

1016

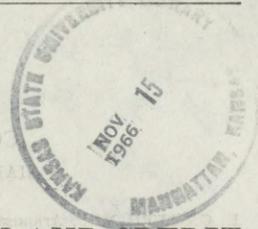
8974  
1981  
So 3/7

# SOIL SURVEYS FOR COMMUNITY PLAN- NING AND RESOURCE DEVELOPMENT

74  
.Ag 8/1  
So 3/7

GOVERNMENT

Storage



## HEARING

BEFORE THE

### SUBCOMMITTEE ON CONSERVATION AND CREDIT

OF THE

## COMMITTEE ON AGRICULTURE HOUSE OF REPRESENTATIVES

### EIGHTY-NINTH CONGRESS

SECOND SESSION

ON

### S. 902, H.R. 2076, H.R. 6423, H.R. 13552, and H.R. 13566

JULY 14, 1966

Serial NN

Printed for the use of the Committee on Agriculture



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1966



Handwritten scribbles and numbers in the top left corner.

Handwritten notes in the top right corner: "1/8 8A.", "P/E 02", and "44".

COMMITTEE ON AGRICULTURE

HAROLD D. COOLEY, North Carolina, *Chairman*  
W. R. POAGE, Texas, *Vice Chairman*

E. C. GATHINGS, Arkansas  
JOHN L. McMILLAN, South Carolina  
THOMAS G. ABERNETHY, Mississippi  
WATKINS M. ABBITT, Virginia  
PAUL C. JONES, Missouri  
HARLAN HAGAN, California  
FRANK A. STUBBLEFIELD, Kentucky  
GRAHAM PURCELL, Texas  
JAMES H. MORRISON, Louisiana  
ALEC G. OLSON, Minnesota  
SPARK M. MATSUNAGA, Hawaii  
MASTON O'NEAL, Georgia  
THOMAS S. FOLEY, Washington  
JOSEPH Y. RESNICK, New York  
LYNN E. STALBAUM, Wisconsin  
ELIGIO DE LA GARZA, Texas  
JOSEPH P. VIGORITO, Pennsylvania  
JOHN C. MACKIE, Michigan  
ROLLAND REDLIN, North Dakota  
BERT BANDSTRA, Iowa  
STANLEY L. GREIGG, Iowa  
CLAIR A. CALLAN, Nebraska

PAUL B. DAGUE, Pennsylvania  
PAGE BELCHER, Oklahoma  
CHARLES M. TEAGUE, California  
ALBERT H. QUIE, Minnesota  
MRS. CATHERINE MAY, Washington  
RALPH HARVEY, Indiana  
PAUL FINDLEY, Illinois  
ROBERT DOLE, Kansas  
LAURENCE J. BURTON, Utah  
PRENTISS WALKER, Mississippi  
GEORGE V. HANSEN, Idaho

RESIDENT COMMISSIONER  
SANTIAGO POLANCO-ABREU, Puerto Rico

MRS. CHRISTINE S. GALLAGHER, *Clerk*  
HYDE H. MURRAY, *Assistant Clerk*  
JOHN J. HEIMBURGER, *General Counsel*  
FRANCIS M. LEMAY, *Staff Consultant*

SUBCOMMITTEE ON CONSERVATION AND CREDIT

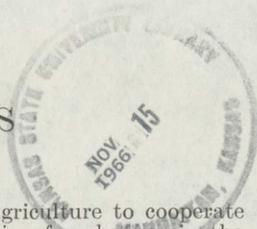
W. R. POAGE, Texas, *Chairman*

E. C. GATHINGS, Arkansas  
FRANK A. STUBBLEFIELD, Kentucky  
JOHN L. McMILLAN, South Carolina  
STANLEY L. GREIGG, Iowa  
CLAIR A. CALLAN, Nebraska  
SANTIAGO POLANCO-ABREU, Puerto Rico

RALPH HARVEY, Indiana  
CHARLES M. TEAGUE, California  
ROBERT DOLE, Kansas



# CONTENTS



	Page
H.R. 2076, a bill to authorize the Secretary of Agriculture to cooperate with States and other public agencies in planning for changes in the use of agricultural land in rapidly expanding urban areas and in other nonagricultural use areas, and for other purposes.....	5
S. 902, an act to provide that the Secretary of Agriculture shall conduct the soil survey program of the U.S. Department of Agriculture so as to make available soil surveys needed by States and other public agencies, including community development districts, for guidance in community planning and resource development, and for other purposes.....	1
Senate Report 1180, 89th Congress, 2d session, soil information assistance for community planning and resource development.....	2
Statement of—	
Dechant, Tony T., president, National Farmers Union.....	38
Dow, Hon. John G., a Representative in Congress from the State of New York.....	26
Graf, Robert E., chairman, Rural-Urban Affairs Committee, National Association of Soil & Water Conservation Districts.....	33
Kee, Hon. James, a Representative in Congress from the State of West Virginia.....	36
Nelson, George H., president, Law Engineering Testing Co.....	35
Philbin, Hon. Philip J., a Representative in Congress from the State of Massachusetts.....	21
Reynolds, Gardner M., director, district 1, American Society of Civil Engineers.....	31
Waggoner, Eugene B., president, Consulting Engineers Council of the U.S.A.....	24
Watkins, G. Reynolds, chairman, Professional Engineers in Private Practice, Functional Section, the National Society of Professional Engineers.....	28
Williams, Donald A., Administrator, Soil Survey Interpretations, Soil Conservation Service, U.S. Department of Agriculture.....	5
Correspondence submitted to the subcommittee:	
Anderson, Kenneth W., Grand Rapids, Mich., letter of June 28, 1966 ..	38
Baring, Hon. Walter S., a Representative in Congress from the State of Nevada, letter of July 11, 1966.....	12
Barr, James R., Barr & Associates, Kodiak, Alaska, letter of June 30, 1966.....	39
Campbell, Ian, State geologist, State of California, letter of June 7, 1966.....	11
Freeman, Hon. Orville L., Secretary of Agriculture, letter of January 26, 1965, to the President of the Senate.....	4
Fried, Aaron D., planning director, Rockland County Planning Board, New City, N.Y., letter of June 30, 1966.....	27
Gedwill, Joseph, P., president, Consulting Engineers Council of Nevada, Las Vegas, Nev., letter of June 11, 1966.....	14
Krametbauer, Victor G., United Testing Laboratories, Inc., Las Vegas, Nev., letter of June 1, 1966.....	12
Lambie, John A., county engineer, county of Los Angeles, Calif., letter of July 1, 1966.....	11
Lowney, John V., and Oscar J. Scherer, Nevada Testing Labs, Ltd., Las Vegas, Nev., letter of June 11, 1966.....	14
Matsunaga, Hon. Spark M., a Representative in Congress from the State of Hawaii, letter of July 8, 1966.....	12
Millard, David, vice president, R. W. Millard & Associates, Inc., Elko, Nev., letter of June 7, 1966.....	14
Quay, John R., A.I.A., Barrington, Ill., letter of July 8, 1966.....	10
Sergant, Gordon E., P.E., Gordon E. Sergant & Associates, Spring Grove, Ill, letter of February 11, 1966.....	9
Wight, George, Wight Consulting Engineers, Barrington, Ill., letter of May 18, 1966.....	10
Williams, D. A., Administrator, Soil Conservation Service, U.S. Department of Agriculture, letter of June 30, 1966.....	30

# CONTENTS

20		The National Council on the Status of Women, 1945-1950	
21		The National Council on the Status of Women, 1950-1955	
22		The National Council on the Status of Women, 1955-1960	
23		The National Council on the Status of Women, 1960-1965	
24		The National Council on the Status of Women, 1965-1970	
25		The National Council on the Status of Women, 1970-1975	
26		The National Council on the Status of Women, 1975-1980	
27		The National Council on the Status of Women, 1980-1985	
28		The National Council on the Status of Women, 1985-1990	
29		The National Council on the Status of Women, 1990-1995	
30		The National Council on the Status of Women, 1995-2000	
31		The National Council on the Status of Women, 2000-2005	
32		The National Council on the Status of Women, 2005-2010	
33		The National Council on the Status of Women, 2010-2015	
34		The National Council on the Status of Women, 2015-2020	
35		The National Council on the Status of Women, 2020-2025	
36		The National Council on the Status of Women, 2025-2030	
37		The National Council on the Status of Women, 2030-2035	
38		The National Council on the Status of Women, 2035-2040	
39		The National Council on the Status of Women, 2040-2045	
40		The National Council on the Status of Women, 2045-2050	
41		The National Council on the Status of Women, 2050-2055	
42		The National Council on the Status of Women, 2055-2060	
43		The National Council on the Status of Women, 2060-2065	
44		The National Council on the Status of Women, 2065-2070	
45		The National Council on the Status of Women, 2070-2075	
46		The National Council on the Status of Women, 2075-2080	
47		The National Council on the Status of Women, 2080-2085	
48		The National Council on the Status of Women, 2085-2090	
49		The National Council on the Status of Women, 2090-2095	
50		The National Council on the Status of Women, 2095-2100	

## SOIL SURVEYS FOR COMMUNITY PLANNING AND RESOURCE DEVELOPMENT

THURSDAY, JULY 14, 1966

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON CONSERVATION AND CREDIT  
OF THE COMMITTEE ON AGRICULTURE,  
*Washington, D.C.*

The subcommittee met, pursuant to notice, at 10 a.m., in room 1302, Longworth House Office Building, Washington, D.C., Hon. W. R. Poage (chairman of the subcommittee) presiding.

Present: Representatives Poage, Gathings, Hagen of California, Greigg, Callan, Teague of California, Dole, and Burton of Utah.

Also present: John J. Heimburger, general counsel; Francis M. LeMay, consultant; Hyde H. Murray, assistant clerk; Jane C. Wojcik, staff; and Fowler C. West, staff.

Mr. POAGE. The subcommittee will please come to order.

The subcommittee is met this morning for consideration of S. 902 and a number of similar bills on the subject of a soil survey program. One of these bills by Mr. Philbin was reported by the committee more than 2 years ago. It was reported out and passed by the full committee. It did not become law because of a lack of action by the other body, I believe.

I should point out that the Senate bill is before us today.

I believe that we will start with Mr. Williams of the Soil Conservation Service who is present. He will explain the views of the Department.

We will be glad to start with you now.

(S. 902 together with. S. Rept. 1180 follow:)

[S. 902, 89th Cong., 2d sess.]

AN ACT to provide that the Secretary of Agriculture shall conduct the soil survey program of the United States Department of Agriculture so as to make available soil surveys needed by States and other public agencies, including community development districts, for guidance in community planning and resource development, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That in recognition of the increasing need for soil surveys by States and other public agencies in connection with community planning and resource development for protecting and improving the quality of the environment, meeting recreational needs, conserving land and water resources, providing for multiple uses of such resources, and controlling and reducing pollution from sediment and other pollutants in areas of rapidly changing uses, including farmlands being shifted to other uses, resulting from rapid expansions in the uses of land for industry, housing, transportation, recreation, and related services, it is the sense of Congress that the soil survey program of the United States Department of Agriculture should be conducted so as to make available soil surveys to meet such needs of the States and other public agencies in connection with community planning and resource development.

SEC. 2. In order to provide soil surveys to assist States, their political subdivisions, soil and water conservation districts, towns, cities, planning boards and

commissions, community development districts, and other public agencies in community planning and resource development for the protection and improvement of the quality of the environment, recreational development, the conservation of land and water resources, the development of multiple uses of such resources, and the control and prevention of pollution from sediment and other pollutants in areas of rapidly changing uses, including farm and nonfarm areas, the Secretary of Agriculture shall, upon the request of a State or other public agency, provide by means of such cooperative arrangements with the State or other public agency as he may deem advisable, the following assistance with respect to such areas and purposes:

(1) the making of studies and reports necessary for the classification and interpretation of kinds of soil;

(2) an intensification of the use and benefits of the National Cooperative Soil Survey;

(3) the furnishing of technical and other assistance needed for full use of soil surveys; and

(4) consultation with other Federal agencies participating or assisting in the planning and development of such areas in order to assure the coordination of the work under this Act with the related work of such other agencies.

SEC. 3. It is further the sense of the Congress that the Secretary shall make a reasonable effort to assure that the contributions of any State or other public agency under any cooperative agreement which may be entered into between the Secretary and such State or other public agency with respect to a soil survey shall be a substantial portion of the cost of such soil survey.

SEC. 4. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act, such sums to remain available until expended.

Passed the Senate May 23, 1966.

Attest:

EMERY L. FRAZIER, *Secretary.*

[S. Rept. 1180, 89th Cong., 2d sess.]

#### SOIL INFORMATION ASSISTANCE FOR COMMUNITY PLANNING AND RESOURCE DEVELOPMENT

The Committee on Agriculture and Forestry, to which was referred the bill (S. 902) to authorize the Secretary of Agriculture to cooperate with States and other public agencies in planning for changes in the use of agricultural land in rapidly expanding urban areas and in other nonagricultural use areas, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill as amended do pass.

#### SHORT EXPLANATION

This bill authorizes the Secretary of Agriculture to provide soil information assistance to States and other public agencies to assist them in community planning and resource development, including planning for such facilities as highway construction, recreational facilities, and water and sewage facilities.

#### COMMITTEE CONSIDERATION

The committee had before it S. 902, introduced by Senator Ellender and Senator Javits, and S. 947, introduced by Senator Williams of New Jersey, substantially identical bills. The committee substitute does not differ in substance from either of these bills. The purpose of the substitute is to make it clear that the bill would be applicable to farm as well as nonfarm areas, and that it is part of the general pattern of agricultural legislation providing for soil surveys, conservation, changes in farmland use, and community development districts.

#### NEED FOR THE BILL

Community development districts, soil conservation districts, planning and zoning boards and commissions, and other local units of government need soil surveys as a basis for developing long-range plans and programs for the orderly development of rural communities and the renewal of natural resources in areas of rapidly changing land use.

