

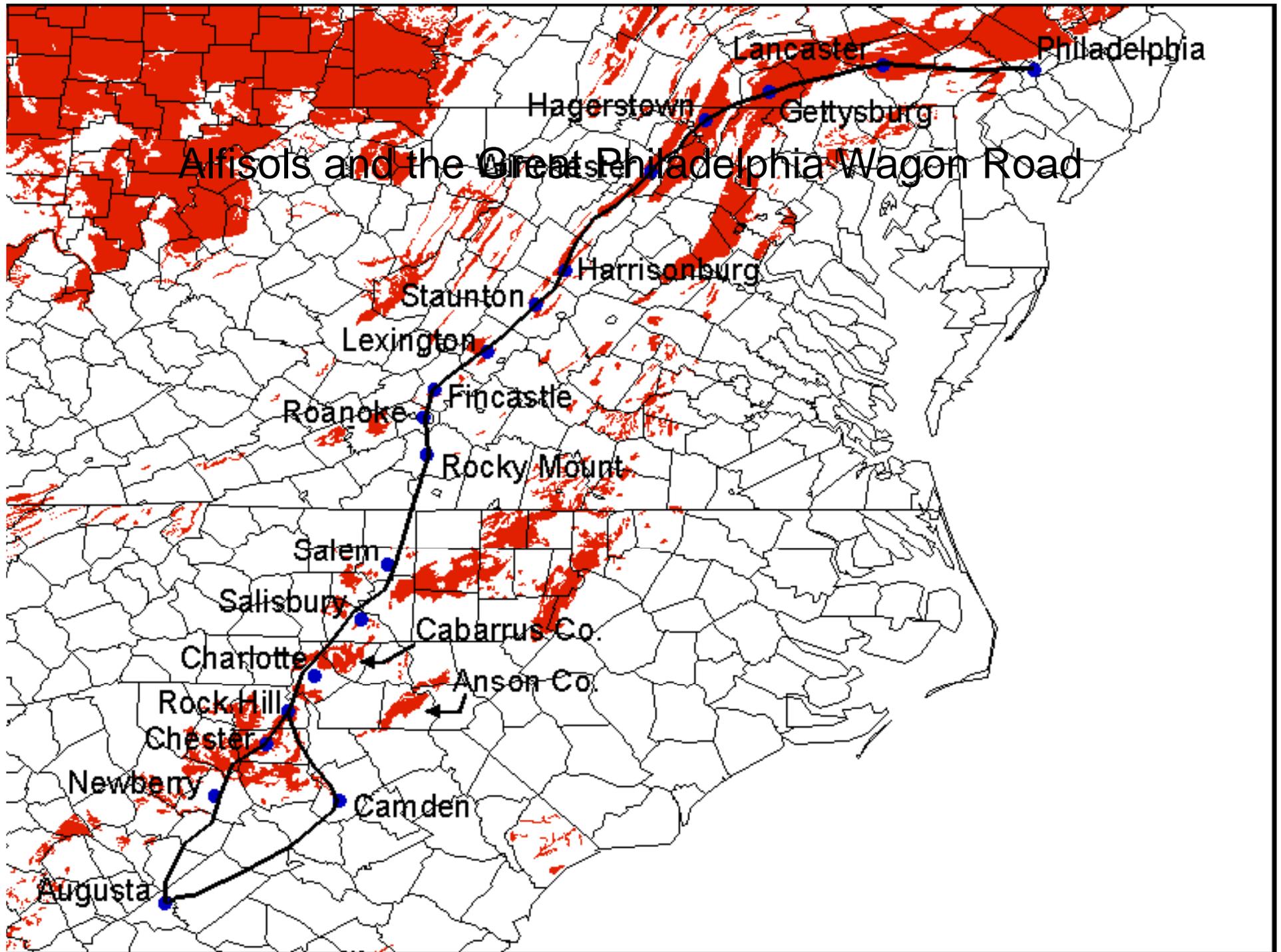
The Creation of the Federal Commitment to Soil Conservation: Hugh Bennett's Campaign, the Depression, and the Dust Bowl

Douglas Helms
National Historian
Natural Resources Conservation Service

Agricultural Outlook Conference
Crystal Gateway Marriott
Arlington, Virginia
February 18, 2010



