the Watershed Protection and Flood Protection Act. And the WashitaBasin remained a catalyst and leader for future USDA upstream flood prevention programs across the country. In February 1956 after hearing Cheyenne banker

[23]During seventeen major storms from 1953 to 1960, the project's installations and procedures reduced flood damages from a potential of 870 acres to an average of only 90 acres. Additional benefits included average savings of over $22,000 per year, healthier ranges and beef production, irrigation water, and recreation benefits. In Harold Kautz, "Sandstone Creek: How a Watershed Was Saved," in *Aridity and Man: The Challenge of Arid Lands in the U.S*., ed. Carl Hodge(Washington: American Association for the Advancement of Science, 1963), pp. 549-51, 553-54; Chester Weems, "Sandstone Creek: The Effect of Upstream Flood Prevention on Local Land Use," *Proceedings of the Oklahoma Academy of Science*, (1967), p. 190.

[24] Carl Albert 7 April 1952 letter to C.E. Barnhill, p.1, in Carl Albert papers, General Series, box 5, folder 45; Resolutions adopted at NFU 15 March 1953 meeting in Denver, p.1, in Carl Albert papers, General Series, box 5, folder 98. NFU resolved that: "large appropriations and broad authority has [sic] been extended to the Executive Branch to build levees, dams, and other works to control floods after they have developed; the ACP and SCS programs have been developed to hold water on the land where it falls and conserve the soil; but practically no provision has been made for the large and important area between the farm itself and the lower stretches of the largest streams….The present ratio of federal expenditure is about $100 for flood control to $1 for flood prevention. This ratio should be evened up by filling the gap on small watersheds" (p. 2).

L.L. Males' Sandstone Creek presentation, the National Association of Soil Conservation Districts voted unanimously to have Congress fund and finish the Washita project ahead of the ten other projects scattered across the country. Oklahoma Association of Soil Conservation Districts president Harral Allen called the Washita plan, especially the Sandstone creek project, the "'keynote of the whole convention.'" Later that spring, Males described the Sandstone Creek project to the Senate Agriculture Appropriations Subcommittee, leaving its chairman Richard B. Russell (D. Ga.) to exclaim,"'[i]t was one of the most interesting and dramatic presentations this committee has ever witnessed.'" By 1961, 141 small watershed projects were being constructed nationwide, and by 1964, Congress had approved 535 projects for construction. Most significant, perhaps was USDA's expanded scope. Years later Carl Albert would observe: "Prior to the 1950s, the main emphasis of the [SCS] was on the planning and execution of conservation measures on individual farms and ranches. It is only in recent years that this has been enlarged to encompass programs for entire watersheds."[25]

The Washita Basin's easily-eroded soils and its erratic climate that included heavy downpours and extended droughts made it a natural place for USDA to develop the upstream flood control program. Through the 1940s, USDA was a fitting federal agency to be working in the basin for the further reason that

[25]*Oklahoman*, 14 February 1956, p. 23; *Oklahoman*, 2 May 1956, p. 28; Robert L. Branyan and Lawrence H. Larsen, *The Eisenhower Administration, 1953-1961: A Documentary History* (New York: Random House, 1971), p. 1355; Robert J. Morgan, *Governing Soil Conservation: Thirty Years of the New Decentralization* (Baltimore: The Johns Hopkins Press, 1965), p. 193; '*Soil and Water Conservation,*' September 1957 speech, p. 7, in Carl Albert papers, Departmental Series, box 25, folder 75.

most Washita Basin residents prioritized the basin's agricultural productivity when considering flood control. It followed that agricultural flood control dams would best serve the region's agricultural economy. Gradually, however, municipal water supplies for basins towns assumed greater priority, especially as drought crept into the basin during the late 1940s. The situation pitted farmers and USDA agents against townsfolk and the Bureau of Reclamation. And as they pushed for the Bureau of Reclamation dams to supply municipal water, basin townsfolk and their congressional representatives tested the Eisenhower administration's efforts to control spending on federally-constructed dams.

While the USDA upstream flood control and water conservation program grew in scope and stature, the Bureau of Reclamation's WashitaBasin plan took shape. Like the USDA, the Reclamation Bureau conducted reconnaissance studies of the basin in the late 1930s, and it reached similar conclusions. By 1940, the Bureau of Reclamation called flood control the basin's "greatest need" since local improvements and irrigation opportunities were vulnerable without it. Water to maintain soil fertility and to stabilize the rural economy in the upper portion of the basin was second. Limiting silt inflow from the upper basin came third. And like the USDA, the Bureau of Reclamation found "no need for immediate consideration of new sources of water to fully supply municipalities," but instead recommended a series of dams for flood control, irrigation, silt detention and recreation.[26]

[26] '*Excerpt from Survey Report on WashitaRiver, by Bureau of Reclamation,*'1940 OPRB Division of Water Resources, pp.12, 9, in Robert Kerr papers, Conservation Series, box 10, folder 14.

During the mid and late 1940s the reclamation bureau cooperated with OPRB to classify irrigation areas and to inventory basin water supplies. By the late 1940s, the drought assumed an important role in the basin's development. During the summer of 1948 and into the 1950s, dangerous water shortages afflicted major basin cities, including Anadarko and Chickasha.By 1951, when regional reclamation director H.E. Robbins presented the agency's overall plan for the basin, reliable municipal water supplies concerned most towns along the river. Robbins proposed a system of seven multiple-purpose reservoirs for municipal water supply, irrigation, flood control, power, recreation and fish and wildlife purposes. The seven reservoirs, he argued, "can be provided more economically than numerous relatively small, single-purpose developments."[27] Because the basin towns of Chickasha, Anadarko, Clinton and ElkCity urgently needed water, Robbins argued that two dams should receive priority. These were the Foss dam on the main stream of the WashitaRiver and the FortCobb dam on one of its tributaries. In addition to controlling floods and providing irrigation water, among other purposes, the Foss Dam would supply water to Clinton and ElkCity, and perhaps seven other towns. Similarly, the Fort Cobb Dam would control floods and supply water to Anadarko and Chickasha, and perhaps Verden and FortCobb. While his report passed through channels, drought aggravated the water supply situation in many basin towns and cities. In five of the seven years from 1948 to 1954, basin cities regularly experienced below-normal precipitation, with many

[27]*Report of Regional Director of Bureau of Reclamation, 18 September 1951*, pp. 40, 57, 72.In January 1948, the *Boise City News* reported that the southwest corner of Oklahoma was exceptionally dry and had not benefitted from recent rains. In *Boise City News*, 8 January 1948, p. 1.

cities receiving fifty percent or less of usual rainfall in successive years. For the twelve-month period ending June 1953, the WashitaRiver near Clinton recorded only eight percent of its average annual run-off since 1935.[28]

The Bureau of Reclamation plan also appeared during heightened tension between big downstream dam and small upstream dam proponents. Following May 1952 hearings to study federal water construction policies, for instance, the Civil Works Subcommittee of the House Public Works Committee argued that since USDA upstream flood control activities could not prevent large-scale damage, they should not be permitted to interfere with the more effective activities of other agencies. Concerned that the Corps of Engineers would be assuming flood control activities, LeFlore County SCD Chairman Perry Chaffin subsequently wrote to Carl Albert: "We may need a line of demarcation as to how far upstream the Army Engineers can go with their program of big dams and how far down stream the Department of Agriculture can go with their program, but we certainly don't need the Army Engineers in the soil and moisture conservation business."[29] For its part, the USDA published 'Where Floods Begin,' a May 1952

[28] The Foss Dam would have a storage capacity of 302,000 acre-feet; 177,000 acre-feet for flood control, 50,000 acre-feet for irrigation and municipal water, and 75,000 acre-feet for sediment reserve. The Fort Cobb Dam would have a storage capacity of 95,000 acre-feet; 62,500 acre-feet for flood control, 15,000 acre-feet for municipal and industrial supply, and 15,000 acre feet as a sediment reserve. The other towns to possibly receive water from the Foss reservoir included Bessie, Corn, Cordell, Rockey, Sentinel, Hobart and Gotebo. Many of these towns were trucking in domestic water by 1953. In U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, pp. 11-21; U.S. Congress, *Washita Project*, Published Hearing, 25 April 1955, p. 40; S.K. Jackson, "The Present Drought in Oklahoma" [1953], p. 8, in Robert S. Kerr papers, Conservation Series, box 11, folder 3.

[29] *Congress and the Nation, 1945-1964*, p. 831; Perry Chaffin 27 June 1955 letter to Carl Albert, p. 1, in Carl Albert papers, Department Series, box 21, folder 12. Similarly, the National Farmers' Union identified a 'gap' between federal authority and appropriations for downstream flood control levees and dams, and soil conservation activities under the ACP and SCS programs. The organization was concerned that "practically no provision has been made for the large and important area between the farm itself and the lower stretches of the largest streams." In James

pamphlet that emphasized the economic benefits of its small upstream dams on WashitaRiver tributaries, particularly on the Sandstone Creek watershed. "It amounts to this," asserted USDA officials, "[c]reeks flood more land than rivers do, and they flood more frequently." To a gathering of southwest Oklahoma farmers, *Daily Oklahoman* associate editor Elmer Peterson explained, "[t]he only reason the big downstream flood attracts all the attention is that its damage is more spectacular. The watershed flood does five or six times as much damage as the downstream flood, but the damage is done in millions of small places, so public attention is diverted to the big torrent."[30] Locally, residents and farmers' groups opposed to the proposed Bureau of Reclamation dams began to organize. For instance, landowners in the Cobb Creek watershed organized the Cobb Creek Flood Prevention Association to protest the Bureau of Reclamation's proposed Cobb Creek dam because it would remove valuable land from production, it would benefit only cities and downstream irrigators, and it would cost more than a flood control project based on the Sandstone Creek watershed model.[31]

Sensing the damage to state and local interests from these contrasting viewpoints, in June 1952 Oklahoma senator Robert Kerr wrote to *Chickasha Daily* newspaper editor Dave Vandivier that he hoped "an attitude of competition does

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Patton 17 March 1953 letter to Carl Albert, p. 1, in Carl Albert papers, General Series, box 5, folder 98.