Traditionally, soil surveys have been used to identify prime farmland and to select areas suitable for different kinds of crops, grasses, and trees and for guiding optimum systems of soil and water management practices. The same basic principles of soil behavior are now used extensively to determine the use of a soil for houses, highways, industrial sites, and recreational facilities. Soil surveys include maps of the kinds of soil, which are interpreted according to such qualities as soil wetness, overflow hazards, depth to rock, hardpans, permeability, erodibility, shrink-swell potential, and hazard of slippage on slopes. Soil surveys provide information that can be used to predict the results of using specific kinds of soil in different ways.

The enactment of this bill would clarify and restate policy for the Department of Agriculture and its cooperating agencies about work in areas of rapid changes in land use and where careful advanced planning is essential to avoid huge losses of both private and public investments. It would facilitate cooperation with other Federal, State, and local agencies in both rural areas undergoing drastic changes in land use and in areas of rapid development. In many areas soil surveys are essential for community planning. Enactment of this bill would provide individuals and public officials with essential information for planning economic development and community facilities. It is not intended that soil surveys would be made of the built-up centers of metropolitan areas.

The Department of Agriculture, with its cooperators in the National Cooperative Soil Survey, has responsibility for soil surveys and has a trained staff of capable specialists to provide essential technical information about soil, water, and plant resources needed by community planners and others. The bill extends methods already tested and known to help develop solutions to problems in community planning and the safe and efficient use of soil and water resources.

The increased demands for soil surveys in areas of rapid growth and for community development would be provided for by the enactment of this bill. The important task of making soil surveys on the farm and ranch lands of the Nation would be maintained in proper balance.

Many local units of government already contribute funds to assist the Department of Agriculture and its cooperators in carrying out soil surveys urgently needed for planning ahead of rapid growth or land-use adjustment. Funding arrangements are included in cooperative agreements between the Soil Conservation Service and the applicable local unit government. The enactment of this bill would stimulate more local effort and financing for soil surveys in specific areas. It will not cost any appreciable amount of additional Federal funds.

In addition to the assistance of the State agricultural experiment stations and other State agencies, in fiscal year 1966 the Department of Agriculture made financial arrangements with local governments for contributions amounting to approximately \$600,000 for speeding up the completion of soil surveys in specific areas. In fiscal year 1964 these local contributions totaled about \$225,000.

In a great many parts of the country a clear-cut distinction no longer exists between rural and urban living. As modern highways are built many nonfarm people establish their homes in rural areas. To achieve good living for both, advanced community planning is essential. Such areas have new and compelling needs for water management, sewage disposal, schools, recreation areas, and other facilities. Such planning requires accurate knowledge of the soils and their alternative potentials in order to avoid serious losses of investment and construction and maintenance costs. To solve these problems the results of the soil surveys and technical assistance should be available to the planning agencies, the residents, and other public and private service agencies.

At the present time, about 10 percent of the 50 million acres being mapped annually in the National Cooperative Soil Survey is located in communities facing urgent planning problems. Not over 10 percent of this, or about 500,000 acres, will be used for housing and similar intensive uses; since about 10 or 15 times as much land as is needed for such uses must be surveyed in order to determine suitable alternative sites therefor. The land not devoted to such uses will be used for farming, forestry, recreation, and other less intensive uses, so that cooperatively financed soil surveys to determine sites for intensive uses helps to provide soil information for agricultural and other less intensive uses. At the present rate of survey work in communities facing urgent planning problems it would require some 20 to 30 years to complete the soil surveys needed by such communities.

In the meantime many costly mistakes would be made, mistakes that could be avoided through the use of soil surveys for a tiny fraction of the cost. Already the officials of hundreds of land-use planning bodies are depending on published

soil surveys. This places a new emphasis and new urgency on the acceleration of their completion.

Soil surveys have already saved untold millions of dollars of both private and public investment. Estimates made by community planners of the value of soil surveys run as high as \$2 million per year for a county. Hundreds of examples have been cited where many thousands of dollars are lost annually through poor site selection for specific uses. In many instances amounts up to one-quarter million dollars have been saved by choosing the right site for individual school buildings. Further examples of other great losses that can be avoided through site selection and the planning of proper measures include: Flooded homes and basements; failures of on-site sewage disposal systems; failures of buildings and highways due to poor-bearing qualities of soils; and excessive construction costs of roads, utility lines, pipelines, and so on.

We should double or triple the present rate of completing soil surveys in areas undertaking community planning to take care of rapid expansion and economic growth. This would mean mapping at least 10 to 15 million acres annually in such areas. At current price levels the cost would amount to about 50 cents per acre. At the present rate of completing soil surveys in such areas, population would have increased by 50 percent in the meantime. From past experience it is clear that enormous investments by individuals and by public agencies would be lost. These can be avoided by use of soil surveys. The enactment of this bill would give emphasis to the need for moving ahead to avoid these enormous preventable losses of private and public investments.

#### DEPARTMENTAL VIEWS

DEPARTMENT OF AGRICULTURE,  
Washington, D.C., January 26, 1965.

HON. HUBERT H. HUMPHREY,  
*President of the Senate.*

DEAR MR. PRESIDENT: Enclosed for the consideration of the Congress is a draft bill to authorize the Secretary of Agriculture to cooperate with States and other public agencies in planning for changes in the use of agricultural land in rapidly expanding urban areas and in other nonagricultural use areas, and for other purposes.

The Department of Agriculture recommends enactment of this legislation as a means to help provide an orderly transition from rural to urban land uses. This requires information on soils for location of industry, commerce, residential housing, parks and recreational areas, and strategic open space. Many urban areas seek to preserve open space in a rural setting. Soil surveys provide scientific information for interpretations and judgment decisions related to the capabilities and limitations for land for different uses and for management of soils during transition and under the new uses. The Department of Agriculture is currently supplying many of the services needed for rural-urban planning through its soil survey, extension, rural areas development, watershed planning, forestry, and economic research programs.

Although the Department already has authority to make soil surveys, the proposed bill would serve essentially to give clear-cut recognition and emphasis to the need for such surveys and interpretive services for areas making specific requests. This is highly important to further cooperative efforts of rural and urban people.

Enactment of this proposal would encourage local and State organizations to make additional contributions to this type of activity.

The Bureau of the Budget advises that, while there is no objection to the presentation of this proposed legislation to the Congress from the standpoint of the administration's program, this advice does not involve any commitment that appropriations to the Department of Agriculture under this proposed legislation would be recommended.

Sincerely yours,

ORVILLE L. FREEMAN, *Secretary.*

(H.R. 6423, introduced by Mr. Freylinghuysen; H.R. 13552, introduced by Mr. Dow; and H.R. 13566, introduced by Mr. Kee, are similar to H.R. 2076, introduced by Mr. Philbin, the text of which follows:)

[H.R. 2076, 89th Cong., 1st sess.]

A BILL To authorize the Secretary of Agriculture to cooperate with States and other public agencies in planning for changes in the use of agricultural land in rapidly expanding urban areas and in other non-agricultural use areas, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the rapid expansion of the Nation's urban areas, resulting in the discontinuance of farming operations on large areas of agricultural land and the consequent serious deterioration of such agricultural land and other land through erosion by wind and water, and shifting uses of agricultural and other land in other nonagricultural use areas, are causing severe problems concerning needed changes in the use of such land and the effects of such changes on the protection, development, and utilization of the soil and water resources of such areas; and that it is the sense of Congress that the Federal Government should cooperate with States and other public agencies for the purpose of providing assistance in planning for such changes in land use and for the protection, development, and utilization of the soil and water resources of such areas, and thereby assist in preserving and protecting the Nation's soil and water resources.

SEC. 2. In order to cooperate with and assist States and their political subdivisions, soil and water conservation district, regional, State, and local planning boards and commissions, and other public agencies in planning for orderly adjustments in the use of land in the Nation's rapidly expanding urban areas and in other nonagricultural use areas and for the protection, development, and utilization of the soil and water resources of such areas, the Secretary of Agriculture is authorized, upon the request of the State or other public agency, to—

- (1) make investigations and surveys in connection with the classification and mapping of soils in such areas;
- (2) make studies necessary for the interpretation of such soil surveys or other applicable surveys made by or available to the Secretary;
- (3) furnish technical and advisory assistance for the protection, development, and economic utilization of the soil and water resources of such areas in connection with the planning by the State or other public agency for orderly adjustment in land use in such areas; and
- (4) consult with other Federal agencies participating or assisting in the planning and development of such areas in order to assure the coordination of the work authorized under this Act with the related work of such other agencies.

SEC. 3. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act, such sums to remain available until expended.

**STATEMENT OF DONALD A. WILLIAMS, ADMINISTRATOR, ACCOMPANIED BY A. A. KLINGEBIEL, DIRECTOR, SOIL SURVEY INTERPRETATIONS, SOIL CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE**

Mr. WILLIAMS. Mr. Chairman, and members of the subcommittee, I have a short statement with respect to this subject.

I am grateful for this opportunity to again appear before this subcommittee. I want to thank the chairman and each member for the courtesy and cooperation I have received as we have had opportunity to discuss soil and water conservation work and activities and to share in the overall efforts on behalf of the farmers and others who have interests in the conservation and development of the natural resources of the Nation.

Secretary Freeman appeared before the House Committee on Agriculture on June 9, 1966, and made the statement "We have

become an urban-oriented nation, preoccupied with problems of suburban sprawl and inner city decay, social strife and congestion, rising welfare costs, the juvenile delinquency." Mr. Freeman suggested an alternative to change this movement to the large cities by increasing needed facilities and services in our small rural communities. He suggested community development districts as a way to explore this alternative.

Community development districts, soil conservation districts, planning and zoning boards and commissions, and other local units of government need soil surveys as a basis for developing long-range plans and programs for the orderly development of rural communities and the renewal of natural resources in areas of rapidly changing land use.

Traditionally, soil surveys have been used to identify prime farmland and to select areas suitable for different kinds of crops, grasses, and trees and for guiding optimum systems of soil and water management practices. The same basic principles of soil behavior are now used extensively to determine the use of a soil for houses, highways, industrial sites, and recreational facilities. Soil surveys include maps of the kinds of soil, which are interpreted according to such qualities as soil wetness, overflow hazards, depth to rock, hardpans, permeability, erodibility, shrink-swell potential, and hazard of slippage on slopes. Soil surveys provide information that can be used to predict the results of using specific kinds of soil in different ways.

The enactment of this bill would clarify and restate policy for the Department of Agriculture and its cooperating agencies about work in areas of rapid changes in land use and where careful advanced planning is essential to avoid huge losses of both private and public investments. It would facilitate cooperation with other Federal, State, and local agencies in both rural areas undergoing drastic changes in land use and in areas of rapid development. In many areas soil surveys are essential for community planning. Enactment of this bill would provide individuals and public officials with essential information for planning economic development and community facilities. It is not intended that soil surveys would be made of the built-up centers of metropolitan areas.

The increased demands for soil surveys in areas of rapid growth and for community development would be provided for by the enactment of this bill. The important task of making soil surveys on the farm and ranchlands of the Nation would be maintained in proper balance.

Many local units of government already contribute funds to assist the Department of Agriculture and its cooperators in carrying out soil surveys urgently needed for planning ahead of rapid growth or land use adjustment. Funding arrangements are included in cooperative agreements between the Soil Conservation Service and the applicable local unit government. The enactment of this would stimulate more local effort and financing for soil surveys in specific areas. It will not cost any appreciable amount of additional Federal funds.

In addition to the assistance of the State agricultural experiment stations and other State agencies, in fiscal year 1966 the Department of Agriculture made financial arrangements with local governments for contributions amounting to approximately \$600,000 for speeding up the completion of soil surveys in specific areas. In fiscal year 1964 these local contributions totaled about \$225,000.

In a great many parts of the country a clear-cut distinction no longer exists between rural and urban living. As modern highways are built many nonfarm people establish their homes in rural areas. To achieve good living for both, advanced community planning is essential. Such areas have new and compelling needs for water management, sewage disposal, schools, recreation areas, and other facilities. Such planning requires accurate knowledge of the soils and their alternative potentials in order to avoid serious losses of investment and construction and maintenance costs. To solve these problems, the results of the soil surveys and technical assistance should be available to the planning agencies, the residents, and other public and private service agencies.

Soil surveys have already saved untold millions of dollars of both private and public investment. Estimates made by community planners of the value of soil surveys run as high as \$2 million per year for a county. Hundreds of examples have been cited where many thousands of dollars are lost annually through poor site selection for specific uses. In many instances amounts up to one-quarter million dollars have been saved by choosing the right site for individual school buildings. Further examples of other great losses that can be avoided through site selection and the planning of proper measures include: Flooded homes and basements; failures of on-site sewage disposal systems; failures of buildings and highways due to poor bearing qualities of soils; and excessive construction costs of roads, utility lines, pipelines and so on.

I would like to comment briefly on S. 902 as passed by the Senate on May 23, 1966. For all intent and purpose, the amended version as passed by the Senate and the House bills, H.R. 2076, H.R. 6423, H.R. 13552, and H.R. 13566 are the same. The revised wording in S. 902 states more clearly the intent of the Department relative to the need for soil surveys in areas of expanding uses of land for industry, housing, and other uses. The House Bills read such that the Secretary of Agriculture needs new authority to make soil surveys in areas of rapid changes in land use. Soil surveys are being made in these areas now as these areas are part of the regular schedule for completing soil surveys. There is need for a clarification and restatement of authority and a need for giving some priority to these areas being taken up by the rapid changes to more intensive uses.

The amended version of S. 902 also stresses the making of cooperative arrangements with local units of government for making studies and reports for mapping in these intensive use areas and that public agencies entering into agreement shall bear a substantial portion of the cost. Although these cooperative arrangements are not new, they are not specifically mentioned in the House bills before this committee. We favor the present version of S. 902.

I would like to digress for a moment and discuss briefly some opposition that has been voiced following the passage of S. 902 in the Senate. Several members of the Consulting Engineers Council, with headquarters in Washington, D.C., expressed concern regarding the intent of S. 902. They interpreted soil surveys as described in this bill to replace the need for on-site investigation for specific construction sites.