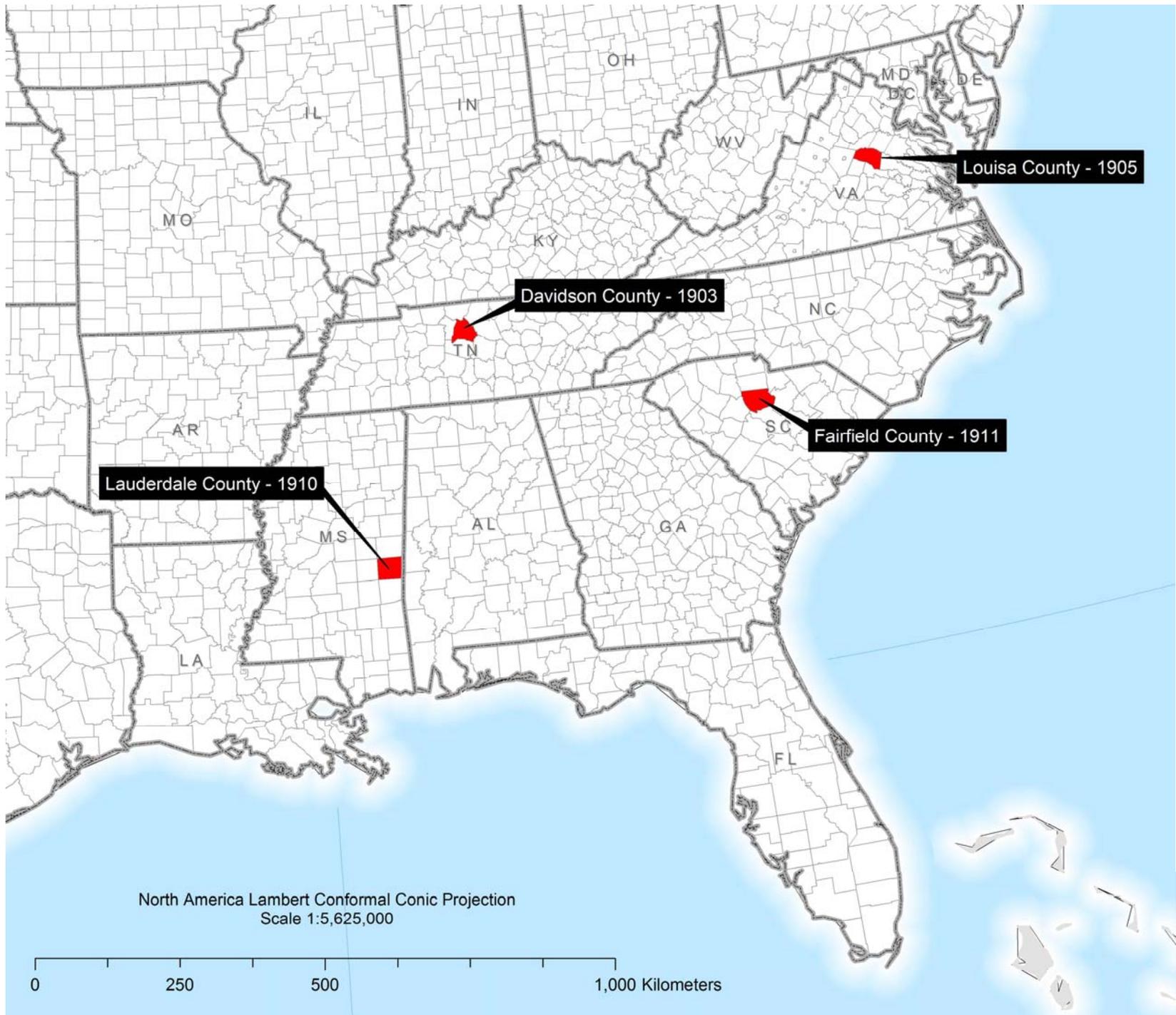
Slide 2





-100.819,27.145





Louisa County, Virginia Soil Survey, 1905

Although the damaging effects of soil erosion were in evidence to right and left through the rolling farm country encountered in North Carolina, Tennessee, and Virginia during my first two years of surveying, it was not until 1905 that I began to understand just what was taking place. ...

The Chief of the Bureau of Soils had requested us to look carefully into the reason for the reputation of the locality for the poverty of its soils. We found much naturally poor soil derived from magnesian schist, along with a large area which had been made poor by erosion of unprotected cultivated sloping land.

The Hugh Bennett Lectures, page 12.

Soil Survey of Fairfield County, SC 1911

“...90 thousand acres of formerly cultivated land so cut to pieces with gullies that it was classed as non-arable Rough Gullied Land.” Louisa County, Virginia

46 thousand acres of bottom land, now subject of to excessive flooding and some it covered with 15 to 20 feet of sand and silt

“This survey turned out to be the first large erosion survey that I know anything about. It was not made specifically to show what erosion was doing to the land; that was an incidental finding.”

The Hugh Bennett Lectures, page 15.



THE
SOILS AND AGRICULTURE
OF THE
SOUTHERN STATES

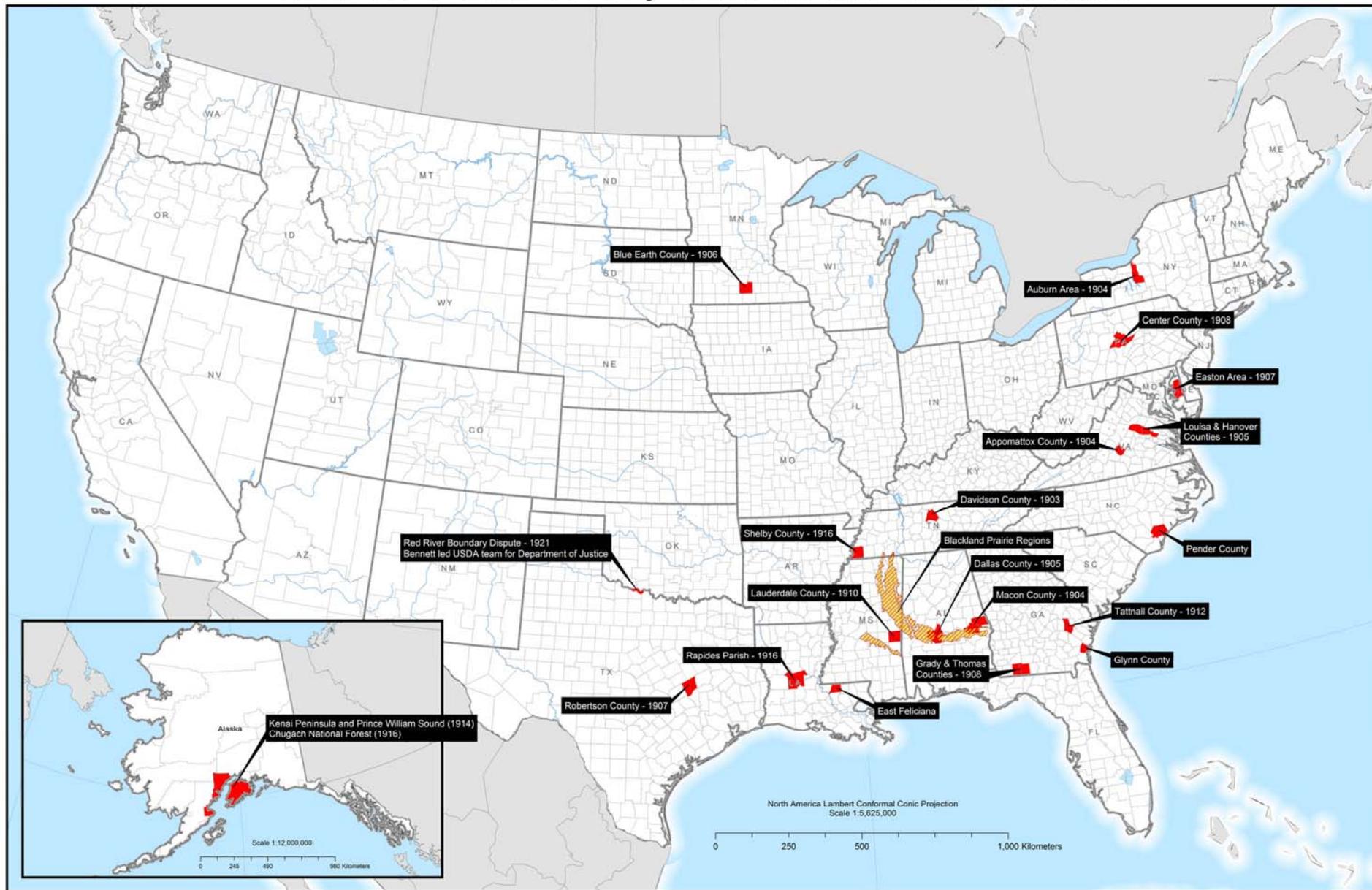
BY
HUGH HAMMOND BENNETT
OF THE BUREAU OF SOILS, UNITED STATES DEPARTMENT
OF AGRICULTURE