[30] 'Where Floods Begin' USDA – SCS – Western Gulf Region, Fort Worth, Texas, May 1952, p. 3, in Robert Kerr papers, Conservation Series, box 11, folder 2; Elmer Peterson, "Dams That Build and Dams That Destroy," 16 February 1952 address to the Carnegie, Oklahoma Farmers' Forum, p. 1, in Robert S. Kerr papers, Conservation Series, box 11, folder 2. Using another colorful analogy, he asserted to the Farmers' Forum: "The surgeon who cuts out a man's liver does a spectacular job, but the real scientist is the doctor who stops the disease before it gets well started and uses preventive medicine" (p. 1).

[31] Floyd Clay explained that his organization had formed two years earlier. He submitted to Albert a petition signed by 554 farmers and landowners opposed to the proposed FortCobb dam. In Floyd Clay 19 February 1955 letter to Carl Albert, p. 1, in Carl Albert papers, General Series, box 7, folder 28.

not develop between the people interested in municipal water supplies and irrigation and the Soil Conservation Service interests in the Valley." A forthcoming Oklahoma Society of Professional Engineers (OSPE) report that recommended balancing upstream dams with downstream projects likely informed Kerr's position. The OSPE Conservation of Natural Resources Committee, including long-time Kerr assistant Don McBride, authored the January 1953 report with OPRB assistance.[32] The committee praised USDA land treatment measures to conserve water and increase agricultural production, especially the state's nearly 100,000 farm ponds which it said "have gone a long way toward solving the drought problem as far as livestock are concerned[.]" But it also argued that upstream USDA activities should respect downstream needs:

> Careful coordination of the Department of Agriculture water-flow retardation structures with any larger downstream reservoirs must be the rule. Otherwise, in the Western part of the state with its high evaporation rates, it is likely that water needed for municipalities and industry will be wasted by evaporation. This danger can be avoided if the permanent pools in these waterflow retardation structures are kept small. They should be large enough at the permanent level to provide stock water and fish for the farm family, but the growing tendency to increase the size to many acres…should be balanced with downstream beneficial use.[33]

To grow support for both the USDA program and the Reclamation Bureau project, Kerr took campaigning Democratic vice-presidential nominee Senator John

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[32] Robert Kerr 19 June 1952 letter to Dave Vandivier, p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 2. Don McBride was a professional engineer who had served as a state official in two administrations before Robert Kerr became governor, in 1943. Robert Kerr Jr., later called McBride, "a self-described 'water rat,' [who] was so indispensable in advising [Robert Kerr] on water development, he was sometimes called the 'third senator from Oklahoma.'" McBride later served as National Reclamation Manager and TVA director. In Robert Kerr Jr., *Mr. Water* (Oklahoma City: Oklahoma Heritage Association, 2005), pp. 79, 82.

[33] *Report to the Governor of Oklahoma on the Problem of Municipal and Industrial Water Supplies for Oklahoma*, 8 January 1953, pp. 17-8.

Sparkman, to tour the Washita basin in September 1952. Kerr wanted Sparkman to appreciate the USDA upstream program, but he also anticipated congressional hearings on the Reclamation Bureau plan. In a tone that suggested more harmony than actually existed, Kerr's press release for the visit declared that he would "advise [Sparkman] of…the unanimous attitude of the people of the State favoring the soil conservation and reclamation features of the project."[34]

Kerr's attitude represented more than a desire to avoid the destructive competition that could compromise both upstream and downstream conservation programs in the basin. The Reclamation Bureau plan arrived in an atmosphere of federal vigilance toward water development spending. This atmosphere had heightened in January 1950, when President Harry Truman established a Water Resources Policy Commission headed by Morris L. Cooke to improve cost-benefit estimate procedures in federal water projects. In December 1950, the Cooke commission urged Congress to consolidate water development in one federal agency or to establish interagency river basin commissions that would apply uniform criteria to construction cost-benefit estimates.[35] The same month, a House-sponsored study listed wide-ranging water development project allocation abuses including "'pork barrel' practices…'deceptive' cost estimates….[and] the alleged habit…of allocating an unfairly high proportion of project costs to non-

[34] Untitled two-page press release [with 1952, in pencil, top right], p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 2.

[35] *Congress and the Nation, 1945-1964*, p. 822; Beatrice Hort Holmes, "A History of Federal Water Resources Programs, 1800-1960," in *Readings in Soil and Water Conservation*, ed. Peter F. Black (New York: MSS Information Corporation, 1974), p.49. Specifically, explained Donald Pisani, Truman had "charged the commission with determining better standards for evaluating the costs, benefits, and feasibility of water projects, as well as for allocating the construction costs of multiple-purpose projects." In Pisani, "Federal Water Policy," p. 135.

reimbursable items like flood control and navigation, in order to minimize repayment burdens for local interests[.]"[36]

Following these studies, in December 1952 the Truman administration issued Circular A-47 which directed the Budget Bureau to apply uniform standards and criteria when evaluating water development proposals. It also directed the agency to ensure that each purpose of a multiple purpose project exceeded its own cost. The directive strengthened the agency's role of 'gatekeeper' to ensure the feasibility of proposed new projects. For several reasons, Circular A-47 made it more difficult to secure water project authorizations. For example, it required that all plans assume a fifty-year project life-span in their cost-benefit analysis. This provision frustrated planners who attributed higher project costs to longer-term benefits. Since the directive complemented its plans to reduce federal spending, the Eisenhower administration adopted Circular A-47.[37]

Budget Bureau director F.J. Lawton applied the new policy as he reviewed the Reclamation Bureau's plan for the WashitaBasin. In a December 1952 letter to

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[36]*Congress and the Nation, 1945-1964*, p. 831. Several years later, the Hoover Commission reported that by June 1952, the cost to complete ninety (90) federal irrigation projects was 110 percent higher than original estimates. In Richard L. Berkman and W. Kip Viscusi, *Damming the West: Ralph Nader's Study Group Report on the Bureau of Reclamation* (New York: Grossman Publishers, 1973), pp. 78-9.

[37]Holmes, "A History of Federal Water Resources Programs, 1800-1960," p.45. The historian Anne H. Morgan provided background to the directive. She wrote: "Since the early 1940s, Presidents Roosevelt and Truman had tried to break down that special Corps-Congress relationship which resulted in a patchwork of individual projects. The only semblance of planning was the striking coincidence of Corps activity in the constituency of powerful members of the Appropriation and Public Works Committees." And she called Budget Bureau Circular A-47, "another presidential attempt to weaken the special relationship between the Appropriations and Public Works committees in Congress and the agencies concerned with water." In Anne H. Morgan, *Robert S. Kerr: The Senate Years* (Norman: University of Oklahoma Press, 1977), pp. 151, 156-57; *Congress and the Nation, 1945-1964*, pp. 831-2. In 1949, Truman had vetoed the Vermejo (New Mexico) reclamation project in part because the project authorized irrigators to repay the project's cost over a period of seventy-six years. In *Congress and the Nation, 1945-1964*, p. 819.

the Interior Secretary, Lawton observed that the agency's budget ascribed most of the project's cost to flood control (which the federal government would pay), and not to water supply (to be paid by local users). These figures did not fit with the project's rhetorical justification. "While the relative amounts of the allocations would indicate that flood control was the major purpose to be served," Lawton wrote, "justification of the project in the report is based mainly on the need for a water supply to meet municipal and irrigation requirements." To reinforce his point, Lawton quoted the reclamation commissioner as having said of the project: "'water supplies for municipal and industrial uses and for expansion of irrigation is of first priority.'" Undaunted by the review, Robert Kerr introduced a Washita Project authorization bill the following month, in January 1953. That March, the new Interior Secretary Douglas McKay submitted to the Budget Bureau a modified report which partially addressed Lawton's concerns by removing some of the project's irrigation and fish and wildlife features, but that only vaguely promised that "the allocations to flood control will be given further consideration[.]"[38]

In March 1953, Washita basin residents testified to the project's benefits before the Senate Interior Committee on Insular Affairs. Their testimony portrayed a region with chronic water quality and supply problems made acute by the current drought. For instance, Bessie resident B.E. Crane explained to the committee that even under normal conditions his town's water supply was so hard (mineralized) that it could not be used for human consumption, household cleaning, or laundry. Mineralized water corroded the town's plumbing and

[38] F.J. Lawton 30 December 1952 letter to Secretary of the Interior, in House Document No. 219, July 1953, p. 12; Douglas McKay 3 March 1953 letter to Joseph M. Dodge, p.5 in House Document No. 219, July 1953, p. 5.

apparatus, making for costly maintenance and parts replacement. "Our community has suffered a lack of development due to the shortage of our water supplies," he asserted. He explained that drought in 1951 and 1952 had forced the town to truck in water supplies, including nearly 236,000 gallons in 236 loads during the last half of 1952. In fact, many of the towns anticipating municipal water from the Foss Dam were trucking in their water during the early 1950s.[39] Clinton Chamber of Commerce secretary-manager Ted Savage said that natural resources in the Clinton area, including oil, gas, and gypsum could be the basis for economic development but not without adequate water, especially in cases like 1952 when "droughts…would have made the maintenance of industrial operations impossible[.]" Hobart resident Percy Hughes explained that his community had only six weeks of water in the town's reservoir. Hobart municipal officials had recently passed an ordinance making it illegal "to have leaky faucets, [and] to water shrubs or flowers." The most urgent call to authorize the project came from Anadarko resident and Washita Basin Improvement Association (WBIA) Chairman, Albert L. Connel, who declared, "We need (DRINKING WATER)…which you will certainly agree carries first priority in all instances….(THIS IS AN EMERGENCY) and I beg and plead that you will observe it as such and that you will recommend expediency[.]"[40]

[39] The Bessie area had a per capita income of only two-third the state average, and it had lost nearly twenty-eight percent of its population since 1940, he said. In *Prepared Statement by Washita Basin Improvement Association*, Bessie, Oklahoma to Chairman, Senate Sub-Committee on Irrigation and Reclamation of Committee on Interior and Insular Affairs, 13 March 1953, p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 3; U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, p. 21.

