

2010

Federalization of the Mosquito: Structural Innovation in the New Deal Administrative State

Polly J. Price

Emory University School of Law

Follow this and additional works at: <https://scholarlycommons.law.emory.edu/elj>

Recommended Citation

Polly J. Price, *Federalization of the Mosquito: Structural Innovation in the New Deal Administrative State*, 60 Emory L. J. 325 (2010).

Available at: <https://scholarlycommons.law.emory.edu/elj/vol60/iss2/3>

This Article is brought to you for free and open access by the Journals at Emory Law Scholarly Commons. It has been accepted for inclusion in Emory Law Journal by an authorized editor of Emory Law Scholarly Commons. For more information, please contact law-scholarly-commons@emory.edu.

FEDERALIZATION OF THE MOSQUITO: STRUCTURAL INNOVATION IN THE NEW DEAL ADMINISTRATIVE STATE

*Polly J. Price**

INTRODUCTION	326
I. MALARIA IN THE SOUTHERN UNITED STATES: PHILANTHROPY, PRIVATE ENTERPRISE, AND LOCAL CONTROL EFFORTS	329
A. <i>State Health Departments and Private Philanthropy</i>	332
B. <i>Private Enterprise, State Regulation, and Courts</i>	335
II. FEDERAL HEALTH INTERVENTION IN THE NEW DEAL ERA	342
A. <i>Creation of the Federal Security Agency</i>	349
B. <i>The Public Health Service Act of 1944</i>	355
III. THE OFFICE OF MALARIA CONTROL IN WAR AREAS: NEGOTIATING STATE AUTHORITY	358
A. <i>An Expansion of Federal Jurisdiction</i>	360
B. <i>The Use of DDT for Mosquito Control</i>	366
CONCLUSION	373

* Professor of Law and Associated Faculty, Department of History, Emory University. This Article is from the *Emory Law Journal's* 2010 Randolph W. Thrower Symposium panel, *Re-Regulation and Government Expansion: A Historical Perspective*. My thanks to the participants in the Emory-UGA 2010 summer workshop and a Saint Louis University Law School faculty colloquium for opportunities to present earlier drafts of this Article. Joel Goldstein and Anders Walker provided particularly helpful comments. Matthew Pechous and Chad Slieper provided excellent research assistance. I also thank David Sencer, former director of the Centers for Disease Control and Prevention, for his guidance and introduction to this topic.

The South is at last being brought to the painful point of taking stock of itself and of facing in their particularity and concreteness the facts in its chronic social and economic maladjustments.

—Walter Wilbur (1934)¹

History is filled with unforeseeable situations that call for some flexibility of action.

—Franklin D. Roosevelt (1935)²

INTRODUCTION

Malaria was a significant problem in the southern United States during the early decades of the twentieth century. Part of President Franklin D. Roosevelt's New Deal focused on economic development of the South, with improvement of public health in that region as an integral part. This Article is a case study of increased federal public health efforts during the New Deal and World War II eras, which replaced some traditionally state and local areas of control as well as private philanthropic efforts.

The rise of the New Deal administrative state saw structural experimentation and innovation at a grand level; this Article's study of federal efforts to combat malaria in the southern United States provides a good example. In one decade, federal efforts ranged from Works Progress Administration employment, experiments with scientific expertise within the Tennessee Valley Authority, federal intervention in civilian areas as a war-strength rationale, and malaria control by federal appropriation. The most significant step resulted from reorganization of the New Deal administrative state under the Federal Security Agency (FSA), an independent agency of the U.S. government established pursuant to the Reorganization Act of 1939.³ The

¹ Walter Wilbur, *Special Problems of the South*, 176 ANNALS AM. ACAD. POL. & SOC. SCI. 49, 49 (1934). Wilbur, a Charleston, South Carolina lawyer, was a member of the field staff of the Federal Emergency Relief Administration when he wrote this article in 1934. Among other observations, Wilbur noted:

Take the measure of the public welfare at any point and the answer is the same: whether the statistics concern infant mortality or illiteracy, tuberculosis or venereal disease, insanity and feeble-mindedness or malaria or pellagra, crime or per capita wealth and income, the Southern States compete for place at the foot of the column.

Id. at 52.

² U.S. DEP'T OF STATE, PEACE AND WAR 272 (1943) (quoting President Franklin D. Roosevelt, Statement Approving S.J. Resolution 173 (Aug. 31, 1935)).

³ Reorganization Act of 1939, Pub. L. No. 19, 53 Stat. 561.

Reorganization Act was heralded as the first major, planned reorganization of the Executive Branch of the U.S. government since 1787.

Long-lasting effects of this New Deal-era experimentation included partnerships between the federal government and the states, and the permanent establishment of what had been a temporary wartime agency into the federal Centers for Disease Control (CDC), located in Atlanta on property donated by Emory University.⁴ The CDC is today the largest federal agency outside of the Washington, D.C. area,⁵ established in a region that at the time was highly resistant to and suspicious of federal agency activity.

Efforts to “federalize” the mosquito encountered significant limitations, and never accomplished (if indeed it had been the aim) primary federal responsibility for the eradication of malaria. Public health law in the United States is still largely a matter of state authority. Because public health was historically and firmly within the responsibilities of states, federal agencies in the New Deal era worked through state and local governments.⁶ Roosevelt’s hoped-for national health insurance scheme would not be included in the Social Security Act of 1935, and critics abounded for the lack of resources devoted to the U.S. Public Health Service.⁷ Both of these failures of New Deal aims have been attributed to the powerful position of Southern Democrats on the Senate Finance and House Ways and Means committees.⁸

But it is nonetheless the case that a greatly enhanced federal role in public health matters emerged from the New Deal era, with the South’s malaria problem as the primary impetus. To combat malaria, the federal aim was to put in place an effective administrative system of distribution—resources and expertise—without overtly usurping the traditional “police power” function of

⁴ Theodore J. Bauer, *New Home for the Communicable Disease Center*, 70 PUB. HEALTH REP. 1104, 1104 (1955).

⁵ ELIZABETH W. ETHERIDGE, *SENTINEL FOR HEALTH: A HISTORY OF THE CENTERS FOR DISEASE CONTROL*, at xv (1992).

⁶ Although malaria in the United States is no longer endemic, some rare cases occur in returning travelers. Particularly in Africa, but also in other parts of the world, malaria remains a significant health challenge. “Worldwide, between 350 and 500 million people are infected with the disease every year,” resulting in up to 3 million deaths annually. RANDALL M. PACKARD, *THE MAKING OF A TROPICAL DISEASE: A SHORT HISTORY OF MALARIA*, at xvi (2007).

⁷ Edgar Sydenstricker, *Health in the New Deal*, 176 ANNALS AM. ACAD. POL. & SOC. SCI. 131, 135, 137 (1934).

⁸ DAVID M. KENNEDY, *FREEDOM FROM FEAR: THE AMERICAN PEOPLE IN DEPRESSION AND WAR, 1929–1945*, at 262, 340 (1999); Jill Quadagno, *Physician Sovereignty and the Purchasers’ Revolt*, 29 J. HEALTH POL. POL’Y & L. 815, 816–17 (2004).

state governments, in recognition of political constraints of the time. As in other key initiatives of the New Deal, the rise of the federal administrative state required coordination and cooperation with state agencies, and in turn fostered administrative innovation at the state level.

One federal agency in particular—the Office of Malaria Control in War Areas (MCWA)—institutionalized the federal response to malaria in the South during World War II. This assertion of wartime jurisdiction maintained at least nominally the primacy of state authority. With the war’s conclusion, however, the war “emergency” ended, along with some of the MCWA’s asserted federal jurisdiction. Although the MCWA became a permanent establishment as the CDC and federal malaria-eradication efforts continued in the South, the federal “takeover,” such as it was, would not be maintained. Executive authority expanded during World War II, but in the matter of public health as a federal responsibility, this brief assertion of expanded jurisdiction would be withdrawn.

Public health federalism in the United States is a topic of interest today.⁹ The background for debate about public health federalism stems from the historical understanding that states possessed exclusive police powers with respect to the health and welfare of their citizens.¹⁰ The federal government had no such authority within states because the health and welfare of individuals was not an enumerated power in the Federal Constitution.¹¹ But despite some claims that the New Deal era profoundly altered the federalism balance in public health law, I suggest that primary state and local authority in the realm of public health remained, with no significant federal presence displacing that state authority. Recognizing that a considerable expansion of federal government health activities did occur, the federal government was still limited to a supporting role with respect to public health administration.

The occurrence of malaria in a population results from a complex interdependence of environmental circumstances and social and economic

⁹ See, e.g., James G. Hodge, Jr., *The Role of New Federalism and Public Health Law*, 12 J.L. & HEALTH 309 (1998) (reviewing the historical federal role in public health law); Wendy E. Parmet, *After September 11: Rethinking Public Health Federalism*, 30 J.L. MED. & ETHICS 201 (2002) (exploring public health federalism, including doctrinal developments that may restrict the federal government’s ability to regulate).

¹⁰ As Larry Gostin has summarized, “The states and localities have had the predominant public responsibility for population-based health services since the founding of the republic.” LAWRENCE O. GOSTIN, *PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT* 47 (2000).

¹¹ The *Federalist Papers*, among other sources, confirms this understanding prior to ratification of the U.S. Constitution. See Parmet, *supra* note 9, at 202.

relationships, dependent upon poverty and inequality as much as geography and climate.¹² The history of efforts to control malaria in the South in the early twentieth century included local, state, and federal governments, along with private philanthropy and private businesses. This division of authority and the complexity of the malaria problem expose the multifaceted nature of public health law in this period.

I. MALARIA IN THE SOUTHERN UNITED STATES: PHILANTHROPY, PRIVATE ENTERPRISE, AND LOCAL CONTROL EFFORTS

Malaria, along with other mosquito-borne diseases such as yellow fever, affected every region of U.S. territory in the late eighteenth through the mid-nineteenth centuries. By the turn of the twentieth century, however, malaria was largely a problem of the southern United States, and would remain so through the 1940s.

The South's long history of poor health is well documented, as is its distinctive picture as having the worst health in the nation throughout the nineteenth and much of the twentieth centuries.¹³ Malaria was endemic and remained the principal cause of disability and death.¹⁴ The carrier for the spread of the disease—the anopheles mosquito—was not identified until 1898.¹⁵ Its control and eventual eradication in the southern United States awaited the early decades of the twentieth century, when journalists began to make the rest of the nation aware of the South's health plight. This new publicity surrounding the “shocking state of southern health” would eventually lead to assistance from northern philanthropies and the federal government.¹⁶

In the warmer southern climate, the anopheles mosquito could survive to breed year round. Spread of the disease relied upon the mosquito vector—a mosquito became infected with the malaria parasite from a human carrier, and in turn, would spread the disease to other humans. Malaria was thus constantly present in these climates. Moreover, once the malaria parasite infected human hosts, the disease was difficult to eradicate. The only treatment until well into the twentieth century was quinine, an expensive medication, and few

¹² Charles E. Rosenberg, *Foreword* to PACKARD, *supra* note 6, at vii–ix.

¹³ James O. Breeden, *Disease as a Factor in Southern Distinctiveness*, in *DISEASE AND DISTINCTIVENESS IN THE AMERICAN SOUTH* 1, 8–9 (Todd L. Savitt & James Harvey Young eds., 1988).

¹⁴ *Id.* at 10.

¹⁵ Martin D. Young, *Scientific Exploration and Achievement in the Field of Malaria*, 52 *J. PARASITOLOGY* 3, 4 (1966).

¹⁶ *Id.* at 14.

physicians at the time recognized the need to continue the medicine long after the disappearance of symptoms of high fever, headache, nausea, and profuse sweating.¹⁷

In 1916, the American Medical Association published a report on public health work in the states.¹⁸ The author of the report, Charles V. Chapin, noted the serious burden of malaria in the South. He reported that in one small manufacturing town nearly 50% of the inhabitants had suffered in one summer from “chills and fever.”¹⁹ But he noted that little systematic work to eradicate malaria had been done by the states, and because of the tremendous burden on the people where it prevailed, it was “surprising that so little has been accomplished by state officials for its control.”²⁰

In the early years of the twentieth century, the prevalence of malaria in the South (along with other preventable diseases such as hookworm, pellagra, and typhoid) was recognized as an economic problem, one that caused extensive retardation of economic development because of its social costs and draining effect on labor. The poverty of the region, due in no small part to the presence of hookworm and malaria, drew the efforts of philanthropists and private industry well before President Roosevelt labeled the South the nation’s number one economic problem.²¹

Throughout the New Deal era, Roosevelt articulated a strategy of spending money in the South to develop the region economically, with the Tennessee Valley Authority as a prominent example. The average income in the South amounted to as little as one-quarter of what Americans in richer states earned.²² This discrepancy derived largely, as one southern senator admitted, from the different labor market imposed on the “great many colored people in the South.”²³

¹⁷ John Duffy, *The Impact of Malaria on the South*, in DISEASE AND DISTINCTIVENESS IN THE AMERICAN SOUTH, *supra* note 13, at 29, 31–32.

¹⁸ CHARLES V. CHAPIN, A REPORT ON STATE PUBLIC HEALTH WORK BASED ON A SURVEY OF STATE BOARDS OF HEALTH (Arno Press 1977) (1916).

¹⁹ *Id.* at 107.

²⁰ *Id.* at 107–08.

²¹ Louis Stark, *South Is Declared ‘No. 1’ by President in Economic Need*, N.Y. TIMES, July 6, 1938, at 1. The President’s letter that formed a basis for the *Times* story is reprinted in NAT’L EMERGENCY COUNCIL, REPORT TO THE PRESIDENT ON THE ECONOMIC CONDITIONS OF THE SOUTH 1 (1938).

²² ERIC RAUCHWAY, THE GREAT DEPRESSION AND THE NEW DEAL 100 (2008).