Members of the Soil Conservation Service met with Mr. Larry Spiller and Mr. John Gnaedinger of the council on June 10, 1966,

and discussed Service policies regarding soil surveys and their use. Statements from the Merrimack County, N.H., published soil survey were used as an example of the kinds of soil engineering interpretations that would be made from soil surveys and their limitations for use under the act. These statements satisfied the two representatives from the Engineering Council and they expressed the opinion that based on this information they could support the bill. They agreed to work with the Soil Conservation Service in developing additional language clarifying the intent of the legislation.

We understand that the Consulting Engineering Council will propose the following amendments to S. 902:

Amend section 2, page 4, line 25, by deleting the word "full" from the sentence and by inserting the following new paragraph on page 5 following line 5:

The provision by the Secretary of such assistance shall not interfere with the furnishing of engineering services by private engineering firms or consultants for on-site sampling and testing of sites or for design and construction of specific engineering works.

Any sites of interest to consulting engineers would be specific construction sites. This amendment is not needed inasmuch as the soil survey program has never been administered so as to interfere with the furnishing of engineering services by private engineering firms or consultants for on-site sampling and testing of sites or for design and construction of specific engineering works nor is there any intent to do so. We would hope that this statement will provide sufficient assurance to the Consulting Engineering Council to satisfy its concerns in this regard. However, if the committee wishes to adopt this amendment we would have no objection.

Soil surveys as completed by the Department of Agriculture and interpretations thereof, could be highly beneficial to those people doing soil testing work or engaged in construction engineering. Soil surveys show the location and extent of the different kinds of soil. They provide information about soil properties to the depth of about 6 feet and in some instances, predictions about soil behavior can be made to 10 or more feet in depth.

These soil maps properly interpreted are a valuable guide to engineers regarding the kinds of problems they may expect such as wetness, rock, low-bearing strength, shrink-swell potential, and the like. Through the use of soil surveys, engineers can make more accurate estimates on construction costs and avoid many problems that might otherwise be encountered. The surveys also help them to determine the location and spacing of samples to be analyzed in the laboratory and the area under which the data can be applied.

Soil maps are not designed or intended to be used in lieu of on-site evaluation or sampling for specific construction sites. They are meant to complement, not duplicate, the work of the engineers. We have had numerous compliments from engineering firms on how beneficial they find soil surveys in carrying out their work.

The rate of completing soil surveys in areas undertaking community planning to take care of rapid expansion and economic growth should be accelerated as rapidly as budgetary considerations will permit. From experience in the past, it is clear that enormous investments by individuals and by public agencies can be protected by means of soil surveys. The enactment of this bill would give emphasis to the

need for moving ahead to avoid these enormous preventable losses of private and public investments.

At this point, Mr. Chairman, I would like to submit for the record copies of a few letters from consulting engineers and architects supporting this work and our position, if I may do so.

Mr. POAGE. Without objection, they will be made a part of the record.

Mr. WILLIAMS. I shall make reference to them, in brief. One is from Gordon E. Sergant & Associates, consulting engineers, of Spring Grove, Ill.; another from Wight Consulting Engineers, of Barrington, Ill.; another from John R. Quay, of Barrington, Ill.; another is from the Division of Mines and Geology, San Francisco, Calif.; another is from the County of Los Angeles, Los Angeles, Calif.

(The letters referred to follow:)

GORDON E. SERGANT & ASSOCIATES,  
*Spring Grove, Ill., February 11, 1966.*

DEPARTMENT OF AGRICULTURE,  
*Soil Conservation Service,  
Woodstock, Ill.*

(Attention: Mr. Sam Haning.)

DEAR MR. HANING: As Director of the Conservation Service of our area, you have co-operated in every respect, in those times when we have requested information about the County's soil, etc. and we are grateful for this consideration.

Our Company, as an engineering service, is in constant need of various information about the areas in which we work, relative to soils, terrain character, elevations, drainage, absorption abilities and vegetation growth. As land developers, designers of roads, designers of sewage and water programs, as well as building construction, it is vital that we have as much information as possible to aid our clients in the field in which we are engaged.

We have found that the information the soil conservation service has is a great help to us in the pre-planning stage of land development and drainage control because of the agricultural mapping done by your department.

The soil borings you use for soil typing is information that is helpful in the showing of soil changes over a large area. Although our soil borings are much deeper, to determine bearing purposes, water table levels, feasibility for installation of sewer and water, etc., these borings you make for agricultural use, indicate uniformity, or non-uniformity in soil character. This information enables us, in many instances, to know to what extent our sub-surface work will be needed.

Your service, with the type of borings you make, is particularly useful in the plotting of roads through planned subdivisions. (Drainage sub-surface soil character to shallow depths, etc.)

I mention just a few of the uses to which we put your "Service" information, as you are well aware of our work with you over the past eight years. Several weeks ago we asked you to get some information for us on DuPage County, as you probably remember. I was surprised the County was not mapped as McHenry County is. However, the information we did get was from the individual farm information which the "Service" plots. This of course, was a great deal of help.

I would expect the continued efforts of the Soil Conservation Service to map the rural areas would aid in the engineering of land development for the engineering companies and be a guide for expansion of utility services for municipalities.

I have pointed out to you however, in discussions about the "other than agricultural uses of your service", the danger of this information in the hands of non-professionals, especially when there is no expert report applying the information and its relation to given areas. I have seen well meaning planning commissions exclude from development, areas of great potential by misusing the information given to them and once a decision is made by them, no amount of explanation, design criteria, or common sense can change that decision. Some of the seemingly most undesirable locations have become our best developments where small lakes, ponds, fill programs and drainways have been incorporated into a design. Under good programming, many poor areas are divided into large tracts, allowing for good safe building sites, but leaving for the most part, the existing terrain in it's natural state and the desirable open space.

There is no doubt that the agricultural information of the Soil Conservation Service can be of great help to us in the engineering field, along with the Municipal and Rural Governments. It is part of the information needed in the over-all growth of our communities. It can have immeasurable value as a guide.

I hope we will continue our relationship as in the past and that service will be extended over more agricultural areas so that the information obtained can be used in later Urban and Suburban growth.

Very truly yours,

GORDON E. SERGANT, P.E.

---

WIGHT CONSULTING ENGINEERS,  
Barrington, Ill., May 18, 1966.

Mr. JOHN QUAY,  
Barrington, Ill.

DEAR MR. QUAY: We certainly enjoyed our conference with you relative to U.S. Department of Agriculture soil maps and classifications.

As stated during this meeting the use of the information gleaned from the reports and maps are of vital interest during initial phase of engineering investigation.

Preliminary investigation for a client to determine land use, density factors and preliminary estimates of cost is a single most important phase of our engineering analysis. Evaluations of soils maps and classifications at this critical stage reduces the variables significantly, thereby enhancing the value of engineering and economic determinations.

If we can offer any information from our records or recommendations on the utilization of soils information we will be happy to do so.

Very truly yours,

GEORGE WIGHT.

---

BARRINGTON, ILL., July 8, 1966.

Mr. DONALD A. WILLIAMS,  
Administrator, Soil Conservation Service,  
U.S. Department of Agriculture,  
Washington, D.C.

DEAR MR. WILLIAMS: It has been brought to my attention that Senators Javits and Ellender have introduced into the congressional legislative process a bill which would, under certain specified conditions, authorize the Soil Conservation Service to undertake an expanded soils mapping and soils interpretation program in metropolitan areas.

It is my opinion that such a program would be beneficial not only to society in general but would also be beneficial to the architectural and engineering professions.

Having area wide information available during the early formulative stages of a project would permit the architect-engineer to better advise his client as to the feasibility and advisability of many undertakings. During the second or plan development state, it would be invaluable in pointing out areas and problems that should be investigated by the engineer in greater depth.

Our Society is currently taking a broader and more sophisticated view toward its physical environment. It is now demanding that the designers of the environment—architects, engineers, planners, etc.—incorporate the skills, talents, knowledge and experience of any and all disciplines and authorities that are capable of making a constructive contribution in improving the physical environment.

In my opinion the soil scientist and the Soil Conservation Service can and should be making a major contribution in this field, and if and when such a program gets underway, it will result in more clients making more use of private professional services.

I sincerely hope that the legislature will act favorably on the now-pending legislation.

Sincerely,

JOHN R. QUAY, A.I.A.,  
Architect.

STATE OF CALIFORNIA—THE RESOURCES AGENCY,  
DEPARTMENT OF CONSERVATION,  
DIVISION OF MINES AND GEOLOGY,  
San Francisco, June 7, 1966.

MR. T. P. HELSETH,  
*State Conservationist, Soil Conservation Service, U.S. Department of Agriculture,  
Berkeley, Calif.*

DEAR TOM: Your transmittal note and the copy of your "Soil Survey, Alameda Area, California", must have arrived during our afternoon discussion yesterday, for I found them this morning when I came into the office (after completing the arduous job of voting) for a quiet day of catching up on my mail—and other things!

The timing of your transmission was perfect, for I've had an entirely peaceful hour to review this report and thus have a sounder base than would otherwise be the case, to compliment you and your staff on what strikes me as a thorough-going and thoroughly useful report. If I were an Alameda area citizen owning even as much as half an acre, I'd surely want to have a copy of this report in my home reference library! Moreover, I find nothing in it that would make for concern over "conflicts of interest" or "duplication", such as we were discussing yesterday. The "engineering interpretations" are strictly soil-related and entirely appropriate—as is the section on Geology.

I am particularly impressed by the aerial mosaic maps you have used to portray the distribution of soil types. These form a very valuable appendix and should help a lot in making the survey intelligible to the layman, as well as contributing an excellent record of your mapping work.

Thanks again for letting me have this report, which will go onto the reference shelves of our library.

Sincerely yours,

IAN CAMPBELL, *State Geologist.*

---

COUNTY OF LOS ANGELES,  
DEPARTMENT OF COUNTY ENGINEER,  
Los Angeles, Calif., July 1, 1966.

MR. THOMAS P. HELSETH,  
*State Conservationist, Soil Conservation Service,  
U.S. Department of Agriculture.*

DEAR MR. HELSETH: I wanted to again express my appreciation for the cooperation of the Soil Conservation Service in developing the Saugus-Newhall Soil Survey in cooperation with the County of Los Angeles. The excellent printed report has received wide distribution within the County.

For the Department of County Engineer, I have issued an Administrative Instruction in order to assure maximum use of the information in the report. This instruction requires that the regional engineers see that copies of the report are available for use by personnel in the regional offices and the Building and Safety district offices in the area covered by the report, and also that the division heads of Building and Safety, Sanitation, Waterworks, Design, Advanced Planning and Administrative Services, and Industrial Waste Divisions prepare written divisional instructions to their personnel governing the use of the information contained in the report.

Other departments in the County, such as the Health Department, have also received copies for their use and guidance.

I certainly hope that similar reports can be prepared for the Antelope Valley, Malibu-Las Virgenes area and other areas within the County.

It is gratifying to me to see such a forward-looking policy develop within the Soil Conservation Service.

Very truly yours,

JOHN A. LAMBIE, *County Engineer.*

MR. POAGE. The Chair would like to ask unanimous consent to insert several letters from certain Members into the record at this point.

And without objection, they will be included at this point in the record.

(The letters referred to follow:)

HOUSE OF REPRESENTATIVES,  
Washington, D.C., July 8, 1966.

Hon. HAROLD D. COOLEY,  
Chairman, Committee on Agriculture,  
U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: A matter of deep concern to consulting engineers in Hawaii and elsewhere in the country is the intended scope and meaning of S. 902. The measure was reported out by the Senate Agriculture Committee, without hearings, on May 19, 1966. It was passed by the Senate on May 23, 1966, with very little debate.

As you know, hearings will be held on this and related House bills by the Conservation and Credit Subcommittee of your Committee on Agriculture on July 14, 1966.

The legislation, generally, appears to serve an excellent purpose. Dissemination of technical information is essential to our country's welfare, and the Federal government is unquestionably in a superior position to expedite the flow of technical soils information which it has arranged and collated.

However, the use of such soil information clearly involves professional engineering skill and judgment on the specific design of the types of development mentioned in S. 902. It is only natural, therefore, for members of the engineering profession to feel that the private consulting engineer is in the best position to perform these design functions, and with this view I am wholly in accord.

It seems to me that this apparent encroachment by the Federal government upon an area now served by the private consulting engineer is inevitable under Section 2(3) which presently reads: "the furnishing of technical and other assistance needed for full use of soil surveys . . ." The salutary purpose of the measure could be preserved and any unwarranted competition with practicing engineers avoided by the substitution, in lieu of the above-quoted provision, of the following wording: "the furnishing of such explanation as is needed for full understanding of the information contained in these soil surveys . . ."

I strongly urge, therefore, that this suggested amendment be adopted.

It is requested that this letter be entered in the record of hearings.

Aloha and best wishes.

Sincerely,

SPARK M. MATSUNAGA,  
Member of Congress.

HOUSE OF REPRESENTATIVES,  
Washington, D.C., July 11, 1966.

Hon. HAROLD D. COOLEY,  
Chairman, Agriculture Committee,  
U.S. House of Representatives,  
Washington, D.C.

DEAR COLLEAGUE: I am herewith enclosing copies of several letters and telegrams received from my constituents opposing S. 902, a bill providing that the Secretary of Agriculture shall conduct the soil survey program of the United States Department of Agriculture so as to make available soil surveys needed by States and other public agencies, including community development districts, for guidance in community planning and resource development.

The opposition as expressed in these letters appears to have much merit and I concur in the views expressed therein.

It is my understanding that hearings are scheduled to commence on July 14th on this legislation and I, therefore, request that these comments and those of my constituents be incorporated in the records of the proceedings.

Sincerely,

WALTER S. BARING,  
Congressman for Nevada.

UNITED TESTING LABORATORIES, INC.,  
Las Vegas, Nev., June 1, 1966.

Hon. WALTER S. BARING,  
The House of Representatives,  
Washington, D.C.

SIR: I have just been apprised of Senate Bill 902 which has been brought up and passed within the past ten days by the Senate regarding the U. S. Department

of Agriculture providing soils surveys for states, political subdivisions, towns, cities, water districts, etc. as an aid in their preparation of various developments throughout the nation.