[40]*Prepared Statement of Ted Savage*, Clinton, OK, member of the Washita Basin Improvement Assoc., to Chairman, Senate Sub-Committee on Irrigation and Reclamation of Committee on Interior and Insular Affairs, 18 March 1953, p. 2, in Robert Kerr papers, Conservation Series, box

Despite the emergency and their sympathy for Washita basin residents, legislators questioned the project's legitimacy. New Mexico senator Clinton Anderson recalled a previous plan for municipal water supply on the Texas Panhandle. "[T]he Texas people were quite anxious to get that Panhandle project through[,]" he recalled, "then somebody reminded us that…it was not an irrigation project, and it would not be fair to allow these communities to group themselves together for the purpose of providing municipal water and have it be at the cost of the federal government." Seeing a parallel to the current situation, Anderson continued: "We know what to do when it is an irrigation project, but when the project, so-called, is primarily a municipal water supply project, we run into some trouble." Reassuringly, Robert Kerr emphasized to the sub-committee, "the plan will meet a pressing and emergency need brought about by continued adverse water conditions, as well as a greatly accelerated demand for more and more water, for industrial and municipal purposes. However, this project is not primarily a municipal water supply project." To make his point, Kerr stressed that the project would irrigate 26,000 acres, control floods, contribute to fish and wildlife resources, and provide recreation.[41] To confirm Kerr's point, M.G.

11, folder 3; Hughes explained that Hobart's population had declined by thirty-six percent since 1930, and its per capita income was almost half the state average. In U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, pp. 65-6; *Prepared Statement of Albert L. Connel*, Anadarko, OK, member of the Washita Basin Improvement Assoc., for Chairman – Senate Sub Committee on Irrigation and Reclamation of Committee on Interior and Insular Affairs, 19 March 1953, p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 3. The record is unclear on how the WBIA was formed. That it comprised members of the former WVIA, including Connel, suggest that the WBIA grew from the former organization.

[41]U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, pp. 28-9; *Prepared Statement of Robert S. Kerr to Chairman, Senate Sub-Committee on Irrigation and Reclamation of Committee on Interior and Insular Affairs*, 23-24 March 1953, pp. 2-3, in Robert Kerr papers, Conservation Series, box 11, folder 3.Kerr explained too: "Although we have not said so in the bill…we hope to take the interest component paid by the municipal and industrial water users and apply it to that portion of the irrigation costs which is beyond the ability of the water users to pay"

Barclay, the Reclamation Bureau's area planning engineer for Oklahoma City explained, "[w]e have always considered this a multipurpose project, involving irrigation, water supply, and recreational benefit, fish and wildlife[.]" And Barclay emphasized that the towns to receive water by the plan ranged in size from about 200 to 5000 people, with most having below 500 inhabitants. "A lot of them are small towns," he explained to the committee, "[it] is difficult to work out their water supply problem, but their problem is just as real to them as anybody else." Oklahoma Bureau of Business research director Francis Cella added: "these people are not asking for something for nothing, they are just asking that the Federal Government temporarily give them a start so that they can go ahead and proceed with development of their own area."[42]

Later that summer, on 28 July 1953, interior secretary Douglas McKay submitted to President Eisenhower his revised report on the Washita plan. On several points, the new report addressed budget bureau director F.J. Lawton's concerns. For instance, of the seven proposed reservoirs, the bill recommended only the immediate authorization of the Foss and Fort Cobb Reservoirs. It also provided for repayment to the federal government of municipal water supply costs within fifty years, it reduced non-reimbursable costs attributed to recreation and fish and wildlife enhancement, and it eliminated irrigation costs except for storage

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(pp. 2-3). This rationale echoed the shift to reclamation policy that followed the completion of Boulder Dam, when power sales were used to subsidize irrigation. See Pisani, "Federal Water," pp. 127-28.

[42]U.S. Congress, *Washita Project*, Unpublished Hearings, 23 March 1953, pp, 21, 22, 29, 60. Since irrigation was really a small priority in the project, and the recreational, fish and wildlife benefits were discounted by other agencies, his answer suggests that an underlying reason for presenting the plan as a multipurpose project; that perhaps this was a water supply project decorated with other purposes to facilitate its passage through Congress and to ease the financial burden on local consumers.

at the Foss and FortCobb reservoirs. McKay admitted that the report's "tentative allocation to flood control is probably substantially greater than would result under the procedure currently used by the Corps of Engineers, and the other tentative allocations are correspondingly lower[,]" but he assured the President that "[b]efore construction of this project is initiated, this Department will give further consideration to the allocation of project costs and to the comments of the Chief of Engineers and other reviewing agencies." This vague promise did not satisfy budget bureau official Roland Hughes, who reminded McKay of the Interior Department's promise to cooperate with the Corps of Engineers to develop joint standards for all agencies in allocating costs. Additionally, Hughes explained, the State of Oklahoma would "be expected to assume responsibility for repayment of the costs so allocated to reimbursable purposes which [were] beyond the ability of local beneficiaries to repay." Once these conditions were met, wrote Hughes, the budget bureau would support the project. Undeterred by Hughes' review, on 29 July 1953, McKay submitted his report to House Speaker Joseph Martin.[43]

As the bill moved through congressional channels, Senator Robert Kerr used the drought crisis and political pressure to win Eisenhower's support for the project. Near the end of July, Kerr appealed directly to Eisenhower, for a third time, to request that the President release the project from a list awaiting the administration's policy revision. In return for releasing "such critically needed projects as those in the drouth-stricken area pending a revision of over-all policy,"

[43] The report estimated costs of the recommended projects at $15,417,000 for flood control, $3,410,000 for irrigation, and $10,370,000 for municipal water supply. In Douglas McKay 28 July 1953 letter to The President [Eisenhower] (through the Bureau of the Budget), in House Document No. 219, July 1953, p. 4; Rowland Hughes 28 July 1953 letter to the Secretary of the Interior (Attention H.J. Slaughter), in House Document No. 219, July 1953, p. 1.

declared a late July 1953 press release from Kerr's office, "Senator Kerr, as a member of the Senate Public Works Committee, pledged his assistance to the President in the consideration of revisions looking to various improvements aimed at clarifying local and federal participation, stressing the more practical projects, and establishing a uniform code of standards."[44]

Oklahoma governor Johnston Murray also pressured Eisenhower to approve the project. On 22 September 1953, in a reversal of his predecessor Leon Phillips' 1939 position regarding the relative importance of upstream dams, Murray wrote to Eisenhower: "we do not feel free to approve further storage in conservation pools of the Department of Agriculture projects unless it can be shown that this will not endanger commitments of water to the Bureau Plan." Later that fall, to Oklahoma senators Robert Kerr and Mike Monroney, he objected to requirements that the Washita project meet "as yet undetermined joint standards," and argued that "when the joint standards have been adopted and all of the agencies and states conform to them, then Oklahoma should go along. Until such procedures have been adopted and clearly are being followed, I see no reason why they should be anticipated in the case of these Oklahoma projects." Similarly, he criticized the Budget Bureau's request that the state underwrite the project's reimbursable costs arguing that "this interpretation of the President's policy is untried and has not been approved generally nor applied to any other projects." Furthermore, he stressed, "it is impossible under the Constitution of the State of Oklahoma for the state to assume liability for the costs of a project which

[44] 31 July 1953 press release, p.1, in Robert Kerr papers, Political/Campaign Series, box 11, folder 35.

would benefit a particular community or area of the State." In 1954 the Washita bill passed the Senate following the unanimous recommendation of the Senate Interior and Insular Affairs Committee, but it did not pass the House before Congress adjourned.[45]

During the fall and winter of 1954-55, pressure grew for Congress to ease the repayment provisions for similar projects. In their 1954 annual meeting that November, for instance, the National Reclamation Association (NRA) resolved that the definition of non-reimbursable costs should be extended to include salinity control, sediment control and public health protection, among other benefits. The NRA also resolved that federal credit should be "used to purchase or guarantee in whole or in part bonds or borrowings for irrigation, reclamation, or multipurpose developments under reasonable standards of repayment security."[46]

Oklahoma officials grew adamant that municipal and industrial water supplies were the state's priority. In October 1952, while Oklahoma cities ran low on water, governor Johnston Murray wrote to Oklahoma Society of Professional Engineers (OSPE) president G.W. McCullough, "[t]he present long protracted drought has brought to our attention [our] grave deficiency in municipal water….This situation must have quick study….looking to future growth of our

[45] Johnston Murray 22 September 1953 to Dwight Eisenhower, p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 4; Murray referred to Article 10, Section 14 of the Oklahoma Constitution, which read "'The State shall not assume the debt of any county, municipal corporation, or political subdivision of the State, unless such debt shall have been contracted to defend itself in time of war, to repel invasion, or to suppress an invasion.'" In Johnston Murray 30 October 1953 to Robert Kerr and Mike Monroney, pp. 1-2, in Robert Kerr papers, Conservation Series, box 11, folder 4.

[46] "The Voice of the West" – Resolutions Recommended by the Resolutions Committee Approved by Each of the State Caucuses and Adopted by the National Reclamation Association – 23rd Annual Meeting, Portland, Oregon, November 8-10, 1954, pp. 19, 25-6, in Carl Albert papers, Department Series, box 22, folder 28.

population and especially the need to better balance our agricultural economy with industrial growth[.]" Following Murray's instructions, OSPE, with OPRB water resources division assistance, surveyed the state's municipal and industrial water supply problems. In their corresponding report, released in January 1953, the engineers argued that "[m]any flood control dams have been built on some of the tributaries of the WashitaRiver to control floods. The water from these reservoirs is being wasted when it could be used to increase crop production on the bottomlands along these streams." Most pointedly, in a passage that summarized the overall transition occurring in the state, the committee concluded:

> In the past the emphasis has been placed on flood control…[h]owever, the increased importance of water supply for municipal, industrial and irrigation uses demands the adoption of a program of water conservation…with flood control conceived on a basis where water supply becomes a primary consideration rather than an incidental one as at present.[47]

Eisenhower could sympathize with the state's call for increased water supplies. In a 31 July 1954 message to Congress he declared, "people are entitled to expect that their timber, minerals, streams, and water supply…should be safeguarded, improved, and made available not only for this but for future generations." He endorsed the Washita project in his 1955 budget message and recommended a supplemental appropriation for its initiation once it was authorized by the Congress.[48]

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[47] *Report to the Governor of Oklahoma on the Problem of Municipal and Industrial Water Supplies for Oklahoma*, 8 January 1953, pp. ii, 2, 9, 30. According to the report, sixty-five Oklahoma cities and towns experienced water supply deficiencies during the latter half of 1952. Additionally, "[thirty-seven] reported need for a new reservoir or additional wells, [fifteen] reported shortage of water supply in storage, [four] need filter plant extensions, [twenty-seven] report need to expand distribution system, and [nine] require more pumping capacity" (p. 9).