New York
THE MACMILLAN COMPANY
1921

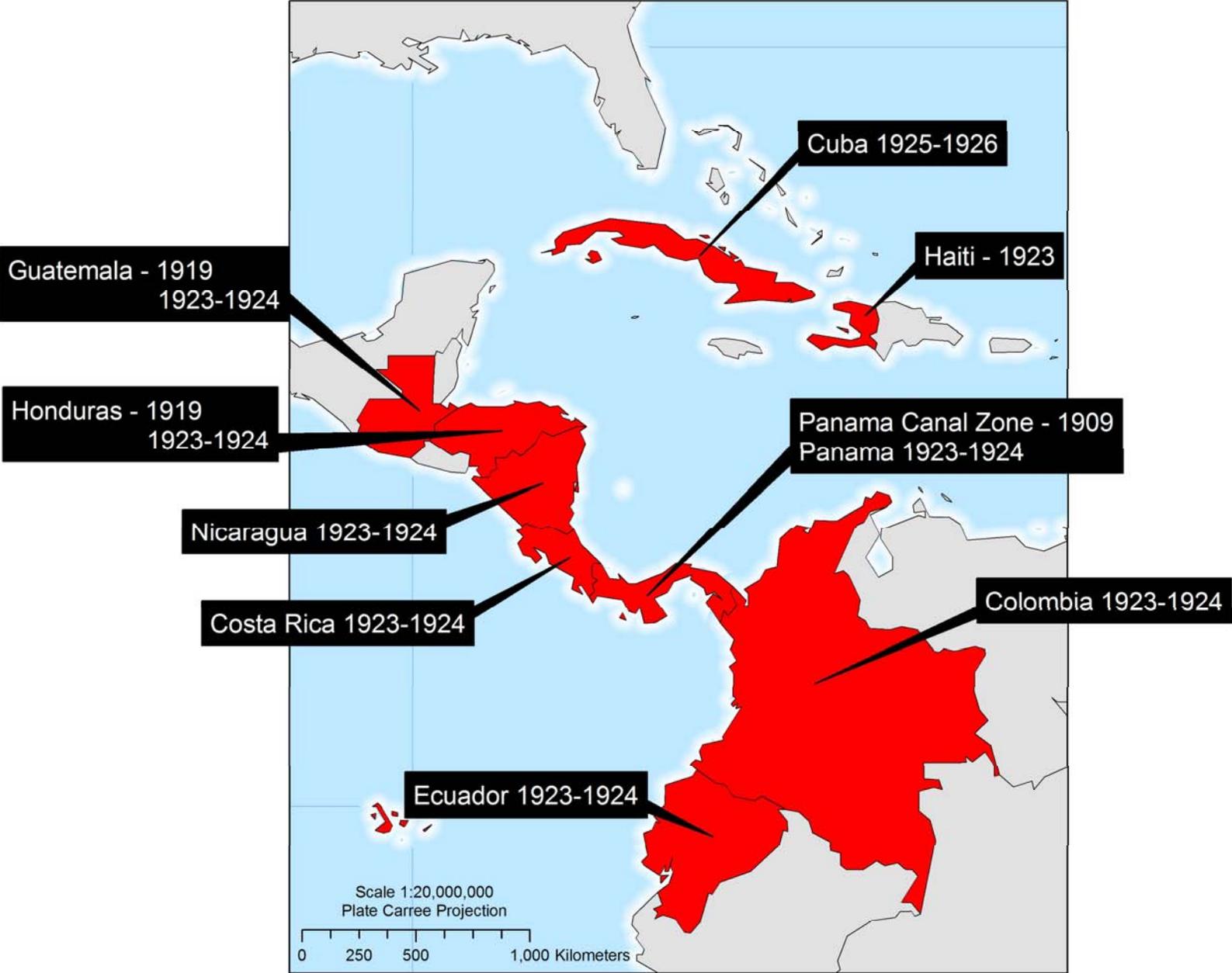
All rights reserved

JAN 26 1921

Bennett's Soil Survey Work in the United States



Bennett's Field Work on Soil Surveys in Foreign Countries



UNITED STATES
DEPARTMENT OF AGRICULTURE
CIRCULAR No. 33

Washington, D. C.