²³ *Id.*

Rural areas throughout the United States exhibited a marked disparity to urban populations. In 1934, only one farm household in ten had an indoor toilet.²⁴ Frequent pregnancies, medically unattended childbirths, malnutrition, pellagra, malaria, hookworm, and other parasites exacted heavy tolls. More than 1,300 rural counties had no hospital, and most of them lacked even a public health nurse.²⁵ As one historian has noted, “In this generally dismal picture, the southeastern states were the most dismal by far.”²⁶

In response to Roosevelt’s request for a report on the economic conditions of the South, the National Emergency Council in 1938 termed that region “a belt of sickness, misery, and unnecessary death.”²⁷ Prominent in this assessment was the presence of malaria, affecting more than two million people annually and estimated to reduce the industrial output of the region by one-third.²⁸ The report estimated the annual costs of deaths from malaria alone to be \$39,500,000, not including lost productivity and costs for treating the illness.²⁹

The incidence of malaria in the South grew markedly worse during the Great Depression. Yet, by the end of World War II, malaria in the United States was largely conquered. One federal agency—the MCWA, the founding institution for the CDC—claimed the lion’s share of responsibility for the eradication of malaria by the 1950s. The claims are difficult to evaluate, although it is certain that federal government efforts, most notably those of the MCWA, played a large role.

But these federal efforts were preceded by an assortment of state and local efforts to control malaria, highly reliant before the Great Depression on outside philanthropy (although little philanthropy was directed specifically toward malaria) and the initiatives of private businesses. An evaluation of federal steps against malaria in the New Deal era requires, first, an overview of preexisting state and local efforts.

²⁴ KENNEDY, *supra* note 8, at 192.

²⁵ *Id.*

²⁶ *Id.*

²⁷ NAT’L EMERGENCY COUNCIL, *supra* note 21, at 29.

²⁸ *Id.* at 29–30.

²⁹ *Id.* at 30.

A. *State Health Departments and Private Philanthropy*

State health departments in the South, although in some instances dating from the Reconstruction era, functioned with extreme financial and expertise limitations in the early decades of the twentieth century. In most southern states, a county or municipal health board served as the primary public health agency. Not all rural counties had one, and even in more populous counties, funding was often nonexistent or was voted piecemeal by local government units. Staffing might include a local physician who would provide advice to elected officials, primarily in the event of an infectious disease outbreak such as yellow fever.³⁰

Control of infectious disease—and especially malaria, which was viewed as less frightening than yellow fever but still a chronic problem—depended on two things. First, the scientific cause of malaria from mosquitoes was a relatively recent discovery. Scientific breakthroughs occurred following the Spanish-American War and the building of the Panama Canal.³¹ Replacing folk beliefs about the cause of malaria in the South required wider dissemination of these discoveries, as well as recommended means of prevention as advised by experts. Even in the early 1920s, the mosquito as the vector of malaria was still by no means widely accepted in rural populations.

Second, with the scientific focus on mosquito control followed the need for financial resources. The southern climate, combined with stagnant bodies of water—large and small—provided fertile areas for mosquito reproduction. These bodies of water could be drained or treated with a larvicide, but were ubiquitous and required continued maintenance. Inhabitants of these areas often lived in substandard housing, creating an urgent need for wire-mesh screens in homes.³² All of these measures were costly, and southern health

³⁰ For descriptions of state and local public health activities in some southern states during this period, see T. F. ABERCROMBIE, *HISTORY OF PUBLIC HEALTH IN GEORGIA, 1733–1950*, at 155 (1953); Lucie Robertson Bridgforth, *The Politics of Public Health Reform: Felix J. Underwood and the Mississippi State Board of Health, 1924–58*, *PUB. HISTORIAN*, Summer 1984, at 5, 7 (1984); Jo Ann Carrigan, *Yellow Fever: Scourge of the South*, in *DISEASE AND DISTINCTIVENESS IN THE AMERICAN SOUTH*, *supra* note 13, at 66; J.G. Townsend, *The Full-Time County Health Program Developed in the Mississippi Valley Following the Flood*, 43 *PUB. HEALTH REP.* 1199, 1202 (1928). For a description of state and local practices in the late nineteenth century, see Margaret Warner, *Local Control Versus National Interest: The Debate over Southern Public Health, 1878–1884*, 50 *J.S. HIST.* 407 (1984).

³¹ MARGARET HUMPHREYS, *MALARIA: POVERTY, RACE, AND PUBLIC HEALTH IN THE UNITED STATES* 47–48 (2001).

³² See PACKARD, *supra* note 6, at 72–73 (discussing how economic and living conditions contributed to the spread of malaria in the South).

departments were in no position to provide them, even assuming that they had the political will to do so in poverty-stricken, racially segregated, rural areas. Moreover, drainage projects had to be maintained, and when they were not, all previous gains were quickly erased.³³

Taxpayer funding for state and local health activities in the South was practically nonexistent in these decades, hampering efforts of state and local health departments to address any chronic disease in lieu of more immediate outbreaks and emergencies.³⁴ The general problem of poverty exacerbated race and class problems in many southern regions.³⁵ Efforts at mosquito control, in particular, were hampered by the rigid system of racial segregation and a long-standing class conflict in the white community.³⁶

Commenting on efforts at public sanitation in the late nineteenth century, one physician in Charleston, South Carolina, stated: “I despair of the State, in its present Africanized condition, spending money to improve health. Two-thirds of our Legislature would think such money thrown away.”³⁷ The lag in spending for public health initiatives in the South continued through the early twentieth century. Even when politicians promoted health as an essential element for economic development for their regions, funds for malaria control remained at the bottom of a long list of priorities.³⁸

One northern journalist wrote in 1879 about sanitation problems in Memphis, Tennessee:

A large sum of money was raised last year in the North for the relief of this city, but very little came from Southern communities. With all the warning that was given by the fever then, nothing has since been done in the way of drainage or purification. The fact is, Memphis is one of the filthiest towns in all the South The yellow-fever

³³ *Id.* at 72.

³⁴ See Bridgforth, *supra* note 30, at 5, 10.

³⁵ *Id.*

³⁶ *Id.*

³⁷ Warner, *supra* note 30, at 408 (quoting Letter from Robert A. Kinloch to Henry I. Bowditch (Mar. 1876), in HENRY I. BOWDITCH, PUBLIC HYGIENE IN AMERICA 242 (1877)).

³⁸ The role of race in allocation of state and local funds for public health in the South is a significant topic, which I do not explore in this Article. At least two possibilities emerge: First, the relative neglect of public health measures in rural areas is attributable to the presence of African-Americans in those regions. Second, it may be that fighting malaria and supporting segregation were both viewed to be “progressive” measures by leading white southerners in this period. No doubt both propositions may be true. Scientific and public health literature at the time (and today) suggest that African-Americans were largely immune from the most virulent forms of malaria in the South. The issue is worth further exploration but must await another venue.

scourge is one of the evils that follow in the train of slavery and an imperfect civilization. The worst feature of the sorrow is that the native inhabitants have no ambition to remove the cause . . . and no disposition to put their hands in their pockets for the relief of the poor. The North is good enough for them for that.³⁹

State health departments in the South encountered significant resistance from county and municipal health boards. As Chapin noted in 1916, “This matter of the state health department taking entire charge of local affairs, thereby displacing local officials, is one of the greatest importance, concerning which there are wide differences of opinion.”⁴⁰ Chapin considered this local opposition “a very practical obstacle” to the “plan of complete state control,” which he advocated.⁴¹ He noted:

In many sections of the country the great body of the citizens are opposed to the state usurping any more of the functions of their town or their county. It would be difficult in these states, where home rule is a fetish, to displace the local health official by the state health official.⁴²

Small wonder, then, that *federal* efforts would prove equally difficult in the states’-rights haunted South.

The first significant outside efforts to improve public health in the South, including the scourge of malaria, came from private philanthropy. Most notable here was the Rockefeller Sanitary Commission (renamed the Rockefeller Foundation in 1913).⁴³ Beginning around 1910, the promise of funds and personnel from this organization invigorated health departments throughout the South. The initial campaign was against hookworm, the cause of much “mental and physical torpor” characterizing the condition of so many

³⁹ Warner, *supra* note 30, at 421 (quoting COMMONWEALTH (Boston), July 26, 1879).

⁴⁰ CHAPIN, *supra* note 18, at 75.

⁴¹ *Id.* at 76.

⁴² *Id.*

⁴³ See generally JOHN EITTLING, THE GERM OF LAZINESS: ROCKEFELLER PHILANTHROPY AND PUBLIC HEALTH IN THE NEW SOUTH (1981) (discussing the origin and successes of the Rockefeller Sanitary Commission); Darwin H. Stapleton, *Historical Perspectives on Malaria: The Rockefeller Antimalaria Strategy in the 20th Century*, 76 MOUNT SINAI J. MED. 468 (2009) (analyzing the Rockefeller Sanitary Commission’s antimalaria strategy); Darwin H. Stapleton, *Lessons of History? Anti-Malaria Strategies of the International Health Board and the Rockefeller Foundation from the 1920s to the Era of DDT*, 119 PUB. HEALTH REP. 206, 206 (2004) (describing the Rockefeller Foundation as “if not at the center, then very near the center” of a “revolution in malaria control”).

poor southerners.⁴⁴ For malaria control, however, philanthropy targeted specific “demonstration” projects in a few areas but did not provide funding sufficient for statewide efforts.⁴⁵

Although the Rockefeller Sanitary Commission was the most active philanthropic organization in the South, others soon joined. The Rosenwald Fund,⁴⁶ for example, undertook malaria control efforts on the extensive Delta and Pine Land Plantation in Mississippi in the 1920s. The fund provided screens for tenant housing, among other efforts, and the resulting reduction in malaria among the sharecroppers in the area led to the promotional message, “[T]he best tenants are attracted to a plantation where the management displays an active interest in their health and welfare.”⁴⁷

In a sense, large farm owners who made malaria-control efforts to benefit their tenants (both black and white sharecroppers) engaged in both private philanthropy and enlightened self-interest, from a business perspective. Lawrence J. Nelson has suggested that this form of planter “welfare capitalism” worked to control malaria, without the need for outside federal assistance in most rural regions.⁴⁸ Moreover, historians generally agree that health and education are central to understanding Progressivism in the South, and these philanthropic efforts, combined with local initiatives, had some effect on the control of malaria in some regions prior to the New Deal.⁴⁹ On the other hand, while statistics on the prevalence of malaria before the late 1940s are unreliable, the perception that malaria was a southern problem remained.

B. *Private Enterprise, State Regulation, and Courts*

Progressives of the early twentieth century shared a preference for social planning over laissez-faire, and a commitment to use government as an agency

⁴⁴ GORDON HARRISON, *MOSQUITOES, MALARIA AND MAN* 178 (1978).

⁴⁵ *Id.* at 181.

⁴⁶ The Julius Rosenwald Fund also provided financial support for venereal disease studies in the South and played an important role in African-American welfare in the 1930s. See Ann W. Fournier et al., *Bad Blood: A Case Study of the Tuskegee Syphilis Project*, 23 J.C. SCI. TEACHING 277 (1994).

⁴⁷ Bridgforth, *supra* note 30, at 12 (internal quotation mark omitted).

⁴⁸ Lawrence J. Nelson, *Welfare Capitalism on a Mississippi Plantation in the Great Depression*, 50 J.S. HIST. 225 (1984); see also George F. Paul, *Welfare Work on a Delta Plantation*, 54 S. WORKMAN 314, 316–18 (1925) (discussing plantation owners’ antimalarial campaign of swamp clearance, cabin inspections, and use of mosquito netting).

⁴⁹ See Nelson, *supra* note 48; see also William A. Link, *Privies, Progressivism, and Public Schools: Health Reform and Education in the Rural South, 1909–1920*, 54 J.S. HIST. 623 (1988).

of social welfare. Progressives of all persuasions believed that government must somehow moderate the economic power that modern industrialism concentrated into fewer and fewer hands. In the southeastern United States, progressive public policy measures were rarely initiated through elected government, as the private philanthropy example illustrates. Importantly, in the South these private philanthropic efforts were supplemented by business initiatives.

Public health officials identified railroads early in the twentieth century as “notorious for their incidental contributions to malaria hazards by creating conditions favoring the development of *Anopheles* mosquitoes.”⁵⁰ Some railroads responded with eradication measures along their lines, as well as other efforts to protect the health of both their employees and customers. One example is the Cotton Belt Railroad’s private campaign against malaria in Arkansas and Texas. The Cotton Belt, which ran from St. Louis to Texas, equipped railroad cars to be used as educational vehicles along its routes, and it also established demonstration farms to educate local residents on eliminating breeding grounds for mosquitoes.⁵¹ Beginning in 1916, the railway’s owners recognized the need to control malaria on its property. The company undertook a number of mosquito-eradication measures, including drainage work and the provision of quinine and wire mesh screens for its employees.⁵² With assistance from the Arkansas Board of Health, the company provided an “exhibit car” targeting the general population, especially school children, along its rail lines to encourage self-protection from malaria.⁵³

Similarly, electric utility companies, which relied upon harnessing the generating power of running water through building dams, paid some attention to mosquito abatement in areas of water impoundment. In 1938, for example, at least four utility companies in southeastern states employed full-time mosquito-fighting crews.⁵⁴ In a few states, such sanitation measures were a requirement of state law, overseen by the state health board or other state government agency. Local communities also held some authority to supervise

⁵⁰ R.C. Derivaux, *The Relation of the Railroads in the South to the Problem of Malaria and Its Control*, 33 PUB. HEALTH REP. 1267, 1267 (1918). A 1938 report on economic conditions in the South noted that “[t]en railroads in the South listed malaria as an economic problem and a costly liability.” NAT’L EMERGENCY COUNCIL, *supra* note 21, at 30.

⁵¹ Don L. Hofsommer, *St. Louis Southwestern Railway’s Campaign Against Malaria in Arkansas and Texas*, 62 ARK. HIST. Q. 182, 182 (2003).

⁵² *See id.* at 182–90.

⁵³ *Id.* at 190.

