

# Public Health Reports

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## PUBLIC HEALTH SERVICE DRINKING WATER STANDARDS, 1946

FEDERAL SECURITY AGENCY,  
UNITED STATES PUBLIC HEALTH SERVICE,  
*Washington, D. C., February 6, 1946.*

The standards included herein have been promulgated as Regulations of the United States Public Health Service and published in the Federal Register. These standards supersede the standards adopted September 25, 1942, and recommended by the Advisory Committee on the Revision of the 1925 Drinking Water Standards. They are recommended and approved by the same Advisory Committee.

Effective upon their date of publication in the Federal Register, these regulations represent standards to which drinking water and water supply systems used by carriers and others subject to Federal Quarantine regulations must conform. These standards are in a form believed suitable for use generally in evaluating quality and safety of water and water supply systems.

[S] THOMAS PARRAN,  
*Surgeon General, United States Public Health Service.*

[S] MAURICE COLLINS  
*Acting Administrator, Federal Security Agency.*

### RESOLUTION—ACCEPTANCE OF DRINKING WATER STANDARDS<sup>1</sup>

Whereas the officers and directors of the American Water Works Association are desirous of supporting all efforts to promote better health through safe water supplies; and

Whereas it is noted that the Standards of the United States Public Health Service are promulgated by the Surgeon General for use in the administration of the Interstate Quarantine Regulations, and that they are intended to apply only to water used on common carriers engaged in interstate commerce; and

Whereas it does not appear that the Surgeon General desires or proposes to extend the authority of the United States Public Health Service to include any water supplies other than those used by common carriers subject to Federal Quarantine Regulations; and

Whereas it is the desire of the American Water Works Association to have available for reference, to recognize and to accept, fair and effective standards for quality of water furnished by all public supply systems; and

Whereas the officers and directors of the American Water Works Association have studied the text of the proposed 1946 Drinking Water Standards which have been developed by the Surgeon General of the United States Public Health

<sup>1</sup> Resolution passed by the officers and directors of the American Water Works Association at a meeting of the Board of Directors held January 14-15, 1946.

Service and found the terms and conditions of these Standards to be constructive; and

Whereas it is the earnest hope of the American Water Works Association that, as a result of its voluntary acceptance of the Drinking Water Standards as criteria of quality for all public water supplies in the United States, the State boards of health and their sanitary engineering personnel will find it possible to further constructive and cooperative relationships with the water works management to the ends that deficiencies in water supply systems be corrected as promptly as feasible; that extraneous sources of contamination of water be eliminated; and that encouragement be given to training and employment of qualified personnel in positions of responsibility in the operation of water works: Now therefore be it

*Resolved by the officers and directors, acting for the American Water Works Association, That the 1946 Drinking Water Standards proposed for adoption by the United States Public Health Service be voluntarily accepted by our Association as the Standards for all public water supplies.*

## PREFACE TO THE 1942 EDITION

The following preface to the 1942 edition of the Public Health Service Drinking Water Standards is included, partly from the standpoint of historical interest, but primarily because the basic ideas expressed in the statement of the Advisory Committee included therein are still valid.

### REPORT OF THE ADVISORY COMMITTEE ON OFFICIAL WATER STANDARDS

The requirements for drinking (and culinary) water provided by common carriers for the use of passengers carried in interstate traffic, commonly known as the Treasury Department Drinking Water Standards, were last revised in 1925, and published in the PUBLIC HEALTH REPORTS of April 10 of that year. Since that time many improvements in water supply practice have been adopted with resulting increased uniformity of quality and safety to the consumer. Moreover, the Public Health Service, in recent years, has been requested by the American Public Health Association, the American Water Works Association, and the American Chemical Society to review the 1925 Standards. Accordingly, the Public Health Service has undertaken a revision of the Standards in order to have them conform more closely to current requirements for water supplies of attainable safety and potability.

To carry out such a revision the Surgeon General of the Public Health Service, on February 27, 1941, appointed the undersigned special Advisory Committee composed of representatives of various Federal organizations and scientific associations and including several members at large. A smaller subcommittee of Public Health Service officers was designated to prepare tentative suggestions for the consideration of the Advisory Committee.

After thorough consideration, the Advisory Committee recommends the adoption of the revisions as set forth in the text herewith submitted. The principal changes now proposed are:

(1) A distinct separation of the text into: (a) That portion containing a statement of the Standards, and (b) that portion constituting a recommended manual of water works practice representing the judgment of the technical subcommittee composed of officers of the Public Health Service. This portion of the text is intended to serve as a guide to the reporting agency and should not be considered as indicating additional requirements to be met for certification of the water supply.

(2) In the bacteriological section, the use of 5-10-ml. portions or of 5-100-ml. portions is made optional; a minimum number of samples is to be examined monthly, the number depending upon the population served; the laboratories in which bacteriological examinations are made and the methods used in making them are subject to inspection at any time by the designated representative of the certifying authority.

(3) Concentration limits for lead, fluoride, arsenic, and selenium are included as part of the Standards and their presence in excess of the limits stated shall constitute ground for rejection of the supply. Limits in concentration that should not be exceeded, where other more suitable supplies are available, are given for copper, iron and manganese together, magnesium, zinc, chloride, sulfate, phenolic compounds, total solids, and alkalinity.

(4) The results of recent studies on the potential pollutional hazards existing in the water supply systems of our communities due to faulty plumbing practices, cross-connections, interconnections, etc., as well as the pollutional hazards which are due to faulty water plant and distribution system operational practices, any or all of which may jeopardize the safety of the water in the distribution system, have been adjudged as being of prime importance in the consideration of the requirements of these Standards. The utmost care and consideration have been given to the inclusion of those provisions which would serve to detect possible contamination arising in the distribution system and thus lead to its correction and further safeguarding of the traveling public.

The Committee believes that, in general, water supplies to be eligible for certification should meet all (sanitary, chemical, and bacteriological) requirements of the Standards and that definite failure to meet any one of them should be ground for rejection or provisional certification, according to the judgment of the certifying authority. However, it is realized that the statement of an official standard of drinking water quality, to be generally applicable, must be interpreted reasonably. The Committee has attempted to take into consideration all aspects of the problem and offers these Standards with the recommendation that the judgment and discretion of the certifying authority be exercised in their application.

## **REPORT OF THE ADVISORY COMMITTEE ON OFFICIAL WATER STANDARDS**

Experience gained by the Certifying Authority during three years' utilization of the Standards adopted in 1942 indicates a need for revision of wording and clarification of certain sections of these Standards. During the period these Standards were in effect it became necessary to issue State Health Officers' Circular Letter No. 85 in order that the Standards would be properly and uniformly applied. It is believed desirable to have the Standards worded in such a manner that they are suitable for utilization without further clarification.