April, 1928

SOIL EROSION A NATIONAL
MENACE

H. H. BENNETT
Soil Scientist, Soil Investigations,
Bureau of Chemistry and Soils

and

W. R. CHAPLINE
Inspector of Grazing, Branch of Research,
Forest Service



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON
1928





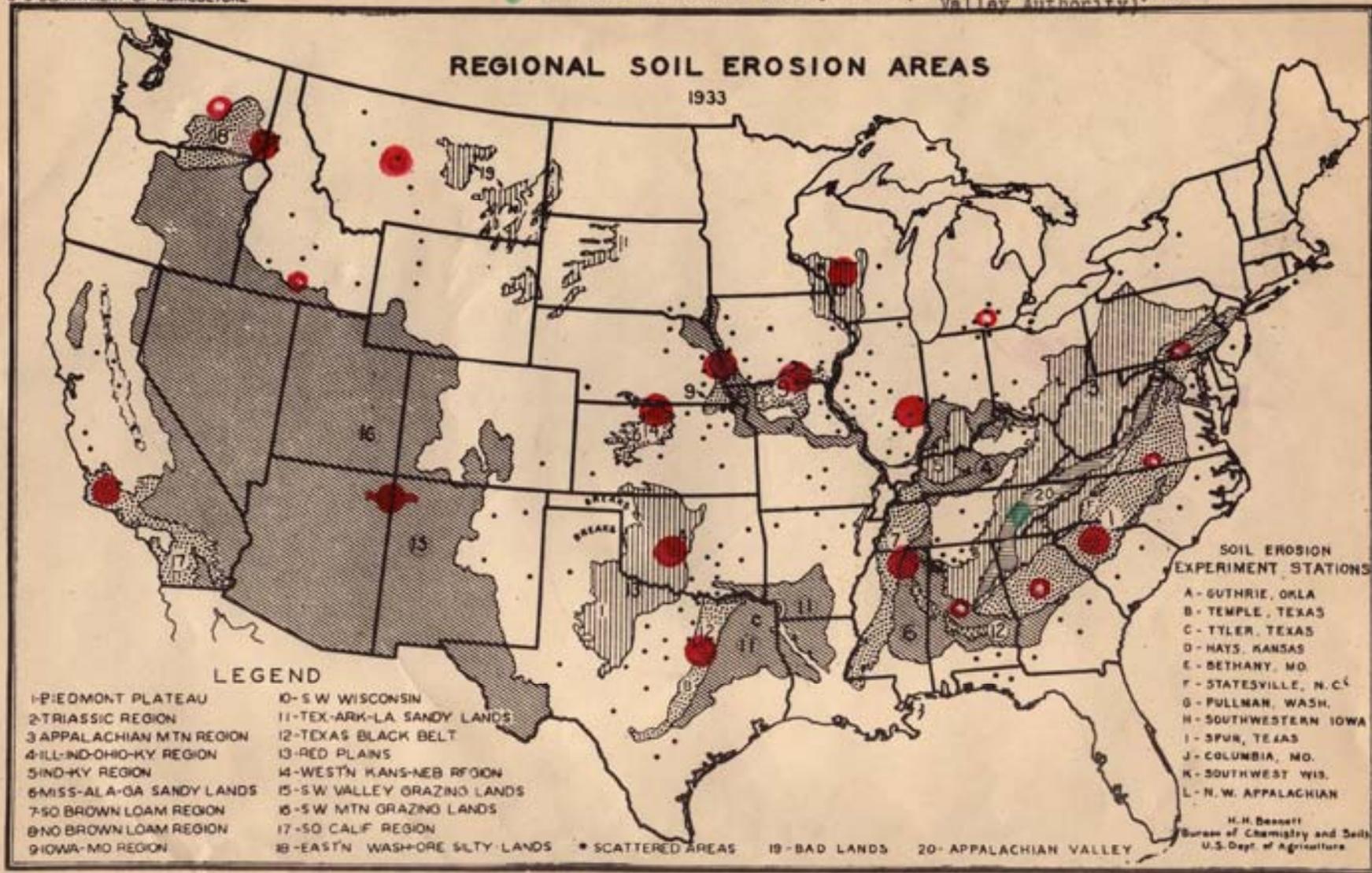
Tentative Location of Erosion Control Areas

- Major Demonstrational Areas
- Minor Demonstrational Areas (there may be more of these)
- Navajo Reservation Area
- Possible Tennessee Valley area (would be financed by Tenn. Valley Authority)

U S DEPARTMENT OF AGRICULTURE

REGIONAL SOIL EROSION AREAS

1933



President Franklin D. Roosevelt's message of March 21, 1933

- President Franklin D. Roosevelt proposed on March 21, 1933, that Congress create "a civilian conservation corps to be used in simple work, not interfering with normal employment, and confining itself to forestry, the prevention of soil erosion, flood control and similar projects."



John Collier

Indian Policy

Change of policy from assimilation to
cultural pluralism

Implications for conservation on
Indian reservations





Slide 20



H-1892 - EL NAVAJO, FRED HARVEY HOTEL, GALLUP, NEW MEXICO

(LATER PAINTING BY FRED SEARF)

Committee Harvey Hotel, Gallup, New Mexico, June 26, 1933

- Bennett chaired committee
- Representatives from the Office of Indian Affairs and USDA
- C. E. Ramser, Senior Drainage Engineer represented the Bureau of Agricultural Engineering. Ramser had also researched and written on terracing and gully control techniques.
- C. K. Cooperrider, Forest Service, Southwestern Forest and Range Experiment Station, who was also in charge of the erosion/streamflow research.



*Distructive erosion on the road to Crown Point
from Gallup. Eastern Navajo Indian Reservation*



Young arroyo showing how erosion undermines
the walls and how large pieces break off. Zuni Indian
Reservation



An arroyo of comparatively recent origin along the road north of Navajo Church on the Eastern Navajo Reservation. Note the continual breaking down of the walls.



Navajo Tribal Council Fort Wingate on July 7 - 8

- **NAVAJO TRIBAL COUNCIL APPROVES EXPERIMENT STATION**
- John Collier's first appearance before the council as Commissioner of Indian Affairs.
- Collier's primary objective for his first meeting with the Council was approval of the experiment station. Bennett spoke to the council and emphasized the erosion that had taken place and the need for experiments and education (Parman, 1976, p42).
- July 8, the council approved the government's selecting a representative area for the "Erosion Control Station." Perhaps reflecting what the council had been told by Bennett, the resolution stated that "unless sound plans for the control of this erosion are developed and carried into practice without further delay, the greater portion of the reservation will be damaged beyond repair."

