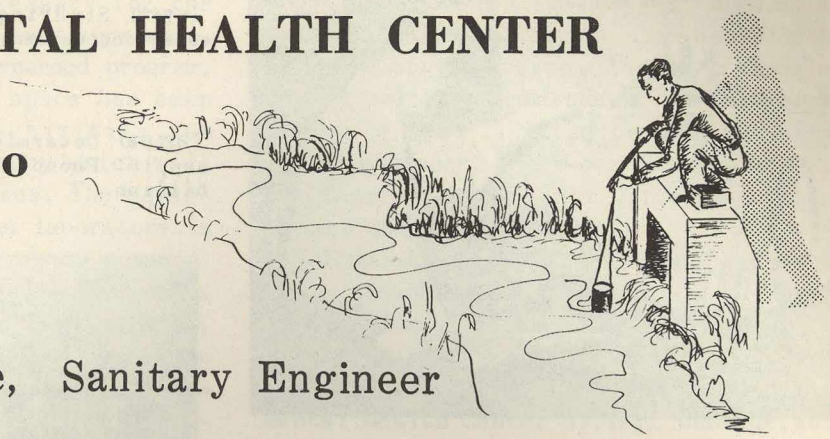
Training Plans Now Being Developed At The ENVIRONMENTAL HEALTH CENTER Cincinnati, Ohio

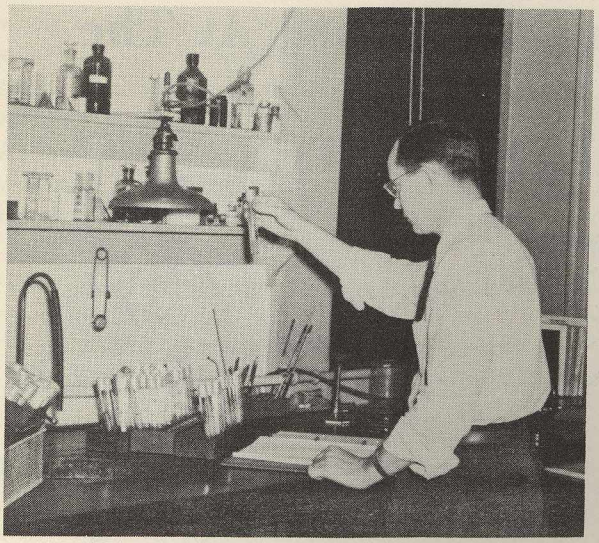


Ernest P. Dubuque, Sanitary Engineer

Since the Public Health Service started its first training programs in sanitation activities, it has sought to offer a well-rounded program of training by coordinating and expanding its training facilities to cover the entire field of sanitation. The Water and Sanitation Investigations Station at Cincinnati, Ohio, had long been considered an ideal place for the expansion of training activities because of its geographical location, its staff of technical personnel engaged in water and sanitation research and field studies, and its history of having conducted highly successful courses in the past. After a series of conferences over a period of 2 years, it was agreed that a more active training program would be undertaken at Cincinnati with the assistance of the Training Division of the Communicable Disease Center. A sanitary engineer was made available from the Training Division in December 1947, to assist in formulating plans and to get the training program under way.

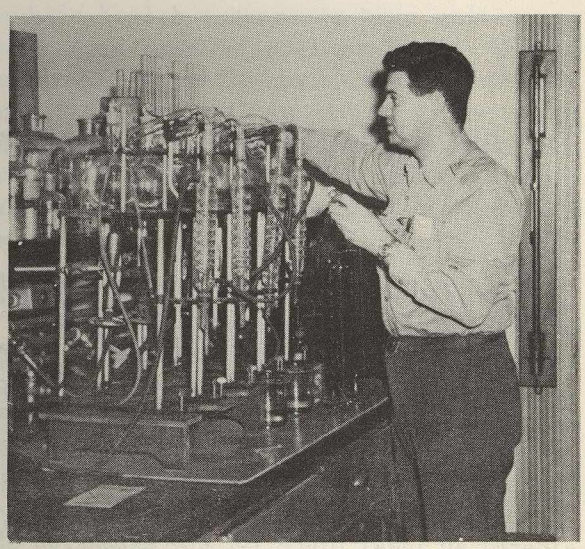
Two training courses were conducted at Cincinnati during 1948. The first, a Sanitary Engineering Training Course in Stream Sanitation, held March 15 through April 2, 1948, was attended by 19 engineers. Fifteen men took the entire course, while four who were unable to attend the entire course were in attendance for 1 week. The second, an Advanced Training Course for Bacteriologists in Charge of Milk Analyses for Food Utensil Examinations, held from April 19 through April 30, 1948, was attended by 17 bacteriologists from State laboratories. The attendance at these

Bacteriological work in connection with safety of drinking water supply.