[48] Found in undated letter in Carl Albert papers, Departmental Series, box 22, folder 5; U.S. Congress, *Washita Project*, Published Hearing, 25 April 1955, p.6.

They had finally won Eisenhower's explicit approval for the project, but Washita Project's supporters and their congressional representatives still had to overcome another hurdle. In April 1955, the Washita project again came before Senate Committee on Interior and Insular Affairs. Since 1953, when the bill had first been introduced, the project's estimated cost had risen from $29,197,000 to $31,750,000. More importantly, the cost allocated to municipal and industrial water supply had risen from $10,370,000 to $15,200,000 in the new budget, while the cost allocated to flood control had dropped from $14,417,000 to $9,475,000. With these changes, nearly five million dollars of the project's estimated cost had been transferred from the federal government to local interests. To the committee, Kerr stressed the broad policy implications from this change: "the budget department is seeking to compel or persuade this Congress to arbitrarily change the benefit element in the authorization estimates by saying that we will allocate a smaller amount of the cost to flood control in the future than we have in the past. The…result of that…would be that a great portion of the projects which Congress wants to authorize could not be authorized[.]" He urged the committee to report the bill out according to its original 1953 budget.[49]

Basin witnesses again stressed their drought-related water shortages. Cordell resident and WBIA member Houston Hulin explained that water levels in the existing reservoirs to supply Cordell and Hobart had gotten so low that locals removed fish in order to save them. After the Washita bill had failed to pass the previous year, Cordell residents had voted bonds to drill several wells, but had not found a suitable water supply. WBIA chairman Albert Connel explained that

[49]U.S. Congress, *Washita Project*, Published Hearing, 25 April 1955, pp. 3, 8.

Chickasha residents used sand bags to capture enough WashitaRiver water for their intake pumps. On the matter of cost allocations, Connel pleaded, "[w]e realize that the Bureau of Reclamation is not directly responsible for supplying municipal water, but since this is a multipurpose project and so much of it is reimbursable to the government, the citizens of that area feel that the Bureau of Reclamation has worked out a very fine plan." And he repeated the regional economic and industrial benefits to accrue from the project, adding "our towns have had bitter experiences with individual stop-gap water-supply measures which provide only for the present or immediate future and which result in recurring problems with no provision for growth and development."[50]

Drought conditions and frustration with the Budget Bureau's new standards made for a sympathetic audience in the hearings. Informed that the change in flood-control allocations from $15,400,000 to $9,475,000 was an administrative decision which arose from the Budget Bureau's conditional approval for the project, New Mexico senator Clinton Anderson fumed: "I have been kicking about the Bureau of the Budget taking over the functions of the Government without proper legal authority for a long time." To make his point, Anderson briefly stopped the proceedings and read into the record section 9(a) of the 1939 Reclamation Act: "In connection with a new project, new division of a project, or supplemental works on the project, there may be allocated to flood control or navigation the part of said total estimate which the Secretary may find to be proper." His frustration growing, Anderson continued: "[the Interior Secretary]….proceeded to find out that this [Washita] project was feasible and

[50]Ibid., pp. 27-8, 43.

workable, and was about to be passed by the Congress. So along comes the Bureau of the Budget and said, 'Wait a minute. Never mind what the Congress or Secretary wants. We are going to handle this all by ourselves.' I do not find anything in the Constitution or anything in the laws that says the Congress has been superseded by the Bureau of the Budget."[51]

Still, while he was unhappy that the Budget Bureau had reduced the federal contribution to flood control on the project, Anderson had to remind even Oklahoma senator Mike Monroney to respect the project's flood control features when describing its benefits. When Monroney explained to the committee that "the Interior Department's new formula…would make the cost of the water [for] these municipalities uneconomic and, therefore would defeat the very purpose of this legislation[,]"Anderson quickly interjected: "I like to believe this is a great flood-control project and not a municipal water-supply project." He then reminded Monroney not to "lose sight of the fact that flood control is the real important factor in this whole program, and we ought not to cut it down so that somebody would pick up the figure that it is not very important..." Quickly Monroney agreed "1,000 percent," then explained, "we have supported numerous projects in reclamation that are on dry land that does not have population and does not have a going industry and a going economy. This we are begging and pleading to salvage and save, an area that without this help will go down to a very, very serious economic crisis." The Senate passed the bill again in 1955.[52]

[51]Ibid., pp. 26-7.
[52]Ibid., pp. 48-9.

The bill did not come of out the House Committee on Interior and Insular Affairs in time for passage in 1955.[53] Before the House one final time in early 1956, final arguments for the project were practical and sympathetic. Oklahoma representative Carl Albert defended the bill for practical reasons: "flood-control reservoirs have been recommended for many years in the Washita system at a cost of more than $20 million. The flood-control portion of these projects under the [Reclamation Bureau] program will amount to some $15 million. So the flood-control cost to the Federal Government has been decreased. The point is the Federal Government will get $20 million worth of flood control for $15 million by adopting this bill." Utah congressman William Dawson added: "This question of water is a matter of life and death with us….This is one of those projects where the Government must step in, where you have a combination of flood control and also municipal uses of water….We should at least give those folks in that drought-stricken area a break."[54]

President Eisenhower approved the Washita Project on 25 February 1956. He saw it as an exceptional case, though. Following his approval, he criticized it for departing from the "fundamental principle" that each purpose of a multiple-purpose project "bear its own share of the costs[.]" Eisenhower explained:

> To this extent, the bill could establish an undesirable precedent for similar handling of other projects without regard to the excess costs to the Federal Government which result from such a method of cost allocation. I shall not consider approval of this bill as such a

[53] Carl Albert 30 July 1955 letter to Albert Connel and Jack Stamper, p. 1, in Carl Albert papers, General Series, box 8, folder 24.

[54] "It would be the part of wisdom to catch this water and sell it to the municipalities, and at the same time decrease the contribution that the Federal Government must make to provide flood control," Albert stressed. Albert and Dawson quotes in Congressional Record, House, 9 February 1956, p. 2449.

> precedent, but rather as recognition of special circumstances and acceptance of the result of the extensive negotiations between the Federal agencies and local interests which were conducted in the development of the project.

With more foresight, California Representative Clair Engle had predicted in the House that year: "[the Washita] project indicates a format of which we are going to see more as time goes along, and that is instead of the single-purpose flood-control projects, we are going to build these as multiple-purpose projects in order to catch the floodwaters and save this floodwater for subsequent use."[55]

Drought, political pressure and frustration with administrative obstacles had pushed the Washita bill through Congress. And while Eisenhower may have stressed that it was not to precede other similar projects, the bill's passage was at least a pretext to greater federal support for municipal water supply projects. From 1956 to 1958 Oklahoma Senator Robert Kerr introduced and drove a federal bill to make it easier for Bureau of Reclamation and Army Corps of Engineers dams to supply municipal water.

Kerr's experiences in southwestern Oklahoma's WashitaBasin clearly informed his desire to expand the Reclamation Bureau's capacity to provide municipal water supplies. He wanted to expand the Corps' capacity in part from his experiences on another Red River tributary, the Little River, in southeastern Oklahoma and southwestern Arkansas. There, just as in the Washita basin, flood control, drought, and water supply concerns intersected during the 1950s, as

[55]*Oklahoman*, 19 April 1956, p. 41; "Statement of the President upon Signing Bill Authorizing Washita River Basin Reclamation Project, Oklahoma. February 25, 1956," in *Public Papers of the Presidents, Dwight D. Eisenhower, 1956*, p. 260; Clair Engle, Congressional Record, House, 9 February 1956, p. 2445.

Oklahoma and Arkansas upstream dam advocates struggled to revise a Corps of Engineers plan to control Red River floods downstream, in Louisiana.

The original plan, authorized in the 1946 Flood Control Act, called for a Corps of Engineers dam (Millwood) on the Little River in southwest Arkansas to control downstream floods on the Red River in Louisiana. Upstream Oklahoma and Arkansas civic groups, along with their congressional representatives, opposed the plan because it offered them few benefits and because it would flood valuable hardwood timber stands that were critical to regional logging and milling industries. Carl Albert later recalled that the Millwood and other dams authorized in 1946 would not benefit Oklahoma because they "were purely for downstream flood control[.]" In fact they would adversely affect Oklahoma, he explained, because "they would back up the floodwaters for miles, spreading the floods' damages." In 1949, Albert protested that southern Oklahoma had already given enough land to flood control above the controversial Denison Dam without receiving its share of benefits, and he wanted the engineers to try "'conscientiously'…to find upstream locations that 'will give McCurtain county protection from floods as well as the lower Red River.'"[56]

Responding to this pressure, in 1950 Congress directed the Corps to study alternate sites for the Millwood Dam, including "additional reservoir sites in the Little River Basin[.]" During the early 1950s, the agency also studied regional flood control as part of the Arkansas-White-Red Basins Interagency Committee (AWRBIAC) to coordinate multi-purpose water development in Oklahoma and

[56]*Oklahoman*, 20 March 1947, p. 40; *Oklahoman*, 12 April 1949, p. 7; *Oklahoman*, 7 March 1954, p. 115;Carl Albert, *Little Giant: The Life and Times of Speaker Carl Albert* (Norman: University of Oklahoma Press, 1990),p. 193.

Arkansas.[57] Robert Kerr had acquired the AWRBIAC in the Senate, as a way to "resolve conflicts among the various federal agencies responsible for water development, interstate disputes, federal-state disagreements, and clashes between advocates of 'big dams' versus 'little dams.'"[58]

As the Corps studied flood control options along the Red River and in the Little River Basin, Oklahoma representatives pressured the agency to consider thoroughly (and favorably) all of its upstream options. In March 1953, before upcoming Red River bank stabilization plan hearings, for instance, Robert Kerr wrote to Corps Tulsa District Engineer Colonel E. G. Herb: "I hope that, in connection with the bank stabilization problem, which in a sense is a flood control problem as well, the Corps of Engineers will take into account the tributary reservoirs on the north side of [the] Red River in Oklahoma....The time has come when we must give more consideration to the beneficial use of stored water for municipal and industrial use for irrigation, and for hydroelectric power than in the past." For good measure, Kerr added that "[t]he tributary reservoirs above mentioned could be utilized to a greater extent and more economically than water stored downstream where they are less accessible for use[.]" Reinforcing Kerr's position, in May 1954, Oklahoma Planning and Resources Board officials

[57] Stanley G. Reiff 29 October 1954 letter to Robert S. Kerr, p. 1, in Robert Kerr papers, Conservation Series, box 10, folder 4; U.S. Congress, Senate, *Civil Functions, Department of the Army, Appropriation Bill, Fiscal Year 1950*, 81st Congress, 1st Session, 10 May 1949, p. 11; Morgan, *The Senate Years*, p. 148. Recalled Carl Albert decades later: "[AWRBIAC] solved my problems on the Red River. Emphasizing interagency cooperation and broad public purposes, its stacks of reports and recommendations gave me the ammunition to change the 1946 authorization in favor of a string of multipurpose dams bringing enormous benefit to southeastern Oklahoma." In Albert, *Little Giant*, p. 193.