June 1938
Trip to Hawaii
Research
13.6 front of
M27
Dear Assistant
The following is a list of
the specimens collected

Aldo Leopold
Forest Service
Albuquerque
N.M.

Cobble
of Kowalski's

Fleas
from Apr. Eggs.
N.M. Apr. Eggs
Eggs of ~~...~~
Albuquerque

School of
(Mentioned by
Loomis)

Chas. Collier

W. C. Loomis

U.S. Foundry & Pipe of Clay

The best Indian
technical man
in School work
in or near the
region

Technical Committee

C. K. Corbridge -

Pres. Shantz, Univ. Ariz.

Dr. Eben L. Hewitt, Univ. N. M.
Director of School of
American Research

Julian Chaco
Canyon
Trail
Management

H. V. Geib, Snow Station
Temple Texas

Desert Laboratory

Quantity - Apr. 11, 1949
George

John G. Hunt, ~~Confidential~~
H. C. Neffler, Albuquerque

National Industrial Recovery Act June 16, 1933

- Shortly after the meeting in the USDA and before the field investigation on the Navajo Reservation
- Title II established the Federal Emergency Administration of Public Works

Special Board of Public Works July 17, 1933

Allotted \$5,000,000 to the Department of the Interior on July 17 for soil erosion prevention work on public and private lands.

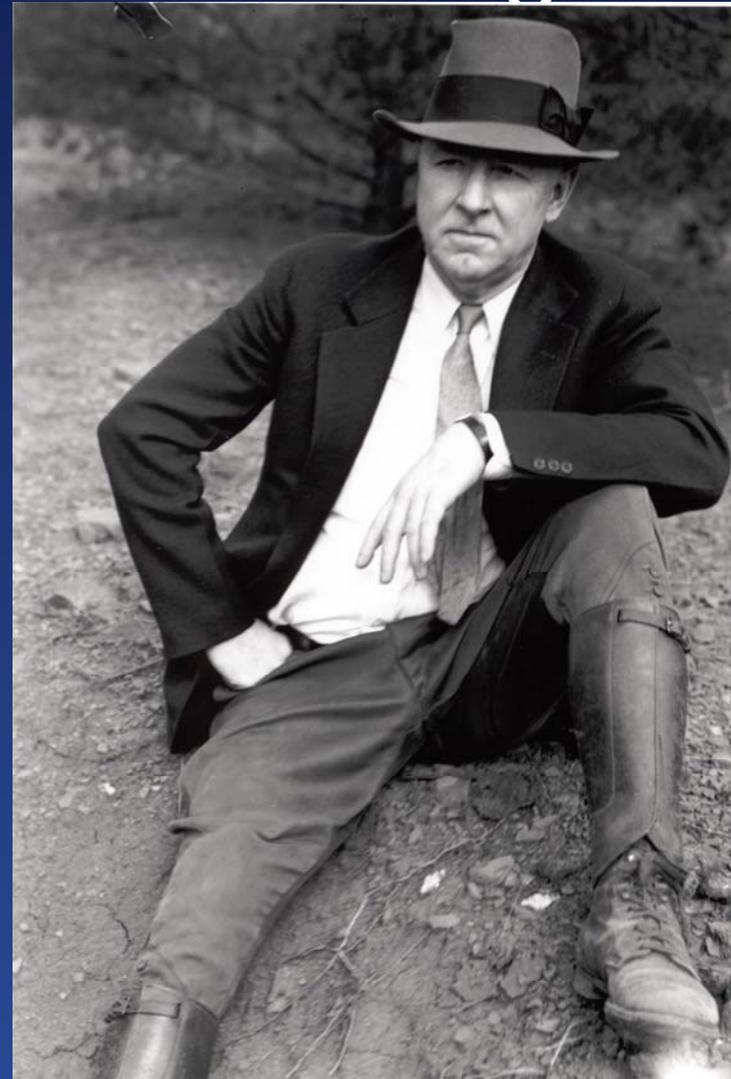
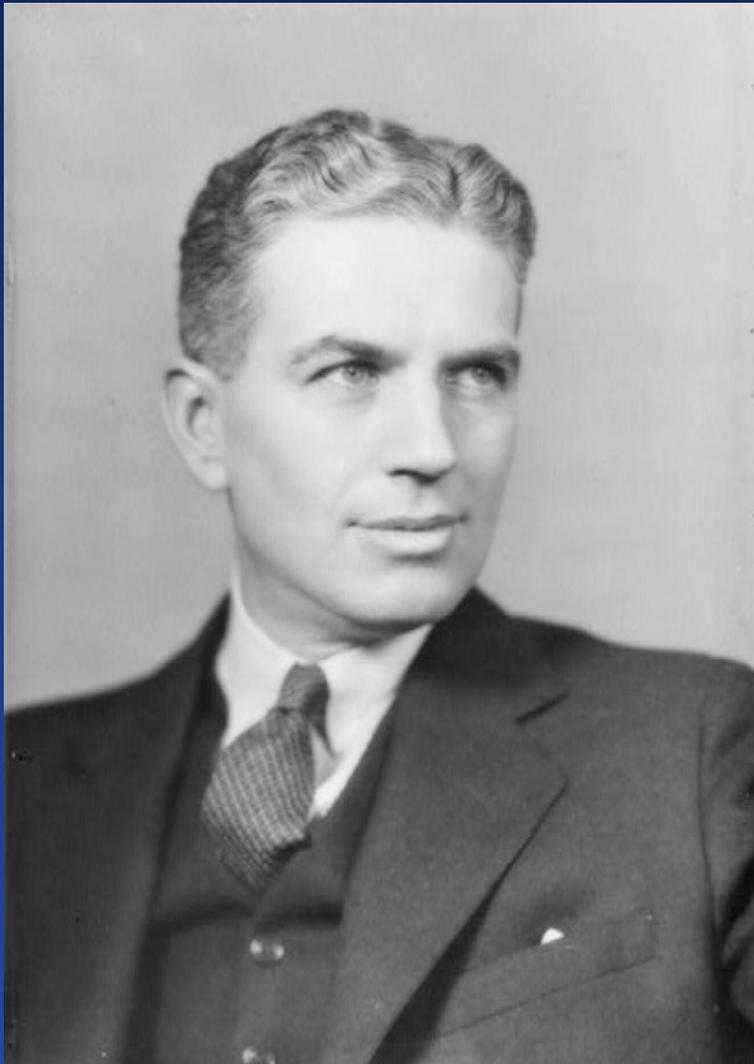
BAE Plan Sent to Ickes as Administrator, June 9, 1933

“I have had this matter of
expenditure of Public Works
money for erosion control
[brought] up with the President
and he is very much interested.”