(LEFT) Studying the ratio of coliform and enterococcus densities in stored water samples.

(BELOW) Determination of phenols in a water supply. Phenols are determined in parts per billion.



courses was necessarily restricted, and represented only a fraction of the candidates who were recommended by State health officers to take them.

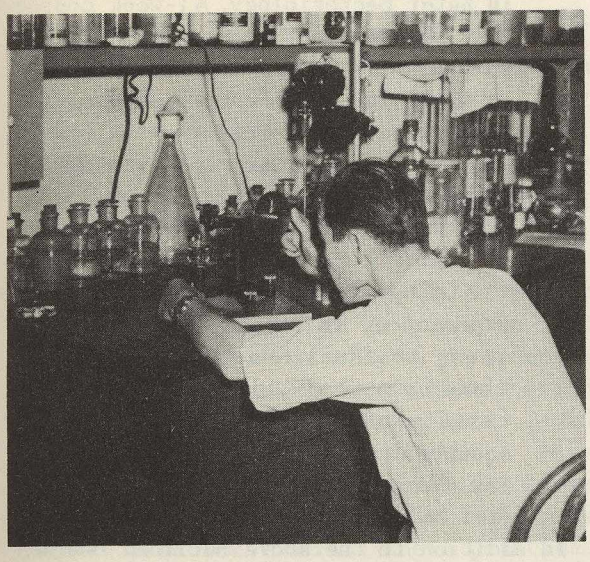
The lectures and laboratory demonstrations were conducted principally by the technical staff of the Water and Sanitation Investigations Station. A few lectures were given by consultants prominent in the field of stream sanitation. The courses were well received, but it was apparent even before the first course was given that the time required by the staff for preparation and presentation of lectures and laboratory demonstrations caused too great an interruption of the regular research programs. It was concluded that the best solution to this problem would be to secure a training staff of professional personnel qualified to present most of the technical lectures, and laboratory and field demonstrations. The advantage of having the training program at Cincinnati, headquarters for conducting research and field studies, was obvious in that the members of the Station staff could present the more technical phases of the training courses. It was also apparent that a special training laboratory should be provided so that training courses could be scheduled at any time without interfering with the regular research and investigations which might be in progress.

After carefully considering the results of the two courses given, the budget for the fiscal year 1949 was drawn up to include sufficient funds for necessary professional personnel and equipment for the training laboratory. Steps were taken at once to establish the following positions for the training staff: Sanitary Chemist, Bacteriologist, Aquatic Biologist, Sanitary Engineer, and Scientific Aide. Recruitment to fill these positions has been in progress for some time and a number of qualified candidates have been located.

Passage of the Water Pollution Control Act in June 1948, not only increased the need for a training program, but also greatly increased the responsibilities of the Water and Sanitation Investigations Station. Subsequent reorganization of the Public Health Service further increased

the scope of activities at the Cincinnati Station, establishing it as the Environmental Health Center. The increase in activities has made it necessary for the Environmental Health Center to secure additional space to house its expanded program. In the new quarters ample space has been allocated for training activities, to include a training laboratory which will accommodate 16 to 18 trainees. The equipping of the lecture room and laboratory is now in progress.

As the Environmental Health Center is engaged in both research and field studies, it affords an excellent opportunity to develop several types of training courses around its activities. Courses for laboratory personnel will consist primarily of training in laboratory techniques and interpretation of laboratory results, with limited field training for the present.