Sir, I wish to register the strongest possible protest to any passage of this bill by the House since I feel that it is superfluous as well as potentially dangerous to the general health and welfare of the public for the following reasons:

The U.S. Department of Agriculture performs soils surveys and publishes their reports from the standpoint purely and solely from the agricultural aspect of soil adequacies or deficiencies. Agricultural soil surveys and the science of soil mechanics from the standpoint of foundation for buildings and other structures such as highways, bridges, tunnels, reservoirs, etc. are as different as day from night. For instance, from the agricultural standpoint, one is forever striving to locate a soil or transform a soil into a loose, friable material which will sustain a living plant; permit water to be absorbed for availability to the plant; and permit the free circulation of air into the root zone. This is diametrically opposed to the mechanics involved in the preparation of a foundation material with the soils in relation to the construction of any major facility. Incidentally, I may point out that during the past two years here in the City of Las Vegas two multi-million dollar subdivisions were constructed upon lands that had previously been surveyed by the U.S. Department of Agriculture; the report was a public report; and yet, each and every one of the 134 houses constructed upon this property had foundation problems due to the fact that sufficient soil mechanics data by a competent soils engineer were not furnished prior to construction. Recently I have been employed in attempting to arrive to some solution to this utter disaster and to date have not been able to find anyone who has developed any material or solution to foundation problems in these types of soils, yet they are similar in all characteristics to other soils in the immediate vicinity from the standpoint of agricultural purposes. I would be pleased indeed to take you or any of your representatives on a personal tour of this particular area in Las Vegas and adjacent areas and point out in specific detail problems that exist which time does not permit me to enumerate in this correspondence.

I feel that although this bill has passed the Senate, if it actually became law, it would be an injustice to the people of the United States and more particularly the people here in the State of Nevada where a majority of the lands belongs to the U.S. Government. Unsuspecting people who acquired these lands with a prepared agricultural soils survey would be direly misled in the belief that these particular soils would be sufficiently adequate for the development of not only agricultural purposes but building of homes, major civic buildings, etc. The problems of foundation stability may not appear for several months until construction is completed and thereby create other disasters similar to the one previously mentioned.

I understand that Senator Thomas Kuchel (D-California) testified that a municipal reservoir with which he is personally familiar cost an estimated two hundred thousand dollars more than was expected because of soils problems which he believes could have been determined and avoided through consultation with the Department of Agriculture Soil Conservation Service. I do not wish to contradict the Honorable Senator, however, I do not believe the Honorable Senator has all the facts and if he has all the facts, I do not think they are clearly stated.

I believe I speak from personal knowledge since I was born and reared on a farm in southern New Mexico and subsequently pursued my education along the lines of agricultural engineering and have had personal contract with the U.S. Department of Agriculture Soils Conservation Service for many years before and after becoming a registered professional engineer and pursuing the profession of consulting engineering, more particularly involved with soil mechanics and the building industry.

Should you desire to have further information submitted to you in Washington, please feel free to call upon Mr. Donald A Buzzell, Consulting Engineers Council, Madison Building, 1155-15th Street, N.W., Washington, D.C.

Very truly yours,

VICTOR G. KRAMETBAUER,  
*Registered Civil Engineer.*

LAS VEGAS, NEV., *June 1, 1966.*

Representative WALTER BARING,  
House Office Building,  
Washington, D.C.:

We are very concerned with an opposed to Government competition with consulting soil engineers as expoused in bill S. 902. Our clients include all the public agencies and private parties mentioned by Senator Williams to be benefited by USDA soil engineering. Appreciate your help.

NEVADA TESTING LABS., LTD.,  
JOHN V. LOWNEY.  
OSCAR J. SCHERER.

CONSULTING ENGINEERS COUNCIL OF NEVADA,  
*Las Vegas, Nev., June 11, 1966.*

Subject: Senate Bill S. 902.  
Hon. WALTER S. BARING,  
Congressman, State of Nevada,  
House Office Building, Washington, D.C.

DEAR CONGRESSMAN: Enclosed herewith you will find photocopies of letters from the headquarters office of the Consulting Engineers Council/USA, Washington, D.C., and a photocopy of subject Bill S. 902.

The letters reflect the views of the Consulting Engineers Council of Nevada concerning this bill. The CEC/Nevada objects very strongly to the passage of this bill as it is more than an infringement upon the activities of soils engineers in private enterprise. Senator Harrison Williams remarks contained in the third paragraph of the enclosed letter of May 24th shows complete ignorance of the function, capabilities and abilities of the Soil Conservation Services of the Department of Agriculture. Quoting Senator Williams' "the Soil Conservation Service has the technical know how and long years of experience that town planners, state agencies and individuals find valuable in developing natural resources of the community" unquote. Soils analysis for the construction of heavy structures, (buildings, dams, roads, reservoirs, etc.) is a tricky profession—any soils engineer is well aware of this, where-as the Department of Agriculture's past experiences have been more in the fields of agriculture such as analysis of soils for product growth, irrigation problems and other problems concerned with farming and agriculture. We therefore feel that the problems of soil analysis for heavy construction should be left to the engineers in private enterprise who have had training and long years of experience in that field of endeavor. The Department of Agriculture should be restrained to function in the field for which it was created—agriculture.

Yours truly,

JOSEPH P. GEDWILL, *President.*

R. W. MILLARD & ASSOCIATES, INC.,  
*Elko, Nev., June 7, 1966.*

HON. WALTER S. BARING,  
Congressman for the State of Nevada,  
House Office Building,  
Washington, D.C.

DEAR CONGRESSMAN BARING: The proposed bill, S. 902, has just been brought to the attention of our firm through a letter from the Consulting Engineers Council. It seems to us that this bill is just another infringement by the Federal Government on private enterprise.

Our firm is more and more faced with the competition presented by the Department of Agriculture, particularly in the field of the rancher. Ten years ago, we were engaged in all phases of ranch development, and we completed approximately ninety (90) percent of the rancher's engineer work. Today, however, we are limited to only the largest ranchers and probably do only five (5) percent of the engineering done for these ranchers.

If there were not, however, many, many competent soils engineers in this country of ours, this bill possibly would be beneficial. But since these engineers exist, this bill is not beneficial and as we feel, just another step to a fully socialistic state.

We urge you to vote against this measure and help defeat this bill.

Very truly yours,

DAVID MILLARD, *Vice-President.*

Mr. WILLIAMS. I thank you for this opportunity to appear before this Subcommittee on Conservation and Credit, and would be happy to answer any questions members of the subcommittee may have.

And may I add that Mr. Klingebiel of the soil survey staff is available here to help with any technical questions that might be asked.

Mr. POAGE. It just occurred to me that we ought to ask what progress the Department of the Interior is making in conducting a basic topographic survey of the United States.

You cannot make a soil survey without that topographic survey, can you?

Mr. WILLIAMS. Yes, Mr. Chairman; we can make them without that, through the use of aerial photographs. However, the topographic surveys are extremely helpful in terms of facilitating the mapping endeavor.

I would make this additional comment, that in a sense soil surveys of a large area serve somewhat the same purpose as a topographic survey serves, for assisting in engineering purposes; in other words, it helps to delineate or locate the favorable sites, but it does not help specifically for a given acre of ground just exactly what the topography is.

Mr. POAGE. A geological map, of course, would give more of that soil information than a topographic survey.

Mr. WILLIAMS. Exactly.

Mr. POAGE. But you cannot make a geological map without a topographical map?

Mr. WILLIAMS. The geological map almost has to accompany the topographic map for full meaning. I am sorry, Mr. Chairman, I cannot answer your question specifically on the progress of the geologic and topographic mapping. We could get that information for the record.

Mr. POAGE. They are a long ways from having completed the mapping of the United States.

Mr. WILLIAMS. That is correct.

Mr. POAGE. And they are not moving at any greater rate than they were many years ago, as I understand it.

Mr. WILLIAMS. I am not sure about that topographic rate. I can tell you with respect to the soil survey mapping, that in the past few years the rate has been stepped up somewhat. This is particularly true in the rural areas where farming is concerned.

In the fiscal year 1966, as near as we have the figures at the present time, soils were mapped in the United States by the Soil Conservation Service and its cooperators of, approximately, 57 million acres of land. Somewhere around one-half of the land area of the United States now has soil maps of some kind, but not all of them have been published. About 60 percent of the commercial farming area in the United States now has been mapped.

The big problem, as we are discussing it here today, in connection with these bills has to do with the increased demand in the urban fringe areas of expansion, and from the many requests we have been receiving from such organizations as State highway departments and others to help in the location and with certain construction specifications of highway building. For example, New Jersey recently participated with us in obtaining some stepped-up soil survey work specifically related to highway locations, to avoid certain desirable

agricultural land and also to help maintain construction costs at a lower level.

Mr. POAGE. You suggested before Mr. Philbin came in, as to the Senate bill, why you prefer the passage of the Senate bill. Will you tell us why?

Mr. WILLIAMS. It is our belief that the Senate bill, that is, the wording of it, tends to clarify somewhat more than the wording of the previous bills of which the Philbin bill is one. The real intent and need here and one that should be particularly stressed is the need for a policy to encourage financial participation by local units of government, such as counties, States, and so forth. We think this would be helpful.

Mr. POAGE. Are there any other questions?

Mr. Teague?

Mr. TEAGUE of California. I apologize for being late, but as you know we had an executive session of another subcommittee of which I am a member.

I note, Mr. Williams, that at the top of page 6 of your statement you suggest an amendment which would delete the word "full" and add these words:

The provision by the Secretary of such assistance shall not interfere with the furnishing of engineering services by private engineering firms or consultants for on-site sampling and testing of sites or for design and construction of specific engineering works.

I think that I approve of that amendment.

I want to ask, if you will, as a matter of legislative history here, tell us just what it is intended to accomplish.

Mr. WILLIAMS. I regret that just before you came in, I pointed out just prior to that amendment that this amendment was going to be proposed, not by the Department of Agriculture but by the Consulting Engineers Council.

Mr. TEAGUE of California. I see. I am not familiar with that.

Mr. WILLIAMS. We do not consider that this amendment is necessary, but if the committee decides that it is a good thing to do, we have no objection to it.

I wanted to make that point clear.

The soil survey work in the United States, historically, has been of major assistance, just as topographic mapping has been, to the engineering fraternity.

Being an engineer myself in background, I know that this is a very real need. And there is nothing about this proposed legislation that will change our past procedures of making soil surveys that would, in any sense, interfere with the engineering use of it but will facilitate it. And we think that you will find that, later on in the testimony, the Consulting Engineers Council will likely support the bill if such an amendment is included.

Mr. TEAGUE of California. Then, if I understand you correctly, you say that it is not contemplated that the Soil Conservation Service would be competing with private engineers?

Mr. WILLIAMS. No, sir, it is not contemplated that it will. In fact, we think, contrary to that, that the work will greatly facilitate the work of the private engineers.

I would like to point this out, Mr. Congressman, that while there undoubtedly have been some cases here and there where there

could have been some degree of question about some of the work we have done, as to whether or not it did conflict or compete with private engineers, but you have to understand in context the nature of our work. Basically, the great bulk of our work, as this committee knows, has to do with working with individual landowners, and not projects, on small types of work such as terracing, grass waterways, small farm ponds, and so on. We have not been able to find any consulting engineering firms in the country interested in going out on the individual farm and doing that kind of work because of the nature of it and because of the fact that the cost to them would be greater in providing that kind of a service, generally speaking, than the cost of the pond. So the private engineers have not been interested in that type of work particularly.

Now, conversely to that, there are many conservation problems of a community nature that we call them group facility type of jobs, in which many farmers or landowners might go together and there would be some significant engineering work involved. In these kinds of cases, it is our policy to urge the local organizations to seek the services of private engineers. I am sure that we have created far more work for private engineers than the few instances, in which there may have been some question about it.

Mr. TEAGUE of California. Thank you very much.

I have one or two more questions.

On page 3 of S. 902, the term "cooperative arrangement." What is your interpretation of what this might mean?

Mr. WILLIAMS. Throughout the history of the soil survey work, the basic cooperative relationship has been between the State agricultural experiment stations and the Soil Conservation Service. There have been no grants by the Federal Government to the State experiment stations for this work, but through financial resources available to the States, nearly all of the State agricultural experiment stations have participated in some degree in facilitating the work. It is true that that participation may not total over 10 to 15 percent of the amount that the Federal Government is putting into it. This is one type of cooperative arrangement.

Another type, such as that I mentioned a few minutes ago, is that of the State highway department in New Jersey participating with us in obtaining some stepped-up soil survey information for their highway purposes, in which they had to pay a part of the cost of it.

Another example is in southeastern Wisconsin where the governing bodies of the several counties there, as well as the State government, have entered into an agreement with our Service to step up the rate of mapping beyond what we would normally be able to do with our own facilities, in order to complete the mapping of that area, generally, between Chicago and Milwaukee, down to the Illinois line, so that the county-governing bodies could use that information as a tool in helping with general county zoning and things of that kind.

The Soil Conservation Service would have nothing to do with the zoning part, but the county governing bodies would use the information.

In this case, I do not recall the exact amount of the financial contribution that the counties and the State put into it, but it was significant, in order to step up the rate of mapping. These are examples.

Mr. TEAGUE of California. Thank you very much.

This is, indeed, helpful.

Can you give me any estimate of how much additional money in the way of appropriations might be needed to take care of the activities which would be authorized under S. 902?

Mr. WILLIAMS. As I indicated in my testimony, we do not consider that the enactment of this bill in itself would make any appreciable difference in the Federal contribution, because the appropriations that we now receive for soil survey work are included in the conservation operations item under the appropriations bill and in which soil survey is one of the parts of that activity.

Assuming that the rate of progress would be enlarged, even if it is stepped up in contributions from non-Federal resources, we think that this legislation itself will not add to the total cost of the soil survey job.

Now, if there is a step-up of the rate in high-priority areas, it may be necessary for us to seek some additional appropriations because of the stepped-up rate through the regular appropriations process, and not because of this legislation per se.

Mr. TEAGUE of California. I understand. Thank you very much. That has been very helpful.

Mr. POAGE. Mr. Gathings?