[58] For Kerr, an inclusive and comprehensive basin-wide approach to water development had added merits, explained Morgan, because "the ratio of costs and benefits was computed basinwide [sic], not for each individual project[,]" and because "the basin concept…broadened the political support in Congress." The AWRBIAC "affected eight states - one sixth of the Senate and fifty-five members of the House." In Morgan, *The Senate Years*, p. 148.

requested that Corps Tulsa District Engineer Colonel Stanley G. Reiff, "consider in your [Millwood and alternate reservoir] planning…the inclusion of all economically feasible space for the storage of industrial and municipal water in any upsteam dam site you may study. This State would not want such reservoirs constructed without such storage and at the proper time will request proper State authority for funds with which to pay for such space."[59]

In September 1954 the Army Corps of Engineers presented to Oklahoma, Arkansas and Louisiana representatives, and to regional upstream and downstream interests, a compromise plan to reduce the Millwood dam's flood control capacity by approximately twenty-five percent, "with equivalent flood control to be provided in a system of seven upstream reservoirs." This proposal, Corps officials hoped, would assure downstream interests that their protection from floods would not be diminished, and simultaneously assure upstream interests eager to protect timber stands and secure water supply storage. As he explained the proposal to Kerr, Reiff emphasized that "[i]n order to justify the proposed system, it would be necessary to obtain substantial water supply benefits." And he reminded Kerr that "[u]nder present criteria for project analysis as set forth by the Bureau of the Budget, the financing of the water supply portion of the proposed plan is the responsibility of state and local interests."[60]

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[59] Robert S. Kerr 4 March 1953 letter to E. G. Herb, p. 1, in Robert S. Kerr papers, Conservation Series, box 11, folder 13; Report of the District Engineer, 15 October 1955, p. 22, in U.S. Congress, House, *Millwood Reservoir and Alternate Reservoirs, Little River, Oklahoma and Arkansas* (H.Doc. 170), 85th Congress, 1st Session, 29 April 1957.

[60] Report of the District Engineer, 15 October 1955, p. 16, in U.S. Congress, *Millwood Reservoir* (H.Doc. 170), 29 April 1957. The plan was generally well-received. Oklahomans wanted an upstream dam built concurrent to the Millwood Dam, Arkansas interests wanted water supply storage in the upstream reservoirs, and downstream Louisiana representatives wanted to ensure no

In October 1955, the Corps officially reported its modified plan. Since the previous fall, the plan had been modified to reduce (from seven to six) the number of upstream dams and to exclude hydro-electric facilities from the upstream reservoirs, but water storage remained a key feature of the plan, with an estimated overall yield of nearly 500 million gallons per day from the upstream dams. Reiff saw the plan's drought mitigation and economic development potential. "Judging by developments during the period 1952 to 1954, when the worst drought on record struck portions of the States of Oklahoma and Texas….[and] [i]n view of the increasing need of water for domestic and industrial purposes in the southwestern part of the United States," he explained, "it appears reasonable to expect increasing demand for the excellent water of the Little River Basin." Again, he emphasized that to make the project work "[m]ore than half of the cost of upstream reservoir projects would have to be repaid by non-Federal interests under existing requirements of local cooperation in conjunction with water supply storage." By law, the local or state contribution had to be made prior to or during the project's construction.[61]

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lost flood control capacity in the new plan; Stanley G. Reiff 29 October 1954 letter to Robert S. Kerr, p. 1, in Robert Kerr papers, Conservation Series, box 10, folder 4.

[61]Reiff also explained that since "representatives of some of the largest cities in these States expressed interest in long-range water supply plans of major extent [during the drought], it is considered that potential users of this water should not be limited in location to the Little River Basin, but should include municipalities and industries within a radius of 100 miles or more, possibly as far away as the Oklahoma City or the Dallas and Fort Worth areas." In U.S. Congress, *Millwood Reservoir*, (H.Doc. 170), 29 April 1957, pp. 17, 22, 34-5. In a 23 May 1957 letter concerning another reservoir (Boswell) in southeast Oklahoma, Corps of Engineers General E.C. Itschner explained to Kerr that "the War Department Civil Functions Act Appropriations Act, 1938 (Public Law 208, 75th Congress) makes general authority available to the Secretary of the Army to provide additional storage capacity in authorized flood control reservoirs, on recommendation of the Chief of Engineers, on condition that the cost of such increased storage capacity is contributed by local agencies. The contribution by local agencies must be made prior to or during construction in order that such funds may be expended in connection with funds appropriated by the United

Months before Reiff presented the modified plan, Kerr had begun to build support and seek a co-sponsor for a bill to facilitate water supply storage in federal dams. In June 1955, he wrote to several Senate colleagues of "the desirability and necessity of having legislation considered which would give the Corps of Engineers authority to enter into contracts to furnish water for municipal and industrial supplies from flood control, river and harbor projects." A new law was necessary, Kerr explained, because "presently many cities are not financially able to enter into contracts with the Corps of Engineers on a 'partnership' basis, at the time the projects are constructed." In their 1953 report to Governor Murray, OSPE had explained how this provision presented a significant obstacle to growth, especially for small communities trying to supply markets that did not yet exist. Corps of Engineers and Reclamation Bureau flood control, power and irrigation projects could include space for municipal water supply provided that those agencies had "a firm responsible agreement to pay for or contract to rent such space over the years" reported the engineers. Cities might borrow from banks, they also noted, but "[s]ufficient collateral wealth to tax or immediate income must be apparent to enlist this aid." Without adequate water supplies to begin with, however, few water-hungry towns and cities had the urban development that would qualify as sufficient collateral wealth to attract water development investors. "As a result," concluded the engineers, "aside from a few wealthy communities and a few others located close to unusual and cheap sources of water, few towns and cities in Oklahoma can finance the storage of water for large

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States for the construction work." In E.C. Itschner 23 May 1957 letter to Robert S. Kerr, p. 1, in Robert Kerr papers, Conservation Series, box 11, folder 14.

consumptive use….As a result drouth finds some communities using stagnate[sic] water…while other communities with insufficient water to meet the needs of even a small industry wonder why no one ever suggests locating such a plant within their limits."[62]

To remedy this situation, Kerr proposed to the senators a new law "patterned generally after Section 9 (c) of the Reclamation Project Act of 1939, which provided the Secretary of the Interior with authority to enter into contracts with cities and industries for water supplies from projects built by the Bureau of Reclamation for irrigation and the development of hydroelectric power." Whereas water supply storage in Corps dams required advanced payment, Section 9 (c) of the 1939 reclamation law gave cities "forty years from the year in which water [was] first delivered" to repay the federal government.[63]

The nature and timing of Kerr's proposal reflected more than Colonel Reiff's assessment that any upstream dams, to be cost effective, would need to store municipal and industrial water for which users must pay in advance. After several years of drought, Oklahoma cities clamored for water to secure their futures. In May 1954, for instance, the Oklahoma Municipal League explained to

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[62] Report of the District Engineer, 15 October 1955, p. 23, in U.S. Congress, *Millwood Reservoir* (H.Doc 170) 29 April 1957; Robert S. Kerr 21 June 1955 letter to Prescott Bush (and other senators), p. 1, in Robert S. Kerr papers, Legislative Series, box 23, folder 28. South Dakota senator Francis H. Case ultimately co-sponsored the successful bill;*Report to the Governor of Oklahoma on the Problem of Municipal and Industrial Water Supplies for Oklahoma*, 8 January 1953, pp. 13, 27.

[63] Robert S. Kerr 21 June 1955 letter to Prescott Bush (and other senators), p. 1, in Robert S. Kerr papers, Legislative Series, box 23, folder 28; Section 9 (c) of 1939 Reclamation Project Act, in U.S. Department of the Interior, *Federal Reclamation Laws Annotated, Volume I: 2 March 1861 – 14 August 1946* (Washington: U.S. Government Printing Office, 1958), pp. 597-8. Kerr's new law liberalized the 1939 Reclamation law further since the earlier law explicitly held that "[n]o contract relating to municipal water supply…or to electric power…shall be made unless…it will not impair the efficiency of the project for irrigation purposes" (pp. 597-8). Kerr's bill did not include this emphasis on irrigation.

candidates in an upcoming gubernatorial race: "Undoubtedly Oklahoma's greatest long range municipal problem is the chronic shortage of water. Our cities and towns cannot live without it. They cannot grow without an adequate supply." As it faced water shortages during the early 1950s, Oklahoma City commissioned water supply studies for the city and its environs. In 1954, consulting engineer C.E. Bretz reported to the City Council that southeast Oklahoma's Red River tributaries could best meet the city's needs. And to the Oklahoma City Chamber of Commerce in 1955, army engineer Colonel F.J. Wilson proposed a "joint navigation-water conveyance facility" to move water and traffic from eastern and southeastern Oklahoma to the state's center.[64] These concerns informed Kerr's proposal. In March and June 1955 both the Senate and House Public Works Committees adopted resolutions instructing the Corps of Engineers to investigate Wilson's navigation and water conveyance plan more deeply.[65] Subsequent letters to army engineers from Arkansas Governor OrvalFaubus and Oklahoma Governor Raymond Gary strengthened the case for tributary water supply dams in southeast Oklahoma. To Corps Major General Emerson Itschner, for instance, Faubus explained, "the great drought area recently inspected by President Eisenhower has to some extent crept into eastern Oklahoma and Texas and into western

[64] *'The Principal Problems of Oklahoma's City and Town Governments,' prepared by the Oklahoma Municipal League, 28 May 1954*, p. 1, in June Benson Papers, Series 4, box 3, folder 5; William Settle Jr., *The Dawning: A New Day for the Southwest (A History of the Tulsa District Corps of Engineers, 1939-1971)* (Tulsa: U.S. Army Corps of Engineers, 1975), p. 124. In fact, Kerr's awareness of a proposed navigation route to Oklahoma City dated from his position as the state governor, in the early 1940s. Then, as he acquired the ArkansasBasin development idea, Kerr learned that he would need to convince all Oklahomans, especially Oklahoma City civic and business leaders, that ArkansasBasin water development would benefit the entire state, not just the Tulsa area. In Anne H. Morgan, *The Senate Years*, pp. 146-7.