⁵⁴ NAT’L EMERGENCY COUNCIL, *supra* note 21, at 30.

land use for sanitation activities, particularly for mosquito control. These private-enterprise initiatives, however, largely preceded state regulation efforts. In time, some states would enact land-use regulations requiring utilities (primarily power companies) to engage in mosquito-control measures for any water-impoundment activities.⁵⁵

In a general way, most southern states relied on older legislation forbidding the pollution of waters, but such laws were of little value without an enforcement mechanism directed toward the proliferation of mosquitoes. Most state health departments at the time had general powers to investigate the conditions of rivers, lakes, and wells, but the more advanced mosquito-control practices by state health departments (none in the South) required approval of plans for water supply and sewage disposal, the authority to order changes to sanitation of impounded water, and other broad authority to make rules.⁵⁶ In most southern states, including Arkansas, Florida, Georgia, Louisiana, and Mississippi, the grant of legislative authority to state boards came only in the most general terms, and for some time, the constitutionality of state agency rule making in these areas was in some doubt.⁵⁷

In Mississippi, for example, the Mississippi Railroad Commission attempted “to better protect the health of the general traveling public” by requiring railroads operating within the state to provide mesh screens for all passenger rail cars.⁵⁸ The Commission contended that it was authorized by the legislature to require such measures.⁵⁹ Various railroad companies, including the Illinois Central Railway Company, challenged the regulation as beyond the delegated authority of the Mississippi Railroad Commission, arguing that only the state health board had authority from the legislature to enact “sanitary ordinances of this character.”⁶⁰ The Mississippi Supreme Court agreed:

The order, in its terms, was to safeguard the health of the traveling public, and while the scientific world now recognize that mosquitoes are guilty of being the sole disseminators of malaria and yellow fever, it is also true that this fact was not known when the Railroad Commission was created and the Code sections referred to were

⁵⁵ For example, in *Wheeler v. River Falls Power Co.*, 111 So. 907 (Ala. 1926), the Alabama Supreme Court discussed state health board regulations on water impoundment as a valid delegation of legislative authority.

⁵⁶ CHAPIN, *supra* note 18, at 176.

⁵⁷ *Id.* at 72–73.

⁵⁸ *Miss. R.R. Comm'n v. Ill. Cent. R.R. Co.*, 74 So. 676, 676 (Miss. 1917).

⁵⁹ *Id.*

⁶⁰ *Id.*

passed. This being true, it is quite sure that the Legislature did not have in mind health and sanitation when section 4860 was written. As before stated, it is possible that wire screens could have been foreseen when the statute was being considered as contributing to the comfort of passengers, but it is somewhat difficult to believe that we were so far ahead of the times that we had already convicted the flies and mosquitoes of manslaughter.⁶¹

Interestingly, some state courts became arbiters of land-use regulation through common law nuisance and other tort suits brought by individual plaintiffs. Such lawsuits targeted utility companies, mills, and railroads for water-impoundment activities alleged to result in rampant mosquito breeding. These lawsuits became a form of self-help for local residents in the absence of a strong state or local regulatory authority.

Beginning in the early twentieth century, courts in southern states entertained lawsuits for personal injury and nuisance related to man-made conditions alleged to lead to malaria.⁶² An example is *Godwin v. Atlantic Coast Line Railroad Co.*, decided by the Georgia Supreme Court in 1904.⁶³ Elizabeth Godwin alleged that the railroad was responsible for a trench near her residence that filled with stagnant water, resulting in her husband's death from malaria in 1902. Evidence established that the pool of water, some 250 feet from the Godwins' house, was "polluted and poisonous," emitting "noxious and offensive odors, vapors, and smells" including "malaria and marsh gas."⁶⁴ A physician testified that Mr. Godwin had died from malarial fever. On the other hand, as the opinion notes, "it appeared that in every part of the city [of Valdosta, Georgia], and in portions thereof remote from the pool, many other persons, at the time of Mr. Godwin's illness, suffered from the same disease."⁶⁵ The jury returned a verdict for the defendant, apparently

⁶¹ *Id.* at 676–77.

⁶² *See, e.g.*, *Burnett v. Ala. Power Co.*, 74 So. 459 (Ala. 1917); *City of Lakeland v. Douglass*, 197 So. 467 (Fla. 1940); *Towaliga Falls Power Co. v. Sims*, 65 S.E. 844 (Ga. Ct. App. 1909); *Rice v. Norfolk-S. R.R. Co.*, 82 S.E. 1034 (N.C. 1914); *Lockhart Power Co. v. Askew*, 96 S.E. 685 (S.C. 1918); *Chattanooga & Tenn. River Power Co. v. Lawson*, 201 S.W. 165 (Tenn. 1918); *Chesapeake & Ohio Ry. Co. v. Whitlow*, 51 S.E. 182 (Va. 1905). In 1909, the Georgia Court of Appeals listed eight prior cases it termed to be "illustrative" in which the Georgia Supreme Court had held "public or quasi public corporations liable in damages to private persons for injury to health through the creation of stagnant ponds or pools or the maintenance of places favorable to the excessive breeding of mosquitoes." *Towaliga*, 65 S.E. at 848.

⁶³ 48 S.E. 139 (Ga. 1904).

⁶⁴ *Id.* at 139, 140.

⁶⁵ *Id.* at 140.

unable to conclude “which of the many causes in existence operated to produce this sickness, or which of these causes predominated the one over the other.”⁶⁶

Godwin is noteworthy for the absence of any reference to the then-known scientific cause of malaria. “Poisons in the air”⁶⁷ and gases from swamps were not uncommon beliefs for the cause of malaria throughout the nineteenth century. The discovery in 1898 of the anopheles mosquito as the carrier of the disease, noted previously, had not yet become widely known among rural physicians, let alone among judges and lawyers. The *Godwin* court noted:

There was much testimony as to the cause of malaria—whether it was transmitted by air currents, through water, or by mosquitoes; all of the witnesses testifying, however, that there were various theories as to its cause, but that it was impossible to say exactly how or by what it was produced, and as to whether it may not have been contracted from the same sources which occasioned similar diseases to persons residing in every part of the city of Valdosta during that year.⁶⁸

On the other hand, a Virginia court in only the following year (1905) recognized a railroad company’s contention that “malaria is caused by the bite of a mosquito of the genus anopheles.”⁶⁹ In 1914, a North Carolina court asserted: “It is now the accepted doctrine of the medical profession that malaria is transmitted by the bite of a certain kind of mosquito, anopheles, and that these mosquitoes are bred in standing water.”⁷⁰

Interestingly, as knowledge widened of the anopheles mosquito vector for malaria, plaintiffs seemed to have an easier time winning cases against utility companies and railroads for land-use activities that resulted in water impoundment, at least when they could present the case to a jury.⁷¹ The jury in the 1905 Virginia case noted above had sided with the plaintiff in his claim against the railroad for allowing “stagnant water, decayed vegetation, mud,

⁶⁶ *Id.* at 141.

⁶⁷ *See, e.g.*, *Cent. Ga. Power Co. v. State*, 73 S.E. 688, 688 (Ga. Ct. App. 1912) (overruling a demurrer to a special presentment by a grand jury alleging a power company’s maintenance of a pond produced malaria and created “poisons in the air, and causing sickness and disease in the community”).

⁶⁸ *Godwin*, 43 S.E. at 140.

⁶⁹ *Chesapeake & Ohio Ry. Co. v. Whitlow*, 51 S.E. 182, 183 (Va. 1905).

⁷⁰ *Rice v. Norfolk-S. R.R. Co.*, 82 S.E. 1034, 1036 (N.C. 1914).

⁷¹ *See, e.g.*, *City of Lakeland v. Douglass*, 197 So. 467 (Fla. 1940); *Cook v. Attapulugus Clay Co.*, 184 S.E. 334 (Ga. Ct. App. 1936) (trial court directed verdict for the plaintiff for \$10,000); *Dance v. City of Rome*, 99 S.E. 51 (Ga. Ct. App. 1919) (reversing directed verdict for defendant); *Towaliga Falls Power Co. v. Foster*, 91 S.E. 442 (Ga. Ct. App. 1917); *Pruitt v. Bethell*, 93 S.E. 945 (N.C. 1917); *Rice*, 82 S.E. at 1034.

etc., to accumulate and remain upon and along its right of way” near the plaintiff’s residence, causing his family to become sick with malaria.⁷² The trial court had instructed the jury that they could find for the plaintiff if they believed that the stagnant water “was the principal and substantive cause of the injury complained of, even though other causes may have contributed to a lesser extent.”⁷³ The Virginia Court of Appeals ordered a new trial on the ground that the jury had been incorrectly instructed on the issue of causation.⁷⁴ The court noted that conditions on the plaintiff’s property, including areas surrounding a spring, an excavation near the dwelling, and an icehouse, “were equally, if not more, favorable for the development of the malarial mosquito, than the conditions about the canal bed.”⁷⁵

Back in Georgia, now recognizing the anopheles mosquito as the cause of malaria, the court of appeals in 1909 reluctantly affirmed a jury verdict against a power company for creating conditions alleged to have caused malaria in a tenant family living near a stream dammed for electrical generation.⁷⁶ The plaintiff argued that the Towaliga Falls Power Company, which had erected a dam across the Towaliga River near his residence in 1906, caused the malaria suffered by his family.⁷⁷ The Georgia court noted that private corporations authorized by the legislature to exercise eminent domain to condemn rights of way and erect dams often created “inconveniences and annoyances.”⁷⁸ But those results were to a great extent “covered in legal contemplation by the legislative grant, and are not nuisances,” according to the court.⁷⁹ Moreover,

[i]n a state like ours, with its many undeveloped resources, with its hundreds of streams running from the hills to the sea, and wasting on their way a wealth of energy which ought to be harnessed with machinery and made to serve the public good, it would be contrary to the very purpose for which the state itself was organized to allow . . . a small amount of private annoyance and inconvenience to stand in the way of development.⁸⁰

⁷² *Whitlow*, 51 S.E. at 182.

⁷³ *Id.* at 183.

⁷⁴ *Id.* at 184.

⁷⁵ *Id.* at 183.

⁷⁶ *Towaliga Falls Power Co. v. Sims*, 65 S.E. 844 (Ga. Ct. App. 1909).

⁷⁷ *Id.* at 844.

⁷⁸ *Id.* at 847.

⁷⁹ *Id.*

⁸⁰ *Id.* at 848.

Nonetheless, the Georgia court affirmed the jury verdict against the power company, without disguising its preference in the matter: “[W]e gravely doubt that the jury reached the right result”⁸¹

Other courts were more hospitable to claims of malaria caused by the land-use activities of railroads and utilities, including a South Carolina court’s approval of an additional \$2,000 for an eminent domain condemnation on account of depreciation in value because a pond “would bring mosquitoes, malaria, chills, and fever.”⁸² The court noted, “If this element of damage is reasonably certain to arise from the ponding of water on respondent’s land, there is no sound reason why it should not be included now in his compensation.”⁸³

These personal injury and nuisance decisions from southern courts merit further evaluation. It may be, for example, that such cases represented a significant form of land-use regulation, and that power companies and railroads undertook mosquito-abatement activities on their properties primarily from fear of such litigation. But for the purposes of this Article, the following observations, at least, are significant: (1) Judges, lawyers, and juries encountered “self-help” efforts by land owners and tenants alleging that railroads and power companies had created conditions causing malaria; (2) courts employed common law doctrines to resolve these disputes, frequently in the plaintiffs’ favor; (3) defendant corporations typically asserted that malaria was ubiquitous in the region and therefore likely was caused from some other water source; and (4) these public proceedings further spread knowledge in rural communities about the causes of malaria.

⁸¹ *Id.* at 850.

⁸² *Lockhart Power Co. v. Askew*, 96 S.E. 685, 686–87 (S.C. 1918).

⁸³ *Id.* at 687.

II. FEDERAL HEALTH INTERVENTION IN THE NEW DEAL ERA

[M]uch of our trouble today and in the past few years has been due to a lack of understanding of the elementary principles of justice and fairness

—Franklin D. Roosevelt (1934)⁸⁴

The U.S. Public Health Service, with a primary mission to prevent contagious diseases entering the country via immigration and trade, began to use its expertise in the late nineteenth century to attack epidemics occurring within the United States. One example was an epidemic of yellow fever in New Orleans, whose termination was claimed by the Public Health Service by means of mosquito control.⁸⁵

Indeed, yellow fever was the primary impetus for the organization of health boards in the 1870s in southern coastal regions. State and local health authorities had inspection and quarantine authority, but efforts at sanitation and draining were haphazard, usually coinciding only with a recent outbreak of yellow fever.⁸⁶ Voluntary associations of southern health officials sought to organize region-wide responses to yellow fever epidemics, but with one short-lived exception, no interstate efforts emerged.⁸⁷

Yellow fever epidemics in the South caught the attention of Congress in 1879. Proponents of a national quarantine measure, known as the Yellow Fever Bill, justified the federal government's intervention under its constitutional right to regulate commerce and to protect the country from foreign "invader[s]."⁸⁸ Opponents of the bill argued that it was unconstitutional and a violation of state rights.⁸⁹

Ultimately, a much weaker bill, one that satisfied some opponents of federal power, created the National Board of Health. The Board's functions were limited to advising state and local boards of health, publishing health information, and investigating public health questions. Even with the weakened version, health officials in Louisiana, Georgia, and Alabama

⁸⁴ Franklin D. Roosevelt, Radio Address (June 28, 1934), *reprinted in* FDR's FIRESIDE CHATS 48 (Russell D. Buhite & David W. Levy eds., 1992).

⁸⁵ HUMPHREYS, *supra* note 31, at 69.

⁸⁶ Warner, *supra* note 30, at 407–08.

⁸⁷ *Id.* at 409, 411–12.

⁸⁸ *Id.* at 412.

⁸⁹ *Id.*

objected to the National Board's "interference" in local affairs.⁹⁰ A memorial to Congress from Alabama stated that it was "neither wise nor prudent for us to intrust the administration of quarantine to the hands of any other health authorities than those who are of our own appointment and directly responsible to our own people."⁹¹ Further, "the State can not afford to allow this large grant of power, so nearly affecting the welfare of our people, to be placed in the hands of the National Board of Health, or of any other agent of the federal government."⁹² Congress permitted the Board to expire in 1883 at the conclusion of its initial appropriations.⁹³

Although the National Health Board was short-lived, it did set a precedent for future public health efforts by the federal government. Congress had given the Board authority to provide money to state and local health boards "and to assume quarantine powers when states did not appear competent or willing to do so."⁹⁴ As a condition of receipt of federal funds, state and local agencies were required to adopt uniform standards (provided by the Board) for yellow fever quarantine actions.⁹⁵ One historian concluded that "[t]here was considerable confusion among state and local boards over the limitations of the National Board's powers," providing as an example that the "National Board could not intervene until local boards had submitted itemized requests for funds."⁹⁶ Future federal grants to state health agencies, likewise, would often condition receipt of funds for specified uses or with conditions attached.

By 1893, the Marine Hospital Service (later to be renamed the U.S. Public Health Service)⁹⁷ was given explicit statutory authorization to use interstate and quarantine powers to prevent the introduction and spread of cholera, yellow fever, smallpox, and plague, with jurisdiction soon extended to include quarantine powers for all infectious and contagious diseases. These powers were to be exercised "in cooperation" with state and local health agencies.⁹⁸

Outside of these limited yellow fever and quarantine activities, the federal government had little to do with public health initiatives within states. But this

⁹⁰ *Id.* at 413.