Mr. GATHINGS. Mr. Williams, you make the statement that huge losses by public and private people had ensued as the result of not having these soil surveys made properly and in time. Are you familiar with what is going on in northern Virginia, in Fairfax, with respect to this?

Mr. WILLIAMS. I am, Mr. Gathings. Fairfax happens to be one of the pilot counties in the United States.

Several years ago, we agreed with the State of Virginia and with the county on this program. Here was a problem of mushrooming suburbia. There were tremendous problems faced by the county board of supervisors of that county, in terms of the location of the roads, the question of whether they would approve developers moving into certain areas, putting in septic tanks, and things of that kind.

As the result of that, we entered into a financial agreement with Fairfax County several years ago to step up the rate of the mapping of Fairfax County. That was done; the job was completed. And then some special interpretation maps were made by the county officials in consultation with our service that were helpful to them for zoning purposes and various other things.

I would like to ask, Mr. Gathings, that Mr. Klingebiel, who is more intimately acquainted with the technical part of that, just add a few words to what I have said, if he may?

Mr. GATHINGS. If you would, please comment—yes.

Mr. KLINGEBIEL. I brought along a number of maps to express the use of the soil surveys.

This map is a standard kind of soil survey that we make all over the United States, the kind we made in Fairfax County, Va., and in other States.

Each of these symbols and lines show the different kinds of soils on this map, including slope and erosion. And through the use of this map, by knowing the kind of soil here and being acquainted with the characteristics of that soil, if this soil should occur in another

county or in another State, we can predict and project the kind of information and experience that we had here to some other county or State having the same kind of soil. This is one of the key helps of a soil map.

Mr. GATHINGS. Is that information made available to builders or developers?

Mr. KLINGEBIEL. This information is made available to the public through the standard published soil survey that we make of each of these areas. We have such a report for Fairfax County, Va. This published soil survey contains the basic soil maps in the back of the report, and in addition the kind of interpretations needed, such as the presence of a water table, the shrink-swell potential of the soil, and many other things that influence the use of the soil.

Mr. GATHINGS. Mr. Williams indicated that the surveys only extended in depth 5 feet.

Mr. KLINGEBIEL. That is correct.

Mr. GATHINGS. Is that adequate?

Mr. KLINGEBIEL. This is not adequate for on-site determination for specific construction. This merely provides a clue or a flag. For example, this interpretive map is the same as the original soil map I showed you but one that shows the degree of wetness or the amount of water that you may have in the soil or on the soil. This information, you see, in these red areas on the map indicates that these have severe limitations, insofar as wetness is concerned. So, it flags the problem for the developer, the engineer, the planner, and others. Where they see the red color, they know that they are going to have this kind of a problem. An engineer in his design and in his construction can either avoid these areas or he can design and plan for them.

Mr. GATHINGS. Do you know where the springs are located?

Mr. KLINGEBIEL. These features of the landscape including the streams and surface springs are shown on soil maps. But if you are speaking of a spring that causes the water table, the maps will show you where the soils are wet within the 5-foot depth, but not deeper than that.

In other words, the information on the soil map is very useful and helpful to engineers, developers, planners, and others to a depth of 5 feet.

If you are in an area, such as in western Iowa, in the deep loess soils, where you know that the same soil material extends to a depth of 30 to 40 feet or more and that it is all the same kind of material, it is obvious that you could predict the soil behavior down to a greater depth for that kind of soil. Normally, soil survey information applies only to a 5-foot depth.

Mr. GATHINGS. In Fairfax County, there is quite a lot of rolling land—

Mr. KLINGEBIEL. Yes, sir.

Mr. GATHINGS. And ravines, and hillsides.

Mr. KLINGEBIEL. Yes, these maps show these features. They show the steepness of the slope and the kind of soil, and the depth of the rock, that is, if rock occurs within the 5-foot depth.

Mr. GATHINGS. But there have been a lot of losses over there as the result of the soil condition, such as a house breaking in two.

Mr. KLINGEBIEL. That is correct. I have seen them.

As a matter of fact, we have used the example from Fairfax County, of the schoolhouse where a quarter-million dollars was saved as a result of the soil map by merely locating the school on more suitable soil at the same site.

This is the same soil map again, but interpreted to show shrink-soil potential. The reasons that caused the building to crack in this picture is that the soil had poor bearing qualities.

The red areas on the map are those areas that have a high shrink-swell—a high clay content of the kind that when it dries out it shrinks and when wet it swells.

Again, this gives a flag in these areas to people wanting this kind of information.

In the yellow areas on the map there is a moderate soil limitation for shrink-swell.

This, again, applies merely to the upper 5-foot depth. For information at greater depths, it would require additional borings.

Mr. GATHINGS. Thank you.

Mr. POAGE. Thank you, Mr. Gathings.

Mr. Callan?

Mr. CALLAN. Do you have a soil survey going on now for remapping all of the counties in the country?

Mr. WILLIAMS. No; not remapping, Mr. Callan. The soil survey is in progress in the United States on a priority basis by counties. The only remapping that is being done is where there were some soil surveys made many, many years ago in which not nearly as much was known at that time about the soil as is now known. We know about 70,000 different kinds of soils in the United States, and the research and the experience of the last several years has pointed up some rather sharp differences in certain kinds of soil that we did not know about many years ago.

Where the maps are real old and not usable, we are doing some remapping; but the rate of mapping, as indicated earlier, is at the rate that we have about 60 percent of the commercial farmland in the United States now mapped in usable mapping, and we are proceeding at the rate of about 57 million acres a year at the present time. Even at that rate, while it has taken care, very largely, of the farming and rural interests, it has not taken care of some of the other interests that we mentioned earlier.

The Fairfax County thing, for example, that was mentioned was not of a very high priority, from strictly an agricultural point of view, but, from the point of view of the general interest of the area in putting the investment of the county, State, and Federal Governments, and private individuals, and so forth, into it, it was highly important and of high priority. We did not feel that we should pull our resources away from the farming communities to go in and step up that mapping. So, we told the county that, "if you will find resources, that is, financial resources, to put in extra help that the survey may be stepped up, then we will be glad to cooperate with you." This is what was done.

Mr. CALLAN. Will this program interfere with our rural areas that need to be mapped?

Mr. WILLIAMS. No, this bill in itself would not do that. It merely clarifies the authority that we have.

May I add, Mr. Callan, one of the needs for this clarification?

Even though the General Counsel of the Department of Agriculture says that we have the legal authority now to do mapping in such places as Fairfax County, from time to time there have been questions raised in the appropriations committees, and otherwise, with respect to whether or not we really have the authority to serve the non-agricultural type of interests. We think that this will clarify that authority, and we also think it will encourage the participation, such as that in Fairfax County, that we have described.

Mr. CALLAN. Thank you.

Mr. POAGE. Thank you, Mr. Callan.

Are there any further questions?

If not, we are very much obliged to you, Mr. Williams.

It has been an interesting discussion of this matter.

We have six other witnesses listed here. We want to give each witness the same time that we have devoted to Mr. Williams. I think his time has been well spent. My only suggestion is that you will use the minimal time possible to complete your statement so that we may complete this hearing today.

Mr. Philbin, the author of H.R. 2067, is with us.

He has been before us before. We are delighted to have you here, Congressman Philbin, and we will be glad to hear from you now.

#### STATEMENT OF HON. PHILIP J. PHILBIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. PHILBIN. Thank you very much, Mr. Chairman. It is a great honor and pleasure and privilege for me to come here this morning to speak to you very briefly about these pending bills.

I must apologize for not being here on time, but I had to leave a rather important meeting of my own committee to which I will have to return. In any event, I deeply appreciate the opportunity that you have given me to be heard again on these bills, in which I am so deeply interested.

As I sat here and listened to the excellent testimony that was given by the previous witness, I thought that practically all of the points that I might express here this morning had been pretty well covered.

In addition, I recognize the expertise that this great committee enjoys and possesses in this area, and in every other area that pertains to the great work that this great committee is conducting, so that I will be very, very brief.

As you know, gentlemen, this bill merely extends, confirms, and reaffirms the principle and function of the soil survey work of the Department of Agriculture which has been well described by the previous witness.

This program has been under way for some time. The proposal in the bill—the principle of these bills, both my bill and the Senate bill—is not only to reaffirm the authority, but also it will give some new impulse through the progression of the soil surveys, in view of the problems that are developing as the result of the growth of the country and the need for a broad, scientific approach to our soil and conservation problems.

With reference to the expansion of some of the areas of the so-called rural-urban fringe, I think that the bill would definitely expedite—and when I speak of the bill, I am speaking of the Senate bill now

which is entirely agreeable to me, notwithstanding the fact that I introduced H.R. 2076—it will expedite and advance the completion of the soil survey work. Up to this time, as you know, the Department has done some very fine work in these soil surveys, but there is much more that remains to be done now, certainly, in view of the growth and the expansion of the country, and this bill moves in the direction to carry out this vital work.

As you know, the Senate has not only reaffirmed the authority that was provided in my bill, but it also permits cooperative agreements with public agencies desiring soil surveys, as I understand it.

The opposition that has been developed, I think, frankly and candidly, after listening to the testimony of the previous witness, and after consulting and talking with some of the officials of the Department of Agriculture about the matter, it would seem that the fears of the private engineers as heretofore expressed may well be groundless, because I think that, taken as a whole and regarded in proper perspective, it would seem clear that, far short of impairing anyone's business, it would not have that effect—and I feel confident that the committee has no intention of doing that by this legislation. There is no desire to do that, I am sure. On the other hand, the expansion of the soil surveys as projected would perhaps be more helpful to that group. In fact, I am informed very reliably that this would in all likelihood be the case.

As you know, the cost of the proposed soil survey is what might be termed a very moderate one. It is not a lavish program—not expensive, that is, in any real sense, as compared with some of the other outlays that we are making in Government today.

The cost-benefit ratio of this program is very high. It is estimated that the cost-benefit ratio of these surveys is about 100 to 1. And under the circumstances, the benefits from the soil survey more than pay for the survey in about a year's time.

It can be seen, therefore, that these benefits are very substantial, and over a period of time will more than pay for the total cost of the soil surveys, and bring very many benefits to the many communities involved.

There are many savings that are possible under the program for community and for industry and for the average person in the agricultural regions and those that are coming into the agricultural regions as the result of new developments, construction and population expansion that will arise from these programs that would not be uncommon.

I understand that there would be savings from \$38,000 to as much as \$225,000 in individual cases through the use of these soil survey services, such as, for example, in selecting school sites, which is something that has to be done in practically all of our communities these days.

In my own State of Massachusetts, local government officials, planners and engineers, real estate and tax assessors, and dealers, and many others can attest to the savings that have been made possible through the use of soil surveys, because they have been used widely and extensively by all these groups I have mentioned and, perhaps, some others, with greater benefits to the communities in agricultural regions, and in some instances in other adjoining, inter-related regions, and communities. In fact, the savings have ex-

ceeded the cost of making the surveys by many times and that is a matter of record.

We began a program in Massachusetts some time ago to utilize more fully the soil survey service information in the solution of rural areas, and you are familiar with that, and I will not expand on it. I know that you are fully familiar with those problems, what they are, and of what great import and benefit they are to many regions of our country; indeed, there are few congressional areas that would not be impacted by these problems in one way or another.

In one town which is in Congressman Keith's district in the Cape Cod area, they launched a pilot project in this area where the soils were mapped by the Soil Conservation Service and an interpretation was developed for some 10 specific uses including such items as school sites, locations for housing, sewage disposal, agriculture and wildlife, and so forth, and the success of this program was such that detailed soil surveys and interpretations are being made by the Soil Conservation Service on a cost-sharing basis for some 10 to 20 towns.

In addition, the State legislature has passed legislation to assist the communities with their conservation problems, and presently there are over 200 local town and city conservation commissions actively dealing with problems relating to the growth and development of their communities as a result of the soil surveys that have been made, and the assistance they have been able to derive from these surveys in agricultural communities—and, as I said before, in some other communities as well has been very helpful.

So, it seems to me, gentlemen, from the evidence I have—and I think from the evidence that has been presented to this committee—that there are strong reasons for adopting this bill, and I am here most respectfully to urge that course upon you.

If it is a question of inserting some clarifying language that would make a bill acceptable to the group that is objecting, I certainly would not interpose any objections to such a course, but, in any event, I would urge expeditious, favorable action by the committee.

I want to express my deep appreciation for your kindness and consideration in permitting me to come here and to talk to you about this bill. It has been a high privilege to be with you at this hearing this morning.

Mr. POAGE. We thank you very much.

We are very glad to have had you with us.

Are there any questions?

Mr. TEAGUE of California. As I understand you, Mr. Philbin, while you may not think it necessary, you would not have objection to the committee adopting the amendment which has been suggested by the Consulting Engineer Council; that is, that the new activity shall not interfere with engineering services by private engineering firms, et cetera?

Mr. PHILBIN. I have not had a chance to study that amendment, but the way that you have recited it to me, substantially, it would seem to me that I would have no objection to it. I would leave it to the good judgment and the well-known common sense and skill and expertise of this fine committee as to just how that matter should be handled.

Thank you very much.

Mr. TEAGUE of California. Thank you.

Mr. POAGE. If there are no further questions, I will now call on Mr. Eugene B. Waggoner, president, Consulting Engineers Council of the U.S.A.

**STATEMENT OF EUGENE B. WAGGONER, PRESIDENT, CONSULTING ENGINEERS COUNCIL OF THE U.S.A.**

Mr. WAGGONER. Mr. Chairman and members of the subcommittee, the members of the Consulting Engineers Council of the United States greatly appreciate this opportunity to express to you their concern over possible misinterpretation of the intent and purposes of S. 902 and related bills.

My name is Eugene B. Waggoner. I am executive vice president in charge of the Denver, Colo., office of the consulting engineering firm of Woodward, Clyde, Sherard & Associates. I might mention this firm is engaged in the practice of soil and foundation engineering.

I appear here today as president of Consulting Engineers Council of the United States, a nonprofit organization of approximately 1,800 private firms, representing more than 25,000 engineers and engineering technicians engaged in virtually every field of engineering practice.