Heretofore drinking water standards adopted by the Public Health Service have been designed to apply specifically to those water supplies used by carriers subject to the Interstate Quarantine Regulations. The present revision contemplates a standard for water quality generally acceptable and applicable to all public water supplies in the United States.

It has been with these two objectives in mind that this revision of the Standards has been effected. No major changes have been made in the basic requirements of the Standards, but certain requirements have been restated in such a manner as to make them more readily applicable to existing water supplies. In writing these Standards in a manner that will allow their application to all public water supplies, no inference is meant or desired that the authority of the Public Health Service should be extended to include any water supplies other than those used by carriers subject to the Federal Quarantine Regulations.

It will be noted that the Manual of Recommended Water Sanitation Practice referred to in the Preface to the 1942 edition of the Standards has not been included in this edition. While this manual was intended merely as an advisory guide, in practice it was found that it, at times, was being used as a part of the Standards and for this reason is omitted from the present text.

## MEMBERSHIP OF ADVISORY COMMITTEE ON REVISION OF THE DRINKING WATER STANDARDS<sup>1</sup>

Joseph W. Mountin, *Chairman, Assistant Surgeon General, States Relations Division, U. S. Public Health Service, Washington, D. C.*

J. K. Hoskins, *Secretary, Senior Sanitary Engineer, Chief, Sanitation Section, U. S. Public Health Service, Washington, D. C.*

### REPRESENTATIVES OF FEDERAL ORGANIZATIONS

*Food and Drug Administration:* J. W. Sale, Senior Chemist, Food Division, Federal Security Agency, Washington, D. C.

*U. S. Geological Survey:* W. D. Collins, Chemist in Charge, Quality of Water Division, Department of the Interior, Washington, D. C.

### REPRESENTATIVES OF SCIENTIFIC ASSOCIATIONS

*American Chemical Society:* A. M. Buswell, Chief, Illinois State Water Survey Division, Urbana, Ill.

*American Public Health Association:* Abel Wolman, Professor of Sanitary Engineering, Johns Hopkins University, Baltimore, Md.

*American Society of Civil Engineers:* Arthur E. Gorman, Engineer of Water Purification, Bureau of Engineering, Department of Public Works, Chicago, Ill.

*American Water Works Association:* Charles R. Cox, Chief, Bureau of Water Supply, State Department of Health, Albany, N. Y.

*Association of American Railroads:* R. C. Bardwell, Superintendent, Water Supply, Chesapeake and Ohio Railroad, Richmond, Va.

*Conference of State Sanitary Engineers:* Arthur D. Weston, Director and Chief Engineer, Division of Sanitary Engineering, State Department of Health, Boston, Mass.

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Herman G. Baity, Professor of Sanitary Engineering, University of North Carolina, Chapel Hill, N. C.

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### Technical Subcommittee, Officers of the Public Health Service

J. K. Hoskins, Senior Sanitary Engineer, Chief, Sanitation Section, States Relations Division, Washington, D. C. (Secretary).

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C. T. Butterfield, Principal Bacteriologist, Stream Pollution Investigations, Cincinnati, Ohio.

C. C. Ruchhoft, Principal Chemist, Stream Pollution Investigations, Cincinnati, Ohio.

Lawrence T. Fairhall, Principal Industrial Toxicologist, National Institute of Health, Bethesda, Md.

<sup>1</sup> Official positions indicated are as of February 27, 1941, when the Committee was organized.

**PUBLIC HEALTH SERVICE DRINKING WATER STANDARDS**

**Standards Promulgated by the United States Public Health Service, Federal Security Agency, February 5, 1946, for Drinking and Culinary Water Supplied by Carriers Subject to the Federal Quarantine Regulations**

(Superseding standards adopted September 25, 1942)<sup>1</sup>

**1.\* DEFINITION OF TERMS**

For the purpose of these Standards the terms designated herein below shall be defined as follows:

1.1. *Adequate protection by natural agencies* implies various relative degrees of protection against the effects of pollution in surface waters; dilution, storage, sedimentation, the effects of sunlight and aeration, and the associated physical and biological processes which tend to produce natural purification; and, in the case of ground waters, storage in and percolation through the water-bearing material.

1.2. *Artificial treatment* includes the various processes commonly used in water treatment, both separately and in combination, such as storage, aeration, sedimentation, coagulation, rapid or slow sand filtration, chlorination, and other accepted forms of disinfection. Rapid sand filtration treatment is commonly understood to include those auxiliary measures, notably coagulation and sedimentation, which are essential to its proper operation.

1.3. *Adequate protection by artificial treatment* implies that the method and degree of elaboration of treatment are appropriate to the source of supply; that the works are of adequate capacity to support maximum demands, are well located, designed, and constructed, are carefully and skillfully operated and supervised by properly trained and qualified personnel, and are adequately protected against floods and other sources of pollution. The evidence that the protection thus afforded is adequate must be furnished by frequent bacteriological examinations and other appropriate analyses showing that the purified water is of good and reasonably uniform quality, a recognized principle being that irregularity in quality is an indication of potential danger. A minimum specification of good quality would be conformance to the bacteriological and chemical requirements of these Standards, as indicated in sections 3 and 4.

1.4. *Sanitary defect* means any faulty structural condition, whether of location, design, or construction of collection, treatment, or distribution works which may regularly or occasionally prevent satisfactory purification of the water supply or cause it to be contaminated from extraneous sources. Among the extraneous sources of contamination

<sup>1</sup> Pub. Health Rep., 58: 69-111 (Jan. 15, 1943).

\*The section numbering employed throughout this text differs from that used in the Federal Register, but maintains a parallel with the numbering of the 1942 Standards with which those in the water works field are familiar.

of water supply are dual supplies, bypasses, cross-connections, inter-connections, and backflow connections.

1.5. *Health hazard* means any faulty operating condition including any device or water treatment practice, which, when introduced into the water supply system, creates or may create a danger to the well-being of the consumer.

1.6. *Water supply system* includes the works and auxiliaries for collection, treatment, and distribution of the water from the source of supply to the free-flowing outlet of the ultimate consumer.