⁹¹ *Id.* at 426 (quoting Jerome Cochrane et al., TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA 124 (1880)) (internal quotation marks omitted).

⁹² *Id.* (quoting Cochrane et al., *supra* note 91, at 124) (internal quotation marks omitted).

⁹³ *Id.* at 413.

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.* at 414.

⁹⁷ *Id.*

⁹⁸ Act of Feb. 15, 1893, ch. 114, § 3, 27 Stat. 449, 450.

picture would begin to change in the early decades of the twentieth century. The U.S. Public Health Service, created by Congress in 1912 as a renamed version of the earlier Marine Hospital Service,⁹⁹ asked Congress in 1914 for funds to control malaria in the United States.¹⁰⁰ But malaria—chronic and endemic in the poverty-stricken, rural South—was a problem addressed by state and local health boards, not the federal government, until the New Deal era.

Prior to World War I, the U.S. Public Health Service began to assist states in reporting cases of malaria, a process requiring malaria surveys and authentication by blood exams.¹⁰¹ Accordingly, the field investigations by federal authorities, in cooperation with state health authorities, included collection of data, field surveys, laboratory and biologic studies, and education campaigns with malaria-control demonstrations. However, the actual mosquito-eradication operations were the responsibility of the states.¹⁰²

The onset of World War I brought with it greater federal involvement in malaria control in the South. Military camps were quickly established there, and malaria-control activities “gained a new priority in preparations for the defense of the nation.”¹⁰³ The U.S. military requested the Public Health Service’s assistance with sanitation activities around its camps.¹⁰⁴ Strict jurisdictional limits were set, with this jurisdiction justified as a war emergency. Federal health officials could operate within a one-mile radius of the camps and industrial plants where malaria was likely to occur.¹⁰⁵ But these federal officials did not undertake direct sanitation efforts; rather, they worked through the state and local health departments.¹⁰⁶ Any specific federal focus in

⁹⁹ Act of Aug. 14, 1912, ch. 288, 37 Stat. 309 (repealed 1944). The U.S. Public Health Service was authorized in 1912, among other tasks, to “study and investigate the diseases of man and conditions influencing the propagation and spread thereof . . . and . . . issue information in the form of publications for the use of the public.” *Id.* § 1, 37 Stat. at 309.

¹⁰⁰ *The History of Malaria, an Ancient Disease*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/malaria/about/history> (last updated Feb. 8, 2010).

¹⁰¹ Mary Helen McClanahan, *The Origin and Administrative Development of the Office of Malaria Control in War Areas 5–6* (May 16, 1958) (unpublished B.B.A. thesis, Emory University) (on file with Woodruff Library, Emory University).

¹⁰² *Id.*

¹⁰³ *Id.* at 7.

¹⁰⁴ *Id.* at 8.

¹⁰⁵ *Id.* at 9.

¹⁰⁶ *Id.*

malarial areas was short-lived, however, as all public health officials—federal, state, and local—were soon overwhelmed by the Spanish Flu pandemic.¹⁰⁷

The U.S. Public Health Service also organized the “Second Annual Antimalaria Conference” for state and local health officials, held at Louisville, Kentucky, in November 1920.¹⁰⁸ L.M. Fisher, a sanitary engineer with the Public Health Service, emphasized the necessity for regional cooperation, “to induce the doing of more and more and still more malaria-control work until the whole remaining section of the country in which malaria is prevalent shall have been cleaned up.”¹⁰⁹ State and local health agencies, however, were not at the time “prepared to undertake it, or even to give adequate assistance.”¹¹⁰ Urging even greater federal assistance (and thus, writing for a political audience), Fisher noted: “The Nation and the State are therefore both interested in its solution, and should both be actively engaged in working out the problem; the efforts of the one should supplement those of the other.”¹¹¹ Further, Fisher continued, “I believe that sooner or later the Nation will recognize its obligation to assist that portion of the country where malaria is present, not alone out of considerations of philanthropy but because it is good business.”¹¹²

The Great Depression, which exacerbated health problems already evident in the South, became the impetus for Roosevelt’s New Deal. Roosevelt’s first one hundred days in office set in motion various measures to attack unemployment and stabilize the economy. The increase in federal spending during Roosevelt’s early years in office would result by 1936 in the first time that non-wartime federal spending surpassed state and local government spending.¹¹³ A large number of civilians employed through the various New Deal programs (notably lacking in coordination) dug ditches or engaged in

¹⁰⁷ The Spanish Flu pandemic, occurring in the midst of World War I, had killed an estimated twenty million people worldwide by 1918. Steven Burg, *Wisconsin and the Great Spanish Flu Epidemic of 1918*, 84 WIS. MAG. HIST. 36, 39 (2000). The United States was particularly hard hit in 1918. In Wisconsin alone, for example, 103,000 persons contracted the disease, and 8,459 died from it in a four-month period. *Id.* at 38.

¹⁰⁸ U.S. PUB. HEALTH SERV., PUBLIC HEALTH BULLETIN NO. 115, TRANSACTIONS OF THE SECOND ANNUAL ANTIMALARIA CONFERENCE OF SANITARY ENGINEERS AND OTHERS ENGAGED IN MALARIA FIELD INVESTIGATIONS AND MOSQUITO CONTROL (1921).

¹⁰⁹ L.M. Fisher, *The Organization of Malaria-Control Division in State Board of Health*, in U.S. PUB. HEALTH. SERV., *supra* note 108, at 65.

¹¹⁰ *Id.*

¹¹¹ *Id.* at 66.

¹¹² *Id.* at 67.

¹¹³ Amity Shlaes, *THE FORGOTTEN MAN: A NEW HISTORY OF THE GREAT DEPRESSION* 266 (2007).

other draining efforts to combat malaria in the South where, during the Great Depression, well over one million cases of malaria occurred.¹¹⁴

But southern states were slow to take federal money.¹¹⁵ As Walter Wilbur noted in 1934, for the southern states “[t]o incur obligations for the relief of distress, especially where the distress was prevailing of a chronic type, was a violent innovation in political practice.”¹¹⁶ In the early years of the New Deal, public opinion was “sharply divided as to whether any special measures for meeting unemployment were ever needed,” and whether federal money had not “done more harm than good.”¹¹⁷ Nonetheless, Wilbur reported that under the Federal Relief Administration, “progress has been made in a frontal attack on the health problems of the Southern area,” with special emphasis on malaria, hookworm, and community sanitation.¹¹⁸

At the same time, an article entitled *Health in the New Deal*, also written in 1934, mentioned neither malaria nor the South specifically in its call for a national public health program.¹¹⁹ The author, the chief statistician of the U.S. Public Health Service, urged instead the recognition of “a fundamental change in the objectives of ‘public health.’”¹²⁰ Further, he contended that “[t]he policy of placing the responsibility for public health upon communities and states . . . has failed ignominiously.”¹²¹ An invigorated national health service, with national jurisdiction, was needed. New Deal efforts to date, including sanitary projects supervised by the Public Health Service as part of the federal work relief program, as well as small appropriations to states for rural sanitation and maternal and infant health, were inadequate.¹²² “So far,” the author noted, “efforts to get the Federal Government to do for public health what it has done for education, agriculture, and roads have been unsuccessful.”¹²³ But this broader concept of a federal role in health, the author was quick to note, was “not an appeal for ‘public medicine’ or ‘state

¹¹⁴ HUMPHREYS, *supra* note 31, at 2.

¹¹⁵ Wilbur, *supra* note 1, at 52.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 54.

¹¹⁹ Sydenstricker, *supra* note 7.

¹²⁰ *Id.* at 134.

¹²¹ *Id.* at 135.

¹²² *Id.* at 135–36.

¹²³ *Id.* at 135.

medicine’ or ‘socialized medicine’ or any particular scheme of furnishing medical care through public provision.”¹²⁴

Public health as a significant federal agency presence in the South emerged, first, from these programs for the unemployed, through grants to state governments, and second, from the government’s increasing relationships with war industries. Of course, an alert historian of public policy will be quick to note the many ways in which the federal government already did intervene in the economy, from agricultural inspections to patent regulation. Moreover, mosquito-control efforts undertaken with federal dollars were at the discretion and under the control of state and local governments.

New Deal programs embodied no single approach to political management of the economy, and the same would be true with respect to public health. One observer believed that “[a]lmost every New Deal agency, temporary or permanent . . . made some contribution to health.”¹²⁵ Like Roosevelt’s economic approach, the malaria-eradication project experienced similar New Deal methods of pragmatic experimentation. Various New Deal federal agencies (the Civil Works Administration, the Federal Emergency Relief Administration, and the Works Progress Administration) drained some two million acres of swamp land, although the haphazard, uncoordinated nature of the early efforts, along with a lack of maintenance of those areas, make the long-term results difficult to gauge.¹²⁶

The first significant, comprehensive federal effort to control malaria on a regional basis was in connection with the Tennessee Valley Authority (TVA), but Works Progress Administration projects also allocated some employment opportunities to “sanitation” efforts—primarily drainage projects to control mosquito breeding areas.¹²⁷ The TVA began damming streams for flood control, hydroelectric power, and navigation. For Norris Dam alone, the TVA would flood over 153,000 acres of land.¹²⁸ Recognizing the hazard of increased malarial breeding grounds from such activities, the TVA hired

¹²⁴ *Id.* at 134.

¹²⁵ Breeden, *supra* note 13, at 18 (quoting JOHN DUFFY, *THE HEALERS: THE RISE OF THE MEDICAL ESTABLISHMENT* 317 (1976)) (internal quotation marks omitted).

¹²⁶ *Id.*

¹²⁷ See Elizabeth Fee & Theodore M. Brown, *Depression-Era Malaria Control in the South*, 94 *AM. J. PUB. HEALTH* 1694, 1694 (2004).

¹²⁸ Shlaes, *supra* note 113, at 176–77.

scientists and engineers to engage in mosquito control, and the research and techniques employed by these experts would be used later by the MCWA.¹²⁹

Beginning in the early 1930s, the TVA, together with the U.S. Public Health Service, played a vital role in malaria control operations in the area under the jurisdiction of the TVA, primarily in Alabama and Tennessee. Mosquito breeding sites were reduced by controlling water levels and applying larvicide.¹³⁰ New Deal officials deemed the malaria control and assessment activities associated with the TVA to be a major commitment.¹³¹

Nonetheless, the 1930s saw a rise in rates of malaria in the southeastern United States.¹³² One cause for this rise may have been better reporting, but the various New Deal efforts to battle malaria did not have any dramatic effect in lessening its prevalence, and in some areas malaria incidence had even seemed to increase. Georgia, for example, accounted for one-sixth of all deaths in the United States from malaria in 1936.¹³³

But both federal officials and state health departments had to convince physicians that receipt of federal funds to combat malaria was not the beginning of “socialized medicine.”¹³⁴ One physician at a state medical association meeting described the “excited talk” among physicians there “concerning state medicine”—proposals that would mean assumption by government “of those duties in the prevention, treatment, and alleviation of disease usually delegated to individuals who have been prepared and certified for this purpose.”¹³⁵ These were “revolutionary proposals” coming from “outside the ranks of medicine.”¹³⁶ Moreover, the speaker said, *federal* help especially should be reserved only for emergencies.¹³⁷

¹²⁹ Duffy, *supra* note 17, at 29, 47.

¹³⁰ *The History of Malaria, an Ancient Disease*, *supra* note 100.

¹³¹ David E. Lilienthal, *TVA: DEMOCRACY ON THE MARCH* 73–74 (1953).

¹³² According to the U.S. Army Office of Medical History, the “last rise of malaria prevalence in this country to epidemic proportions occurred in the mid-thirties . . . probably as a direct effect of the depression.” Justin M. Andrews & Jean S. Grant, *Malaria Incidence in the United States Before World War II*, in 6 COMMUNICABLE DISEASES: MALARIA 61, 61 (John Boyd Coates et al. eds., 1963), available at <http://history.amedd.army.mil/booksdocs/wwii/Malaria/chapterIII.htm>.

¹³³ EVELYN WARD GAY, *THE MEDICAL PROFESSION IN GEORGIA 1733–1983*, at 345 (1983).

¹³⁴ Bridgforth, *supra* note 30, at 13; see also GAY, *supra* note 133, at 342–43.

¹³⁵ GAY, *supra* note 133, at 347 (internal quotation mark omitted).

¹³⁶ *Id.*

¹³⁷ *Id.* at 348.

A. *Creation of the Federal Security Agency*

In Franklin Roosevelt's first term of office, thirty new federal agencies came into being. One critic at the time alleged that nearly all of these were too "close to the executive," and the proliferation of new agencies "bewildered" the average citizen.¹³⁸ Roosevelt's efforts to reorganize the administrative arm of the Executive Branch followed on the heels of the "Second New Deal" legislative efforts in 1935.¹³⁹ This Second New Deal addressed the continuing economic problems of the nation. As David Kennedy has written about the overall pattern of the Second New Deal, in the social realm "the dominant motif was security; in the economic realm, regulation (which was security by another name); and in the physical realm, planned development."¹⁴⁰

In 1937, the White House proposed a "Reorganization Act," seeking a dramatic expansion of the President's authority with respect to the newly created agencies. Among other things, the 1937 bill would have expanded the presidential staff, integrated executive agencies into a single presidential office, and raised all independent agencies into existing Cabinet departments. Roosevelt urged that this legislation was necessary to accomplish the goals of the earlier New Deal legislation:

Individual or local or state effort alone cannot protect us in 1937 any better than ten years ago. It will take time—and plenty of time—to work out our remedies administratively even after legislation is passed. To complete our program of protection in time, therefore, we cannot delay one moment in making certain that our national government has power to carry through.¹⁴¹

Congress tabled the bill amid mounting concerns about the extension of presidential authority.

Two years later, Roosevelt was successful. The Reorganization Act of 1939¹⁴² was said to be the first major, planned reorganization of the Executive Branch of U.S. government since 1787. This Act permitted the President to reorganize the Executive Branch, within certain limits. The Reorganization

¹³⁸ Shlaes, *supra* note 113, at 230.

¹³⁹ The Second New Deal is described in ALAN BRINKLEY, *THE END OF REFORM: NEW DEAL LIBERALISM IN RECESSION AND WAR* (1995).