Consulting engineers serve the public. Their clients include States, political subdivisions, soil and water conservation districts, towns, cities, planning boards and commissions, community development districts, large industries, private citizens, and other professionals. Like all private businessmen, consulting engineers rely upon their knowledge, skill, experience, integrity, and service to enable them to successfully compete in the engineering marketplace.

Included in our membership are over 250 firms who provide highly specialized services in the field of soils engineering. There are additionally hundreds of firms whose civil engineering works require knowledge and expertise closely related to the fields of soils and foundations. These firms have invested large sums of money in equipment and technical training. They maintain staffs of recognized experts in soils engineering. Typical projects include soil and foundation engineering for buildings, highways, airfields, dams, powerplants, water and sewage systems, bridges, drainage projects, reservoirs, and subdivision development. Many provide services worldwide.

Adoption of S. 902, as presently worded, will not only permit but may even obligate the Secretary of Agriculture to provide expanded and detailed engineering services in unjustifiable competition with this important segment of the private enterprise community.

Our council is not opposed to the intent of this legislation as explained to us by the Administrator of the Soil Conservation Service. And I might say, as others have indicated, in my testimony that generalized agricultural soil surveys, prepared by the Soil Conservation Service, have resulted in soils maps and related information of value to farmers, agriculturists, and, in some instances, to engineers. The preparation and publication of this type of data for urban and nonagricultural areas can be a worthwhile endeavor.

However, the wording of S. 902, as we see it, and, as some Senators interpreted it, implies availability of soil engineering services which extend considerably beyond what we are advised is the primary intent of this legislation. In addition to studies, reports, classification, and

interpretation of soils, S. 902 proposes to make available "technical assistance needed for full use of soil surveys." Such wording might easily be misinterpreted to mean "complete soils engineering as required for a detailed structural foundation," or "all investigations plans and specifications for a complex sewage treatment plant or earth dam." Such services could, as we read the bill, be demanded of the Soil Conservation Service since the Secretary of Agriculture is told in section 2 that he " \* \* \* shall, upon the receipt of a State or other public agency, provide \* \* \* the following assistance \* \* \*".

To most public officials and local commissions, such wording will leave little doubt but what the Department of Agriculture must, if asked, provide full and complete soils engineering for a building, subdivision, park, sewage treatment plant, or other public works project. The possibility of such misinterpretation has already been demonstrated. Senate Agriculture Committee Report No. 1180 states in part:

The same basic principles of soil behavior (as used in traditional soil surveys) are now being used extensively to determine the use of soil for houses, highways, industrial sites, and recreation facilities \* \* \*. Enactment of this bill would provide individuals and public officials with essential information for planning economic development and community facilities.

Also, when this measure came before the Senate on May 23, 1966, testimony was offered to the effect that:

Using the soil survey, industry finds the proper place to build, homeowners and builders locate the best place for houses and septic tanks, and counties and municipalities chose the proper site for reservoirs, highways, pipelines, and sewage systems.

Soil surveys are, of course, often useful in determining general sites, but is it totally absurd to consider either alternate or specific locations for any industrial plant, highway, pipeline, or other major public works projects without detailed soils and foundation analyses and engineering.

To assume that general soil surveys are suitable for engineering design use—as has already been done—is not only a distortion of the scope of services intended by S. 902 to be available from the Department of Agriculture, but, in some instances, could result in expensive and serious consequences.

The files of Consulting Engineers Council already contain documented reports of projects wherein Soil Conservation Service engineers, under present legislation and authority, have provided complete engineering services to private clients in direct competition with consulting engineers. These situations are past history. We are here today to seek means of avoiding such occurrences in the future. And we respectfully suggest that the best means of accomplishing this is through delineation of the intent of Congress in the actual wording of the authorizing legislation.

In this respect, we believe that modification of the provision of "technical assistance needed for full use of soil surveys" would be in the best interest of both the Secretary of Agriculture and the consulting engineering profession. We have, accordingly, held a number of meetings with officials of the Soil Conservation Service and, as a result of these meetings, have agreed upon the desirability of the following amendment:

Amend section 2, subparagraph 3, by deleting the word "full" from the sentence and by inserting at the end of section 2 the following new paragraph:

The provision, by the Secretary, of such assistance shall not interfere with the furnishing of engineering services by private engineering firms or consultants for on-site sampling and testing of sites or for design and construction of specific engineering works.

Let me specifically state that it is our intent that this amendment not be inserted as another (fifth) subparagraph, but rather that it be a new, additional paragraph binding upon all elements of section 2.

By eliminating the word "full" from subparagraph 3, we would hope to avoid any implication that the Secretary shall be required to provide complete and detailed soils engineering assistance. By adding the suggested additional paragraph to section 2, we hope to preclude misinterpretation of this legislation as authorization or responsibility to engage in engineering services over and above the generalized soil surveys and maps now being provided by the Soil Conservation Service.

We believe that the language we recommend is consistent with the Bureau of the Budget's procurement directive, Circular No. A-76, which "reaffirms the Government's basic policy of relying upon the private enterprise system to supply its needs." Our proposed amendment has the approval of the Administrator of the U.S. Soil Conservation Service. We hope you will agree that our recommendation is in the public interest.

Consulting engineers have no subsidies and they seek none. All that our members are asking, in calling this matter to your attention, is your help to be sure a proper climate for the continued private practice of consulting engineering. As such, we respectfully urge your favorable consideration of S. 902 only so long as it contains the aforementioned amendment.

We thank you for this opportunity to express our views and recommendations relative to this important legislation.

Mr. POAGE. Thank you very much. We appreciate your statement, Mr. Waggoner.

Are there any questions?

If there are none, we are very much obliged to you, Mr. Waggoner.

Mr. WAGGONER. Thank you.

Mr. POAGE. We will now call on our colleague, Mr. Dow. He wants to make a statement.

#### STATEMENT OF HON. JOHN G. DOW, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Dow. Mr. Chairman, I want to be sure I am speaking on something germane to your topic here. I am here in reference to Congressman Philbin's bill, H.R. 2076, and my own, H.R. 13552.

Mr. POAGE. Yours is the same bill?

Mr. Dow. That is correct.

Mr. POAGE. Mr. Philbin testified on his.

Mr. Dow. If you will permit me, sir, I would like to enter a statement in regard to my bill.

Mr. POAGE. Certainly, we would like to have you do so.

Mr. Dow. I do not want to upset the schedule, but I appreciate this opportunity to testify.

Allow me to thank you for the chance to appear before you today in support of the bill that I have introduced to authorize the Secretary of Agriculture to cooperate with States and other public agencies in planning for changes in the use of agricultural land in rapidly expanding urban areas and in other nonagricultural areas, and for other purposes.

The bill is identical to H.R. 2076, which was introduced by our colleague, Representative Philbin.

My purpose in appearing as a cosponsor for this legislation relates to the rapidly growing suburban area that I represent in Rockland and Orange Counties of New York State. The rate of growth is so rapid that mistakes are being made in such obvious sites as highway locations, zoning, and scenic preservation. What mistakes are being made in the much less apparent selection of uses for soil is anybody's guess, and is undoubtedly a dismal abuse of vast amounts of good land.

It does not take much imagination to envisage blacktop laid on rich loam. In many suburban areas leaching fields are laid out in clay or rock-filled soil beyond the potential for absorption. Before our eyes land is denuded of topsoil and peat. In suburban planning there is little regard of the special usefulness of land for particular crops.

In flying over our eastern countryside we can see countless cases of trees and grass cover being stripped from embankments that are exposed by housing developments and highway excavations. Land that maintains unusual stands of native trees and shrubbery is gored without regard for its natural potential.

Besides the long-term abuse of these critical resources there are immediate and practical damages as a result of land misuse: water is lost, homes are flooded, basements crack, and soils with poor bearing qualities give way under structures built on ill-chosen sites.

The groundwork of all community planning should be soil analysis. I subscribe to the purposes of these two bills.

Mr. Chairman, I submit in support a copy of a letter dated June 30, 1966, from the Rockland County Planning Board, addressed to me and recommending passage of this legislation.

Kindly accept my thanks for listening to this brief testimony.

Mr. POAGE. Thank you very much, Mr. Dow. We are very glad to have you with us. The letter you mentioned will be made a part of the record.

(The letter referred to, dated June 30, 1966, follows:)

ROCKLAND COUNTY PLANNING BOARD,  
New City, N.Y., June 30, 1966.

Hon. JOHN G. Dow,  
U.S. House of Representatives,  
Washington, D.C.

DEAR MR. DOW: The Rockland County Planning Board at its June 18th meeting unanimously passed a resolution in support of H.R. 2076, introduced by Representative Philbin, authorizing the Secretary of Agriculture to facilitate soil surveys and other applicable surveys in urban areas.

This bill, at present, is in the House of Agricultural Committee on which Representative Joseph Resnick, of New York, is a member.

The Rockland County Planning Board would appreciate any effort on your part to expedite moving this bill out of committee and getting it passed.

Thank you for your kind assistance in this matter.

Very truly yours,

AARON D. FRIED,  
Planning Director.

Mr. POAGE. Are there any questions?

Mr. GATHINGS?

Mr. GATHINGS. Did you hear the testimony of Mr. Waggoner just a minute ago?

Mr. DOW. I am afraid that I did not. I just came in.

Mr. GATHINGS. He suggested an amendment that had to do with the private practice of soil engineering. Would you object to such an amendment being put in here at the end of section 2?

Mr. DOW. Mr. Gathings, I am in favor of the general thrust and purpose of this bill, and I do not have any ax to grind in relation to a particular amendment, except that I would not want to see the effort damaged or slowed up because of something relating to private enterprise.

I am for the employment of private soil engineers where possible, but I would dislike to think that the amendment would throw off the effectiveness of the bill.

Mr. GATHINGS. Thank you.

Mr. POAGE. Thank you, Mr. Gathings.

If there are no further questions, we are very much obliged to you.

Mr. DOW. Thank you.

Mr. POAGE. We have four more witnesses listed on the witness list. Obviously, we will be pressed for time. I cannot speak for the other members of the committee, I am sure, but I think that the committee is inclined to report this bill with the amendment that has been suggested.

Mr. TEAGUE of California. I would like to speak for everybody on this side to state that we are for it.

Mr. POAGE. I do not think that there is any opposition.

I thought that there might be witnesses who might want to file their statements, rather than to present them orally.

Anybody who wants to place his full statement in the record, may do so.

We will next call on Mr. G. Reynolds Watkins, chairman, Professional Engineers in Private Practice, Functional Section, National Society of Professional Engineers.

We will be glad to hear from you now.

Mr. WATKINS. I will try to be as brief as possible, sir.

Mr. POAGE. If you care to, you may file your statement and we will make it a part of the record, without you having to read it.

If you want to read it, you may do so.

**STATEMENT OF G. REYNOLDS WATKINS, CHAIRMAN, PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE, FUNCTIONAL SECTION, THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS**

Mr. WATKINS. Mr. Chairman and members of the subcommittee, I greatly appreciate the opportunity to present the views of the National Society of Professional Engineers on S. 902, a bill to make available soil surveys needed by States and other public agencies.

My name is G. Reynolds Watkins. I am a professional engineer from Lexington, Ky., where I have my own consulting engineering firm. I appear here today as chairman or the Professional Engineers in Private Practice, Functional Section of the National Society of

Professional Engineers, a nonprofit organization having a membership of more than 65,000. Our society is composed of professional engineers engaged in virtually all branches of the engineering profession and all fields of professional endeavor. Each of the society's members is qualified under applicable State engineering registration laws which certify that registrants have met the prescribed qualifications for engaging in the practice of professional engineering. The society's membership is affiliated through 53 States and territorial societies and more than 450 local chapters.

We have carefully analyzed S. 902, and are seriously concerned about its potential impact on the engineering profession if it is enacted as presently written.

Section 2 of S. 902, as has been pointed out, specifically directs the Secretary of Agriculture, on request of a State or other public agency, to provide soil survey assistance in connection with areas of rapidly changing uses, including both farms and nonfarm areas. Such assistance would include not only the making and furnishing of soil surveys, but also "the furnishing of technical and other assistance needed for full use of soil surveys."

It is our understanding that S. 902 is not intended to authorize the Department of Agriculture to provide services to States or other public agencies in competition with private engineering firms or consultants. However, nowhere in the bill is there any limitation on such competition. To the contrary, the undefined and highly ambiguous phrase, "technical and other assistance needed for full use of soil surveys" without modification or restriction could easily and reasonably be interpreted to include many of the professional engineering services now provided by private engineering firms and consultants in connection with soils engineering activities.

We have discussed this serious problem of ambiguity in the bill with officials of the Soil Conservation Service, and it is our understanding that in proposing this legislation the Department of Agriculture did not contemplate the creation of any problem of competition.

The position of the Soil Conservation Service is set forth in a letter to our society, dated June 30, 1966, from Mr. Donald A. Williams, the Administrator. Mr. Williams' letter states, in effect, that no competition or duplication of the services of engineers in private practice is intended by the bill. With the permission of the subcommittee, we submit a copy of this letter for inclusion in the record as part of our testimony.

Mr. POAGE. Without objection, the letter will be made a part of the record at the conclusion of your statement.

Mr. WATKINS. We understand further from our conversations with officials of the Soil Conservation Service that the agency would have no objection to inclusion of language in the bill making it clear that competition with private engineering firms or consultants is not intended. On this basis, we respectfully offer for the subcommittee's consideration a proposed amendment which we believe would simply and effectively accomplish this, yet in no way hinder or hamper either the bill's stated purposes or the effectiveness of the Department of Agriculture's soil survey program.

Our amendment is a little different from the other amendment, and this is why I would like to get it in the record.

We recommend that there be added at the end of Section 2 the following paragraph:

In providing such assistance, the Secretary shall not provide any service that is readily available from private engineering firms or consultants.

This language is patterned closely after an amendment to the State Technical Services Act of 1965, approved last year by both the House and the Senate after consideration of the same basic problem now raised by S. 902. The amendment's purpose there was to avoid any unintended competition with private firms or consultants in providing "technical services" or "technical assistance" under the act to State, local, or regional groups. We have observed the operation of the State Technical Services Act closely since its enactment, and know of no particular difficulties in the interpretation or application of this amendment, either for the administering Federal agency, the State and local groups involved, or the engineering profession.