[65] In his 1960 'Initial Findings' report on the proposal, the Tulsa District Engineer discounted the navigation plan's feasibility but recommended further study of the water conveyance plan. InWilliam Settle Jr., *The Dawning*, p. 124.

Arkansas….many cities, such as Texarkana…and the cities of Magnolia, Hope, Ashdown, and others in Arkansas are very interested in this project because of the possibility of furnishing water for municipal and other uses[.]" And to Acting Corps of Engineers Chief Charles G. Houle, Gary wrote, "[t]he state of Oklahoma at this time holds a copy of a request to the district engineer at Tulsa, Oklahoma, from a city in Texas, requesting substantially more storage in the project area under discussion than the total water supply storage provided for in the six upstream reservoirs contained in the report. The expanded use of water and the pressing demands for municipal, industrial and power needs for it persuade us to believe that we cannot overdevelop these projects."[66]

Kerr's bill also certainly reflected his growing power in the Senate. In 1955, Kerr became chairman of the Flood Control and Rivers and Harbors Subcommittee of the Senate Public Works Committee. The position meant that his support was crucial to other congressmen pursuing their own water projects. In 1956 and early 1958, Kerr tied the water supply idea to omnibus river, harbor and flood control bills, both of which Eisenhower vetoed because they contained projects, including the modified Millwood Dam, "deemed unfeasible by the budget bureau and the U.S. Army Corps of Engineers[.]" To get the bill passed during the 1958 election year, however, Congress met Eisenhower's demands and cut from nearly $100 million in 'unfeasible' projects. To secure President Eisenhower's support for the bill, for instance, Kerr accepted a Budget Bureau cost formula that reduced the federal contribution by increasing the Millwood dam's water supply

[66]OrvalFaubus 22 January 1957 letter to Emerson C. Itschner, p. xi, and Raymond Gary 24 October 1956 letter to Charles G. Houle, p. x, both in U.S. Congress, *Millwood Reservoir* (H.Doc 170), 29 April 1957.

benefits. Likely at work too was Kerr's political strength in the Senate. After Eisenhower had delayed funds to Kerr's Arkansas Project in order to rebuild flood-damaged northeastern states in early 1956, Kerr had threatened to "'fight every inch of the way'" and to use his Public Works Subcommittee chairmanship to "bottle up" other projects until his interests were met. Eisenhower signed the bill on 3 July 1958.[67]

As finally passed, the Water Supply Act was Title III of the 1958 omnibus rivers, harbors and flood control act that authorized (in Titles I and II) just over $1.5 billion dollars in new navigation, beach erosion and flood control projects, including the modified Millwood Project. Title III (the Water Supply Act) authorized the Bureau of Reclamation and the Army Corps of Engineers to allocate a maximum of thirty percent of a dam's storage capacity to municipal water supplies for which local communities could defer payments and interest until they began to use the water or for ten years, whichever came first. Once a community began to use the stored water, it would begin to repay construction costs, with the entire balance to be settled within a maximum of fifty years from

[67] Richard Lowitt explained that Kerr's "most useful power base emanated from chairing the Subcommittee on Flood Control and Appropriations because it made him an ex-officio member of the Senate Appropriations Committee (with full voting rights) and the Appropriations Conference Committee." In Richard Lowitt, *American Outback: The Oklahoma Panhandle in the Twentieth Century* (Lubbock: TexasTechUniversity, 2006), pp. 69-70; *Oklahoman*, 5 June 1958, p. 28; *Congress and the Nation, 1945-1964*, p. 858;*Congressional Record*, House, 25 June 1958, p. 12254. Instead of $10,700,000, the agency wanted $55,800,000 allocated to water supply. In*Oklahoman*, 5 June 1958, p. 28; Morgan, *The Senate Years*, p. 162; The bill passed the Senate by a vote of seventy-five to one. The lone 'nay' vote came from New Hampshire senator Norris Cotton because the bill would add to long list of already authorized, but unfinanced and incomplete public works projects. In *Congressional Record*, Senate, 7 July 1958, p. 13033. In the House, California representative B.F. Sisk, whose district lost two proposed flood control projects in amendments to meet Eisenhower's approval, explained that his support for the bill came "most reluctantly, because I consider it marks a surrender of the legitimate and proper authority of the Congress to a power-hungry Bureau of the Budget." In*Congressional Record*, House, 17 June 1958, p. 11496 and 18 June 1958, p. 11623.

the project's construction.[68] Previously, Corps of Engineers and Bureau of Reclamation projects could provide municipal water storage, but the innovation in Title III, reported the Senate Public Works Committee, was the "provision of water-supply storage in reservoirs where it is apparent that there will be a future demand for such storage but where the demand is not pressing at the time of construction."[69] It provided small and stagnant communities like those along the WashitaRiver an opportunity to attract municipal and industrial consumers with the promise of stable water supplies. Not only did this provision anticipate growth, observed historian Anne H. Morgan, "it also was a step in liberalizing the cost/benefit criteria used to determine a water proposal's economic feasibility.[70]

In *CadillacDesert*, a respected study of western water policy, the journalist Marc Reisner described the Water Supply Act as a congressional effort to prevent Corps of Engineers dams from unfairly subsidizing large-scale irrigation farmers. Specifically, he saw the law as a congressional reaction to a "covert liaison between the Corps of Engineers and the world's largest irrigation farmers[,]" on the Kings and Kern rivers in California's TulareBasin during the 1940s. There, in 1948, following an 11-year competition with the Bureau of Reclamation, the Corps of Engineers successfully received funding to build two flood control dams that

[68]*Congressional Record*, House, 25 June 1958, p. 12252. Explaining how they had arrived at the figure of thirty percent, South Dakota Senator Francis H. Case explained to the Senate that both he and Kerr had conferred with Budget Bureau officials and held some informal hearings from which they "thought it might be appropriate to use the figure of 30 percent….used on many PWA projects." *Congressional Record*, Senate, 17 June 1958, p. 11496.
[69]*Congressional Record*, Senate, 17 June 1958, p. 11497.
[70] Morgan, *The Senate Years*, p. 169. To combine individual bills for single projects in an omnibus bill was another Kerr innovation to neutralize opposition, explained Morgan (who credited the observation to Congressman Paul Douglas), because through it, irrigation supporters and rivers and harbors supporters from both parties "were now tied together as allies, instead of competing as rivals" (p. 170).

benefited a few large-scale downstream irrigation farmers. "There was so much resentment over the fact that [California's] biggest growers had gotten an enormous supply of water virtually free from the Corps[,]" observed Reisner, "that a number of Congressmen vowed never to let it happen again, and the result was Title III."[71]

Events in Oklahoma indicate the Water Supply Act's different roots. Instead of an effort to restrict Corps of Engineers activities, the law was intended to broaden both Corps of Engineers and Bureau of Reclamation capacity to supply water to growing cities. It fit with the "broadening range of purposes that [federal] agencies were directed to consider" after World War II, and especially the Reclamation Bureau's shift "from the rural to the urban West" after the 1930s.[72]Oklahoma senator Robert Kerr introduced and pushed the bill through the Senate, not during the late 1940s, but during the mid-1950s. The law reflected the needs of small, drought-stricken Washita Basin towns without the collateral to jumpstart a Bureau of Reclamation water supply project, and similar circumstance in southeastern Oklahoma and Arkansas, where the Corps of Engineers required drought-stricken consumers to pay in advance for water supply space.[73] As the Senate discussed the bill during its final stages, South Dakota senator Case

[71] For this reason, Reisner emphasized the law's restrictive context, and explained that Title III of the 1958 Water Supply Act "allowed water from a federal dam to be sold to another political entity, such as a city or a state provided the water was used only for municipal or industrial purposes – that is, not for irrigation." In Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (New York: Penguin Books, 1993, first 1986), pp. 179, 196.
[72] Richard Andrews, *Managing the Environment, Managing Ourselves: A History of American Environmental Policy* (New Haven: Yale University Press, 1999), p. 176; Pisani, "The Bureau of Reclamation and the West, 1945-2000," p. 64.
[73] In *Rivers of Empire*, the historian Donald Worster discusses water for cities like Tulsa (navigation) (p. 264) and Phoenix-Tuscon through the Central Arizona Project (p. 275) but he pays little attention to smaller cities and towns that needed water supplies. See Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (Oxford: Oxford University Press, 1985), pp. 264, 275.

explained that "the major credit for the bill being before the Senate in its present form is due to the leadership of the Senator from Oklahoma."[74] In 1958, the Senate Public Works Committee reported that it "considers title III to be one of the most important parts of the bill because of the increasingly acute water shortages which are developing not only in the more arid sections of the country but also in humid areas."[75] And contemporary observers noted that "[t]he purpose of the Water Supply Act was to provide in advance for meeting the needs of growing communities. The Act was a good example of the developing trend in federal water policy to stress the need for municipal and industrial water supply projects as the nation's population continued to enlarge rapidly."[76]

The law also reflected tensions surrounding the Eisenhower administration's tight budgetary policies, especially the growing power of the Budget Bureau as it administered Circular A-47. Tulsa Corps of Engineers historian William A. Settle rooted that tension among Oklahoma's congressmen: "more and more with the growth of budgetary planning it became necessary for the Corps, in making recommendations, to stay within the budgetary limitations set by the President through the Bureau of the Budget. Congress, not the Corps, fought with the Bureau of the Budget….[and] in 1955 and 1956 Congressmen from Oklahoma and Arkansas refused to be bound by budgetary restrictions." More

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[74]*Congressional Record*, Senate, 17 June 1958, p. 11498. While he was governor in the early 1940s, wrote Corps of Engineers historian William Settle Jr., "Kerr proposed at a special meeting called by the Oklahoma City Chamber of Commerce and presided over by publisher E.K. Gaylord, that the city become interested in navigation to central Oklahoma." Settle was discussing the origins and (unsuccessful) development of the Central Oklahoma Project. In Settle Jr., *The Dawning*, pp. 123-5.