¹⁴⁰ KENNEDY, *supra* note 8, at 247.

¹⁴¹ Franklin D. Roosevelt, Radio Address (Mar. 9, 1937), *reprinted in* FDR's *FIRESIDE CHATS*, *supra* note 84, at 86.

¹⁴² Pub. L. No. 19, 53 Stat. 561.

Act immediately caused concern that it delegated far too much power to the President. It passed narrowly, only after amendment in both houses of Congress to add “efficiency” and “economy” as the official goals of the bill.¹⁴³ Opponents of the Reorganization Act characterized it as a move toward dictatorship. Senator Millard Tydings, for example, stated: “The radio these days is full of appeals for democracy, appeals against the totalitarian States. Yet, while we are condemning these authoritarian States, we are, bit by bit, adopting their methods, which we condemn.”¹⁴⁴

Less than three weeks after passage of the Reorganization Act, on April 25, 1939, Roosevelt presented to Congress “Reorganization Plan No. I.”¹⁴⁵ While designed to reduce the number of agencies reporting directly to the President, this plan dramatically extended presidential control over the Executive Branch. It also substantially reorganized a number of federal agencies.

The most important element of this plan was the creation of a new, Cabinet-level Federal Security Agency (FSA). This new agency brought together the Social Security Board, U.S. Employment Service, Office of Education (later the U.S. Department of Education), the Civilian Conservation Corps, the Food and Drug Administration, and the U.S. Public Health Service, which was formerly under the Treasury Department.

Unlike today’s Department of Homeland Security, the use of the term “security” for the FSA meant primarily the domestic welfare of citizens. This use was of a piece with Roosevelt’s second inaugural address in 1937, in which he said, “We refused to leave the problems of our common welfare to be solved by the winds of chance and the hurricanes of disaster.”¹⁴⁶ Government expansion was necessary to address the problems of “one-third of a nation ill-housed, ill-clad, ill-nourished.”¹⁴⁷ Roosevelt continued: “Nearly all of us recognize that as intricacies of human relations increase, so power to govern them must also increase—power to stop evil; power to do good. . . . [W]e have undertaken to erect on the old foundations a more enduring structure for the better use of future generations.”¹⁴⁸ This undertaking, Roosevelt stressed,

¹⁴³ *Reorganizing Bill Is Passed by House by Vote of 246-153*, N.Y. TIMES, Mar. 9, 1939, at 1.

¹⁴⁴ *Spending Foes Put Senate on Record*, N.Y. TIMES, Mar. 21, 1939, at 13.

¹⁴⁵ Reorganization Plan No. I, 53 Stat. 1423 (1939).

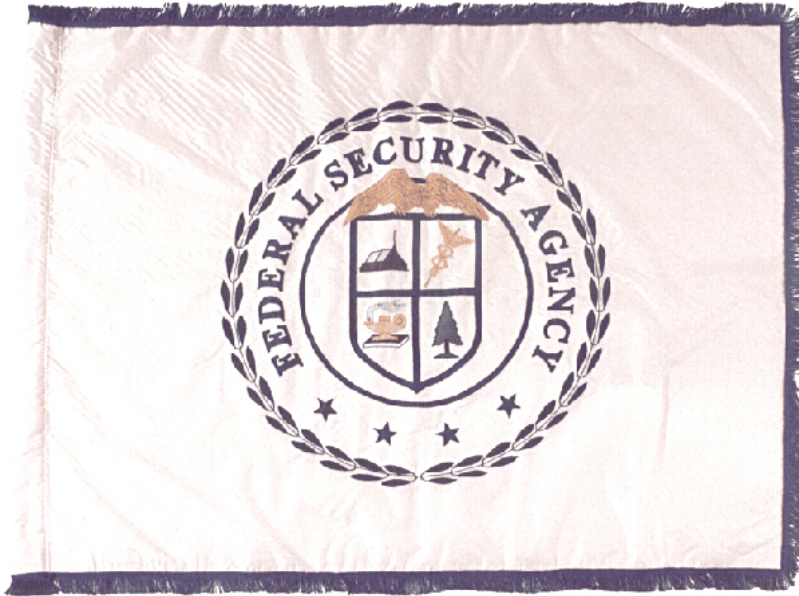
¹⁴⁶ Franklin D. Roosevelt, Second Inaugural Address (Jan. 20, 1937), available at http://avalon.law.yale.edu/20th_century/froos2.asp.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

would “fashion[] an instrument of unimagined power for the establishment of a morally better world.”¹⁴⁹

Figure 1:
Flag depicting the seal of the Federal Security Agency, created in 1939



As the official “seal” represents (see Figure 1 above), the FSA combined an unprecedented number of government functions and exhibited sprawling legal powers. The FSA held responsibility for matters involving (among others) social security, education, drug regulation, protection of the food supply, civil defense, and later, running the camps where Japanese-Americans were interned and conducting biological weapons research.¹⁵⁰ Its important legacy was to coax the public to accept a broader conception of “security” that held the prospect of more thoroughly protecting programs important to the Roosevelt Administration.

¹⁴⁹ *Id.*

¹⁵⁰ *See id.* at pt. 2.

The key concept espoused by Roosevelt was that a strong domestic “security” was necessary to face the international threats posed by the war in Europe. The FSA pervasively mixed domestic regulatory and national defense functions both before and after World War II, and the Office of Malaria Control in War Areas, discussed below, is a prime example of this.

Roosevelt’s message to Congress on the Reorganization Act of 1939 emphasized these themes: “In these days of ruthless attempts to destroy democratic governments, it is baldly asserted that democracies must always be weak in order to be democratic at all; and that, therefore, it will be easy to crush all free states out of existence.”¹⁵¹ Roosevelt stated that this Act would allow him to introduce “modern means of administrative management.”¹⁵² Similarly, in a Fireside Chat radio address, Roosevelt explained his reorganization proposal:

For many years we have all known that the Executive and Administrative departments of the government in Washington are a higgledy-piggledy patchwork of duplicate responsibilities and overlapping powers. The reorganization of this vast government machinery which I proposed to the Congress last winter does not conflict with the principle of the democratic process, as some people say. It only makes that process work more efficiently.¹⁵³

Professor Mariano-Florentino Cuéllar has examined the origins of the FSA, exploring in particular why the agency combined domestic regulatory and

¹⁵¹ Franklin D. Roosevelt, Message to Congress on the Reorganization Act (Apr. 25, 1939), *available at* <http://www.presidency.ucsb.edu/ws/index.php?pid=15748>.

¹⁵² *Id.* Roosevelt stated in his message to Congress on the Reorganization Plan:

Forty years ago in 1899 President McKinley could deal with the whole machinery of the Executive Branch through his eight cabinet secretaries and the heads of two commissions; and there was but one commission of the so-called quasi-judicial type in existence. He could keep in touch with all the work through eight or ten persons.

Now, forty years later, not only do some thirty major agencies (to say nothing of the minor ones) report directly to the President, but there are several quasi-judicial bodies which have enough administrative work to require them also to see him on important executive matters.

It has become physically impossible for one man to see so many persons, to receive reports directly from them, and to attempt to advise them on their own problems which they submit. In addition the President today has the task of trying to keep their programs in step with each other or in line with the national policy laid down by the Congress. And he must seek to prevent unnecessary duplication of effort.

Id.

¹⁵³ Franklin D. Roosevelt, Radio Address (Oct. 12, 1937), *reprinted in* FRANKLIN DELANO ROOSEVELT, THE FIRESIDE CHATS OF FRANKLIN DELANO ROOSEVELT 76 (2008).

national defense functions both before and after World War II.¹⁵⁴ As Professor Cuéllar notes, how the Executive Branch defines national security is key to its assertion of power, as we have seen with the response to the 9/11 terrorist attacks.¹⁵⁵ The article cogently documents how the Roosevelt White House promoted a broad conception of “security” that held the prospect of more thoroughly protecting domestic programs important to the Administration.¹⁵⁶ Although the article does not address the MCWA or its placement within the U.S. Public Health Service, this wartime agency is a good illustration of Roosevelt’s broad notion of domestic “security.”

Under Roosevelt’s Reorganization Plan, the U.S. Public Health Service would be moved from the Treasury Department to the FSA. Although the Public Health Service was only one agency of the many larger organizations brought under the umbrella of the FSA, Roosevelt specifically explained to Congress the rationale for this change:

The Public Health Service is transferred from the Treasury Department to the Federal Security Agency. It is obvious that the health activities of the Federal Government may be better carried out when so grouped than if they are left in the Treasury, which is primarily a fiscal agency, and where the necessary relationships with other social security, employment and educational activities now must be carried on by an elaborate scheme of interdepartmental committee work.¹⁵⁷

The U.S. Public Health Service could in some respects substitute for the failure of Roosevelt’s aim to include a national health insurance scheme in the Social Security Act of 1935.¹⁵⁸ Opposition from the American Medical Association

¹⁵⁴ Mariano-Florentino Cuéllar, “*Securing*” the Nation: Law, Politics, and Organization at the Federal Security Agency, 1939–1953, 76 U. CHI. L. REV. 587 (2009).

¹⁵⁵ See *id.* at 596. The tendency of war to expand executive power under the United States Constitution, temporarily or permanently, is a topic much explored in law review scholarship. See, e.g., William Michael Treanor, *The War Powers Outside the Courts*, 81 IND. L.J. 1333, 1341 (2006) (“While one can trace a general expansion of executive power in the war powers area—and this is certainly the case in the years since the Second World War—that expansion has been highly (if episodically) contested by Congress. Thus, this is not the type of situation in which one can say that we the people have evolved to a new consensus that alters the constitutional framework.”).

¹⁵⁶ See Cuéllar, *supra* note 154.

¹⁵⁷ Roosevelt, *supra* note 151.

¹⁵⁸ KENNEDY, *supra* note 8, at 271. The Social Security Act became law on August 14, 1935. The Act “provided for unemployment insurance and old-age pensions, its principal features, and also authorized nearly \$50 million in federal grants to the states for the immediate relief of the indigent elderly, another \$25 million for Aid to Dependent Children, and modest sums for public health services.” *Id.*

to “socialized medicine” ensured the defeat of this aspect of Roosevelt’s security plan.

Although Roosevelt’s hoped-for medical care program was not included in the Social Security Act, he continued to pursue a federal health insurance program by establishing a committee of government experts to study this issue. The Interdepartmental Committee to Coordinate Health and Welfare Activities issued a report in early 1938 calling for, among other recommendations, federal grants to the states “toward the costs of a general medical care program.”¹⁵⁹ This general medical care program envisioned the U.S. Public Health Service taking on a new role in administering health care delivery in the United States.¹⁶⁰ Viewing this proposal as the start of a national health care system, the American Medical Association adopted a resolution rejecting this recommendation.¹⁶¹ The Committee’s recommendations became the basis of a bill introduced in the Senate, but the proposal never made its way out of the Senate Finance Committee.¹⁶² Roosevelt was unable to push national health insurance as a legislative priority in his remaining years as President.

Dedicating the National Institute of Health¹⁶³ in Bethesda, Maryland, in 1940, Roosevelt said:

Although we have still much to do, the nation today, I am very certain, is better prepared to meet the public health problems of our emergency than at any previous time in the history of the country. . . .

The Public Health Service of the United States is a very old institution and has done magnificent work, but it is only recently, in the past few years, that the Federal Government has indicated that it can do infinitely more. Disease disregards State as well as national lines and among the States there is, as we know, an inequality of opportunity for health. In such cases the Public Health Service is helping and must continue even more greatly to help.¹⁶⁴

¹⁵⁹ *Background, Report of the Technical Committee on Medical Care*, SOC. SEC. ADMIN., <http://www.ssa.gov/history/reports/Interdepartmental.html> (last visited Jan. 14, 2011).

¹⁶⁰ Lynne Page Snyder, *A New Mandate for Public Health*, 109 PUB. HEALTH REP. 469, 470 (1994).

¹⁶¹ *Background, Report of the Technical Committee on Medical Care*, *supra* note 159.

¹⁶² *Id.*

¹⁶³ *A Short History of the National Institutes of Health*, NAT’L INSTS. OF HEALTH, <http://history.nih.gov/exhibits/history/> (last visited Jan. 14, 2011). Originally singular, the NIH was renamed in the plural, National Institutes of Health, by Congress in 1948 to reflect the inclusion of additional organizations within the NIH umbrella. *Id.*

¹⁶⁴ Franklin D. Roosevelt, Address at the Dedication of the National Institute of Health, Bethesda, Maryland (Oct. 31, 1940), available at <http://www.presidency.ucsb.edu/ws/index.php?pid=15888&st=&st1>.

B. *The Public Health Service Act of 1944*

Federal activity in public health grew throughout the twentieth century, but especially after the early years of the New Deal. Structurally, the creation of the FSA allowed for a more prominent role for the U.S. Public Health Service in Roosevelt's agenda. Congress assisted this transformation with the Public Health Service Act of 1944.¹⁶⁵ The Act is said to be the "modern statutory basis for federal power in a health crisis,"¹⁶⁶ limited though that authority may be by the continuation of primary state obligations for the health of its citizens.

Legislative activity resulting in the 1944 Act grew out of concerns for health needs in the mobilization for World War II.¹⁶⁷ The Act reorganized the U.S. Public Health Service within the FSA and brought together under one title most of the existing laws affecting the Service.¹⁶⁸ Congress no longer faced appropriations for public health work through "a half-dozen subcommittees and transfers of funds from other agencies," a result that addressed the concern of "disjointed policy making."¹⁶⁹ Congress specifically authorized the Public Health Service to "furnish any materials, supplies, or equipment, or perform any work or services requested by the Federal Security Agency."¹⁷⁰

Noteworthy throughout is the direction by Congress that the U.S. Public Health Service's role was primarily to "assist" states in addressing health concerns. Under the subtitle "Federal-State Cooperation," for example, the Surgeon General was directed to

assist States and their political subdivisions in the prevention and suppression of communicable diseases, [to] cooperate with and aid State and local authorities in the enforcement of their quarantine and other health regulations . . . , and [to] advise the several States on matters relating to the preservation and improvement of the public health.¹⁷¹

¹⁶⁵ Public Health Service Act, ch. 373, 58 Stat. 682 (1944) (codified as amended at 42 U.S.C. §§ 201–300 (2006)).

¹⁶⁶ John Thomas Clarkson, Note, *Phase Six Pandemic: A Call to Re-Evaluate Federal Quarantine Authority Before the Next Catastrophic Outbreak*, 44 GA. L. REV. 803, 816 (2010).