We strongly urge that this same type of amendment be adopted in the present case.

Mr. Chairman, we greatly appreciate this opportunity to appear before the subcommittee to present our views on this important matter, and will be happy to answer any questions or provide any additional information you may desire.

(The letter presented by Mr. Watkins, dated June 20, 1966, follows:)

U.S. DEPARTMENT OF AGRICULTURE,  
SOIL CONSERVATION SERVICE,  
Washington, D.C., June 30, 1966.

Mr. WILLIAM D. PATTON,  
*Legislative Counsel, National Society of Professional Engineers,*  
*Washington, D.C.*

DEAR MR. PATTON: Reference is made to your telephone conversation of June 29, 1966, with Mr. Warren A. Blight relative to the provisions of S. 902. You asked that we send a letter explaining the need for S. 902 and the interpretation of "technical services" as noted in the bill in relation to those services performed by private engineers.

Your question centered around the interpretation of the words "technical services" as used in the bill. Generally, we consider these "technical services" to include the field mapping work, and soil interpretation and classification that is necessary to accompany a soil survey. It is not intended that such "technical services" would include the taking and testing of samples that would be necessary for construction purposes. The problem seems to be one of interpretation of words. We see no problem of competition or duplication of effort in this area.

Recently we were in conference with the staff of the Consulting Engineering Council discussing the provisions of S. 902. When this group understood the interpretation placed on the wording in S. 902, they voiced their support in favor of the bill.

Soil surveys as completed by the Department of Agriculture and interpretations thereof, could be highly beneficial to those people doing soil testing work or engaged in construction engineering. Soil surveys show the location and extent of the different kinds of soil. They provide information about soil properties to the depth of about six feet and in some instances, predictions about soil behavior can be made to ten or more feet in depth. These soil maps properly interpreted are a valuable guide to engineers regarding the kinds of problems they may expect such as wetness, rock, low-bearing strength, shrink-swell potential, and the like. Through the use of soil surveys, engineers can make more accurate estimates on construction costs and avoid many problems that might otherwise be encountered. The surveys also help them to determine the location and spacing of samples to be analyzed in the laboratory and the area under which the data can be applied.

Soil maps are not designed or intended to be used in lieu of on-site evaluation or sampling for specific construction sites. They are meant to complement not duplicate the work of the engineers. We have had numerous compliments from engineering firms on how beneficial they find soil surveys in carrying out their work.

We are enclosing a booklet "Know Your Soil" which explains the development of a soil survey and how soil surveys are used to assist private engineers, foresters, and the like.

We hope this information will be helpful to you. If we can be of further assistance, please let us know.

Sincerely yours,

D. A. WILLIAMS, *Administrator.*

Mr. WATKINS. In addition to the essence of our prepared statement, I would like to make two very brief comments, if I may sir.

Mr. POAGE. Proceed.

Mr. WATKINS. No. 1 is that we certainly welcome Mr. Williams' statement that the services covered by this legislation will not be provided in competition with private practice. We appreciate his sympathetic response to our problem. However, we want to point out that we cannot agree with his conclusion that no amendment is needed. That is the first point which I want to make.

The second point is that, although admittedly the engineers in private practice are much more interested in the soils work that goes along with construction projects, still there are certain firms and certain of our members who also engage in overall soils work.

The third point is: We feel that the amendment we propose is perhaps briefer, clearer, simpler, and less subject to misinterpretation than the amendment which has been proposed in the other testimony.

For this reason, we respectfully request that the wording which we have proposed here be given your very serious consideration.

We greatly appreciate having been given the opportunity to present this statement. We understand your time problem. Unless there are questions, we will close our testimony.

Mr. POAGE. Thank you very much, Mr. Watkins. Mr. Dole.

Mr. DOLE. Briefly, what effect would this have that the other proposed amendment would not have?

Mr. WATKINS. We simply think, sir, that the simplicity of our language is less subject to being misinterpreted. The word "interfere" bothers us somewhat, to be very frank about it, and we think that the same language that went along with the State Technical Services Act is clearer and simpler language.

Mr. DOLE. You think either amendment would be an improvement to the bill, if we adopt one or the other?

Mr. WATKINS. Yes, sir.

Mr. DOLE. In other words, there is some merit not only to your amendment but to the other amendment?

Mr. WATKINS. Yes, sir.

Mr. DOLE. Thank you.

Mr. POAGE. Thank you, Mr. Watkins.

Mr. WATKINS. Thank you.

Mr. POAGE. We will now call on Mr. Gardner M. Reynolds, director, district 1, American Society of Civil Engineers.

#### STATEMENT OF GARDNER M. REYNOLDS, DIRECTOR, DISTRICT 1, AMERICAN SOCIETY OF CIVIL ENGINEERS

Mr. REYNOLDS. Mr. Chairman and members of this subcommittee. I have listened to your discussion regarding time, and I would be willing to file my statement. It is a very brief one, but outlines the position of the American Society of Civil Engineers.

Mr. POAGE. Without objection, we will include your statement in the record, in full.

Mr. REYNOLDS. I would like to include, sir, a statement which I have not included in my written statement, to the effect that the American Society of Civil Engineers would endorse either of the amendments that have been proposed here today, sir.

Mr. POAGE. Thank you, sir.

(The prepared statement submitted by Mr. Reynolds reads in full as follows:)

STATEMENT OF GARDNER M. REYNOLDS, DIRECTOR, DISTRICT 1, AMERICAN SOCIETY OF CIVIL ENGINEERS

I am appearing before you as a representative of the American Society of Civil Engineers, a National engineering organization of some 60,000 members, to discuss the implications in a bill passed by the Senate—S. 902—wherein the Department of Agriculture is "to make available soil surveys needed by states and other public agencies, including community development districts, for guidance in community planning and resource development, and *for other purposes.*" The underlining on the written copy has been added by me.

Our Society is concerned that the enactment of this bill into law will encourage the Department of Agriculture to provide engineering services which are now being furnished competently by private consulting engineering firms. It is our opinion that the provision of these services by an agency of the Federal Government would not be in the best interests of the public.

In March 1960, the American Society of Civil Engineers adopted a "Policy Regarding the Relationship Between Public and Private Engineering in Governmental Agencies." A portion of this Policy, which is applicable to the situation under discussion, is as follows:

"... The Society's 44,000 members include more than 13,000 professional engineers in the service of all levels of government, and at least 9,500 engineers engaged as principals or employees in the private practice of engineering. With primary regard for the public welfare, and in the professional interest of these segments of membership, it is incumbent upon the Society to recommend a policy that will insure the most efficient and economical use of all engineering services . . ."

There are hundreds of private engineering firms in the country who perform foundation investigations and develop criteria for the foundation support of structures, the development of unused land, the evaluation of landslide potentials, the installation of underground facilities and other engineered works. It is our opinion that S. 902, as written, will allow the Department of Agriculture to furnish these services with a resultant weakening of a much needed private segment of the economy.

It is recognized that the soil surveys that have been performed by the Soil Conservation Service of the Department of Agriculture are extremely valuable to engineers in planning engineering works in areas where such surveys are available. However, they do not preclude the need for detailed subsurface investigations to obtain data for foundation design for such engineering works. The data in the present soil surveys are limited to the upper few feet of soil.

We are concerned that under the authority of S. 902 the Department of Agriculture will undertake detailed subsurface investigations and provide soil data that will be used in engineering design.

It is requested that S. 902 be amended to limit the Department of Agriculture to the type of service now provided and to insure that the Department will not expand their services into an area that is being adequately served by private practice.

Mr. POAGE. Are there any questions of Mr. Reynolds?

If not, we are very much obliged to you.

We will next call Mr. Robert E. Graf, chairman, Rural-Urban Affairs Committee of the National Association of Soil and Water Conservation Districts.

STATEMENT OF ROBERT E. GRAF, CHAIRMAN, RURAL-URBAN  
AFFAIRS COMMITTEE OF THE NATIONAL ASSOCIATION OF  
SOIL AND WATER CONSERVATION DISTRICTS

Mr. GRAF. Mr. Chairman and members of the subcommittee, I will be very pleased to file our statement with you.

Mr. POAGE. Without objection, your statement may be filed and placed in the record at this point.

Mr. GRAF. We have no objection to either of the amendments. Thank you.

(The prepared statement submitted by Mr. Graf reads in full as follows:)

STATEMENT BY ROBERT E. GRAF, CHAIRMAN, RURAL-URBAN AFFAIRS COMMITTEE, NATIONAL ASSOCIATION OF SOIL AND WATER CONSERVATION DISTRICTS

I am Robert E. Graf, Chairman of the Rural-Urban Affairs Committee of the National Association of Soil and Water Conservation Districts (NACD). Our Association represents the 3,000 Conservation Districts organized under state law throughout the United States, and their Associations in the 50 States and Puerto Rico.

NACD enthusiastically recommends the enactment of S. 902 passed by the Senate which clarifies the authority of the U.S. Department of Agriculture to conduct soil surveys and provide soils information in non-agricultural areas. We believe that this legislation will enable the U.S. Soil Conservation Service more adequately to assist Soil and Water Conservation Districts in providing needed and useful services in conservation and resource development.

The National Cooperative Soil Survey has proven to be one of the most valuable tools for achieving wise land, water, and other resource use in the United States. Over the past three decades, it has found its principal application in defining areas of farm lands in most urgent need of conservation treatment, and in contributing to the design of engineering and agronomic practices most effective in halting soil erosion and other kinds of resource deterioration.

In recent years, however, the patterns of land use throughout the country—and the potential uses of soil surveys—have been changing. Cities and towns have pushed through their original boundaries, spreading over into adjacent farm and forest lands. Large new recreational areas have been established for the benefit of our growing population. A great network of interstate highways is criss-crossing the countryside. New electric transmission lines, pipe lines, and water distribution facilities are linking production areas with consuming areas.

Residential areas, business districts, and farm lands are no longer confined as clearly as they once were to distinct and separate regions. Today, they are being mixed—one with the other, and the mixture often extends considerable distances into rural areas.

These new patterns of land use have created problems of many kinds. Some of these are related to the past failure of planners, developers, and builders to utilize knowledge about the characteristics of soils and other resource factors in areas under consideration for new or additional uses. Often the information has simply not been available. This has led to the construction of homes whose septic tanks would not function, whose basements flood after rainstorms, and whose foundations crack and crumble.

It has led to road-building practices which accelerate erosion and block farm drainage systems, and to the selection of routes for utility rights-of-way which are unduly expensive and which damage nearby resources. It has also led to the unwise diversion of fertile agricultural lands to other purposes; to the pollution of streams, lakes, and reservoirs by sediment washed from construction areas; and to the waste of water development, recreational, and open space sites having great potential value.

These problems are apparent and most dramatic in the vicinity of our larger urban centers where the pressures behind metropolitan sprawl are most intense. But they occur, to varying degrees, in a great many other parts of the nation. Wherever there is a growing community, there is usually a risk of unwise land use and unplanned resource development. Wherever a pipeline, a dam, or a highway

is under construction, the risks are present. The cost in dollars, in resource damage, and in human effort is very large.

Soil and Water Conservation Districts—drawing upon the aid of the U.S. Department of Agriculture and other federal and state agencies cooperating with them—are seeking ways to reduce resource waste and damage from these causes—and to contribute to wiser and more efficient land planning and development.

District leaders have learned that the soil survey, accompanied with proper interpretations, can be as valuable in solving some of the complex resource-use problems in non-farm rural areas, and in rural-urban fringe areas, as it has been—and will continue to be—in meeting conservation problems on farm and ranch lands. They have discovered that community planning boards and commissions—ranging from the small planning agencies in our New England towns to the large regional planning bodies serving the big cities—are eager to get reliable soils information as a basis for community planning.

Soils data, properly interpreted, can help identify areas most suitable for residential, commercial, recreational and agricultural use. Soil surveys can help determine the least expensive and most desirable places to construct schools, highways, and utility lines. They can help locate potential open space areas, potential water supply sites, and prime park and wildlife areas. They can serve as the foundation for sediment pollution control programs, for reducing erosion along highway and utility routes, and even for the landscaping plans for public buildings.

In numerous cases, the cost of soil survey reports has been recaptured by use of the information in connection with a single decision. As an example, one town in Massachusetts was ready to call a special town meeting to appropriate funds for the purchase of a school site. Percolation tests had yielded favorable results. However, on checking their recently completed soil survey, it was found that soil scientists had rated the site as severely limited for schools. Further field investigation showed unforeseen water problems at the site which had not been obvious during the percolation tests. Consequently, the town went on to look for a more favorable site and saved the money which might have been used to purchase the undesirable site.

The need to accelerate the rate of soil surveying and to extend the use of land inventories beyond the boundaries of farms and ranches has long been recognized by Conservation Districts. It has become even more apparent during the past several years as over two-thirds of the Districts have formulated more far-reaching long-range programs of farm, water, forest, and recreational development. Acceleration and wider use of soils information is given high priority in a large proportion of these long-range programs.

At the 20th annual convention of our National Association held this year in New Orleans, the NACD Council—representing 3,000 Districts and their State Associations—urged the expansion of soil surveys and specifically endorsed the principle of S. 902. Our association policy states:

“This measure has many desirable features important to the planning and future development of natural resources in many rapidly-changing fringe areas near metropolitan centers. In many such areas, farm lands are being used for urban and suburban development. All too often, such expansions do not take into account the application of the sciences and techniques to achieve soil, water, and other natural resource conservation.”

Our association is happy to support S. 902. We earnestly recommend its adoption. We appreciate this opportunity to present our views before your Subcommittee.

Mr. POAGE. Are there any questions?

Mr. GATHINGS. I would like to ask Mr. Graf a question.

Did you appear before the Senate committee when this bill was before that body?

Mr. GRAF. No, I did not myself.

Mr. GATHINGS. Mr. Williams, what was the consideration that was given this legislation in the Senate, do you recall?

