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A Review of the Report of the Committee on Environmental Health Problems to the Surgeon General

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A REVIEW OF THE REPORT OF THE COMMITTEE ON ENVIRONMENTAL HEALTH PROBLEMS TO THE SURGEON GENERAL

CHARLES A. DAMBACH*

INTRODUCTION

November 1, 1963 was the second anniversary date of the "Gross Committee" report to the Surgeon General on environmental health problems.¹ Preparation of the report was undertaken in an air of urgency to meet certain programming requirements of the Bureau of the Budget for establishing, in the Washington, D.C. area, an Environmental Health Center under the Public Health Service. The "Gross Committee" endorsed the proposed Center, provided estimates of manpower, facility and financial needs to 1970 and suggested areas of research emphasis and needed organization. Site acquisition and planning funds for the Center were included in the President's budget for 1962, 1963 and 1964; however, the House of Representatives and the Senate have not come to an agreement on this item. The agreement reached by the House-Senate Conference on the Department's 1964 appropriation bill did not include any funding for the Center; thus fiscal year 1964 plans have come to a halt. Consideration is currently being given to the Center in relation to budget plans of the Public Health Service for fiscal year 1965. According to the November 25, 1963 issue of the *U.S. News and World Report*, appropriations for this program have bogged down in Congress presumably because of opposition to establishing more government research facilities in the Washington, D.C. area.²

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1. U.S. Public Health Service, Pub. No. 908, Dep't of Health, Education and Welfare, Report of the Committee on Environmental Health Problems to the Surgeon General 1-288 (1962).

2. *Where Billions For Research Go*, U.S. News and World Report, November 25, 1963, p. 74.

The Environmental Health Center has been proposed to provide greater emphasis in the Public Health Service on research, training and service in the environmental health sciences.³ The Gross Committee recommendations included a national Environmental Health Center and an Office of Environmental Health Sciences in a Bureau of Environmental Health to be created out of the present Bureau of State Services. The air pollution control, water supply and water pollution control and environmental engineering responsibilities of the Public Health Service are among the programs affected by these recommendations.

The author of this paper was a member of the Gross Committee and endorsed the recommendations it made. He will attempt in this paper to present a case report of the Committee's work.

I

WHY AN ENVIRONMENTAL MENTAL HEALTH CENTER?

A. Recommendations of Advisory Groups

Widespread public attention has been focused on environmental health problems in recent years. The mysterious lethal fog that settled on Donora, Pennsylvania in 1948 and on London in 1952 and the near chronic irritation of Los Angeles smog are examples.⁴ More recent events include the cranberry episode during the holiday season of 1960, fear over radioactive fallout from testing of nuclear weapons, the appearance of Rachel Carson's "Silent Spring," the report of the President's Science Advisory Committee on the use of pesticides, and a spate of articles in newspapers, magazines and professional journals.⁵

3. Environmental Health is a convenient word-symbol representing a number of meanings. The term embraces and gives common identity to such non-microbial or non-metabolic agents of ill health which occur in the environment as toxic chemical agents in food, water and air; tensions related to living and working conditions, and accidents related to environmental hazards. The term describes an area of education, research and medical practice which is gaining in acceptance and which implies a comprehensive treatment of interrelated insults to health as contrasted to focusing attention on their component parts.

4. Walsh McDermott, *Air Pollution and Public Health*, Scientific American, October, 1961, pp. 49-57.

5. The literature on this subject is already voluminous. For recent developments in this field the reader's attention is directed to: The White House, Report of the President's Science Advisory Committee, Use of Pesticides 1-24 (1963); Pest Regulation Division, U.S. Dep't of Agriculture, Official Summary of Agricultural Pest Chemical Uses; National Agricultural Chemicals Ass'n, Washington, D.C., News and Pesticide Review.

The National Advisory Health Council in June of 1958 recommended that the Public Health Service devote greater resources to research and education in this field. Also in June of 1958 a panel of consultants, assembled to advise the Secretary of Health, Education and Welfare on medical research and education, called attention to the need for additional research on such environmental health problems as radiation injury, harmful chemical processes, accidents, communicable disease and increasing air and water pollution. That the Public Health Service has not been negligent in facing up to these problems is evident from increasingly higher budget requests submitted to the Congress to implement research, service and educational programs in these areas.

B. Request of the Sub-Committee on Appropriations

The Sub-Committee on Departments of Labor and Health, Education, and Welfare, and Related Agencies Appropriations of the House Committee on Appropriations which conducted hearings on these budget requests was alert and apparently sympathetic to growing demand for funds to support these programs.⁶ The Committee expressed concern, however, that the requests were so widely dispersed in the various organizational units of the Service budget that their magnitude and significance was not clearly evident. These concerns led the Sub-Committee to request

that the Public Health Service make a thorough study of the environmental health problems and the most efficient organization of their facilities to meet these needs, and to have a report prepared for submission to the Committee by January 1, 1960, so that the Committee may have an opportunity to study it before holding hearings on the 1961 budget.⁷

C. Report of the Public Health Service to the Sub-Committee on Appropriations

The Surgeon General took prompt steps to implement prepara-

6. Report of Sub-Committee on Departments of Labor and Health, Education, and Welfare, and Related Agencies Appropriations, House Committee on Appropriations, 85th Cong., 2d Sess. (Comm. Print 1959).

7. Report on Environmental Health Problems, *Hearings on H.R. 11465 Before the Sub-Committee on Departments of Labor and Health, Education, and Welfare, and Related Agencies Appropriations of the House Committee on Appropriations*, 86th Cong., 2d Sess. 6 (1960).

tion of the report.⁸ The report documented growing environmental health hazards such as radioactive products, toxic materials in air and water resulting from industrial processes, and problems in mental health associated with growth of metropolitan areas. It detailed also Public Health Service programs to meet these needs. The report noted that programs and activities developed by the Public Health Service for dealing with such hazards are carried out somewhat independently and in response to specific urgencies. This has resulted in a loose grouping of related but independently treated programs which are carried out in all three of the operating bureaus of the Service, but primarily in the Bureau of State Services. The administration of these activities presents a number of organizational problems with respect to interagency and internal co-ordination, staffing, laboratory facilities, and appropriations structure.

The report predicted that over the next decade, social and economic forces will further increase the potential of environmental health hazards and that the Public Health Service is faced with the need for an expanded program of research, training, and technical services and a high level organizational unit within which there must be strong professional leadership, and integration of biomedical and engineering activities, and as close a relationship as possible between the operational and investigatory groups. In addition to an expanded intramural research program, there must be an extensive extramural program.

The Committee hearing the report was impressed with its analysis of Public Health Service programs and its description of the host of health problems in the area of environment. The Committee chairman, however, indicated disappointment "that it is most unspecific as to recommendations both for program expansion and for financing." In short, he said:

it does not give us what we need and what we hope to get in order to act intelligently on the 1961 budget for environmental health activities. . . .