¹⁶⁷ Philip R. Lee, *Reinventing the Public Health Service: A Look in a 5-Year-Old Mirror*, 109 PUB. HEALTH REP. 466, 466 (1994).

¹⁶⁸ *Public Health Service Act, 1944*, 59 PUB. HEALTH REP. 916, 916 (1944).

¹⁶⁹ Snyder, *supra* note 160, at 470.

¹⁷⁰ Public Health Service Act § 327.

¹⁷¹ *Id.* § 311.

The Act expanded grants and services to states, directing the Surgeon General to establish specific programs to address tuberculosis and venereal disease.¹⁷² Congress included an appropriation of \$20 million annually for state and local health departments to “maintain[] adequate public health services,” a substantial increase over amounts previously available.¹⁷³

In several respects, however, the 1944 Act broadened the scope of federal government power in public health. The millions of dollars newly available to aid state and local health efforts came with strings attached. The Surgeon General could issue regulations relating to the purpose of the grant (tuberculosis treatment protocols, for example), conditioning the receipt of the grant upon the state’s compliance with its directions. Prior to issuing any such regulations, the Surgeon General was to consult with state health authorities, at least “insofar as practicable.”¹⁷⁴

Federal health authority with respect to quarantine was also expanded by the Act. The federal government’s quarantine authority had been a frequent source of conflict with state and local governments, particularly in port areas, throughout the nineteenth century and into the early decades of the twentieth.¹⁷⁵ Prior federal quarantine law emanated from the theory that the federal government was responsible for customs and immigration control at the nation’s borders.¹⁷⁶ In the 1944 Act, by contrast, the federal government’s quarantine power was clarified to extend to interstate transmission of communicable diseases, presumably under a Commerce Clause theory.¹⁷⁷ The Act authorized the Surgeon General (with the approval of the FSA administrator) to “make and enforce such regulations as in his judgment are necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the States” as well as “from one State or possession into any other State or possession.”¹⁷⁸ The statutory language invited broader authority to attack the conditions under which an epidemic

¹⁷² *Id.* § 314.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ See generally Felice Batlan, *Law in the Time of Cholera: Disease, State Power and Quarantines Past and Future*, 80 TEMP. L. REV. 53 (2007) (describing historical conflicts between state, local, and federal governments over quarantine).

¹⁷⁶ H.R.J. Res. 42, 39th Cong. (1866). In 1866, Congress had authorized the Secretary of the Treasury to issue regulations it “deemed necessary and proper, in aid of State or municipal authorities” with respect to quarantine. *Id.*

¹⁷⁷ Public Health Service Act § 311.

¹⁷⁸ *Id.* § 361.

might spread within the nation. Indeed, a writer summarizing the 1944 Act in *Public Health Reports*, a weekly publication of the Office of the Surgeon General, identified “the trend of public health work” to be “the eradication of widely prevalent diseases which place an unnecessary burden upon the health and economy of the Nation.”¹⁷⁹

This broadened statutory authority was really a congressional ratification of the many new public health efforts during the New Deal and the mobilization for World War II.¹⁸⁰ As described in Part III below, the Office of Malaria Control in War Areas was already engaged in direct interventions within states well before the Public Health Service Act of 1944, under the authority of a national security mandate coordinated with the U.S. Army. The 1944 Act confirmed this authority through section 604, “Appropriations for Emergency Health and Sanitation Activities.”¹⁸¹ Without specifically mentioning malaria or the MCWA (which had by then been in existence for two years), this section nonetheless confirmed a statutory basis for the MCWA’s activities, authorizing appropriations for the Surgeon General “to conduct health and sanitation activities in areas adjoining military or naval reservations within or without the United States, in areas where there are concentrations of military or naval forces, in Government and private industrial plants engaged in defense work, and in areas adjoining such industrial plants.”¹⁸² Importantly, such activities were authorized “*either directly or through State health authorities.*”¹⁸³

Funding for U.S. Public Health Service activities increased during the Roosevelt years, but even after the Public Health Service Act of 1944 and the broadened authority it conferred, the U.S. Public Health Service remained on the sidelines for most health issues facing the American population. In the southern United States, this relative absence of a federal role changed dramatically with the onset of World War II and the creation of the MCWA.

¹⁷⁹ *Public Health Service Act*, *supra* note 168, at 916.

¹⁸⁰ Lynne Page Snyder, *Passage and Significance of the 1944 Public Health Service Act*, 109 PUB. HEALTH REP. 721, 721 (1994).

¹⁸¹ Public Health Service Act § 604.

¹⁸² *Id.*

¹⁸³ *Id.* (emphasis added).

III. THE OFFICE OF MALARIA CONTROL IN WAR AREAS: NEGOTIATING STATE AUTHORITY

Nowhere was the domestic function of the FSA more closely and explicitly aligned to the war effort than in the MCWA. The Office of National Defense Malaria Control Activities was established in the United States Public Health Service, now an arm of the FSA, on February 10, 1942. It was renamed the Office of Malaria Control in War Areas a short time later, on April 27, 1942. Its location in Atlanta, Georgia, was strategic for malaria control. MCWA's responsibilities included fifteen southeastern states, Puerto Rico, and the Virgin Islands.¹⁸⁴

As World War II approached, the South was strategically important for military bases—a great number were established there because of the possibility of year-round training. In 1942, there were 499 military installations in the South, and that number would increase to 583 two years later.¹⁸⁵ Because the South became an important host of military bases and wartime industry, the military had a significant interest in control of malaria there. The MCWA was a unique agency in its partnership with the military, charged to address mosquito control in civilian areas around bases and war-related industries. The MCWA thus was characterized not as a New Deal priority, but as a wartime necessity.

Neither the Public Health Service nor the MCWA ever had a specific statutory mandate from Congress to take on malaria work in the United States. Instead, the agency performed its work through executive delegation and by congressional appropriation of funds.¹⁸⁶

¹⁸⁴ McClanahan, *supra* note 101, at 31.

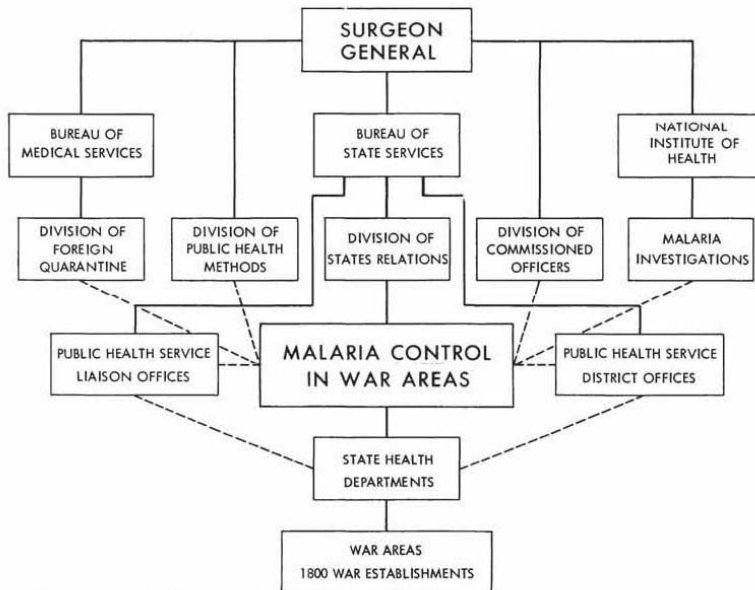
¹⁸⁵ Justin M. Andrews & Jean S. Grant, *Experience in the United States, in 6 COMMUNICABLE DISEASES: MALARIA*, *supra* note 132, at 61, 61.

¹⁸⁶ For examples of congressional budget appropriations for malaria control, see Act of July 3, 1945, Pub. L. No. 79-124, 59 Stat. 361; Act of Dec. 22, 1944, Pub. L. No. 78-529, 58 Stat. 853; Act of June 28, 1944, Pub. L. No. 78-373, 58 Stat. 547; Act of July 12, 1943, Pub. L. No. 78-135, 57 Stat. 494; Act of July 12, 1943, Pub. L. No. 78-132, 57 Stat. 431; Act of July 2, 1942, Pub. L. No. 77-647, 56 Stat. 562; Act of Feb. 21, 1942, Pub. L. No. 77-463, 56 Stat. 98; Act of July 3, 1941, Pub. L. No. 77-150, 55 Stat. 541; Act of July 1, 1941, Pub. L. No. 77-146, 55 Stat. 466; Act of Mar. 1, 1941, Pub. L. No. 77-9, 55 Stat. 14.

Figure 2:

This chart depicts the organizational structure of the Public Health Service branch of the Federal Security Agency, after the addition of the MCWA.

CHART 4.—*Malaria Control in War Areas, lines of authority and interrelations*



Source: *Malaria Control in War Areas Field Bulletin*, September 1944.

The structure and content of this organizational chart (Figure 2 above) merits consideration. Notice, particularly, the references to state relations, and the authority established via direct (and dashed) lines with state health departments. The state health departments, in turn, are shown with direct authority over the geographic areas surrounding the 1,800 designated “war establishments” (military bases as well as defense-related industries). The MCWA itself reported directly to the “Division of State Relations,” which in turn reported to the “Bureau of State Services” of the U.S. Public Health Service.¹⁸⁷ But during the war, federal employees of the MCWA often worked

¹⁸⁷ The U.S. Public Health Service’s Division of State Relations was created in 1936, after it received funding applications from every state in the nation. The 1935 Social Security Act had made public health funds available to the states and for the first time had created a permanent mechanism for distributing them.

directly in areas under state jurisdiction, spraying larvicide and directing drainage activities.

A. An Expansion of Federal Jurisdiction

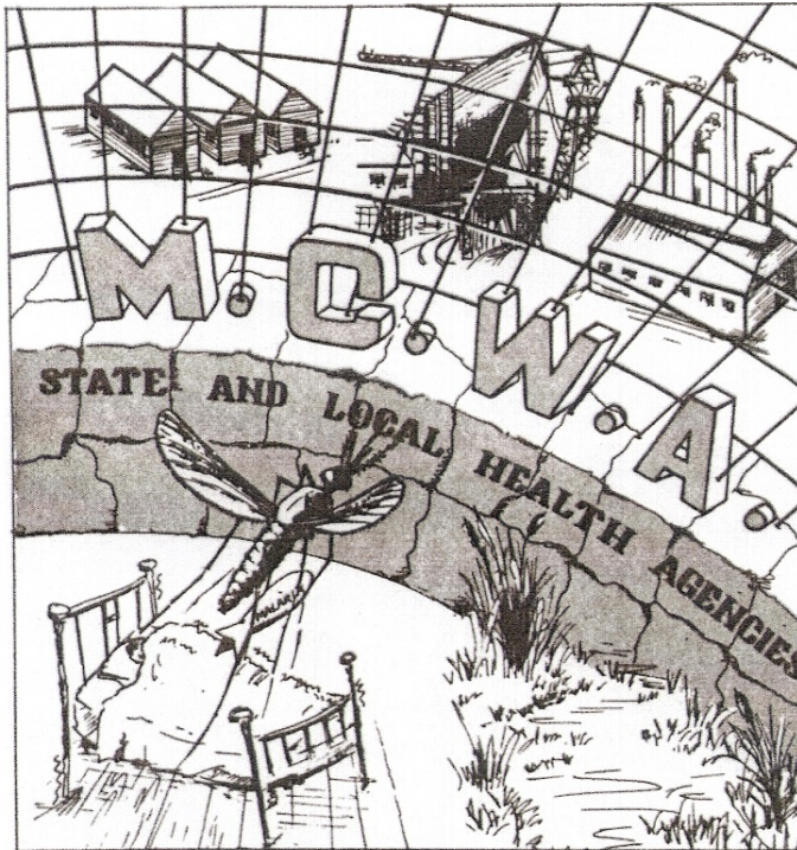
In theory, the MCWA's jurisdiction was limited to a one-mile radius around the establishments to be protected.¹⁸⁸ The one-mile radius restriction, first practiced in World War I, was thought to be the flight limits of the anopheles mosquito. In terms of the MCWA's work, this one-mile jurisdictional limit was observed more often in the breach, without objection by state or local authorities. There is no evidence, for example, that any government officials employed surveyors to demarcate the one-mile circle, nor are there, apparently, any recorded complaints when MCWA operations extended outside of these zones.

Federal health expenditures in the South, largely grants in aid from the Public Health Service, had already increased to just over \$4 million in 1930. Breeden, *supra* note 13, at 15.

¹⁸⁸ McClanahan, *supra* note 101, at 32.

Figure 3:

MCWA illustration from its report for 1942–43, depicting the mosquito as an enemy airplane carrying a disease “bomb.” Note the depiction of the MCWA atop the “superstructure” of state and local health agencies.



M.C.W.A. IS THE SUPERSTRUCTURE BUILT UPON THE SOLID FOUNDATION OF STATE AND LOCAL HEALTH AGENCIES FOR THE PROTECTION OF FIGHTING MEN AND WAR WORKERS.

This MCWA illustration (Figure 3 above) also merits further consideration with respect to the depiction of state and local health agencies as its “superstructure.” To some extent the MCWA continued a legal fiction of jurisdictional limits associated with the one-mile demarcation. On the other hand, the MCWA is depicted as the organizing, governing structure for state

and local health agencies. Moreover, designation of “war establishments” was a federal, not a state matter.

Military bases were subject to the jurisdiction of the military’s infectious disease control units, so the military itself handled elimination of mosquitoes and protection of troops from malaria on each military base. Mosquito breeding areas, however, surrounded military bases in the South, and in any event military planners had to account for exposure of soldiers in transit to the training camps and while on leave. A separate agency was necessary because neither the federal government nor the military had authority to act in areas outside of military bases. Thus, the MCWA was given jurisdiction over “civilian” areas surrounding military bases for malaria control.