Daily Digest of USDA July 25

Reported on the allotment of \$5,000,000 for soil erosion prevention. It quoted the Special Board for Public Works as saying the plan "provides for the practice of terracing, which agricultural engineers have found to be the most effective means of controlling erosion." Funds were to be allotted to the States in proportion to their cultivated acres

Tugwell – Bennett Meeting



John Collier to Harold Ickes

“He sees the matter steadily and whole,
and is not an engineering fanatic nor a
re-seeding and ecological fanatic nor an
animal husbandry fanatic.”

Harold Ickes, Secretary of the Interior



Ickes to Wallace, September 3, 1933

“I am anxious to have this matter undertaken at once, as I know you are, and I regret the delay due to our waiting for Dr. Barrows, since, in the end, his decision was in the negative. How about H. H. Bennett of the Bureau of Chemistry and Soils, of your department?”

Wallace to Ickes, September 12, 1933

“I have the feeling that Mr. Bennett is the best qualified man available to take over these duties. He has devoted more study to the problem of erosion than any other man in the country...”

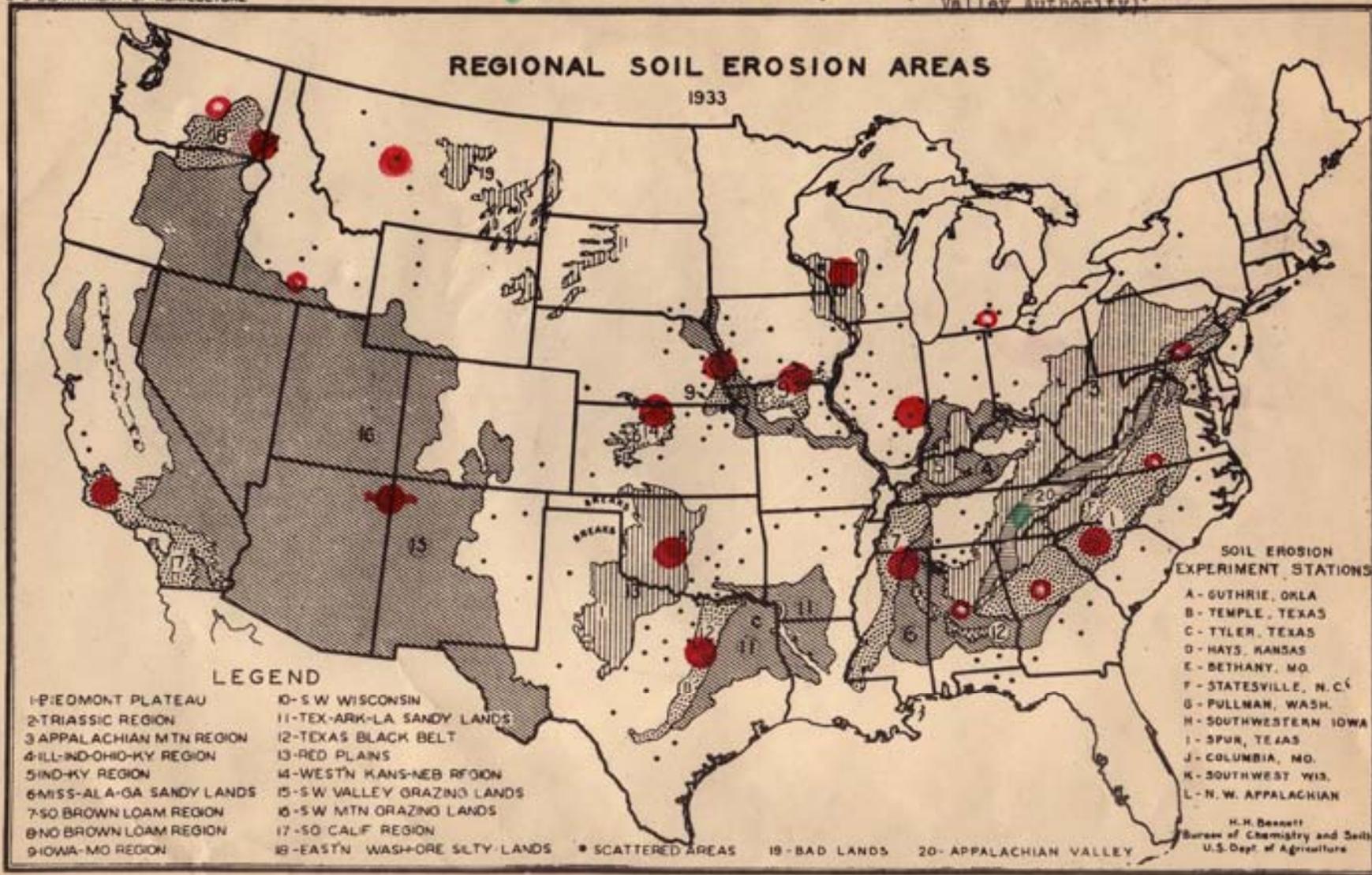
Tentative Location of Erosion Control Areas

- Major Demonstrational Areas
- Minor Demonstrational Areas (there may be more of these)
- Navajo Reservation Area
- Possible Tennessee Valley area (would be financed by Tenn. Valley Authority)