8. Advice in preparation of the report was sought from a special panel including consultants drawn from the Committee on Environmental Health of the National Advisory Health Council, members of the Public Health Service Advisory Committees concerned with special aspects of Environmental Health, and a state health officer from a large metropolitan area. The report of this group was submitted through the Surgeon General to the House Committee on Appropriations in January, 1960. Public Health Service, U.S. Dep't of Health, Education and Welfare, Surgeon General's Report to the House Committee on Appropriations (1960).

The Committee wonders whether some realignment of responsibility within the Service might not help in giving greater visibility to some important but currently obscure programs and in bringing the whole environmental health field into a more closely knit area.⁹

D. Testimony of the Surgeon General

Dr. Leroy E. Burney, then Surgeon General, in his responding testimony before the Sub-Committee, emphasized the rapidly changing nature of environmental health problems, the increasingly complex medical and social problems involved, and the concomitant impact any structural change in the organization of the Public Health Service to cope with these problems would have on the entire Public Health Service program.

What is essentially, he noted, "a common air supply, a common water supply, a common transportation system is now dealt with fragmentarily by literally scores of officials and groups."¹⁰ We must, he said, recognize that the nature of our goal is now necessarily different. We can, for example, aim for total eradication of the micro-biological enemies of man, but in dealing with the possible harmful effects of the by-products of industry and of the wastes of nuclear technology, our goal can not be complete conquest, but containment.

Of course, Dr. Burney's view that in an urban, industrial society we must accept a certain amount of deterioration of our environment will not be fully accepted by all citizens, especially those popularly classed as conservationists. It is apparent that much of the pressure to increase public action in the field of environmental health especially with respect to air and water pollution emanated from this source. Dr. Burney recognized that it is important for the health profession to realize that the basic decisions in this matter are not theirs to make. Rather these are decisions of public policy with economic and social ramifications which extend far beyond the medical field of competence.

The report specified, as its principal general recommendation, that a major organizational unit be established within the Public Health Service to direct an overall approach.¹¹ It did not, however, specify the precise nature of this unit, or delineate precisely its

9. Report on Environmental Health Problems, *op. cit. supra* note 7, at 35.

10. *Ibid.*

11. Public Health Service, U.S. Dep't of Health, Education and Welfare, Surgeon General's Report to the House Committee on Appropriations (1960).

sphere of influence. The panel which prepared the report also made certain informal recommendations to the Surgeon General on organization of the Public Health Service for environmental health. These recommendations met with internal opposition on the grounds that they were prepared without the benefit of participation of the organizational units affected.

E. Report of the Task Force on Mission of the Public Health Service

These considerations motivated the Surgeon General to establish a task force "to study the present and the probable future mission of the Public Health Service over the next decade; then to design the best possible organizational structure to accommodate present and future responsibilities."¹² The task force reported that

there has been no appreciable adjustment to the nation's political, industrial and social organizations, and that the lag in adjustment of environmental factors to limits of human tolerance is particularly striking. Health and safety in the city, on the farm, in work places and in travel can no longer be assessed in terms of the relatively simple exposures of a generation ago. Today viro-infections, machines of tremendous power, prolonged low level exposures to ionizing radiations and tens of thousands of potentially toxic chemicals must be considered predominate features of the American environment affecting the entire population.¹³

The Committee expressed the view that the next great nationwide health efforts may be expected in two broad areas: (1) the physical environment, and (2) comprehensive medical care. It noted that effective action in environmental health requires that the private use of water, atmosphere and land be limited in the public interest and those who might create environmental hazards should be primarily responsible for averting or abating them.

The Committee observed that in the period of 1945 to 1959

12. U.S. Dep't of Health, Education and Welfare, Final Report of the Study Group on Mission and Organization of the Public Health Service I (1960). The study group was composed of twelve carefully selected Public Health Service career employees. It was supported by five full time staff members, two part time staff members, and two outside management and organization experts. The study group was relieved of regular duties so that they could devote three full months to the study. The Final Report contains a self-appraisal of the mission of the Public Health Service and its growth.

13. *Id.* at 5.

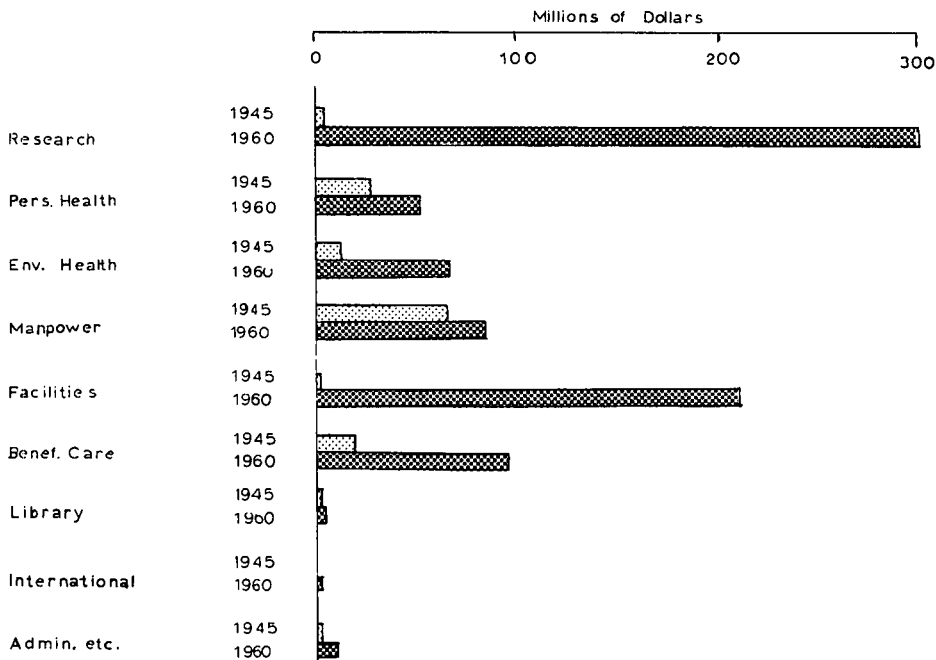
twenty-three new peacetime programs were established in the Public Health Service by legislative or administrative action and appropriations increased from \$117,000,000 in 1945 to \$839,000,000 in 1960 or approximately 618 per cent increase. Major increases were for the purposes of research, construction grants, beneficiary care, and environmental health. The dramatic rise of these programs is illustrated by new programs in water supply and pollution control and air pollution control. Increases in expenditures of the Public Health Service by function is shown in Figure 1.