[75]*Congressional Record*, Senate, 17 June 1958, p. 11497. This passage also appears in: U.S. Congress, Senate, Committee on Public Works, *Summary of Legislative Activities*, 85th Congress, 2nd Session, Washington, D.C., August 1958, p. 20.

[76]*Congress and the Nation, 1945-1964*, p. 858.

broadly still, the Water Supply Act revealed the limits to public support for Eisenhower's partnership principle. "Fiscal soundness and engineering feasibility were desirable," observed historian Richard Elmo, "but not if they resulted in fewer appropriations."[77]

[77] Settle Jr., *The Dawning*, p. 100; Richardson, *Dams, Parks and Politics*, p. 127.

Conclusion

During 1959, the Senate Select Committee on National Water Resources held nationwide hearings to determine the country's future water needs. In November 1959, the committee assembled in Oklahoma City to hear local and regional concerns. To the audience, Oklahoma Association of Soil Conservation Districts president Lavern Fishel explained:

> Back in the 1930's, during the Dust Bowl days…the Nation became aware of the needs of soil conservation….
>
> Likewise, during the drought years of more recent date when agricultural cities and towns were experiencing critical water shortages, the Nation took a new look at what needed to be done to develop and utilize our water for the beneficial use of mankind.
>
> This, even today, is more important because of the increased consumption of water and the rapid increase in population. Demands for pure and usable water will be greater with each passing day….
>
> As our country grows the various segments of our society become more interdependent. Agriculture cannot stand alone. Neither can a town or city.[1]

Fishel defended the upstream dam program against growing urban and industrial priorities that he believed would threaten its future. Directly, his testimony reflected recent tensions in the WashitaBasin. There, drought-stricken residents had reversed their commitment to upstream flood control dams for agriculture in favor of bigger dams to supply municipal water for area towns. More broadly, however, Fishel's testimony reflected new priorities in Oklahoma after World War

[1]U.S. Congress.Senate.Select Committee on National Water Resources.Hearings.*Water Resources: Part 15*, 86th Congress, 1st Session, Oklahoma City, 30 November 1959, p. 2380.

II as municipal and commercial intersts usurped agriculture's social and economic importance. The drought revealed those priorities.

From the 1870s to the 1950s, Oklahoma's agricultural economy continually changed. Nineteenth-century attitudes prized independence and self-reliance. Drought brought agricultural adaptations, technical innovations and legislative reforms, but almost no federal relief. Drought also heightened expert authority. Farmers who took expert advice to diversify their farms soon expected experiment station advice on a range of issues including disease control and seed testing. Overproduction and low crop prices oriented farmers toward the federal government. By the 1930s, contemporaries understood the drought that ravaged Plains farmers to be an agricultural problem best solved through agricultural adjustments. New Deal planners responded to low crop prices and devastating dust storms by introducing programs to limit production, conserve soil and water, relocate desperate farmers, and assume control and ownership of marginal and vulnerable land. After World War II, by contrast, growing cities and industries challenged the state's rural and agricultural heritage. Farms got bigger and the number of farms shrank as producers invested in new technologies to increase production. To make ends meet, many smaller operators held off-farm jobs.

When drought and dust storms hit the Southern Plains during the late 1940s and early 1950s, emergency erosion control and soil and water conservation neglected farmers' long-term economic interests. Requests for specific assistance to protect farmers' crop allotments and allow time to recover from the disaster were significant for several reasons. First, they revealed contradictions to federal

policy since crop surplus control programs collided with soil conservation efforts. They also reflected the contemporary sense that popular conservation techniques were not universally applicable and that even dry and marginal areas contained some worthwhile farmland. It followed that conservation strategies should suit geographical and economic conditions on individual farms. Instead of broad federal control over large areas of sub-marginal and vulnerable land, officials recommended the Great Plains Conservation Program (GPCP) which gave farmers independence and flexibility to customize federal conservation assistance on their farms and ranches while protecting their allotments during dry periods. The program reflected practical and experimental experiences across the Plains. It signified that soil and water conservation was still an active process well after the lessons learned during the 1930s.

The independence and flexibility that farmers acquired through GPCP contrasted with their heightened and growing reliance on technological systems and expert advice during the drought, not just on the semi-arid Plains but also in the state's usually humid east. Throughout the drought, Oklahoma farmers requested expert advice to mitigate dry conditions. They received a collaborative message from federal and state agronomists, academics, farm editors, and manufacturers that steered them toward a concert of interrelated conservation and production systems. Irrigation exploded in Oklahoma during the 1950s, for instance, and required a range of components and chemical inputs to be fully effective. High irrigation costs compelled many farmers to produce at maximum capacity to pay for their new equipment. New technologies consolidated state

governmental, academic and industrial authority on a range of functions, including soil testing, technical instruction, and maintenance.

Initially, the federal drought program neglected the disaster's broad and dynamic character by restricting assistance to full-time farmers in designated counties. By excluding part-time farmers, the drought relief program lagged behind post-war demographic and economic patterns, including land consolidation, high production costs, and industrial development that compelled many small farmers to hold part-time jobs. By the drought's end, new laws and programs reflected a growing appreciation for the drought's broad economic implications. Amendments to the Small Business Act authorized federal disaster loans to small businesses in drought areas, and farmers with part-time industrial jobs could soon receive Farmers Home Administration (FHA) loans through the Rural Development Program. In the 1957 report '*Drouth and Other Natural Disasters*', southern plains agricultural producers, businesses, researchers, and government representatives added rhetorical support for the new developments by recommending commercial and industrial expansion to mitigate drought's economic consequences; in addition, officials relaxed FHA lending policies to permit farmers to live in towns or cities. These developments signified a shift from the idea that drought was strictly an agricultural problem that required solutions to the idea that drought mitigation required an integrated and flexible economy. Relief administration during the drought fostered another shift as Oklahoma's Department of Public Welfare assumed from county-level officials

the authority to ensure federal standards for the distribution of USDA commodity relief foodstuffs. In this way, the drought consolidated state authority.

Oklahoma's cattlemen also turned to federal officials for relief. Just as Oklahoma's farmers turned to technical experts for drought-related conservation and production advice, the state's cattlemen connected with their industry's various segments as they fought drought-related plant and animal diseases, and learned to feed relief grain. Oklahoma cattlemen joined the call for federal cattle purchases to stabilize prices. Federal price supports proved too contentious to some producers and to Agriculture Secretary Benson, prompting Oklahoma cattlemen to strengthen their ties with marketing and retailing sectors of the industry as a way to increase consumption and cattle prices. They also connected with animal health and nutrition experts as they fought drought-related plant and animal diseases and learned to feed relief grain in confined herds. Feeding relief grain to their cattle convinced them to develop a local feeding industry. The shift represented new attitudes that quickly transformed the Southern Plains. Asked early in the drought whether he considered the region to be cattle fattening country, Panhandle rancher Ladd Hitch reportedly replied, "Yes, this is a cattle-feeding country, but there aren't many cattle feeding people [here]."[2] By the drought's end, the Oklahoma Cattlemen's Association had successfully pressured the state government to remove a sales tax on cattle feed so that they could develop a local feeding industry. Shortly afterward, massive feedlot operations that currently supply much of the nation's beef began to appear in significant

[2] Donald Green, *Panhandle Pioneer: Henry C. Hitch, his ranch and his family* (Norman: University of Oklahoma Press, 1979), pp. 209, 213 (quoting from Green's personal interview with Hitch, August 3, 1976), 216.

numbers on the Southern Plains.[3] The drought helped to integrate Oklahoma's cattle industry.

Finally, the drought and industrial ambitions changed the priorities of townsfolk living in southwest Oklahoma's Washita Basin. There, as urban water supplies diminished during the early 1950s, basin townsfolk and state authorities reversed their commitment to upstream flood control dams for agricultural purposes in favor of bigger dams to provide municipal water. The episode revealed changing priorities that accompanied regional economic development and municipal growth after World War II. It also revealed the inter-agency conflict that characterized federal resource development, especially as the USDA's scope increased from individual farms to entire watersheds, and as the Reclamation Bureau's scope shifted from rural to urban projects after the 1930s. Most important for this study, the episode revealed the drought's role – along with political pressure and frustration with Budget Bureau oversight – to help local communities acquire cheaper municipal water from the federal government in the face of presidential efforts to coordinate and limit water development spending after World War II. Fueled by severe drought, the Washita Project, and similar struggles by drought-ridden southeast Oklahoma consumers, was an important prelude to the 1958 Water Supply Act, which increased federal assistance to municipal water supplies.

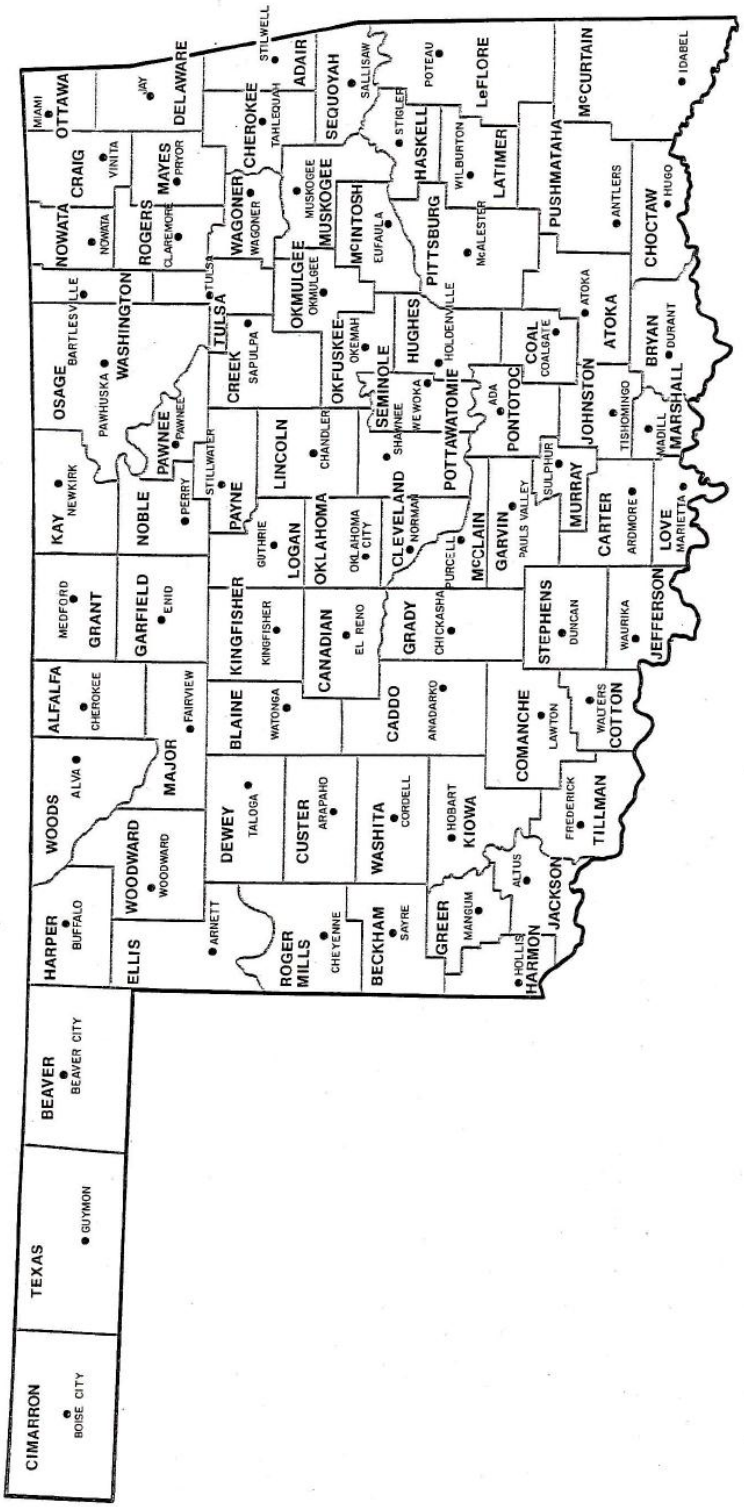
[3] Jerry Sinise, "Feedlots....Expansion in the Southwest," *Oklahoma Cowman* 9 (October 1969), p. 33.