1.7. *The coliform group of bacteria* is defined, for the purpose of these Standards, as including all organisms considered in the coli-aerogenes group as set forth in the Standard Methods for the Examination of Water and Sewage, current edition, prepared, approved, and published jointly by the American Public Health Association and the American Water Works Association, New York City. The procedures<sup>2</sup> for the demonstration of bacteria of this group shall be those specified herein, for:

(a) The completed test, or

(b) The confirmed test when the liquid confirmatory medium brilliant green bile lactose broth, 2 percent, is used, providing the formation of gas in any amount in this medium during 48 hours of incubation at 37° C. is considered to constitute a positive confirmed test, or

(c) The confirmed test when one of the following liquid confirmatory media is used: Crystal violet lactose broth, fuchsin lactose broth, or formate ricinoleate broth. For the purpose of this test, all are equivalent, but it is recommended that the laboratory worker base his selection of any one of these confirmatory media upon correlation of the confirmed results thus obtained with a series of completed tests, and that he select for use the liquid confirmatory medium yielding results most nearly agreeing with the results of the completed test. The incubation period for the selected liquid confirmatory medium shall be 48 hours at 37° C. and the formation of gas in any amount during this time shall be considered to constitute a positive confirmed test.

1.8. *The standard portion of water* for the application of the bacteriological test may be either:

(a) Ten milliliters (10 ml.) or

(b) One hundred milliliters (100 ml.)

1.9. *The standard sample* for the bacteriological test shall consist of five (5) standard portions of either:

(a) Ten milliliters (10 ml.) or

(b) One hundred milliliters (100 ml.) each.

<sup>2</sup> This reference shall apply to all details of technique in the bacteriological examination, including the selection and preparation of apparatus and media, the collection and handling of samples, and the intervals and conditions of storage allowable between collection and examination of the water sample.

In any disinfected supply the sample must be freed of any disinfecting agent within twenty (20) minutes of the time of its collection.<sup>3</sup>

1.10. *The certifying authority* is the Surgeon General of the United States Public Health Service or his duly authorized and designated representatives. Reference to the certifying authority shall be applicable only in the cases of those water supplies to be certified for use on carriers subject to the Federal Quarantine Regulations. *The reporting agency* shall be understood to mean the respective official State health agencies or their designated representatives.

## 2. AS TO SOURCE AND PROTECTION

2.1. The water supply shall be:

- (a) Obtained from a source free from pollution; or
- (b) Obtained from a source adequately purified by natural agencies;

or

- (c) Adequately protected by artificial treatment.

2.2. The water supply system in all its parts should be free from sanitary defects and health hazards, and all known sanitary defects and health hazards shall be systematically removed at a rate satisfactory to the reporting agency and to the certifying authority. Approval of public water supplies by the reporting agency and the certifying authority will be conditioned by the existence of:

- (a) Rules and regulations prohibiting connections or arrangements by which liquids or chemicals of unsafe, unknown, or questionable quality may be discharged or drawn into the public water supply;

- (b) Provisions to enforce such rules and regulations effectively on all new installations; and

- (c) A continuing program to detect health hazards and sanitary defects within the water distribution system.

2.21. *Applications.*—For the purposes of these Standards, responsibility for conditions in the water supply systems shall be considered to be held by

- (a) The water purveyor from the source of supply to the connection to the customer's service piping, and

- (b) The owner of the property served and the municipal, county, or other authority having legal jurisdiction from the point of connection to the customer's service piping to the free-flowing outlet of the ultimate consumer.

## 3. AS TO BACTERIOLOGICAL QUALITY

3.1. *Sampling.*—The bacteriological examination of water considered under this section shall be of samples collected at representative points throughout the distribution system.

<sup>3</sup> In freeing samples of chlorine or chloramines, the procedure given in the Standard Methods for the Examination of Water and Sewage, current edition, shall be followed.



The frequency of sampling and the location of sampling points on the distribution system should be such as to determine properly the bacteriological quality of the water supply. The frequency of sampling and the distribution of sampling points shall be regulated jointly by the reporting agency and the certifying authority after investigation by either agency, or both, of the source, method of treatment, and protection of the water concerned.

The minimum number of samples to be collected from the distribution system and examined by the reporting agency or its designated representatives each month should be in accordance with the number as determined from the graph presented in figure 1 of these Standards <sup>4</sup> which is based upon the relationship of population served and minimum number of samples per month:

<i>Population served</i>	<i>Minimum number of samples per month</i>
2,500 and under.....	1
10,000.....	7
25,000.....	25
100,000.....	100
1,000,000.....	300
2,000,000.....	390
5,000,000.....	500

In determining the number of samples examined monthly, the following samples may be included, provided all results are assembled and available for inspection and the laboratory methods and technical competence of the personnel are approved by the reporting and certifying agencies:

- (a) Samples examined by the reporting agency.
- (b) Samples examined by local health department laboratories.
- (c) Samples examined by the water works authority.
- (d) Samples examined by commercial laboratories.

Daily samples collected following an unsatisfactory sample as provided in sections 3.22 and 3.24 shall be considered as special samples and shall not be included in the determination of the number of samples examined monthly. Neither shall subsequent unsatisfactory samples in this daily series be used as a basis for prohibiting the supply, provided that (1) immediate and active efforts are made to locate the cause of such contamination, (2) immediate action is taken to eliminate such cause, and (3) samples taken following such remedial action are satisfactory.

The laboratories in which these examinations are made and the methods used in making them shall be subject to inspection at any

<sup>4</sup> For the purpose of uniformity and simplicity in application, the number of samples to be examined each month for any given population served shall be determined from the graph in accordance with the following:

- For populations of 25,000 and under to the nearest 1.
- For populations of 25,001 to 100,000 to the nearest 5.
- For populations of 100,001 to 2,000,000 to the nearest 10.
- For populations of over 2,000,000 to the nearest 25.