Mr. WILLIAMS. As I recall it, Mr. Gathings, essentially no issue was raised with respect to this engineering problem. The wording of S. 902 is essentially that recommended by the administration. I think the question with respect to the interpretation arose subsequent

to the Senate passage and subsequent to any testimony that was given there. It is my belief that the Senate would not object to the amendment if this committee saw fit to include it. I am not sure of that, but I think that would be the case.

Mr. GATHINGS. Thank you.

Mr. POAGE. Thank you, Mr. Gathings.

If there are no further questions, we will call, next, Mr. George H. Nelson, president, Law Engineering Testing Co., Atlanta, Ga.

We will be glad to hear from you now, Mr. Nelson.

#### STATEMENT OF GEORGE H. NELSON, PRESIDENT, LAW ENGINEERING TESTING CO., ATLANTA, GA.

Mr. NELSON. Mr. Chairman and members of the subcommittee. We would like to file our statement, in view of the testimony we have already heard this morning, and the time factor involved in the presenting of it.

Mr. POAGE. Your statement will be included and made a part of the record at this point.

We thank you very much.

(The prepared statement submitted by Mr. Nelson reads in full as follows:)

#### STATEMENT OF GEORGE H. NELSON, PRESIDENT-ELECT, AMERICAN COUNCIL OF INDEPENDENT LABORATORIES, INC.

My name is George H. Nelson and I am President of Law Engineering Testing Company of Atlanta, Georgia, a firm specializing in materials testing, soil and foundation investigations and geological surveys. I am also President-Elect of the American Council of Independent Laboratories, a national professional association of independent, tax-paying laboratories. Approximately 100 of our members practice in the soils testing and foundation engineering field. I am here to state the position of the ACIL regarding Senate Bill 902.

ACIL recognizes the value to the nation of the general soils classifications provided by the National Cooperative Soil Survey. This type of broad gauge activity, similar to the geologic, water supply and topographic mapping services undertaken by the U.S. Geologic Survey are in the highest and most appropriate order of government service. They provide inventory-type information which is needed for overall planning and for utilization of our natural resources. These are programs that, because of their scope and size, could not be undertaken by industry because they cover such large areas of our country and because their objectives are long range and have wide usage.

ACIL supports such activity and depends on the wisdom of Congress to determine the need for such programs at the proper time and when resources are available to finance them.

Senate Bill 902, however, goes beyond this concept in Section 2 in that it expands the scope of this activity into areas of service traditionally provided by private enterprise.

Specifically, this bill provides that the Secretary of Agriculture shall provide assistance to a state or other public agency in four areas. Item 3, "the furnishing of technical and other assistance needed for full use of soil surveys," particularly is a direct incursion into a field of activity provided by consulting professional geologists and soils engineers. It is the position of ACIL that the services proposed are now available and can be provided by competent, experienced registered professional engineers doing business in every part of the United States. These specialized consultants have, through many years of experience with many types and classes of soils in many geographic areas and in many engineering applications, developed an expertise in problems relating to soils that when applied will provide economic, practical solutions for all types of clients.

On March 3, 1966, Circular No. A-76 was issued by the Executive Office of the President of the United States, Bureau of the Budget, the subject being "Policies for acquiring commercial or industrial products and services for government use."

Under 2 of this circular, the stated policy is "The guidelines in this circular are in furtherance of the government's general policy of relying on the private enterprise system to supply its needs."

ACIL believes that it would be in direct conflict with this policy to attempt to develop in an arm of the Federal Government such a staff of consultants to provide the same services that are now available and to do so at the expense of the very firms who provide the tax support for our government.

Walter F. Carey, then President of the Chamber of Commerce of the United States, said in a talk last year and I quote:

"For, to put it bluntly, the government of this free enterprise nation is—unintentionally, I know—nibbling and sometimes gobbling at the offspring of free enterprise. Government by its size and continuing growth is being demonstrably injurious to our internal competitiveness, to our creativity, to our proven and innate ability for generating goods and services, and—what is of most importance to most people—jobs.

"President Johnson is striving to achieve more economic growth. Get the government out of unnecessary activities and the creativity of scores of individual businesses will increase. Profits will increase. Tax revenues will increase. Jobs will increase. And on the other side—the government side—prudence, thrift, efficiency will increase."

Mr. Carey was not far from the truth.

It is my understanding that an amendment to this bill has been proposed which would read substantially as follows:

"The provision by the Secretary of such assistance shall not interfere with the furnishing of engineering services by private engineering firms or consultants for on-site sampling and testing of sites or for design and construction of specific engineering works."

To accept this amendment would not be without precedent. As an example, on the recently passed State Technical Services Act, S. 949 and H.R. 3420, certain changes were made which had the effect of eliminating objections such as the above. The original wording was,

"Determined that such technical services program does not provide a service performed as practicably by private technical services, professional consultants or private institutions."

This was changed to read as follows:

"Determined that such technical services program does not provide a service that is now available or could be made available as practicably by private technical services, professional consultants or private institutions."

We are in agreement that this amendment would remove the opposition which we have to this bill and would recommend its acceptance to help assure that this legislation achieves its intended purpose.

Thank you.

(The following letters and statements were also submitted:)

STATEMENT OF HON. JAMES KEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA

Mr. Chairman and distinguished Members of the Subcommittee on Conservation and Credit of the Agriculture Committee of the United States House of Representatives, I am deeply grateful for your courtesy in providing me this opportunity to present this statement for your consideration.

Mr. Chairman, the Members of your Subcommittee are to be highly commended for holding hearings today on this vital legislation. This proposed legislation is a reasonable and sound approach, which if enacted, will be of benefit to many citizens and areas in the United States.

I enthusiastically support the principles contained in the various proposals receiving your consideration this morning. In fact, I have introduced H.R. 13566 primarily because of the following valid reasons:

1. This measure will promote the use of soil maps as an aid to orderly planning of rural fringe areas.
2. The soil survey assistance which the farmer has received should now be available to the other users of land, which would be authorized under this proposed legislation.
3. Thousands of non-agricultural developments will spring up in all parts of our Nation during the oncoming years in the immediate future. Community leaders must be equipped with this type of legislation in order to have the tools to resolve the numerous existing problems of sedimentation, sanita-

tion, and waste disposal which this will provide. I have been advised that sedimentation from construction activities is one of the major pollutants of water.

4. Home-buyers and rural-fringe developers are losing millions of dollars every year due to poor building sites. This proposed legislation can help to substantially prevent these unnecessary losses.

5. This measure would enable the mobilization of additional needed manpower and would eliminate the present confusion in existing laws under which the Soil Conservation Service is now directed to act.

6. These proposals will strengthen and improve the program of the Soil Conservation Service.

Especially will H.R. 13566 further accelerate the very important work of the U.S. Department of Agriculture in providing soil surveys. We are rapidly becoming an urban society and although my home State of West Virginia is not one of the highly populated sections of the United States, smaller towns are expanding and the larger cities are increasing with new housing developments and industries at an accelerating rate.

It is vitally important to community planners and developers that they have soil surveys and interpretative data available to them for use in making efficient long-range plans and programs. The value of soil surveys for community planning is best expressed as a cost avoidance item. When such data are available, shifts in use can often be planned with the best possible use being made of the soils in the broad planning area. It is my further understanding that hundreds of examples are known where thousands of dollars have been lost annually because of poor site selection for specific uses.

The Soil Conservation Service is now mapping five million acres annually in these rapidly expanding use areas. At this rate of mapping, and considering the rapid population growth across our Nation, many areas will be developed without the advantage of a soil survey and the interpretative information that accompanies such survey.

It appears logical to me that we should restate and clarify the policy of the Department of Agriculture regarding soil surveys in areas of rapidly changing land uses and direct the Secretary to accelerate surveys in such areas in order to keep pace with the needs as we know them to be. It also appears reasonable that we should now avoid the expensive mistakes that have been experienced in the past and provide the needed soil survey data available to planners and developers prior to the development of long-range plans and programs for community development.

In considering the bills before your Subcommittee, I would respectfully encourage the adoption of the revised wording contained in S. 902 as passed by the U.S. Senate. No new authority is needed for the Secretary of Agriculture to make soil surveys. It seems to me the revised wording in S. 902 more clearly states what is needed in the way of a clarification and restatement of authority and encourages the Secretary to enter into cooperative agreements for local cost sharing for purposes of making soil surveys in areas of rapidly changing land uses.

As an example of use of soils information for nonfarm uses, the Health Department in my home County of Mercer used soils information to develop a map of the County showing soil limitations for septic tank disposal fields and as a basis for developing specifications for sewage effluent disposal and for sanitary land fill.

In addition, the Soil Conservation Service provided soil interpretations for woodland to the U.S. Steel Corporation on 75,000 acres in McDowell, Wyoming and Mercer Counties, all of which are located in the Fifth Congressional District of West Virginia.

The Soil Conservation Service furnished soils information for recreation and engineering uses for the development of a recreation plan for one of the watersheds—Brush Creek Recreation Area. A private engineering consulting firm, The Miniaci Engineering Company of Pineville, West Virginia, is cooperating with the Soil Conservation Service in this development.

At the present time, Airways Engineering Corporation is conducting a Feasibility Survey for Mercer County in order to determine whether or not a joint Commercial-Industrial Park and Airport Complex can be established. Such a complex is absolutely essential for the continued economic development of southern West Virginia. The information previously obtained by the Soil Conservation Service is absolutely vital specifically to the engineering feasibility and as such will contribute substantially to the final determination of this Feasibility Survey.

Therefore, Mr. Chairman, I again express my deep appreciation to you and the Members of your Subcommittee for your consideration of this statement on behalf of this proposed legislation.

## STATEMENT OF TONY T. DECHANT, PRESIDENT, NATIONAL FARMERS UNION

The National Farmers Union is in full support of the passage of S. 902, a bill to provide that the Secretary of Agriculture shall conduct the soil survey program of the U.S. Department of Agriculture so as to make available soil surveys needed by states and other public agencies, including community development districts, for guidance in community planning and resource development, and for other purposes.

Soil surveys conducted by the Soil Conservation Service traditionally have been used to identify prime farmland and to select areas suitable for different kinds of crops, grasses, and trees and for guiding optimum systems of soil and water management practices. The same basic principles of soil behavior are now used extensively to determine the use of soil for houses, highways, industrial sites, recreation facilities, etc.

Soil maps are needed for non-farm land.

In a great many parts of the country a clear-cut distinction no longer exists between rural and urban living. As modern highways are built many non-farm people establish their homes in rural areas. To achieve good living for both advanced community planning is essential. Such areas have new needs for water management, sewage disposal, schools, recreation areas, and other facilities. Such planning requires accurate knowledge of the soils and their alternative potentials in order to avoid serious losses of investment in construction and maintenance costs. To solve these problems the results of the soil surveys should be available to the planning agencies, the residents, and other public and private agencies.

S. 902 as passed by the United States Senate would clarify and restate soil survey policy for the Department of Agriculture. The National Farmers Union believes the authority proposed is needed because:

1. It will promote the use of soil maps as an aid to orderly planning of rural-fringe areas.
2. The soil survey assistance which farmers have received is needed by other users of land.
3. Thousands of non-agricultural developments will spring up in all parts of the Nation during the next few years. Community leaders must be equipped with soil maps to deal with the numerous problems of sedimentation, sanitation and waste disposal which this will present. Sedimentation from construction activities is one of the major pollutants of water.
4. Home buyers and rural-fringe developers are losing millions of dollars every year due to poor building sites.
5. It will strengthen and improve the program of the Soil Conservation Service. It will enable the mobilization of additional needed manpower and will clear up the present confusion in the laws under which the Soil Conservation Service is directed to act.

Farmers Union delegates at our 64th annual convention in Denver last March took note of these needs. They voted to call upon Congress to enact legislation to clarify the Department of Agriculture's authority to conduct soil surveys on non-farm land.

Therefore, we urge the enactment of S. 902 by the House of Representatives and request that this letter be made a part of the record of the public hearing on this needed legislation.

GRAND RAPIDS, MICH., June 28, 1966.

Congressman GERALD R. FORD,  
Minority Leader,  
Washington, D.C.

DEAR SIR: The tax-paying sector of the engineering profession is greatly alarmed over the implications of greatly increased infringement by the U.S. Department of Agriculture into the field of private engineering practice by Senate Bill 902 (and/or H.R. 2076). The basic idea of providing soils surveys is all right, but the language authorizing the work is so broad that it can include planning and design of "such facilities as highway construction, recreational facilities and water and sewage facilities," to quote from the Senate Committee reporting out the bill.

Please do what you can to have this wording changed so as to let the Department of Agriculture do the work for which they are trained and organized, and for us to continue to do the work for which we are trained and organized.

Respectfully yours,

KENNETH W. ANDERSON,  
Professional Engineer.

BARR & ASSOCIATES,  
Kodiak, Alaska, June 30, 1966.

Representative RALPH RIVERS,  
U.S. Congress, Washington, D.C.

DEAR MR. RIVERS: This letter is written to protest S.902, a bill which has passed the Senate and is now in the House Agricultural Committee.

S.902 authorizes the Secretary of Agriculture, through the Soil Conservation Service, to provide soils investigations, surveys and interpretations for states, cities, local planning boards and other public agencies.

S.902 could open the door for expansion of U.S.D.A.'s present soil mapping and surveys to the extent that that agency could shortly be offering services in direct competition with consulting soils engineers, civil engineers and other branches of private consulting engineers through "planning" for such facilities as highway construction, recreational facilities and water and sewage facilities.

We in Kodiak have had a very recent experience with government engineering. Recently the Corps of Engineers, (U.S. Government) took over a signed contract from this firm which we had with the Alaska State Housing Authority for the reason that "the Corps would have to lay off some of their key personnel because of lack of work." This firm's staff was cut from sixteen employees back to nine because of this action.

You are urged to actively oppose S.902 or amend it so as to forestall creating of another government agency that can only exist at the expense of private engineering firms.

Sincerely,

JAMES R. BARR.

Mr. POAGE. I believe that concludes all of the witnesses we have listed here.

Is there anyone else here who wants to be heard on this subject?

If not, we are very much obliged to every one of you.

The committee will now go into executive session.

We are very glad to have had you all with us this morning.

(Whereupon, at 11:30 a.m., the subcommittee retired into executive session.)

○