F. Proposed New Bureau

To cope with these problems the task force proposed the creation of a new Bureau of Environmental Health.

The proposed new organizational plan would retain the five existing organizational units (water supply and pollution control,

FIGURE 1
EXPENDITURES OF THE PHS BY FUNCTION



radiological health, air pollution, occupational health and general environmental health services). A proposed sixth division would be concerned with social and economic organizations which affect environmental health. Its personnel would engage in studies necessary to solve problems related to urbanization in metropolitan complexes, including demonstrations and experiments for the development of effective methods of organization and administration in this field.

The Committee recognized that many of the operations of the Public Health Service related to environmental health must be carried out in the field. It recognized the need for unification and coordination. It indicated that a strong headquarters staff in Washington is essential for central planning and administration, and for maintaining a highly complex set of relationships between environmental programs of the Public Health Service and other governmental programs. It proposed "that a central laboratory facility will be needed for research which cannot be done in the field which cuts across divisional lines, and requires interdisciplinary scientific approaches."¹⁴ The study group indicated that it believes strongly that the central facility is a prerequisite if the complicated and extensive problems facing the Public Health Service are to be made effective.

G. Requested Funding For The Environmental Health Center

All of these reports had as a common core the need for some organizational change in the Public Health Service which would give stronger identity and support to environmental health and provide for a co-ordinated effort. These actions led to the development by the Public Health Service of a proposal to establish a Bureau of Environmental Health with an Environmental Health Center near Washington, D.C.

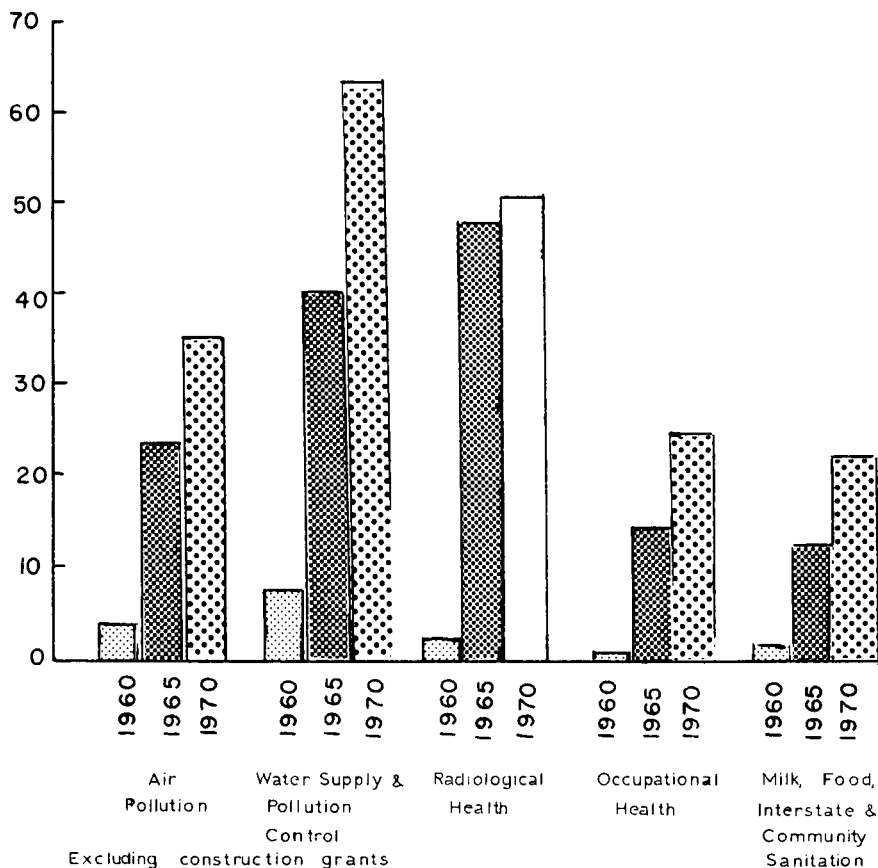
The estimated cost of programs to be carried out through the new Bureau of Environmental Health are shown in Figure 2.¹⁵ Total program costs including grants and direct operation in the field of environmental health under this proposal would rise by 1965 to about \$400,000,000 and by 1970 to about \$520,000,000.

14. *Id.* at 29.

15. U.S. Public Health Service, Dep't of Health, Education and Welfare, Proposal for an Environmental Health Center for the Public Health Service 1-50 (undated pictorial brochure).

FIGURE 2

ESTIMATED PROGRAM LEVELS IN MILLIONS OF DOLLARS



Of this amount approximately \$30,000,000 would be related to personnel for the Environmental Health Center.

The proposed Center would be developed in three phases. The first, employing 2500 persons, to be completed in 1966, would cost \$44,000,000. The second phase, to be completed in 1968, would cost an additional \$17,000,000 and include 1300 additional employees. The third phase, to be completed in 1969, would cost an additional \$9,500,000 with an additional 950 employees. These projections of staff and funds were made on the basis of recommendations of advisory groups to the Public Health Service.

A request for funds to implement planning the proposed center was submitted unsuccessfully to the Senate as a last minute amendment to the 1962 budget. Preceding this action the proposal was also considered by the office of the President's Science Advisor and one of its study panels. Mr. Boisfeuillet Jones, Assistant to the Secretary of Health, Education, and Welfare for health and medical affairs, in addressing the Gross Committee at its opening session on August 23, 1961, reported that the panel endorsed the plan to locate the regulatory, technical assistance, and administrative functions of environmental health programs in the Washington area, but had reservations concerning the requirement for the housing of the major government research facilities for all phases of the proposed program in a single center. It expressed the view that "governmental research facilities should be developed on a selective basis to satisfy specific needs,"¹⁶ and indicated that the proposed broad expansion appears to be too rapid for the supply of qualified manpower. It asked for a clear delineation by the Public Health Service in a substantive manner of the research program to be carried out in the proposed Center.

The President sent to the Congress an amendment to the 1962 budget in the amount of \$3,515,000 for site acquisition and detailed planning for the proposed Environmental Health Center. Certain conditions were placed on the proposal which were conveyed to the Secretary of Health, Education and Welfare in a letter from Elmer B. Statts, Deputy Director of the Bureau of the Budget, dated July 5, 1961. In this letter Mr. Statts stated that

the funds for detailed planning included in the budget amendment will be reserved pending a further study and review of environmental health research programs and facility needs by a Task Group which will give special attention to:

- (a) Research manpower requirements, both federal and non-federal, and necessary training and other programs to meet those requirements;
- (b) The appropriate emphasis between intramural federal research efforts and extramural efforts and federal programs, both as to personnel and facilities needed to carry both efforts forward;
- (c) The current research activities, and facility resource of other federal agencies in appropriate interrelationships and coordination, including the possible sharing of research facilities.