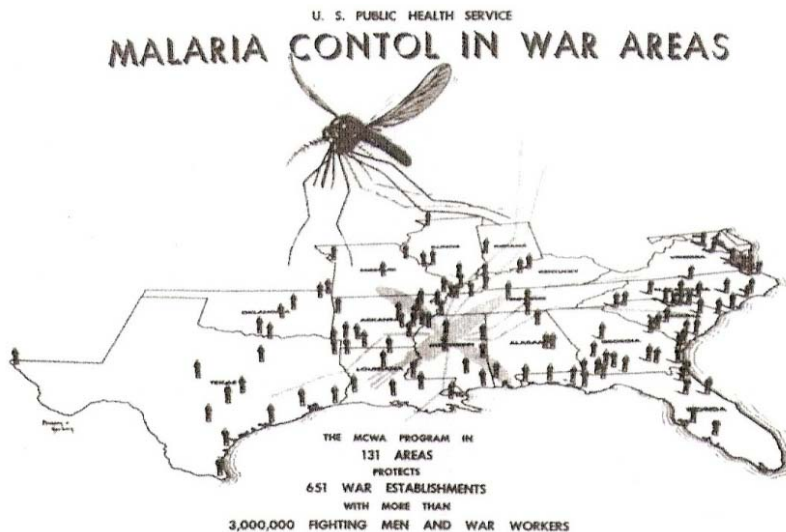
War necessity encompassed private industry deemed vital to defense, further enlarging the jurisdiction of the MCWA within southern states. As World War II progressed, the FSA increasingly viewed agricultural production to be an essential war aim, expanding the designated operation area of the MCWA enormously. Eventually, some 2,000 “war establishments” were designated, including factories, depots, access highways, and recreational areas, in addition to military bases.¹⁸⁹ Fewer than 600 of these 2,000 “war establishments” were military posts.¹⁹⁰ As the MCWA itself observed in its annual report for 1942–43, “[T]he immensity of the task has required the support and expansion of the normal local and state health department facilities by the United States Public Health Service.”¹⁹¹

¹⁸⁹ Andrews & Grant, *supra* note 185, at 91.

¹⁹⁰ *Id.*

¹⁹¹ U.S. PUB. HEALTH SERV., MALARIA CONTROL IN WAR AREAS, 1942–43, at 5 (1943).

Figure 4:
A map of the United States South showing locations of personnel of the MCWA in 1943.



In its annual reports, the MCWA appended a “State Section,” emphasizing that the MCWA operated within each state “as a cooperative enterprise between the Public Health Service and the state health department.”¹⁹² This section included letters from the state health department directors for each state where MCWA operations occurred. The letters, each one page in length, recounted the accomplishments for the year in acres drained, water surfaces treated with larvicide, and hours of labor expended.¹⁹³ Some letters specifically credited the cumulative achievements to the MCWA, while in others the credit was implied.¹⁹⁴

The U.S. Public Health Service also assigned employees to serve as “Liaison Officers” between regional Army Service Commands and state health officials, who operated independently from the MCWA to coordinate federal,

¹⁹² *Id.* at 83.

¹⁹³ *Id.* at 84–92.

¹⁹⁴ *Compare id.* at 85 (letter from Arkansas State Health Officer specifically discussing MCWA’s achievements in Arkansas the previous year), *with id.* at 89 (letter from Georgia State Health Officer omitting mention of MCWA).

state, and local resources in “emergency health work.”¹⁹⁵ A history of the Public Health Service described the Liaison Officers as “free to work in association with State and local civil authorities in investigating health conditions and in stimulating the development or improvement of location health organizations.”¹⁹⁶ Liaison Officers were expected to address, among other problems, venereal and other communicable diseases, sanitation, and “provision of health and medical services in civilian communities.”¹⁹⁷ MCWA engineers communicated with these Liaison Officers for joint planning of mosquito-eradication operations.¹⁹⁸

By 1953, the MCWA had spent an estimated \$100 million for antimalarial activities.¹⁹⁹ Within only one year of its creation, the federal agency employed 4,300 people, including 300 commissioned officers of the U.S. Public Health Service.²⁰⁰ The great majority of employees were sanitation engineers and entomologists, who in turn trained state and federal employees in eradication techniques. The agency reported that it had benefited hundreds of war establishments, including military, industrial, housing, and recreational installations, protecting some several million persons in the United States in connection with the war effort.²⁰¹ Training in malaria control became one of the responsibilities of the MCWA.²⁰²

One historian recounted:

From the beginning, engineers and entomologists dominated MCWA. Physicians assessed malaria cases in the field, and parasitologists ran the laboratory, but major emphasis was always on mosquito control, the engineers’ specialty. They determined control methods, directed operations, surveyed and designed drainage construction projects, and mapped field activities. . . . The wartime need to save time, money, and equipment dictated that temporary measures like

¹⁹⁵ RALPH CHESTER WILLIAMS, *THE UNITED STATES PUBLIC HEALTH SERVICE 1789–1950*, at 625 (1951).

¹⁹⁶ *Id.* at 628–29.

¹⁹⁷ *Id.* at 629.

¹⁹⁸ U.S. PUB. HEALTH SERV., *supra* note 191, at 2.

¹⁹⁹ Duffy, *supra* note 17, at 49.

²⁰⁰ FITZHUGH MULLAN, *PLAGUES AND POLITICS: THE STORY OF THE UNITED STATES PUBLIC HEALTH SERVICE* 125 (1989).

²⁰¹ Bauer, *supra* note 4, at 1104.

²⁰² John Parascandola, *From MCWA to CDC—Origins of the Centers for Disease Control and Prevention*, 111 PUB. HEALTH REP. 549, 549 (1996).

larvicidal control take preference over permanent drainage projects.²⁰³

Many of the sanitary engineers and laboratory workers employed by the MCWA completed a four-week orientation course sponsored by the U.S. Public Health Service in Bethesda, Maryland.²⁰⁴ The orientation course emphasized “the unique federal-state relationship for coöperation in public health activities,” and instructors emphasized the police powers of the state.²⁰⁵ Dr. A.J. McLaughlin, for example, extolled the “ideal relation between federal and state governments” to be “such as to insure the covering between them of the entire field of public health.”²⁰⁶ Along the same lines, Lieutenant Stanley Drexler told attendees:

The most impressive thing about the study of federal legislation pertaining to public health is the extent to which Congress has leaned over backward to (a) keep the federal government out of the day-to-day public health work, (b) keep the public health worker under control of the states and municipalities, and (c) make the federal government a center of research, a center for the exchange of ideas, and a sort of over-all adviser. Much, if not all of the past prestige of the Public Health Service in the field of federal-state relations has been contained in the persuasive and coöperative powers of the Service rather than in its legal powers.²⁰⁷

The MCWA largely followed the form, but not the function, of the federalism limitations outlined by Lieutenant Drexler.

The most significant step in the expansion of the MCWA’s jurisdiction came with official recognition of an “extended malaria control program” operated by the MCWA. As the war seemed all but concluded, officials reasoned that the most significant threat of malaria likely would be returning military personnel who had contracted the disease where they had been stationed, most notably those returning from the Pacific. Beginning in late 1943, cases of nonindigenous malaria increased sharply in hospitals and prisoner-of-war camps, and scientists established that malaria acquired abroad

²⁰³ ETHERIDGE, *supra* note 5, at 4.

²⁰⁴ E. S. Tisdale, *Relationship of the U. S. Public Health Service to State and Local Health Units*, 35 AM. J. PUB. HEALTH 625, 627 (1945).

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*

could be transmitted domestically.²⁰⁸ The MCWA, however, was not originally authorized to operate beyond war establishments.

Further, with the specter of a rapidly approaching demobilization of thousands of troops who had served in malarial areas, the problem of malaria control became a national one. Unless the United States government was willing to quarantine these returning soldiers from six to nine months after their return, a malaria epidemic likely could not be contained. Testifying before Congress, an MCWA official reported that malaria experts had predicted that over a million malaria carriers would return to the United States at the conclusion of the war.²⁰⁹

Congress responded by authorizing an “Extended Program” for the MCWA, along with an appropriation of just over \$10 million for “Malaria and Diseases of Tropical Origin (National Defense).”²¹⁰ The MCWA now had, effectively, a national jurisdiction, not restricted to a one-mile radius around military establishments in areas of endemic malaria. The Medical Director of the U.S. Public Health Service, Dr. L.L. Williams, Jr., reassured the public that the returning war veterans did not “pose any new problem; it merely accentuates the existing civilian problem.”²¹¹ To address the problem, Dr. Williams wrote, the Public Health Service had asked for “an appropriation to extend the activities of Malaria Control in War Areas.”²¹² Justifying the MCWA’s expanded jurisdiction was also, now, the goal to eradicate malaria throughout the United States. “With the continued cooperation of State health departments,” Dr. Williams claimed, “this program will be successful.”²¹³

B. The Use of DDT for Mosquito Control

An important addition to the MCWA’s arsenal was the introduction of DDT for civilian use toward the close of World War II. Developed by the U.S. Army for use in war zones during World War II, DDT’s reputation for mosquito control was thought in 1945 to be “the War’s greatest contribution to the future health of the world.”²¹⁴ DDT killed adult mosquitoes for lengthy

²⁰⁸ McClanahan, *supra* note 101, at 48–49.

²⁰⁹ *Id.* at 52–53.

²¹⁰ *Id.* at 55.

²¹¹ L.L. Williams, Jr., *The Extended Malaria Control Program*, 60 PUB. HEALTH REP. 464, 464 (1945).

²¹² *Id.* at 468.

²¹³ *Id.* at 469.

²¹⁴ Edmund P. Russell III, *The Strange Career of DDT: Experts, Federal Capacity, and Environmentalism in World War II*, 40 TECH. & CULTURE 770, 770–71 (1999).

periods and was usually sprayed on the walls of buildings.²¹⁵ *Time*, *Reader's Digest*, and *Better Homes and Gardens* ran laudatory articles on DDT, calling it “one of the great scientific discoveries of World War II.”²¹⁶ The upsurge in public interest in DDT as a pesticide led to the Army’s decision to release it for civilian use at the conclusion of the war.²¹⁷ Although concerns about DDT’s potential impact on human health and the environment existed, the federal government would not ban most uses of DDT in the United States until 1972.²¹⁸

Prior to its public availability, however, the MCWA played a key role in introducing DDT for mosquito control in civilian areas. The MCWA acquired DDT supplies from the military and began spraying the interiors of houses in areas with identified malaria morbidity.²¹⁹ In 1944, the first year of the program, the MCWA oversaw DDT spraying in over half a million homes in the South. By the late 1940s, over one million homes per year would be sprayed. The spraying program ended in 1951.²²⁰

The availability of DDT for civilian use furthered the transition to the MCWA “extended program” at the conclusion of the war.²²¹ The threat of outbreaks from returning war veterans, it was argued, could more easily be controlled by treating the interiors of homes and public buildings with DDT than by larviciding and drainage. Congress appropriated funds for this purpose, with locations determined by the MCWA based upon malaria rates. There was “no uniform method of securing the State and local participation.”²²² One study noted that the “incidental fly control” resulting from DDT spraying—meaning ordinary household pests also fell victim to DDT—was one of the “major factors in the ready acceptance and the success

²¹⁵ *Id.* at 779.

²¹⁶ *Id.* at 782–83.

²¹⁷ *Id.* at 773–75.

²¹⁸ *Id.* at 771–72. An article in *Public Health Reports*, published in 1945, is notable for its lack of attention to any potential adverse environmental or human health effects of DDT. S.W. Simmons, *Tests of the Effectiveness of DDT in Anopheline Control*, 60 PUB. HEALTH REP. 917 (1945). Much of the development work for applications in the United States was completed at the MCWA’s Savannah, Georgia laboratory. *Id.* at 917.

²¹⁹ Margaret Humphreys, *Kicking a Dying Dog: DDT and the Demise of Malaria in the American South, 1942–1950*, 87 *ISIS* 1, 12–13 (1996).

²²⁰ *Id.* at 14.

²²¹ Frank Tetzlaff, *Operation of the United States Public Health Service Malaria Control Program*, 63 PUB. HEALTH REP. 557, 558 (1948).

²²² *Id.* at 559.

of the spraying program.”²²³ In other words, homeowners appreciated the fact that DDT killed other insects as well. The author of the study further opined that “we should expect an eventual extension of this activity to provide control of all insects having public health significance.”²²⁴ Ongoing consideration of the idea (which was eventually adopted), the author noted, would require more extensive interior spraying of DDT than currently practiced.²²⁵

Margaret Humphreys, among others, has noted that indigenous cases of malaria in the United States had declined dramatically before the establishment of the MCWA. In a 1996 article, Humphreys posed the following provocative questions:

Why did the federal and state public health establishment choose this declining disease for a major eradication campaign, when diseases such as tuberculosis, syphilis, and polio had a much larger impact on morbidity and mortality? And why did they do so in the early 1940s, just when evidence of its imminent demise was coming to light?²²⁶

The questions are particularly important because of the MCWA’s role in the use of DDT. The introduction of DDT by the MCWA on such a large scale seems to have attacked only a small problem.

As one answer to these questions, Humphreys noted that malaria data in the United States was woefully inaccurate until the late 1940s, and most scientists believed malaria epidemics were cyclical, with a dramatic upsurge having occurred as recently as 1935–36.²²⁷ But a framework answer to these questions undoubtedly must center on the militarization of the South during World War II. Malaria was known to exist in the region; soldiers from every part of the United States would be trained there; important war industries operated there; and the federal government doubted the ability of state and local governments to protect these war assets.

²²³ *Id.* at 561.

²²⁴ *Id.*

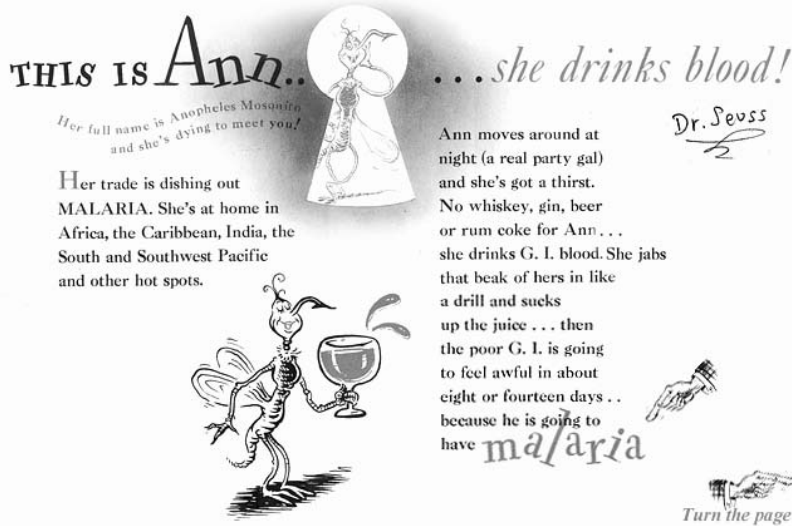
²²⁵ *Id.*

²²⁶ Humphreys, *supra* note 219, at 3.