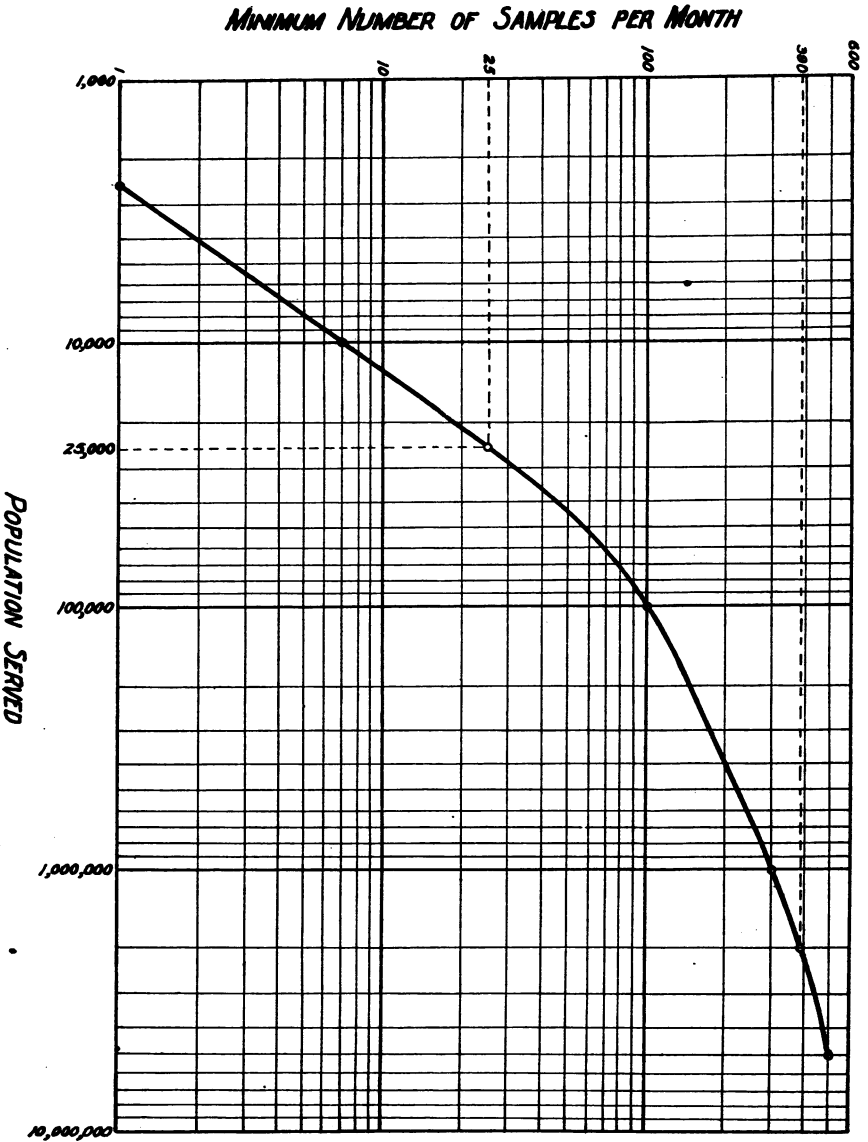


FIGURE 1.—Relation between minimum number of samples to be collected per month and population served.

time by the designated representatives of the certifying authority and reporting agency. Compliance with the specified procedures and the results obtained shall be used as a basis for certification, in accordance with the application given below:

3.2. *Application.*—Applications 3.21 and 3.22 given below shall govern when ten milliliter (10 ml.) portions are used and applications

3.23 and 3.24 shall govern when one hundred milliliter (100 ml.) portions are used.<sup>5</sup>

3.21. Of all the standard ten milliliter (10 ml.) portions examined per month in accordance with the specified procedure, not more than ten (10) percent shall show the presence of organisms of the coliform group.

3.22. Occasionally three (3) or more of the five (5) equal ten milliliter (10 ml.) portions constituting a single standard sample may show the presence of organisms of the coliform group, provided that this shall not be allowable if it occurs in consecutive samples or in more than:

- (a) Five (5) percent of the standard samples when twenty (20) or more samples have been examined per month.
- (b) One (1) standard sample when less than twenty (20) samples have been examined per month.

Provided further that when three or more of the five equal ten milliliter (10 ml.) portions constituting a single standard sample show the presence of organisms of the coliform group, daily samples from the same sampling point shall be collected promptly and examined until the results obtained from at least two consecutive samples show the water to be of satisfactory quality.<sup>6</sup>

3.23. Of all the standard one hundred milliliter (100 ml.) portions examined per month in accordance with the specified procedure, not more than sixty (60) percent shall show the presence of organisms of the coliform group.

3.24. Occasionally all of the five (5) equal one hundred milliliter (100 ml.) portions constituting a single standard sample may show the presence of organisms of the coliform group, provided that this shall not be allowable if it occurs in consecutive samples or in more than:

- (a) Twenty (20) percent of the standard samples when five (5) or more samples have been examined per month.
- (b) One (1) standard sample when less than five (5) samples have been examined per month.

Provided further that when all five of the standard one hundred milliliter (100 ml.) portions constituting a single standard sample show the presence of organisms of the coliform group, daily samples from the same sampling point shall be collected promptly

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<sup>5</sup> It is to be understood that in the examination of any water supply the series of samples for any one month must conform to both of the above requirements, either 3.21 and 3.22 or 3.23 and 3.24, respectively.

<sup>6</sup> When this occurs, and when waters of unknown quality are being examined, simultaneous tests should be made on multiple portions of a geometric series ranging from 10 ml. to 0.1 ml. or less.

and examined until the results obtained from at least two consecutive samples show the water to be of satisfactory quality.<sup>7</sup>

3.25. The procedure given, using a standard sample composed of five standard portions, provides for an estimation of the most probable number of coliform bacteria present in the sample as set forth in the following tabulation:

Number of portions		Most probable number of coliform bacteria per 100 ml.	
Negative	Positive	When 5-10-ml. portions are examined	When 5-100-ml. portions are examined
5	0	Less than 2.2	Less than 0.22
4	1	2.2	.22
3	2	5.1	.51
2	3	9.2	.92
1	4	16.0	1.60
0	5	More than 16.0	More than 1.60

4. AS TO THE PHYSICAL AND CHEMICAL CHARACTERISTICS

4.1. *Physical characteristics.*<sup>8</sup>—The turbidity of the water shall not exceed 10 p. p. m. (silica scale), nor shall the color exceed 20 (standard cobalt scale). The water shall have no objectionable taste or odor.

4.2. *Chemical characteristics.*—The water shall not contain an excessive amount of soluble mineral substance, nor excessive amounts of any chemicals employed in treatment. Under ordinary circumstances, the analytical evidence that the water satisfies the physical and chemical standards given in sections 4.1 and 4.21 and simple evidence that it is acceptable for taste and odor will be sufficient for certification with respect to physical and chemical characteristics.

4.21. The presence of lead (Pb) in excess of 0.1 p. p. m., of fluoride in excess of 1.5 p. p. m., of arsenic in excess of 0.05 p. p. m., of selenium in excess of 0.05 p. p. m., of hexavalent chromium in excess of 0.05 p. p. m., shall constitute grounds for rejection of the supply.

These limits are given in parts per million by weight and a reference to the method of analysis recommended for each determination is given in section 4.31. Salts of barium, hexavalent chromium, heavy metal glucosides, or other substances with deleterious physiological effects shall not be added to the system for water treatment purposes.

Ordinarily analysis for these substances need be made only semiannually. If, however, there is some presumption of unfitness because of these elements, periodic determination for the element in question should be made more frequently.

<sup>7</sup> When this occurs, and when waters of unknown quality are being examined, simultaneous tests should be made on multiple portions of a geometric series ranging from 100 ml. to 1.0 ml. or less.

<sup>8</sup> The requirements in section 4.1 relating to turbidity and color shall be met by all filtered water supplies. Turbidity and color limits for unfiltered waters and the requirements of freedom from taste or odor for either filtered or unfiltered waters should be based on reasonable judgment and discretion, giving due consideration to all the local factors involved.