16. U.S. Public Health Service, Pub. No. 908, Dep't of Health, Education and Welfare, Report of the Committee on Environmental Health Problems to the Surgeon General 273 (1962).

The review was to be concluded by December 1, with a target date of November 1 set for completion of the work by the task force. The plans and conclusions developed in this review were to serve as a basis for determining facility requirements for the various environmental health programs and to provide a basis for a new facility to proceed. This directive led to the appointment of the Gross Committee.

II

ESTABLISHMENT OF THE COMMITTEE ON ENVIRONMENTAL HEALTH

Surgeon General Luther B. Terry lost little time in fulfilling this request. On July 21, 1961, through telegraphic communications, he established a committee under the chairmanship of Dr. Paul M. Gross of Duke University to undertake this assignment.¹⁷ Mr. Hal

17. Members of the Gross Committee on Environmental Health included:

Ahlberg, Clark D., Dr., Vice President for Administration and Research, Syracuse University, Syracuse 10, N.Y.

Anderson, Gaylord, Dr., Mayo Professor and Director, School of Public Health, University of Minnesota, Minneapolis, Minn.

Chambers, Leslie A., Dr., Scientific Director, Allan Hancock Foundation for Scientific Research, University of Southern California, Los Angeles, Cal.

Dack, G. M., Dr., Director, Food Research Institute, University of Chicago, Chicago, Ill.

Dambach, Charles A., Dr., Director, Natural Resources Institute, Ohio State University, Columbus, Ohio.

DuBois, Kenneth P., Dr., Professor of Pharmacology, University of Chicago, Chicago, Ill.

Goldblith, Samuel A., Dr., Professor, Department of Food Technology, Massachusetts Institute of Technology, Cambridge, Mass.

Gordon, Seth, Mr., Vice President, North American Wildlife Foundation 3019 7th Ave., Sacramento, Cal., Member, Water Pollution Control Advisory Board, August 7, 1958-June 30, 1961.

Gross, Paul M., Dr., Ch., Professor, Department of Chemistry, Duke University, Durham, N.C.

Handler, Philip, Dr., Ch., Department of Biochemistry and Nutrition, Duke University School of Medicine, Durham, N.C.

Hatch, Theodore F., Dr., Professor of Industrial Health Engineering, University of Pittsburgh, Pittsburgh, Pa., Member, Surgeon General's Advisory Committee on Occupational Health.

Logan, John, Dr., Chairman, Dep't of Civil Engineering, Northwestern University, Evanston, Ill.

Merrill, Malcolm, Dr., Director of Public Health, State Dep't of Public Health, Berkeley, Cal., Member, National Advisory Committee on Community Air Pollution.

Metzler, Dwight, Mr., Director, Division of Sanitation, Kansas State Board of Health.

Morgan, Russell, Dr., Professor of Radiology, Johns Hopkins University Medical School, Baltimore, Md., Member, National Advisory Committee on Radiation.

Hollister, Chief, Radiological Systems Analysis, Division of Radiological Health Service, was designated as Executive Secretary for the group. The task force was to be selected in consultation with the President's Science Advisor and instructed to prepare long range research objectives in each program area and recommendations on the appropriate federal programs to accomplish this objective.

The Committee held its first meeting on August 23, 1961 in Washington, D.C., where it was briefed on its responsibilities by Boisfeuillet Jones, Assistant to the Secretary of Health and Medical Affairs; Dr. Luther B. Terry, Surgeon General; Dr. Robert J. Anderson, Deputy Chief, Bureau of State Services; and Dr. Paul M. Gross, Committee Chairman. The importance of the report to the Executive Office and for budgetary decisions in the Congress and programming in the Public Health Service was emphasized. Staff assistance to the Committee was given first priority by the Surgeon General. This briefing and the resulting discussions provided an insight to Environmental Health problems not evident in available documentary material.

It was apparent that the original thinking in the Public Health Service was that an Environmental Health Center should be established as an expansion of the Robert A. Taft Sanitary Engineering Center at Cincinnati. The Public Health Service budgeted \$785,000 in fiscal year 1961 funds for planning this expansion. The proposal was abandoned, however, upon consideration of the overcrowded conditions at Taft, and the prevailing view that a central research unit working closely with the central administration in Washington is necessary to bring about closer interrelationships. The Senate in considering the Environmental Health Center question, however, has been concerned about high land costs and the wisdom of another governmental facility in the Washington area. Congressional concern has also been raised in regard to the efficient use of big research tools, technical skills, and the impact of a large Environmental Health Center on programs in universities. The notion is held in some quarters that the equivalent of a Bureau of Environmental Health authority exists, and that the problem is primarily interdisciplinary integration of research through administrative directive.

The Public Health Service had at the time of the Gross Committee meeting authority to establish seven regional water pollution control laboratories. The Director of the Budget, however, indicated that funds would not be released for this purpose until the

Gross Committee report was available, and further that the 1963 budget proposal of the Public Health Service would be considered in the light of this report.

A. The Committee's Assignment

From this background of information it is evident that the idea of an Environmental Health Center antedated the Gross Committee. Motivation for the Center originated in public concern expressed through Advisory Groups and Congressional committees. The Center was to be only a part of a broader proposal for reorganization of the Public Health Service to meet present and future challenges. Lacking in the proposals, however, were clear indications of what was needed in terms of people, money and facilities. This is what the Bureau of the Budget, the President's Science Advisor, and the Committee on Appropriations apparently wanted. The role of the Gross Committee therefore was to come up with a more clearly defined substantive research program including estimates of these requirements.

The committee was faced with the tremendous task of completing its report by November 1. Six divisional and four special sub-committees were established to prepare reports for review and action by the parent committee. Sub-committees were structured so that they included persons familiar with active programs, and persons not familiar with active programs. Every member of the parent committee served on at least two sub-committees. Public Health Service staff members were made available to sub-committees and arrangements were made for the services of outside consultants. A total of twenty-five consultants drawn from industry, private organizations, state and federal agencies and universities were used.¹⁸

18. Consultants to Sub-Committees:

Applied Mathematics and Statistics:

Dr. Frank Murray, Professor of Mathematics, Mathematics Department, Duke University, Durham, N.C.

Dr. Thomas F. Mancuso, Chief, Division of Industrial Hygiene, Ohio State Health Department, Columbus, Ohio.

Dr. A. G. Oettinger, Computation Laboratory, Harvard University, Cambridge, Mass.

Dr. Wilfrid Joseph Dixon, Professor of Preventive Medicine, University of California Medical Center, Los Angeles 44, Cal.

Dr. Frank Corbato, Deputy Director, Computer Department, Massachusetts Institute of Tech., Cambridge, Mass.