U. S. DEPARTMENT OF AGRICULTURE

REGIONAL SOIL EROSION AREAS

1933



LEGEND

- | | |
|---------------------------|-------------------------------|
| 1-P. EDMONT PLATEAU | 10-S W WISCONSIN |
| 2-TRIASSIC REGION | 11-TEX-ARK-LA SANDY LANDS |
| 3 APPALACHIAN MTN REGION | 12-TEXAS BLACK BELT |
| 4-ILL-IND-OHIO-KY REGION | 13-RED PLAINS |
| 5-IND-KY REGION | 14-WESTN KANS-NEB REGION |
| 6-MISS-ALA-GA SANDY LANDS | 15-S W VALLEY GRAZING LANDS |
| 7-SO BROWN LOAM REGION | 16-S W MTN GRAZING LANDS |
| 8-NO BROWN LOAM REGION | 17-SO CALIF REGION |
| 9-IOWA-MO REGION | 18-EASTN WASH-ORE SILTY LANDS |

● SCATTERED AREAS 19-BAD LANDS 20- APPALACHIAN VALLEY

SOIL EROSION EXPERIMENT STATIONS

- A - GUTHRIE, OKLA
- B - TEMPLE, TEXAS
- C - TYLER, TEXAS
- D - HAYS, KANSAS
- E - BETHANY, MO.
- F - STATESVILLE, N. C.
- G - PULLMAN, WASH.
- H - SOUTHWESTERN IOWA
- I - SPUR, TEXAS
- J - COLUMBIA, MO.
- K - SOUTHWEST WIS.
- L - N. W. APPALACHIAN

H. H. Bennett
Bureau of Chemistry and Soils
U. S. Dept. of Agriculture

9

Conflicts

- Federal Emergency Relief Administration state projects
- Forest Service erosion control camps
- Agricultural Adjustment Administration
- State agricultural agencies and USDA vs Department of the Interior

Annual Report, USDA 1934

This is not an agronomic program or a soils, forestry, or engineering program, but a program employing all of these measures in accordance with the needs and adaptabilities of every acre of land requiring treatment, so coordinated that the integrated activities will support one another to effect complete control of the erosion, flood, and silting problems of entire watersheds.



TRANSFER TO USDA

1. Wallace and agriculturalists
2. Money expiring
3. WPA funding
4. Ickes wants Department of Conservation
5. Meeting with FDR



DUST STORMS 1934

1933 drought and localized storms

May 11, 1934 HHB quoted in articles in
New York Times

Dalhart Demonstration Project
Drought CCC camps

Dust Storms 1935

March 6, 1935

8,000 feet over Bolling Field

March 10

Bennett article in Washington Post

FDR note to his Appointments Secretary

March 9, 1935

"I want to see Mr. Bennett of the Soil Erosion Service. Make an appointment for Monday for me"

Dust Storm Reported in Washington Post, New York Times, and Washington Evening Star

March 20

Opening day of the hearings before
House Committee on Public Lands

A well-publicized storm darkened Kansas City. The cloud, moving about 35 miles per hour, crossed the Mississippi River at Quincy, Illinois, in the early evening. The Weather Bureau and newspapers tracked its course up the Ohio River Valley and over Cleveland.

The Washington Post, March 22, 1935

D. C. Invaded By Dust Storm From Midwest

**Federal Buildings Veiled;
Government to Fight
Soil Erosion.**

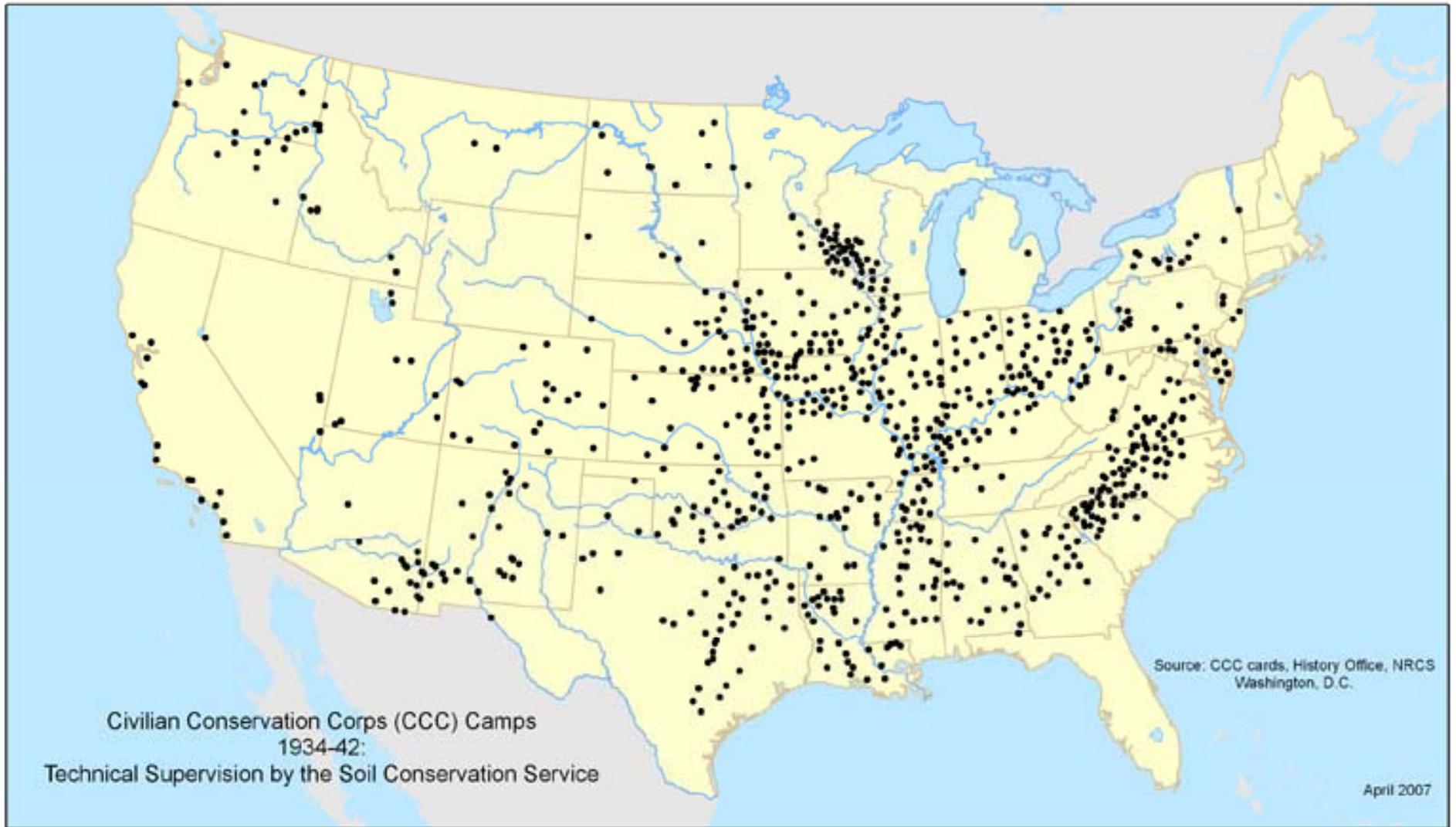
“ Throngs of curious persons, leaving Government offices, swarmed down the Mall and to Potomac Park, where the dust was visible. . . . ”