Where experience, examination, and available evidence indicate that such substances are not present or likely to be present in the water supplies involved, semiannual examinations are not necessary, provided such omission is acceptable to the reporting agency and the certifying authority.

4.22. The following chemical substances which may be present in natural or treated waters should preferably not occur in excess of the following concentrations where other more suitable supplies are available in the judgment of the certifying authority. Recommended methods of analysis are given in section 4.3.

Copper (Cu) should not exceed 3.0 p. p. m.

Iron (Fe) and manganese (Mn) together should not exceed 0.3 p. p. m.

Magnesium (Mg) should not exceed 125 p. p. m.

Zinc (Zn) should not exceed 15 p. p. m.

Chloride (Cl) should not exceed 250 p. p. m.

Sulfate (SO<sub>4</sub>) should not exceed 250 p. p. m.

Phenolic compounds should not exceed 0.001 p. p. m. in terms of phenol.

Total solids should not exceed 500 p. p. m. for a water of good chemical quality. However, if such water is not available, a total solids content of 1,000 p. p. m. may be permitted.

For chemically treated waters, i. e., lime softened, zeolite or other ion exchange treated waters, or any other chemical treatments, the following three requirements should be met:

(1) The phenolphthalein alkalinity (calculated as CaCO<sub>3</sub>) should not be greater than 15 p. p. m. plus 0.4 times the total alkalinity. This requirement limits the permissible pH to about 10.6 at 25° C.

(2) The normal carbonate alkalinity should not exceed 120 p. p. m. Since the normal alkalinity is a function of the hydrogen ion concentration and the total alkalinity, this requirement may be met by keeping the total alkalinity within the limits suggested below when the pH of the water is within the range given. These values apply to water at 25° C.

<i>pH range:</i>	<i>Limit for total alkalinity (p.p.m. as CaCO<sub>3</sub>)</i>
8.0 to 9.6.....	400
9.7.....	340
9.8.....	300
9.9.....	260
10.0.....	230
10.1.....	210
10.2.....	190
10.3.....	180
10.4.....	170
10.5 to 10.6.....	160

(3) If excess alkalinity is produced by chemical treatment, the total alkalinity should not exceed the hardness by more than 35 p.p.m. (calculated as  $\text{CaCO}_3$ ).

4.3. Recommended methods of analysis: <sup>9</sup>

4.31. Ions with required limits of concentration.

*Arsenic* (As): Official and Tentative Methods of Analysis. Association of Official Agricultural Chemists, 1940, p. 390; also "Colorimetric Microdetermination of Arsenic," Morris B. Jacobs and Jack Nagler, Industrial and Engineering Chemistry, Anal. Ed., **14**: 442 (1942).

*Fluoride* (F): Standard Methods for the Examination of Water and Sewage, current edition, also Methods of Determining Fluorides, Committee Report, A. P. Black, Chairman. Journal American Water Works Association, **33**: 1965-2017 (1941).

*Lead* (Pb): Standard Methods for the Examination of Water and Sewage, current edition.

*Selenium* (Se): Official and Tentative Methods of Analysis. Association of Official Agricultural Chemists, 1940, pp. 11 and 417; also Robinson, W. O., Dudley, H. C., Williams, K. T., and Byers, Horace G.; The Determination of Selenium and Arsenic by Distillation. Industrial and Engineering Chemistry, Anal. Ed., **6**: 274 (1934).

*Hexavalent chromium*: Standard Methods for the Examination of Water and Sewage, current edition.

4.32. Ions and substances with suggested limits of concentration.

*Copper* (Cu): Standard Methods for the Examination of Water and Sewage, current edition.

*Iron* (Fe): and *Manganese* (Mn): Ibid.

*Magnesium* (Mg): Ibid.

*Zinc* (Zn): Ibid.

*Chloride* (Cl): Ibid.

*Sulfate* ( $\text{SO}_4$ ): Ibid.

*Phenolic compounds*: Ibid.

With dibromquinonechlorimide as an indicator.

*Total solids*: Ibid.

*Alkalinity*: Ibid.

<sup>9</sup> For the chemical determinations referred to in this report, when given, the methods of analysis recommended by the Association of Official Agricultural Chemists are satisfactory and may be substituted for those recommended in the Standard Methods for the Examination of Water and Sewage, current edition, which are specifically cited.

## INCIDENCE OF HOSPITALIZATION, JANUARY 1946

Through the cooperation of the Hospital Service Plan Commission of the American Hospital Association, data on hospital admissions among members of Blue Cross Hospital Service Plans are presented monthly. These plans provide prepaid hospital service. The data cover hospital service plans scattered throughout the country, mostly in large cities:

Item	January	
	1945	1946
1. Number of plans supplying data.....	75	81
2. Number of persons eligible for hospital care.....	15,956,400	17,259,949
3. Number of persons admitted for hospital care.....	137,055	158,991
4. Incidence per 100 persons, annual rate during current month (daily rate $\times 365$ ).....	101.1	108.4
5. Incidence per 1,000 persons, annual rate for the 12 months ended Jan. 31, 1946.....	103.5	107.3
6. Number of plans reporting on hospital days.....	22	30
7. Days of hospital care per case discharged during month <sup>1</sup> .....	8.05	8.00

<sup>1</sup> Days include entire stay of patient in hospital whether at full pay or at a discount.

## DEATHS DURING WEEK ENDED FEBRUARY 16, 1946

[From the Weekly Mortality Index, issued by the Bureau of Census, Department of Commerce]

	Week ended Feb. 16, 1946	Corresponding week, 1945
<b>Data for 93 large cities of the United States:</b>		
Total deaths.....	10,063	9,913
Average for 3 prior years.....	10,066	-----
Total deaths, first 7 weeks of year.....	74,530	69,041
Deaths under 1 year of age.....	632	665
Average for 3 prior years.....	662	-----
Deaths under 1 year of age, first 7 weeks of year.....	4,261	4,471
<b>Data from industrial insurance companies:</b>		
Policies in force.....	67,161,803	67,037,246
Number of death claims.....	12,368	11,882
Death claims per 1,000 policies in force, annual rate.....	9.6	9.2
Death claims per 1,000 policies, first 7 weeks of year, annual rate.....	11.4	10.6

# PREVALENCE OF DISEASE

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*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED FEBRUARY 23, 1946

#### Summary

Slight declines in the incidence of influenza were recorded during the week in all of the 9 geographic divisions of the country. A total of 7,234 cases was reported, as compared with 8,411 last week, 4,444 for the corresponding week last year, and a 5-year (1941-45) median of 5,984. In the 10 States reporting currently more than 100 cases each, located in the South Atlantic, South Central, Mountain, and Pacific areas, an aggregate of 6,713 cases occurred (approximately 93 percent of the total). These States are as follows (last week's figures in parentheses): *Increases*—Louisiana 594 (541), Texas 3,030 (2,885); *decreases*—Virginia 743 (937), South Carolina 923 (961), Georgia 113 (139), Alabama 542 (569), Arkansas 259 (318), Oklahoma 127 (314), Arizona 154 (203), California 228 (716). The total for the year to date is 155,013, as compared with 35,025 and 301,265, respectively, for the corresponding periods of 1945 and 1944, and a 5-year median of 39,064. For the period since November 18, 1945, a total of 493,579 cases has been reported, as compared with 50,542 and 626,477, respectively, for the corresponding periods of 1944-45 and 1943-44.