Analytical Methods and Instrumentation:

Confidential summary statements were prepared by Public Health Service staff members for each of the divisional sub-committees and the parent committee. A series of sub-committee meetings throughout the country were promptly arranged. Selected staff members and consultants met with sub-committees to discuss these statements and to serve as resource advisors for sub-committee deliberations and to prepare working documents based on these deliberations.

Divisional sub-committee meetings were held prior to the second meeting of the entire committee which convened in Washington on September 11, 1961.

B. Guide Lines For Sub-Committee Reports

The broad guide lines for sub-committee reports were estab-

Dr. Arnold Beckman: President, Beckman Instrument Co., Fullerton, Calif.

Air Pollution:

Dr. Eugene Gillis, Health Commissioner, Philadelphia Department of Public Health, Philadelphia, Pa.

Mr. S. Smith Griswold, Air Pollution Control Officer, Los Angeles County Air Pollution Control District.

Dr. Glen R. Hilst, Vice President, Travelers Research Center, Inc.

Dr. H. F. Johnstone, Research Professor of Chemical Engineering, Department of Chemistry and Chemical Engineering, University of Illinois.

Dr. Robert A. Kehoe, Professor of Industrial Medicine, Kettering Laboratory, University of Cincinnati.

Dr. John T. Middleton, Chairman, Department of Plant Pathology, University of California.

Dr. Norton Nelson, Director, Institute of Industrial Medicine, New York University.

Mr. Alexander Rihm, Jr., Executive Director, Air Pollution Control Board, New York State Department of Health.

Dr. Waldo L. Treuting, School of Public Health, University of Pittsburgh.

Environmental Engineering:

Mr. Samuel Baxter, Commissioner and Chief Engineer, Philadelphia Water Department, Philadelphia, Pa.

Mr. Erick Mood, Director, Bureau of Environmental Sanitation, New Haven Health Department, New Haven, Conn.

Mr. Paul Opperman, Executive Director, Northeast Illinois Metropolitan Area Planning Commission, Chicago, Illinois.

Mr. Paul W. Purdom, Director, Division of Environmental Health, Department of Public Health, Philadelphia, Pa.

Mr. William A. Xanten, Superintendent, Division of Sanitation, District of Columbia Government, Washington, D.C.

Occupational Health:

Dr. Clyde Berry, University of Iowa.

Dr. Earl Irvin, Medical Director, Ford Motor Co.

Radiological Health:

Dr. Charles L. Dunham, Director, Division of Biology and Medicine, U.S. Atomic Energy Commission, Washington, D.C.

Dr. Donald R. Chadwick, Secretary, Federal Radiation Council, Washington, D.C.

Water Supply and Pollution Control:

Dr. Lewis Koenig, Physical Chemist Consultant, San Antonio, Tex.

lished at this meeting. Although much of the actual writing for sub-committee reports was done by Public Health Service staff members, what was written was carefully discussed by the sub-committees and acted upon by them. Preliminary sub-committee reports were presented by the respective chairmen at a meeting of the parent committee on October 4. Some of the concerns of sub-committee members were brought to light at this session. These included concern with the necessity of making judgments on organizational matters without full consideration of the existing operational procedures and programs, and the position of the Committee in accepting source materials they were not in a position to properly evaluate. The consensus seemed to be that the sub-committees must essentially trust one another and base the final report on material they present.

Rumored interdepartmental concern over the ultimate location of federal responsibility for water supply and pollution control highlighted discussion of the preliminary report of the Sub-Committee on Water Supply and Pollution Control. This Sub-Committee learned that a special task force within the Department of Health, Education and Welfare had presented a report to the Secretary on September 1 concerning this subject. This report dealt with a proposal to elevate water supply and pollution control to a special status in the Department of Health, Education and Welfare as originally recommended by Congressman Blatnik in 1958 and urged by conservation interests.¹⁹ The crux of the problem in the judgment of spokesmen for conservation interests is that the Public Health Service because of its medical orientation does not give adequate attention to pollution problems which do not directly involve public health.

The Water Supply and Pollution Control Sub-Committee proposed that the report recognize this problem by urging clear and separate identity for this area and by suggesting that this might be accomplished through establishing the new unit as a bureau directly under the Surgeon General. The director of this unit should be a general grade engineering officer with experience in water supply and pollution control programs. The Sub-Committee took the position that integration of water supply and pollution control into the Center is not essential to a successful water resources program. However, it recognized that inclusion of this unit is essential to the Environmental Health Center. Concern was expressed by the Committee that elevation of one area within the Center to special

19. Conservation News, September, 1958.

status would create havoc to the inter-disciplinary effort, and if it were taken completely out of the Public Health Service it would greatly weaken the proposed Environmental Health concept. The Sub-Committee's proposal was therefore not adopted.

A writing team prepared a preliminary draft of the main report which was made available to the Committee for review and discussion. Two meetings were held for discussion of the draft, and on October 25 the recommendations and substance of the report were adopted.

The final report of the Committee was completed on schedule and submitted to the Surgeon General and ultimately to the Executive and Legislative branches.²⁰

III

DISCUSSION OF THE FINAL REPORT

A total of ten sub-committee reports were prepared including the following which were directly concerned with natural resources: air pollution, environmental engineering, manpower resources and training, water supply and pollution control. These reports are replete with carefully condensed and documented statements concerning environmental health program needs for each of the major categories. Further condensation of this material for the purpose of this paper does not appear to be feasible.

There was no question within the Committee of the validity of needs as presented in the sub-committee reports. Nor was there any doubt that problems in environmental health are of such present and future magnitude as to justify a strong immediate attack on the problem. Furthermore, there was agreement that this is an area of concern which requires an interdisciplinary approach, including contributions from the social and physical sciences as well as the many discreet specialties of the biological sciences *e.g.*, bio-chemistry, bio-physics, ecology, physiology, and radiology.

There was consensus that the advantages of a central facility for a centralized program materially outweigh the disadvantages. Among the principal advantages recognized are:

20. U.S. Public Health Service, Pub. No. 908, Dep't of Health, Education and Welfare, Report of the Committee on Environmental Health Problems to the Surgeon General 1-288 (1962).

(a) The need for clear identity and focal attention on environmental health problems would be met.

(b) A national integration of environmental health effort and resultant avoidance of duplication would result.

(c) There would be a development of a pool of scientific capability in a variety of disciplines which could be drawn upon to solve environmental health problems.

(d) A creation of an intellectual climate would result which would attract exceptionally able talent to the field and stimulate exchange of ideas and initiation of effort to solve environmental health problems.

(e) Expensive hardware necessary to nationwide research such as computers, radiological instrumentation, monitoring systems for air and water pollution control and radioactive fallout could be more economically utilized through a centralized facility.

(f) Exchange of information and co-operation with related institutions in and out of government would be facilitated.