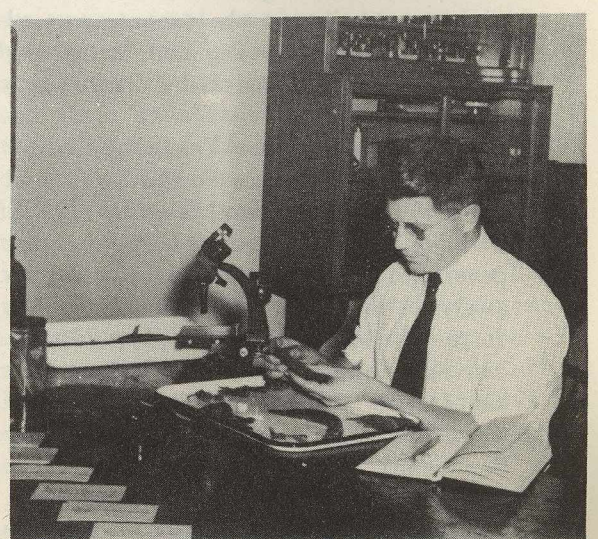
(ABOVE) Determination of surface tension in detergent study.

(RIGHT) Sorting and classifying fish in connection with stream pollution study.

It is hoped that in the near future, training for mobile laboratory personnel will be conducted in the field. Training courses for engineers will include both laboratory and field training, as well as lectures on program organization, legal aspects of stream-pollution abatement, and interpretation of data as it applies to the field of the engineer. The research activities of the Environmental Health Center lend themselves admirably to training courses in which laboratory personnel and engineers may be trained in both standard and recently developed methods and variations.

It should be pointed out that the planning of training activities at the Environmental Health Center differs considerably from the planning of training activities in a local health department. The work of the Center is done on a cooperative basis with the States and not as a local governmental function.

In planning field training it is an advantage to have routine activities in a relatively compact area, over which the sponsoring agency has direct control. On the laboratory phases of training, however, it is a distinct advantage to have men available at the Center who have devoted many years to research and have been responsible for developing many of the standard laboratory procedures.



Making films for direct microscopic count in milk work.

Training plans being developed at the Environmental Health Center at the present time are as follows:

(1) Advanced Sanitary Engineering Training in Stream-Pollution Abatement Programs. A 3-week course for experienced engineers which furnishes training in organizing and operating stream pollution and industrial-waste surveys and programs.

(2) Orientation Course for Sanitary Engineers in Stream and Industrial-Waste Survey Methods. A 12-week program for inexperienced engineers, which furnishes training in the techniques and methods of conducting and operating stream pollution and industrial-waste surveys.

(3) Advanced Laboratory-Training Course in Sewage, Stream Pollution, and Industrial-Waste Analysis. A 3-week course for experienced laboratory personnel which furnishes training in analysis and interpretation of results in the fields of water supply, sewage, stream sanitation, and industrial wastes.

(4) Orientation Course for Laboratory Personnel in the Examination of Sewage, Polluted Waters, and Industrial Wastes. A 3-week training course for chemists, bacteriologists, or biologists who have had little or no experience in sanitary chemistry and sanitary bacteriology, to provide intensive training in the techniques in the standard and recently developed methods of making chemical, bacteriological, and biological examinations of samples encountered in stream-pollution and industrial-waste surveys.

(5) Advanced Training Course for Bacteriologists in Charge of Laboratories for Water and Milk Analyses and Food-Utensil Examinations. A 3-week course for bacteriologists with a wide background in sanitary bacteriology, to provide advanced training in the theory, laboratory techniques, and interpretation of results obtained in the field of bacteriology.

(6) Advanced Laboratory Training Course in Water Bacteriology. A1-week course for experienced bacteriologists, to provide advanced training in the theory, laboratory techniques, and interpretation of results obtained in the field of sanitary bacteriology as it pertains to water.

(7) Orientation Course in Stream-Survey Methods. A 2- or 3-week intensive training course for engineers inexperienced in stream-survey techniques, to familiarize them with the theory, methods, interpretation of results of stream surveys, and the equipment used in sampling and testing. Most of the work in this course will be done in the field.

In addition to the above outlined courses which are being planned, it will be possible to add other new training courses, as activities at the Environmental Health Center expand and develop. The response to the courses already outlined, and the training needs as they are expressed by the various States will serve as a guide in the future development of laboratory and field training courses at the Environmental Health Center.