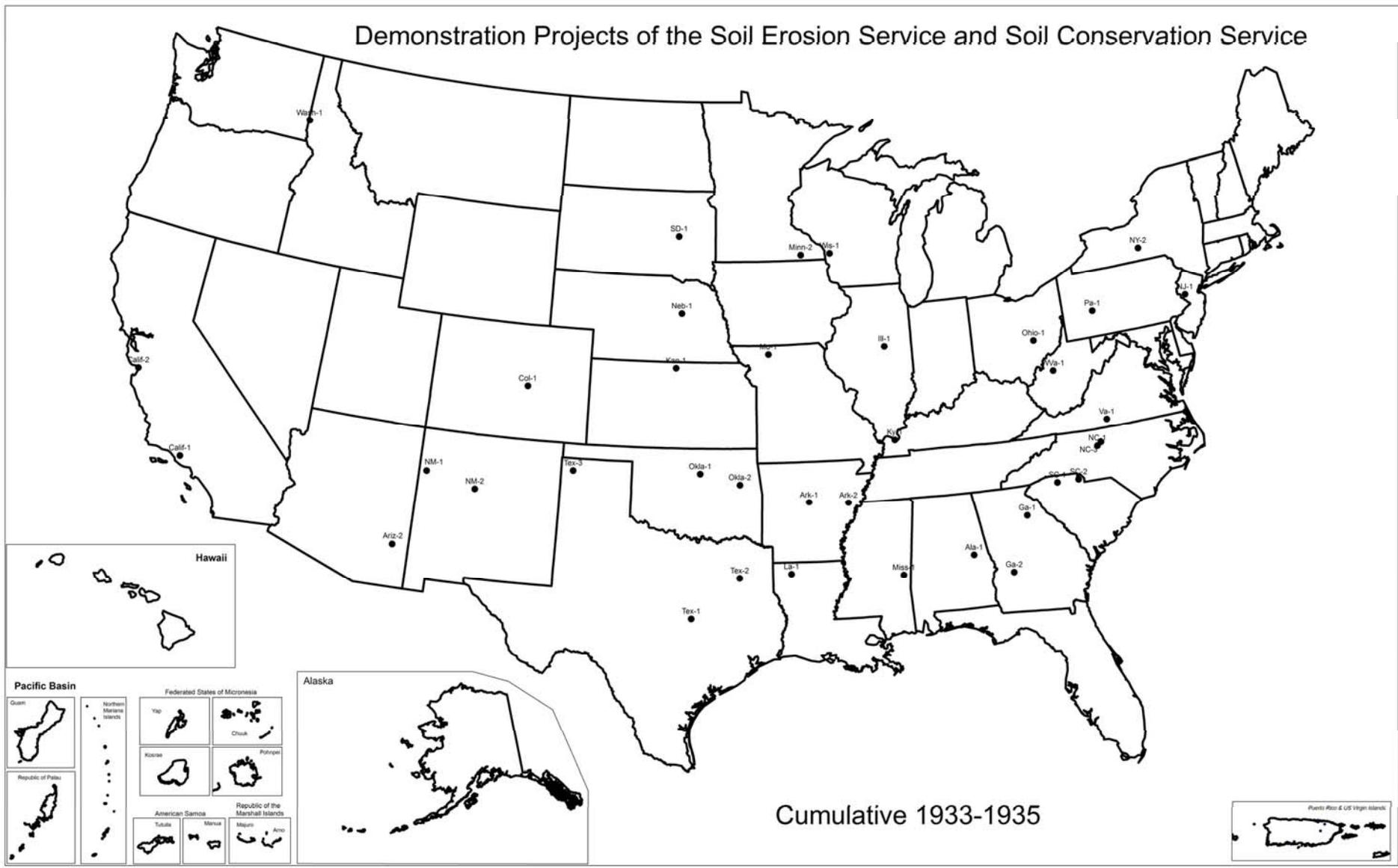
Senate amendments

- Permanently in the statement of policy
- Public health as an objective
- Soil Conservation Service to be name

- April 27, 1935



Demonstration Projects of the Soil Erosion Service and Soil Conservation Service





Slide 57

Coon Creek Project, La Crosse, Wisconsin, circa 1937 and 1967





- Amazing that he succeeded. In retrospect, passage of the legislation was hardly a predictable outcome.

- Bennett was the critical component to the success. He had the ability, whether by dint of personality or experience, to persist without alienating. Faced with an obstacle, he explained and educated, often in lengthy memoranda, and did not succumb to burning bridges with those whose support he needed.

- Reflecting on the early history, Bennett thought it was probably a good idea SES got its start in Interior and recalled that Ickes “invariably came to the assistance of his bureaus in arguments originating outside the Department” (Bennett 1959).