The major objections to a centralized facility are those related to availability of top level scientific talent. There is much to be said for dispersing such talent near or in university centers where they can contribute both to high level research and training. Arguments against a Washington headquarters relate largely to such political considerations as the economic and social impact of additional governmental facilities in an area already heavily dependent upon government programs in relation to the economic and social benefits to be derived from location in a more politically acceptable area. Additionally there are questions of time and energy loss by employees commuting from their residence to a facility in the crowded Washington area as compared to a central laboratory in a quiet university city elsewhere in the United States. An overriding reason advanced for a Washington-based center is the necessity for the regulatory and operational programs to be contiguous. The regulatory programs must of necessity be in Washington. Since both regulatory and operational programs are dependent on research results it is logical to have all three programs in close proximity.

The Committee early concluded that their concern was not if there is an environmental health problem, but how best to solve it in terms of leadership, institutional arrangements and level of effort. This is evident in the following conclusions of the Committee:

That a national need exists for establishment and maintenance of a vigorous and integrated effort to maintain controls over the human environment compatible with projections of change in both population and the environment itself.

That the current "categorical" approaches represented by Public Health Service divisional programs are incapable of providing either (a) the necessary cognizance of combined multiple effects of environmental impacts or (b) the depth of effort required by individual divisional programs.

That accommodation to the national needs in environmental health will require the establishment of a strong focal center adequately staffed and equipped to prosecute an effective and integrated program within the Public Health Service and to manage and coordinate a strong extra-mural research, training, and technical support program utilizing the available institutional resources of the nation.

That an adequate legislative basis for a sufficient national program in environmental health does not exist at present.²¹

To meet these needs the Committee made recommendations which largely parallel those presented in the Final Report of the Study Group on the Mission and Organization of the Public Health Service.²² The following is a condensation of the major recommendations:

1. The Federal Government, through the Public Health Service, should assume leadership for a major national effort concerned with problems in the environmental health field.
2. High priority should be given to training of scientific manpower to meet environmental health needs.
3. A National Environmental Health Center should be established in the Washington, D.C. area under the Bureau of State Services which should be redesignated as the Bureau of Environmental Health. The essential components of this center should include:
 - (a) The headquarters of the present environmental health oriented operational programs within the Public Health Service (Bureau of State Services) (including air pollution, environmental engineering and food protection, occupational health, radiological health, water supply and pollution control).
 - (b) Headquarters for a unified grants program in support of fellowships, university training programs, university related research projects and demonstration grants.
 - (c) Facilities for special training programs.

21. *Id.* at 1.

22. U.S. Dep't of Health, Education and Welfare, Final Report of the Study Group on Mission and Organization of the Public Health Service 1-66 (1960).

(d) An office of Environmental Health Sciences. This would be the supporting core for the operating divisions. It would provide such central services as mathematics, statistics, data processing, information storage and retrieval, instrumentation and analytical laboratories and the services common to divisional needs. It would study basic environmental health problems and conduct research essential to the interest of the several divisions. It would be administratively independent of the division structure, have a separate budget and be responsible for continual purview of the entire field of environmental health.

4. Each of the current programs in environmental health should be strengthened materially as to staff and facilities.
5. Regional facilities with adequate staff supplementary to the Center should be developed.
6. Intensive study should be given to the optimum organization for environmental health in the Public Health Service and conservation of present strengths in the transition to meet those broader responsibilities.
7. Strong liaison should be maintained between the Bureau of Environmental Health and appropriate agencies to maximize effort and avoid duplication.
8. Legislative authority should be sought by the Public Health Service to establish a Bureau of Environmental Health with such authorization beyond that which now applies to divisional operations to enable it to conduct research training and technical support activities; to administer a broad program of extramural training, research, demonstration, and institutional support grants, and contracts. Additionally a statutory advisory council on environmental health should be established to advise the Surgeon General on matters related to this subject.

A. Resources Required

A major concern of the Congress in considering authorization for a national Environmental Health Center is its ultimate cost. The Committee felt it could not with any real validity project needed effort and resultant costs beyond the next five to ten year period because of time limitations and the rate of change in our technology. A more rapid build-up in the immediate period than in future years was, however, anticipated. Growth of the central scientific staff from the present core of 125 to about 300 by 1965 was recommended for the Environmental Health Center. Estimated scientific staff needs for the Center to 1970 were estimated at 450. Relating these numbers to costs, including costs for supporting staffs and re-

sources for operation of the Center, would aggregate \$50,000,000- by 1970. Related field operations would cost an additional \$50,000,000. Research and training would account for one half of the \$100,000,000 total. A ratio of extramural support for research and training operations of 5 to 1 was recommended for achievement by 1970. This would place the annual cost of the program exclusive of construction grants for public works at \$350,000,000. Costs for capital improvements are not included in these calculations.

B. Manpower Needs

The impact of an expanded program in environmental health on the available pool of scientific manpower was studied. Needs as expressed by program sub-committees were equated with estimates of available manpower developed by the National Science Foundation.²³ On this basis allocation of scientific manpower to environmental health program needs in the Public Health Service in 1960-61 accounted for 0.15 per cent of the total national pool. The share of the total national scientific manpower pool needed to achieve recommended environmental health program levels by 1965 would be 0.24 per cent. By 1970 it would be 0.27 per cent. Although the increases are in the order of 60 per cent the total number involved in relation to the size of the scientific manpower national pool (87,000 in 1961, 168,000 in 1970) is relatively small and believed to be attainable without serious stress.

Scientific personnel needed in the recommended programs would be drawn from a wide range of disciplines including some ordinarily outside of public health requirements. The Committee recommended that the National Science Foundation and the National Institute of Health take cognizance of these needs. The sub-committee on manpower resources further urged that the Public Health Service undertake a program of institutional grants to universities to provide comprehensive training in this field. The present level of training grants support in the Public Health Service for environmental health is \$8.5 million. A rise to an annual level of \$27.5 million during the next ten years was recommended.

C. Related Resources of Other Agencies

The Committee did not, in this writer's view, inquire deeply

23. National Science Foundation, Report No. 61-27, Investing in Scientific Progress (1961).

enough into the related research activities of other federal agencies in terms of appropriate interrelationships, co-ordination, and possible sharing of facilities related to environmental health. There was in fact barely adequate time to examine in depth the environmental health problems and programs of the Public Health Service. Reliance, thus, of necessity, was placed on the collective knowledge of committee members and staff reports concerning these relationships. This aspect of the Committee's work received little attention in sub-committee reports, in the discussion of the parent committee, and in the final report. Perhaps it was not necessary.