Of the total of 174 cases of meningococcus meningitis, New York reported 21, Illinois and California 15 each, Pennsylvania 14, Texas 10, and Michigan and Missouri 7 each. Of the total of 40 cases of poliomyelitis, Florida reported 5 and Georgia and Mississippi 4 each.

The incidence of diphtheria continues above the normal expectancy; 337 cases were reported during the current week as compared with 261 for the same week last year, and the total to date is 3,211 as compared with 2,627 for the same period last year and a 5-year median of 2,480.

A total of 15,725 cases of measles was reported (as compared with 13,932 last week and a 5-year median of 17,754), of which 8,431, or about 54 percent, were reported in the Middle Atlantic and East North Central areas. The total to date is 69,199, as compared with 13,497 for the same period last year and a 5-year median of 97,528.

Deaths recorded during the week in 93 large cities of the United States totaled 9,470, as compared with 10,063 last week, 9,351 and 9,699, respectively, for the corresponding weeks of 1945 and 1944, and a 3-year (1943-45) average of 9,820. The total for the year to date is 84,000, as compared with 78,392 for the corresponding period last year.



*Telegraphic morbidity reports from State health officers for the week ended February 23, 1946, and comparison with corresponding week of 1945 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1941- 45	Week ended—		Median 1941- 45	Week ended—		Median 1941- 45	Week ended—		Median 1941- 45
	Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945	
<b>NEW ENGLAND</b>												
Maine.....	0	0	0	2	3	2	15	138	0	1	1	
New Hampshire.....	0	0	0	-----	-----	-----	-----	15	1	0	0	
Vermont.....	1	0	0	-----	-----	1	14	14	0	0	0	
Massachusetts.....	3	2	2	-----	-----	260	52	41	4	5	5	
Rhode Island.....	0	0	0	1	40	1	4	12	34	0	1	
Connecticut.....	0	0	0	9	4	3	68	69	238	2	1	
<b>MIDDLE ATLANTIC</b>												
New York.....	19	12	22	14	5	10	1,469	78	1,596	21	27	
New Jersey.....	1	2	2	13	1	15	689	48	1,109	5	6	
Pennsylvania.....	13	13	13	6	6	5	1,614	108	2,410	14	25	
<b>E. NORTH CENTRAL</b>												
Ohio.....	22	11	10	21	7	24	239	46	217	4	13	
Indiana.....	12	7	6	29	4	21	448	16	226	4	4	
Illinois.....	10	4	18	8	-----	31	1,483	90	553	15	28	
Michigan <sup>1</sup> .....	26	7	4	5	5	5	2,103	24	285	7	12	
Wisconsin.....	2	3	2	63	12	63	386	38	662	1	2	
<b>W. NORTH CENTRAL</b>												
Minnesota.....	6	4	5	2	1	2	22	12	42	1	1	
Iowa.....	7	0	4	-----	-----	8	33	14	276	5	3	
Missouri.....	6	3	7	6	5	4	360	5	382	7	7	
North Dakota.....	0	3	1	6	57	20	-----	2	42	2	0	
South Dakota.....	0	2	2	-----	1	1	133	16	16	1	1	
Nebraska.....	1	3	3	4	10	15	70	15	48	0	1	
Kansas.....	6	5	3	27	6	8	939	18	320	1	2	
<b>SOUTH ATLANTIC</b>												
Delaware.....	0	2	1	-----	-----	-----	6	9	17	0	1	
Maryland <sup>2</sup> .....	14	6	3	16	1	18	172	48	77	5	8	
District of Columbia.....	1	1	0	-----	1	2	41	9	59	0	4	
Virginia.....	6	5	10	743	718	803	349	62	436	5	12	
West Virginia.....	1	6	6	8	39	42	22	58	189	0	4	
North Carolina.....	14	3	10	-----	-----	50	237	32	343	1	7	
South Carolina.....	11	3	3	923	665	950	170	30	237	2	2	
Georgia.....	5	6	4	113	41	122	144	39	349	4	2	
Florida.....	2	2	2	4	2	13	90	41	145	6	11	
<b>E. SOUTH CENTRAL</b>												
Kentucky.....	9	6	6	10	4	104	426	3	142	3	8	
Tennessee.....	4	2	3	91	68	68	186	71	226	7	8	
Alabama.....	11	9	9	542	212	389	159	8	172	6	2	
Mississippi <sup>2</sup> .....	5	4	4	-----	-----	-----	-----	-----	-----	6	5	
<b>W. SOUTH CENTRAL</b>												
Arkansas.....	11	3	5	259	217	223	66	32	122	3	4	
Louisiana.....	7	6	5	594	3	12	97	19	83	1	2	
Oklahoma.....	1	6	6	127	129	155	154	12	57	1	1	
Texas.....	37	52	36	3,080	1,951	1,951	518	339	697	10	25	
<b>MOUNTAIN</b>												
Montana.....	6	1	1	3	31	25	11	12	125	0	1	
Idaho.....	0	1	1	44	-----	45	1	30	0	0	0	
Wyoming.....	0	0	0	1	-----	52	35	4	65	0	0	
Colorado.....	6	9	7	61	20	61	132	17	228	2	4	
New Mexico.....	3	2	1	2	2	5	14	5	51	0	2	
Arizona.....	12	2	3	154	115	156	39	7	175	0	2	
Utah <sup>2</sup> .....	0	0	0	45	30	43	289	46	48	0	0	
Nevada.....	0	0	0	-----	-----	-----	-----	1	1	0	0	
<b>PACIFIC</b>												
Washington.....	5	4	3	-----	1	3	469	79	141	1	4	
Oregon.....	6	2	2	20	9	41	169	53	132	1	1	
California.....	25	34	15	228	21	126	1,362	677	677	15	25	
Total.....	337	261	261	7,224	4,444	5,984	15,725	2,406	17,754	174	290	
8 weeks.....	3,211	2,627	2,480	155,013	35,025	39,064	69,199	13,497	97,528	1,642	1,987	