²²⁷ *Id.* at 3–4.

Figure 5:

Theodore Geisel, better known as Dr. Seuss, illustrated this 1943 pamphlet used to educate the public and members of the armed forces about the causes of malaria. Geisel served as a captain in the U.S. Army during World War II.



From 1942 to 1945, the MCWA had its headquarters in Atlanta. At the end of the war, the Office took on the mission to eradicate malaria (not just control it) everywhere in the United States. The primary rationale for continuing the effort now shifted to preventing the reintroduction of malaria from returning military personnel who had served overseas. These veterans would return to homes and workplaces throughout the United States. As one advocate for expansion of the MCWA mission warned in 1945, “Millions of American soldiers and sailors are operating, or will operate, in Central Africa and in the South West Pacific which include the most fever-ridden areas on the surface of the globe. We already have warning signals of the results which we may expect.”²²⁸ Those “warning signals” included recent malaria epidemics in New Jersey, Ohio, and Michigan.²²⁹

At the close of World War II, then, the MCWA shifted its emphasis to preventing importation of malaria and other insect-borne diseases via returning

²²⁸ *The Challenge of Malaria Control*, 35 AM. J. PUB. HEALTH 271, 271 (1945).

²²⁹ *Id.* at 272.

U.S. troops, thus retaining its funding, extending its jurisdiction nationwide, and justifying the establishment of a permanent agency. MCWA officials in 1945 stressed “the need that will develop in the future for protecting the general population from the servicemen who will return to their home communities as carriers of even more virulent strains of plasmodia than those with which we have been familiar in the United States.”²³⁰

Although the MCWA was officially terminated at the conclusion of the war, various successor organizations followed. But the original core of the MCWA remained in Atlanta, renamed first the Communicable Disease Center,²³¹ and later the Center for Disease Control and Prevention.²³² In its early years, the CDC remained primarily concerned with malaria, and to accomplish its eradication goal, agency employees continued to train state and local health agencies in malaria-control techniques and strategies, as well as to supply larvicides and financial support. But CDC employees no longer engaged directly in spraying and other eradication efforts. The war’s conclusion brought with it the discontinuation of the MCWA’s malaria control program, shifting employee efforts to less direct interventions.

Moreover, while the new Communicable Disease Center continued “certain training and investigation functions” of the MCWA, its expertise expanded to other insect-borne and contagious diseases.²³³ “[T]ropical and related infections,” which the renamed MCWA would take on, had “certain extraterritorial and interstate aspects which make them matters of Federal concern as well.”²³⁴ While this addition to the extended malaria control

²³⁰ *Id.* at 271.

²³¹ Bauer, *supra* note 4, at 1104. This Article uses the term “CDC” to refer to the Communicable Disease Center historically and the Centers for Disease Control today.

²³² The organization’s current name is plural—the *Centers* for Disease Control and Prevention—to reflect the consolidation of separate health endeavors formerly located in Washington, D.C. The designation was changed to the plural in 1980, with “and Prevention” appended in 1992. The CDC currently has more than 15,000 employees and an annual budget of about \$10 billion.

²³³ Justin M. Andrews, *The United States Public Health Service Communicable Disease Center*, 61 PUB. HEALTH REP. 1203, 1203 (1946). The expansion included diseases in “the Tropics or subtropics” transmitted by insects, but also any source of infection known or suspected to be zoological, including

all diseases of protozoan and helminthic origin, the most prominent of which are malaria, amebiasis, the schistosomiasis, hookworm disease, filariasis, etc., and certain infections of bacterial or viral etiology such as yellow fever, dengue, certain neurovirologic disorders, the various forms of typhus and plague, sand-fly fever, diverse diarrheas and dysenteries, and possibly other diseases.

Id.

²³⁴ *Id.* at 1204.

program could be “considered heterogeneous from clinical and nosologic points of view,” it was nonetheless “eminently sound, sensible, and workable from the standpoints of laboratory diagnosis, epidemiologic investigation, and control operations,” according to a 1946 article in *Public Health Reports*.²³⁵

The Communicable Disease Center, still located in Atlanta but awaiting construction of a large facility on property donated by Emory University,²³⁶ was charged to “continue certain training and investigation functions of the Office of Malaria Control in War Areas,”²³⁷ although it did not continue to perform spraying and drainage through its employees, as it had during the war. Its operational services included field-testing, evaluation of vector control, equipment design and testing, insecticide research, and training of state health workers.²³⁸ These activities, the CDC’s early proponents noted, “exceed the resources and facilities of individual States. They are concerned to a large degree with interstate and extracontinental health hazards.”²³⁹ As a post-war fledgling public health agency, it was hoped “earnestly that the peacetime Communicable Disease Center will merit and receive the support and cooperation of State health departments to the same or even greater extent than did the war-related Office of Malaria Control in War Areas.”²⁴⁰

The CDC’s own history of the malaria-eradication campaign notes that the TVA’s malaria assessment and control activities, along with the MCWA’s work in the southeastern United States, “were so successful that at the end of the war and the founding of CDC, one of the initial tasks was to oversee the completion of the elimination of malaria as a major public health problem.”²⁴¹ In 1949, the CDC reported that the country was “declared free of malaria as a significant public health problem.”²⁴²

²³⁵ *Id.* at 1203.

²³⁶ Bauer, *supra* note 4, at 1106. Theodore Bauer, Chief of the Communicable Disease Center in 1955, wrote that the proposed construction near Emory would “allow the CDC, for the first time, to assemble its headquarters activities at one location. Now they are located in some 65 buildings in Atlanta and Chamblee, Ga., and at Montgomery, Ala. Many of these buildings are temporary structures, unsuitable for laboratory work, and expensive to maintain.” *Id.*

²³⁷ Andrews, *supra* note 233.

²³⁸ *Id.* at 1206.

²³⁹ *Id.* at 1207.

²⁴⁰ *Id.*

²⁴¹ *Elimination of Malaria in the United States (1947–1951)*, CTRS. FOR DISEASE CONTROL & PREVENTION, http://www.cdc.gov/malaria/about/history/elimination_us.html (last updated Feb. 8, 2010).

²⁴² *Id.*

To what extent did the MCWA's activities contribute to this result? Dr. Justin Andrews noted in 1948:

That malaria reduction occurred near many of these operation sites as a result of breeding place destruction and antilarval measures is indisputable, but that these areas were sufficiently numerous, extensive, or malariogenically important to produce a coalescent malaria depression throughout the South is hardly credible. Furthermore, malaria has diminished to a greater or lesser degree in areas beyond the influence of the TVA and untouched by WPA or MCWA. Thus, it is evident that other factors in addition to interference with anopheline production have been concerned in this phenomenon.²⁴³

One writer in 1945 posited that poverty in the South, especially among tenant farmers, was the primary factor for the tenacity of malaria.²⁴⁴ Using the price of cotton and income data from federal tax returns, the writer showed a correlation between declining incomes and cyclical recurrences of malaria in Mississippi. This data, he claimed, ran counter to the view that malaria rates closely tracked the total amount of rainfall for a given year.²⁴⁵ While lauding the "very beneficial" and "concrete results" from efforts to control malaria by eliminating mosquito breeding grounds, he also noted that improvement in socioeconomic conditions must occur to "eliminate the disease from this country."²⁴⁶ Poor people lived in substandard housing, were malnourished, and had less access to health care and prophylactic malaria medicines. Malaria itself exacerbated the cycle of poverty.²⁴⁷ The MCWA attacked the newly federalized mosquito, but the general rise in prosperity following the Great Depression greatly aided its effort.

Although scholars disagree about whether malaria was already on the wane in the South in the 1940s, it is clear that the MCWA became at least symbolically important as a model of public health intervention by the federal government. In 1945, as World War II concluded, a senior sanitary engineer

²⁴³ Justin M. Andrews, *What's Happening to Malaria in the U.S.A.?*, 38 AM. J. PUB. HEALTH 931, 939 (1948).

²⁴⁴ William B. Brierly, *Malaria and Socio-Economic Conditions in Mississippi*, 23 SOC. FORCES 451, 454, 458 (1945).

²⁴⁵ *Id.* at 452, 458.

²⁴⁶ *Id.* at 451.

²⁴⁷ The relationship between poverty and malaria as a global phenomenon is widely recognized today. Sixty percent of malaria infections occur in the poorest twenty percent of the world's population. Nikki Kumar, *Public Health or Public Harm: DDT, Malaria, and the Right to Health*, 23 WINDSOR REV. LEGAL & SOC. ISSUES 85, 90 (2007).

with the U.S. Public Health Service cited the MCWA as a prime example “that a new era of federal-state cooperative effort is here.”²⁴⁸

CONCLUSION

In the early decades of the twentieth century, race, poverty, and the monopoly of state and local health boards led to little regional progress against malaria in the United States. The subsequent story is about federal efforts to eradicate malaria, efforts that extended federal jurisdiction within states, and ultimately, a declaration of success. But some scientists and historians conclude that malaria eradication in the southern United States had as much to do with changes in agricultural practices, economic improvement in the region, and demographic shifts, as it did prophylactic mosquito-elimination measures taken by state and federal agencies.²⁴⁹

Could the South have eliminated malaria without federal dollars? Some scholars suggest this could be the case. Local and state health organizations contributed to the eradication of malaria in the United States, as did private enterprise and philanthropy. Even if malaria might have been eliminated in this way, the eradication of malaria in the region would certainly have been delayed. For the purpose of this Article, that debate is significantly beside the point. From a federalization perspective, the critical point is that the federal government initiated a malaria-eradication effort with broad jurisdiction that helped reshape public perception of the federal government’s responsibilities. It did so under a “national security” mandate that blurred the distinction between domestic and international security, with an effect on the federal government’s regulatory power. But the federal government then withdrew from this wartime assertion of jurisdiction, leaving public health federalism largely unchanged.

The first regionally coordinated efforts at malaria control in the South occurred in the 1940s as a national security mandate connected with America’s entry into World War II. This national security mandate was part of a larger story of increasing federal powers in public health efforts, touted as both a matter of domestic policy and essential to the war effort. The federal CDC, and its location in Atlanta, was a direct result of this wartime mandate. World War II sealed the New Deal transformation for this public health issue,

²⁴⁸ Tisdale, *supra* note 204, at 625.

²⁴⁹ *See, e.g.*, HUMPHREYS, *supra* note 31.

overcoming some of the hurdles of federalism and regional suspicion of the federal government.

The legacy of a centralized, broadly charged agency like the CDC was thus not a direct result of New Deal efforts but of war exigency. Before World War II, federal efforts to combat malaria in the South were content with a patchwork approach, which was all that was politically feasible. Multistate coordination was a direct result of the invocation of war necessity. The Office of Malaria Control in War Areas provided a significant federalism precedent in the area of public health.

The establishment of the Federal Security Agency, and later the MCWA, followed the failure of Roosevelt's national health insurance scheme. The FSA established an early tradition of federal institutions combating discrete health problems. Nonetheless, federalization of the mosquito to combat malaria in the South would not federalize public health in the United States to any great extent. Public health law remains decentralized and primarily a state obligation.

Malaria-eradication efforts in the South paralleled an increased reliance on agency implementation, a story familiar in industry and monetary regulation during the New Deal era. But the eventual emergence of a more unified federal approach to this public health issue is anything but a straightforward story of a turn to agency expertise to solve a public problem. The early New Deal programs were uncoordinated and haphazard. But for the needs of the military during World War II, it is unlikely that a unified federal approach, let alone an agency specifically charged to combat malaria, would have emerged.

Furthermore, "federalization" was complicated by views of state rights and local authority. The MCWA answered to the newly created Division of States Relations within the U.S. Public Health Service, with district offices accepting responsibility for federal-state relations. The MCWA worked primarily through state and local boards of health, but due to wartime powers allocated to the agency, malaria-eradication efforts came to be viewed as a distinct obligation of the federal government. Some elements of southern society needed little convincing that malaria was a drag on the southern economy, but the South continued to be suspicious of government generally, and the federal government specifically. Ironically, a limited-purpose federal agency became the prime mover toward an organization with more permanent possibilities, as we see today with the federal Centers for Disease Control and Prevention.

The “new federalism” of the United States Supreme Court has been described in the public health arena to “rel[y] heavily on a rigid and categorical view of the boundaries between federal and state power.”²⁵⁰ Although this Article does not specifically engage recent scholarship in “new federalism” public health in the United States, it is interesting to observe that the contemporary popular expectation is that the federal government steps in to control health epidemics, natural disasters, and so forth. The mindset in the 1930s and 1940s was different in many regions of the United States. This mindset was particularly entrenched in the South, where federalism issues presented the specter of national interference with southern racial issues.

Yet the experience of the MCWA and subsequent efforts to eradicate malaria gained widespread acceptance, due perhaps in no small part to respect for the military and recognition of the need to protect it along with the larger war effort. The military voice carried great weight in Washington under the Roosevelt Administration, and it was ultimately this emphasis on malaria control as a national security priority that won out, however temporarily, over disputes about domestic allocation of power. The subsequent federal withdrawal after the war from assertions of direct jurisdictional authority over health matters within states left no permanent alteration in public health federalism, even if the war provided the impetus for establishment of the federal Centers for Disease Control. Today, the CDC still works under the federalism paradigm in place throughout the twentieth century, as a “federal service organization to provide specialized assistance to the states, which have legislative responsibility for disease control.”²⁵¹ The MCWA’s malaria-eradication effort served as a model for the CDC’s role in the global eradication of smallpox by 1980.²⁵²

Moreover, efforts at malaria control in the 1930s and 1940s display a remarkable flexibility of administrative approach by federal executive agencies. This approach, experimentation with adjustments as needed, echoed on a smaller scale other endeavors by Franklin Roosevelt during the New Deal. In the end, the mosquito became a subject of federal jurisdiction without an explicit declaration of federal authority. This federal intervention to eradicate malaria was an aberration—although a small one—in the customary division

²⁵⁰ Parmet, *supra* note 9, at 202.

²⁵¹ William H. Foege, *Centers for Disease Control*, 2 J. PUB. HEALTH POL’Y 8, 9 (1981).

²⁵² For a timeline and history of the global effort to eradicate smallpox, see *Smallpox: 30th Anniversary of Global Eradication*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/features/smallpoxeradication> (last updated Oct. 1, 2007).

of authority between the states and the federal government in matters of public health.