The problems associated with environmental health are unique to the Public Health Service, however much they may be influenced by the activities of other agencies. The U.S. Department of Agriculture through its Agricultural Research Service, for example, conducts extensive tests and engages in fundamental research concerning agricultural use of and the dangers related to the use of pesticides. The Pure Food and Drug Administration is also concerned with safe tolerance levels of the materials which appear on food stuffs. Environmental health is concerned with these materials wherever they appear in the environment as agents harmful to man. The insecticide research work in Food and Drug and in the Department of Agriculture thus complements rather than competes with Public Health researches on these problems. A similar case can be made for research carried out in other branches of government.

Informed contacts appear to have been affected which permit exchange of information between these groups. This is a strong argument for location of environmental health activities in the Washington area where such co-operation may be fostered both on an informal and a formal basis. Co-ordination between the Public Health Service and the Atomic Energy Commission on problems related to radiation hazard research could be better affected, as recommended by the Sub-Committee on Radiological Health, through the establishment of a Radiation Hazards Research Liaison Committee.

IV

IMPLICATIONS FOR NATURAL RESOURCES CONSERVATION

The work of virtually every division of the proposed Environmental Health Center touches to some degree on problems related to natural resources. However, the program of the divisions of Air

Pollution and Water Supply and Pollution Control are of special concern in this area.

There appears to be universal support for keeping national responsibility for air pollution control in the environmental health program of the Public Health Service. However, there does not appear to be such widespread support for keeping full national responsibility for water supply and water pollution control in this unit of government. Events since appearance of the report of the Committee on Environmental Health have borne out the concern of its Sub-Committee on Water Supply and Pollution Control that efforts were underway to either accord this program special status in the Public Health Service or transfer it to another Department. These events include the establishment late in 1961 of an Assistant Secretary of Health, Education and Welfare as immediate representative of the Secretary in the administration of federal water supply and pollution control programs, and the further upgrading of the Division of Water Supply and Pollution Control by appointment of its Chief, Gordon E. McCallum to the rank of Assistant Surgeon General. Very recently Mr. John Barnhill, another non-medical career employee has been named Deputy Chief of this Division.²⁴

24. Conservation News, December, 1961, p. 7.

James A. Quigley, Former Pennsylvania Congressman, was named late in 1961 as the immediate representative to the Secretary of Health, Education and Welfare on water supply and pollution control matters. His responsibilities in this capacity include chairmanship of the Water Pollution Control Advisory Board, review of all water pollution problems which might involve federal enforcement action and representation of the Secretary on interdepartmental and interagency matters relating to pollution.

Louis Clapper in Conservation News, August, 1962, p. 7, in commenting on the inconclusion of pollution control activities of the Public Health Service in the Bureau of Environmental Health said:

Admittedly there are some limited relationships between problems. Air pollutants can fall in rain to become water pollution. Radioactivity also can be a problem of water pollution. The real key to the problem, however, lies in the field of medical direction. To all too many doctors in administrative positions, water pollution merely is a problem of waste disposal such as "interstate carrier sanitation" (dining car inspection) or "solid waste (garbage) disposal."

Such an attitude gives no value to effects of water pollution on fishing, hunting, swimming, boating, aesthetic appreciation and other forms of recreation or industrial needs. A beach closed because of contamination may not offer a health hazard if the quarantine is observed, but neither does it offer anything positive in the way of public recreation.

Medics are fighting to keep Water Supply and Pollution Control as a division in the Bureau of Environmental Health because it is needed as a key activity for justifying a new and expensive Environmental Health Center to

Congressman John D. Dingell of Michigan appears to be a strong supporter of the proposal to move Pollution Control out of the Public Health Service. Appearing on June 20, 1963, before a special Sub-Committee on Air and Water Pollution of the Senate Committee on Public Works, he spoke disparagingly about Public Health Service efforts in the pollution control field and announced that he had introduced legislation to transfer all functions relating to water pollution control from Health, Education, and Welfare to the Department of the Interior.²⁵

The Senate in the current Congress passed on October 17, 1963 a bill²⁶ which has been referred to the House Committee on Public Works which would amend the Federal Water Pollution Control Act to establish a Federal Water Pollution Control Administration separate from the Public Health Service, but in the Department of Health, Education and Welfare. This appears to be a first step in a continuing battle to stimulate greater federal activity in pollution control matters especially in so far as they affect fish and wildlife interests and to take responsibility for this program out of the Public Health Service.

Ultimate separation of all water supply and pollution control

be located near Washington, D.C. Not only can the Division contribute to administrative expenses, but pollution control research monies could be used for related problems.

To a somewhat similar extent, the same problem exists in water pollution control work at the State level. Medical administrators often find water pollution control too costly and controversial for state health departments and, as a result of inadequate funds and pressures, some state programs have been ineffectual. Twenty states have found it advantageous to move water pollution control out of their health departments for administration as separate agencies.

25. *Water Pollution Control—Hearings Before a Special Sub-Committee on Air and Water Pollution of the Senate Committee on Public Works, 88th Cong., 1st Sess. 1-716 (1963).* Statements before this Sub-Committee by Charles H. Callison, Assistant to the President, National Audubon Society, Robert T. Dennis, Assistant Conservation Director, Izaak Walton League of America, Louis Clapper, Chief, Division of Conservation, National Wildlife Federation relative to S. 469 to amend the Federal Water Pollution Control Act were also critical of the record of the Public Health Service in Pollution Control and advocated upgrading the status of the Division in Health Education and Welfare or its removal from that Department. They were opposed to inclusion of the program and regulatory functions of the Division of Water Supply and Pollution Control in the proposed Environmental Health Center. The opinions expressed by other participants in these hearings were more moderate and many were clearly opposed to any changes in the present administrative structure for water supply and pollution control. Milton P. Adams, Consulting Engineer, State and Interstate Water Pollution Control administrators, speaking in behalf of this group expressed opposition to changing the law at this time.

26. S. 469, 88th Cong., 1st Sess. (1963).

programs from the Bureau of Environmental Health could have a serious impact on the effectiveness of the total environmental health effort and on the national water pollution control program itself. These effects need to be carefully weighed. The basic elements in the controversy appear to be the allegation that the Public Health Service because of its medical orientation gives inadequate attention at all levels to non-medically related pollution problems. Although there is increasing interest on the part of the Public Health Service in such problems it has obviously not mounted a program of sufficient strength in these areas to quiet such criticism.

There are serious water pollution problems not directly affecting health which do not appear to command the central interest of the Public Health Service. Examples are acid mine drainage, suspended colloidal material washed from agricultural lands, paper pulp wastes, and refinery wastes which impair surface water for industrial uses and for recreational uses in areas where surface waters are not used for domestic purposes.