Subsequent and recent droughts have shared important themes with Oklahoma's wide-ranging drought experiences during the 1950s. During the 1980s, for instance, the costliest drought in U.S. history stretched across the western U.S. and northern Great Plains, sparking massive wildfires at Yellowstone National Park and across the West, and disrupting Mississippi River navigation.And from the late 1990s to nearly 2010, drought afflicted large parts the western United States, Canada and Mexico, withwide-ranging effects including municipal water shortages, wildfires and insect outbreaks.[4]

These recent droughts remind us that erratic, often insufficient rainfall is a recurrent problem on the Southern Plains. They also suggest the importance of studying not only the famous drought of the 1930s but also the long dry spell of the 1950s, a time when local authorities and federal officials struggled to find solutions to the absence of rain. Certainly, we can still learn from events that occurred on farms and ranches during the 1930s Dust Bowl. But we also have much to learn from the 1950s drought, especially the disaster's implications for the broader regional economy and, more importantly, for the region's future.

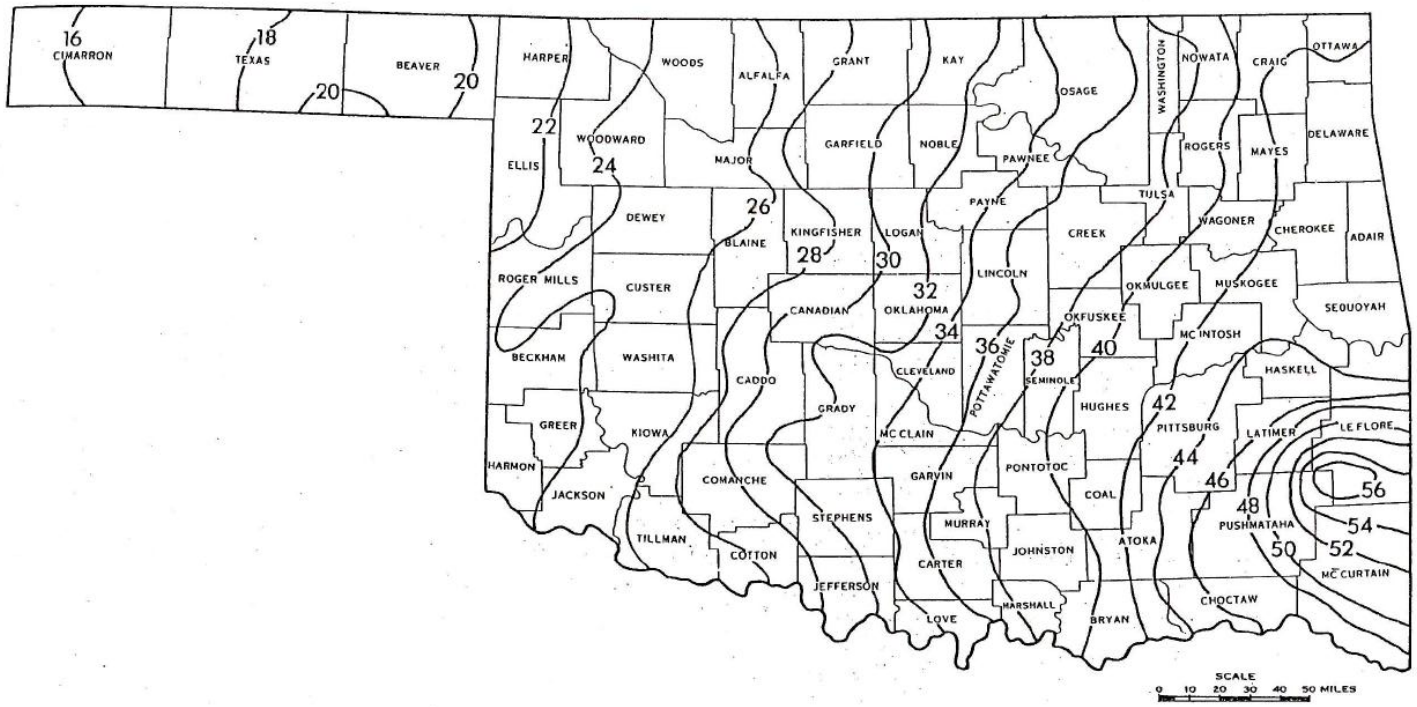
[4] Justin Sheffield and Eric Wood, *Drought: Past Problems and Future Scenarios* (London: Earthscan, 2011), pp. 126-7.

Map 1. Oklahoma Counties in 1960.



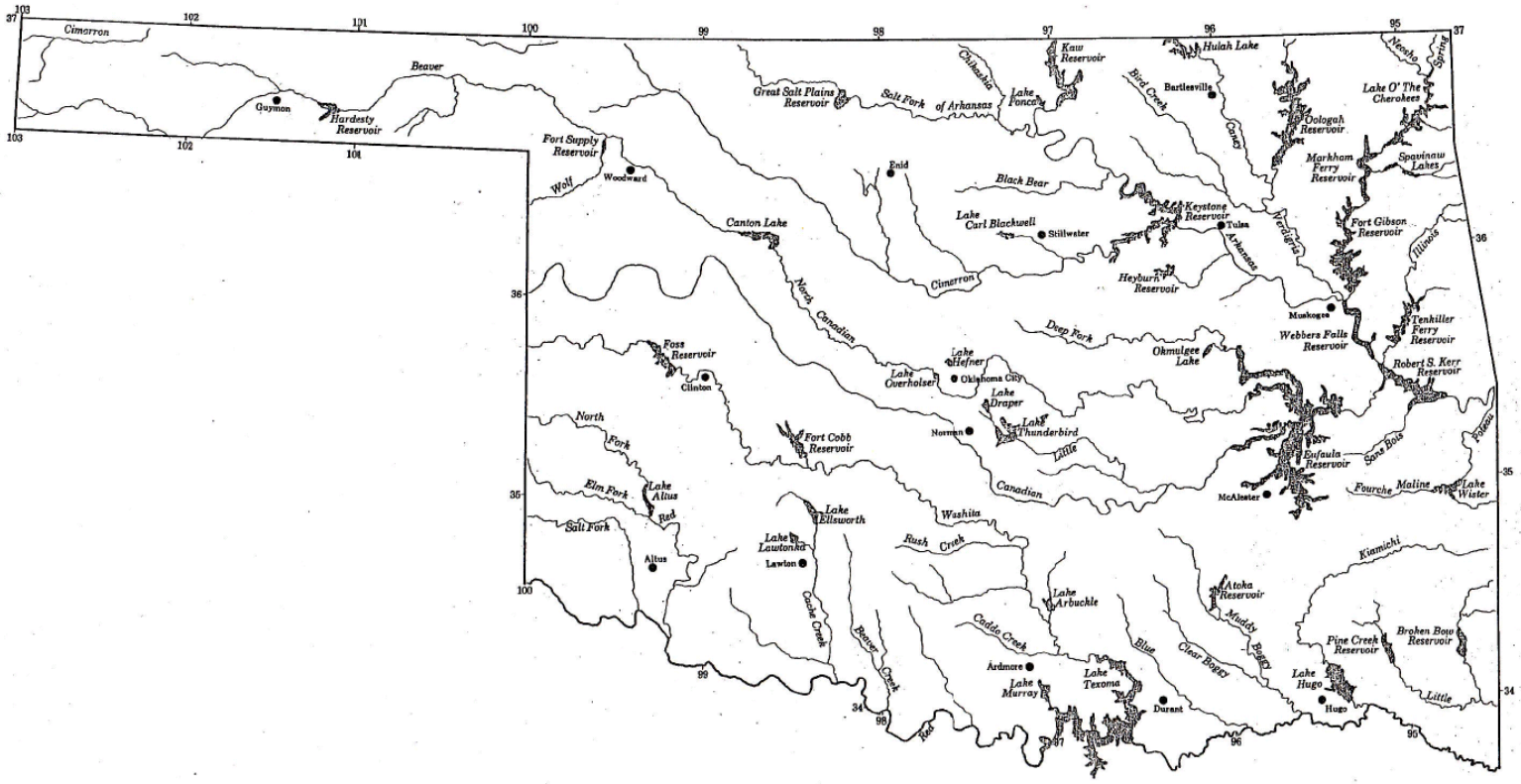
Source: Arrell Morgan Gibson, *Oklahoma: A History of Five Centuries* (Norman: University of Oklahoma Press, 1965).

Map 2. Oklahoma Average Annual Precipitation, 1930-1960



Source: Oklahoma State University Department of Geography, *Oklahoma in Maps*, January 1979.

Map 3. Oklahoma Rivers and Lakes



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