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

*Telegraphic morbidity reports from State health officers for the week ended February 23, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.*

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever <sup>1</sup>		
	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45
	Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945		Feb. 23, 1946	Feb. 24, 1945	
<b>NEW ENGLAND</b>												
Maine.....	0	1	0	23	57	14	0	0	0	0	0	0
New Hampshire.....	0	0	0	2	10	13	0	0	0	0	0	0
Vermont.....	0	0	0	13	14	14	0	0	0	0	0	0
Massachusetts.....	1	0	0	153	271	318	0	0	0	3	1	1
Rhode Island.....	0	0	0	0	17	17	0	0	0	0	0	0
Connecticut.....	1	0	0	39	114	79	0	0	0	1	2	1
<b>MIDDLE ATLANTIC</b>												
New York.....	3	2	1	451	486	486	0	0	0	0	3	5
New Jersey.....	0	3	1	108	130	161	1	0	0	2	2	1
Pennsylvania.....	1	1	1	319	602	535	0	0	0	1	4	3
<b>EAST NORTH CENTRAL</b>												
Ohio.....	2	0	0	373	456	318	0	0	0	0	4	4
Indiana.....	0	0	0	113	208	167	0	3	2	3	0	0
Illinois.....	0	2	1	210	443	360	0	1	1	0	0	1
Michigan <sup>2</sup> .....	1	0	1	142	316	241	0	1	0	1	0	1
Wisconsin.....	1	0	0	141	229	229	0	4	1	0	0	0
<b>WEST NORTH CENTRAL</b>												
Minnesota.....	0	0	0	60	101	101	0	0	0	0	0	0
Iowa.....	0	0	0	59	72	72	1	0	1	0	2	0
Missouri.....	1	1	0	75	87	133	0	0	0	3	2	1
North Dakota.....	0	0	0	1	30	30	0	0	0	0	0	0
South Dakota.....	0	0	0	18	11	29	0	0	1	0	0	0
Nebraska.....	1	0	0	34	111	82	0	0	0	0	0	0
Kansas.....	0	0	0	99	165	117	1	0	0	0	1	1
<b>SOUTH ATLANTIC</b>												
Delaware.....	0	0	0	7	5	7	0	0	0	1	0	0
Maryland <sup>1</sup> .....	1	0	0	81	296	102	0	0	0	0	1	0
District of Columbia.....	0	0	0	26	77	35	0	0	0	0	0	0
Virginia.....	0	1	1	61	162	44	0	0	0	2	4	2
West Virginia.....	0	0	0	37	41	43	0	0	0	0	1	2
North Carolina.....	1	0	0	46	108	44	0	0	0	0	1	0
South Carolina.....	0	0	0	11	7	7	0	0	0	0	1	2
Georgia.....	4	0	0	10	37	26	1	0	0	3	0	1
Florida.....	5	0	1	8	15	15	0	0	0	0	0	0
<b>EAST SOUTH CENTRAL</b>												
Kentucky.....	0	2	0	29	79	79	0	0	0	0	0	0
Tennessee.....	2	0	0	24	102	92	0	0	0	1	3	3
Alabama.....	1	2	0	9	15	18	0	0	0	2	0	1
Mississippi <sup>2</sup> .....	4	1	1	10	45	11	0	1	0	0	1	1
<b>WEST SOUTH CENTRAL</b>												
Arkansas.....	1	0	0	11	13	6	1	1	2	0	0	1
Louisiana.....	1	0	1	13	21	8	0	0	0	2	1	1
Oklahoma.....	1	3	0	21	35	32	0	0	0	2	0	2
Texas.....	1	1	1	78	121	66	2	0	0	6	5	2
<b>MOUNTAIN</b>												
Montana.....	0	0	0	1	40	33	0	0	0	1	0	0
Idaho.....	0	0	0	2	56	10	0	0	0	0	0	0
Wyoming.....	0	0	0	5	7	11	0	0	0	0	0	0
Colorado.....	1	0	0	34	101	63	0	0	0	2	2	0
New Mexico.....	0	0	0	24	26	7	0	0	0	0	3	0
Arizona.....	0	0	0	8	28	12	0	0	0	0	0	0
Utah <sup>1</sup> .....	0	0	1	41	51	51	0	0	0	0	0	0
Nevada.....	0	0	0	0	2	0	0	1	0	0	0	0
<b>PACIFIC</b>												
Washington.....	2	0	0	19	119	62	0	0	0	0	0	0
Oregon.....	0	0	0	21	47	18	0	0	0	1	0	1
California.....	3	6	3	218	378	153	1	0	0	2	3	3
Total.....	40	26	25	3,288	5,964	4,367	8	12	16	39	47	65
8 weeks.....	353	314	228	24,382	41,922	30,415	58	77	170	320	478	555

<sup>1</sup> Period ended earlier than Saturday.

<sup>2</sup> Including paratyphoid fever reported separately, as follows: Massachusetts 3; New Jersey 2; Georgia 1; California 1.

Telegraphic morbidity reports from State health officers for the week ended February 23, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.