An environmental health center which is broadly concerned with research on all impacts of environment on public health, however, should be concerned with these problems. The solution appears to be in two directions: first, in not separating research on these problems from the Bureau of Environmental Health but rather in encouraging and aiding it to deal with those aspects of the problems it has competence to handle; and, second, in placing responsibility on the agencies concerned with affected resources to conduct such pollution-related research as will enable Health, Education and Welfare, state and local agencies responsible for pollution abatement to act wisely and effectively to protect these resources.

The Fish and Wildlife Service should, for example, be enabled to make such studies as will clearly demonstrate pollutional levels which are inimical to wildlife resources rather than expecting an agency like the Public Health Service to do this for them. This approach does not necessitate duplication of effort, but it does emphasize the need for co-ordination of effort. An Environmental Health Center which shares its pool of high level scientific knowledge, its specialized research facilities and its overall leadership capability in this field with other resource agencies can make a significant contribution to solving problems within their realm of concern.

It is highly doubtful that taking all pollution control activities out of the Public Health Service and placing them in another unit

of government would solve the problems troubling conservation interests. Such action might in fact compound their problems through loss of the prestige and experience which the Public Health Service and the medical profession give to pollution abatement. Conservation interests alone can not be effective in combating pollution. The united support of all affected interests is needed. It is time to bury the hatchet in the problem rather than in the program which has been proposed.

V

PRESENT STATUS

Consideration will undoubtedly again be given to plans for the Environmental Health Center in the Public Health Service budget for 1965. Meanwhile the essential concept for the Center appears to be gaining acceptance. Sufficient progress has been made in deliberations concerning the Center that communities from coast to coast assume its ultimate authorization and have commissioned delegations to seek it for their locality. A location outside the Washington area appears to be favored in political circles at this time. Although this would not be fatal to the Environmental Health Center concept, it would, if the Gross Committee was correct in its conclusions, not be conducive to maximizing the potential benefits it could provide. A number of factors undoubtedly contributed to the failure of Congress to provide funds for the proposed Environmental Health Center. This is not the kind of popular proposal which attracts legions of vigorous supporters. The chief proponents are professionals and the members of Congressional Committees who through long experience have become familiar and concerned with environmental influences on health.

There is reason to assume that lack of widespread, strong public support may be due to a lack of understanding of the meaning of environmental health and its significance to individuals. About eighty per cent of the people in the United States having the equivalent of a tenth grade education, according to word tests, know that the word environment refers to "surroundings." Although the word thus has a widely accepted meaning, it is highly generalized. Advanced undergraduate and graduate students with whom the writer has frequent contact did not, upon query, readily relate environmental health to the specific areas with which the Environmental Health Center is to be concerned.

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There is general concern and public support for the essential elements of the Environmental Health Center. There is strong, almost militant support for certain of these elements—particularly control of air pollution, water pollution, use of pesticides, radioactive fallout, and disposal of radioactive wastes. Apparently there has not developed a national conception of these problems as being related to environmental health. With few exceptions these problems are treated separately by public agencies with undoubtedly some inefficiency and duplication of effort.

Lynton K. Caldwell has recently suggested the need for considering the environment as a new focus for public policy.²⁷ He recognized, however, that "In the evolution of American political institutions, thus far, there appears to be no clear doctrine of public responsibility for the human environment as such. It therefore follows that concern for the environment is the business of almost no one in our public life."²⁸ Interest of the Public Health Service in providing leadership in this field is therefore a hopeful sign. It is evident, however, that much research and education is in order before responsibility for this role is clearly settled. An Environmental Health Center could be the first major step on a national scale to cope with the environment in an effective way.

CONCLUSION

Problems arising from our rapidly developing technology, increasing urbanization and population growth in a relatively fixed terrestrial environment have led to concern with our competence to keep that environment healthy for man's occupancy. This concern has resulted in a proposal to establish out of existing divisions a Bureau of Environmental Health in the U.S. Public Health Service and the establishment of a major research, training and operation center in Environmental Health in the vicinity of Washington, D.C. The proposal has been under the scrutiny of the Executive Offices through the President's Science Advisor, the Bureau of the Budget, and the appropriate sub-committees of the House and Senate. Internal and external advisory groups to the Public Health Service have recommended establishment of the Center.

A special Committee on Environmental Health was appointed

27. Lynton K. Caldwell, *Environment: A New Focus for Public Policy?* Public Administration Review, September, 1963, pp. 132-37.

28. *Id.* at 134.

by the Surgeon General in August, 1961, at the instigation of the Executive Branch, to make specific recommendations concerning these problems. The assignment of the Committee was to report on the needed manpower requirements and level of support for an Environmental Health Center. The report of the Committee which was made on November 1, 1961, endorsed the establishment of an Environmental Health Center in the Washington, D.C. area. The recommended time table was for the Center to be established by 1965, and to be operating fully by approximately 1970.

The principal natural resources affected by the proposed center are air and water resources and related pollution problems. There appears to be general agreement that existing Public Health Service elements related to Environmental Health would be enhanced by this move. Controversy over the water supply and pollution control functions, however, may be a factor in the delay in establishing the proposed Center. Questions concerning the control of burgeoning federal budgets and competition among communities for the Center may be more important contributing factors. Ultimately it is believed an Environmental Health Center will be established.

Current status

An item of \$1,500,000 for planning an Environmental Health Center to be established on lands of the Department of Agriculture near Beltsville, Maryland was included in H.R. 10809, the 1965 appropriations bill for the Departments of Labor, Health, Education, and Welfare. This item was not allowed by the House.²⁹ The Senate Committee on appropriations to the Departments of Labor, Health, Education, and Welfare, however, recommended restoration of this item. In debate on the bill, as recommended by the committee, an amendment to eliminate this item was introduced. The nub of the arguments presented is that the Center should not be located in the Washington area because: (1) its presence would add to the already crowded housing and traffic conditions in the Washington area; (2) there is already a heavy concentration of government research activities in this area; (3) possible dilution of support for the environmental health research effort at the Taft Sanitary Engineering Center in Cincinnati may occur; and (4) there is alleged scientific erosion in the Midwest due to heavy placement of government research contracts on the East and West coasts. The

29. 110 Cong. Rec. 19809 (daily ed. Aug. 19, 1964).

amendment was defeated by a vote of thirty-five yeas; forty nays; and twenty-five non-votes.³⁰ The appropriation bill with \$1,500,000 for the planning of an environmental health center in the Beltsville area was then passed by the Senate, and a conference with the House of Representatives to iron out differences was requested.³¹ S. 649 and the Companion House Bill, H.R. 3160, which would have the effect of removing water supply and pollution control activities from the Environmental Health Center program, are still pending in the Congress. Thus it appears that the future of an Environmental Health Center in the Public Health Service, at least insofar as a Washington area location is concerned, is nearer realization, but yet far from certain.

30. *Id.* at 19814.

31. *Id.* at 19826.