Division and State	Whooping cough			Week ended Feb. 23, 1946							
	Week ended—		Median 1941- 45	Dysentery			En- ceph- alitis, infec- tious	Rocky Mt. spot- ted fever	Tula- remia	Ty- phus fever, en- demic	Un- du- lant fever
	Feb. 23, 1946	Feb. 24, 1945		Ame- bic	Bacil- lary	Un- spec- ified					
<b>NEW ENGLAND</b>											
Maine.....	32	32	32								
New Hampshire.....	1	1	1								
Vermont.....	14	30	23								1
Massachusetts.....	81	168	138								
Rhode Island.....	22	18	18								
Connecticut.....	58	48	60								
<b>MIDDLE ATLANTIC</b>											
New York.....	177	171	276	5	4		2		2		1
New Jersey.....	108	115	115			1					
Pennsylvania.....	123	171	204				1				1
<b>EAST NORTH CENTRAL</b>											
Ohio.....	84	187	187								4
Indiana.....	10	26	26						2		1
Illinois.....	97	60	67	1	1						1
Michigan <sup>2</sup> .....	132	89	137	1	2						
Wisconsin.....	62	57	146								
<b>WEST NORTH CENTRAL</b>											
Minnesota.....	12	19	38	2							6
Iowa.....	4	2	14								
Missouri.....	4	1	26								
North Dakota.....			13			1	1				
South Dakota.....		2	3								5
Nebraska.....	4	3	14								1
Kansas.....	17	46	43								1
<b>SOUTH ATLANTIC</b>											
Delaware.....	5	1	1								
Maryland <sup>2</sup> .....	24	40	46								1
District of Columbia.....	5	6	7								
Virginia.....	43	54	55			42		1			2
West Virginia.....	5	45	39								1
North Carolina.....	56	83	126								1
South Carolina.....	31	67	58	2	4			4			3
Georgia.....	4	11	22	1				2			6
Florida.....	20	15	15						2		3
<b>EAST SOUTH CENTRAL</b>											
Kentucky.....	23	41	53			1	1				2
Tennessee.....	12	23	55						3		4
Alabama.....	13	22	33	2							1
Mississippi <sup>2</sup> .....								1			8
<b>WEST SOUTH CENTRAL</b>											
Arkansas.....	9	18	18	3	2		1				
Louisiana.....	4	1	2	1				4		2	1
Oklahoma.....	1	25	15		1						
Texas.....	108	279	279	27	172	20		1		26	11
<b>MOUNTAIN</b>											
Montana.....	4	11	17								
Idaho.....	7										
Wyoming.....		7	3								
Colorado.....	31	27	30	1							
New Mexico.....	6	9	15		1						
Arizona.....	4	53	37			7					
Utah <sup>2</sup> .....	12	55	25			10					
Nevada.....	3										
<b>PACIFIC</b>											
Washington.....	33	16	24								1
Oregon.....	15	18	18								1
California.....	71	233	247	3	2		1				5
Total.....	1,582	2,406	2,988	49	189	82	7	0	20	52	52
Same week, 1945.....	2,406			30	368	59	8	1	13	54	71
Average, 1943-45.....	2,707			29	298	68	9	1	10	436	
8 weeks: 1946.....	14,396			322	2,428	955	61	3	175	438	503
1945.....	18,423			222	4,681	1,016	50	4	189	479	675
Average, 1943-45.....	21,277		30,944	184	2,652	600	65	4	138	477	

<sup>2</sup> Period ended earlier than Saturday.

<sup>4</sup> 5-year median, 1941-45.

**NOTIFIABLE DISEASES, FOURTH QUARTER 1945<sup>1</sup>**

The figures in the following table are the totals of the monthly morbidity reports received from the State health authorities for October, November, and December 1945. These reports are preliminary and the figures are therefore more or less incomplete. In most instances they include cases reported in both civilian and military populations. The comparisons made are with similar preliminary reports; but owing to population shifts and the presence of large military populations in certain States, the figures for some States are not comparable with those for prior years, especially for certain diseases. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State, although some do not do so. The lists of diseases included are not the same for each State. Only 11 of the common communicable diseases are notifiable in all the States. In some instances cases are reported, in some States, of diseases that are not required by law or regulation to be reported, and the figures are included although manifestly incomplete. There are also variations among the States in the degree of completeness of reporting of cases of the reportable diseases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while in many States other diseases, such as puerperal septicemia, rheumatic fever, and Vincent's infection, are not reportable.

In spite of these known deficiencies, however, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating a trend by providing a comparison with similar preliminary figures for prior years. The table also gives a picture of the geographic prevalence of certain diseases, as the States are arranged by geographic location.

Leaders are used in the table to indicate that no case of the disease was reported.

*Consolidated monthly State morbidity reports for October, November, and December 1945*

Division and State	An-thrax	Chick-enpox	Con-junctivitis	Diph-theria	Dysen-tery, amebic	Dysen-tery, bacil-lary	Dysen-tery, unde-fined	En-cephalitis, infec-tious	Ger-man measles	Hook-worm disease	Influ-enza	Ma-laria	*Meas-sles	*Men-ingitis, meningococcus	Mumps	Oph-thal-mia neonatorum	Pelle-gra	Pneu-monia, all forms
NEW ENGLAND																		
Maine.....		426		56			2	24			14	13	27	4	936			126
New Hampshire.....		229		13		1		1			104		139	3	223			10
Vermont.....		794		9				52			267		2	13	2			18
Massachusetts.....	1	2,002	76	58	7	60	9	162		3		162	2,006	35	1,518	40		4,353
Rhode Island.....		163		6		8		1			82	52	11	6	162			141
Connecticut.....		998		16	1	43		59		3	50	168	110	18	1,467	1		691
MIDDLE ATLANTIC																		
New York.....	1	2,927		115	50	468		16			254	270	1,866	146	6,747			4,744
New Jersey.....	1	2,426		43	25	1	29	2	141		532	281	214	63	1,012	3		1,267
Pennsylvania.....		2,708		102	2						183		3,123	88	1,268	4		633
EAST NORTH CENTRAL																		
Ohio.....	1	1,950		485	4	7	8	1	59		633	51	154	64	392	96		758
Indiana.....		841	4	170	7	2	17	5	13		4,820	87	3	33	105			117
Illinois.....		1,864		73	49	45	14	98			781	3	2,708	124	712	128		2,177
Michigan.....		3,192	37	224	16	67	2	148			60	107	2,025	52	1,739	5		615
Wisconsin.....		4,982		46	1			69			4,724	7	338	31	2,815			4,202

WEST NORTH CENTRAL													
Minnesota.....	1,290	175	21	3	6	2	36	177	60	29	302	2	93
Iowa.....	442	121	151	6	6	660	80	47	25	40	38	38	
Missouri.....	151	102	30	3	6	237	40	254	37	3	98	2	305
North Dakota.....	144	30	1	1	4,325	6	22	21	5	134	187	167	
South Dakota.....	186	22	1	1	26	1,479	12	50	3	30	96	106	
Nebraska.....	287	31	2	20	31,435	42	382	29	9	493	106	288	
Kansas.....	620	74	2										
SOUTH ATLANTIC													
Delaware.....	24	7	3	3	41	2	12	14	3	8	14	8	
Maryland.....	474	210	4	6	369	40	74	13	13	8	77	698	
District of Columbia.....	76	5	1	2	83	11	18	74	13	1	23	347	
Virginia.....	269	345	6	874	22,834	99	370	17	85	17	669	669	
West Virginia.....	214	159	2	1	18,853	34	26	23	39	23	59	183	
North Carolina.....	895	895	11	13	67	184	164	23	23	23	59	183	
South Carolina.....	196	270	30	218	16,294	399	1,741	6	184	13	197	1,288	
Georgia.....	135	347	9	18	983	2,539	1,169	79	21	69	220	220	
Florida.....	70	89	17	7	1,183	73	5	49	20	131	137	137	
EAST SOUTH CENTRAL													
Kentucky.....	156	191	3	9	33	119,543	92	1,087	23	23	70	249	
Tennessee.....	108	398	2	18	4	1,720	52	69	38	38	62	497	
Alabama.....	161	311	13	2	190	4,397	485	26	39	145	769	769	
Mississippi.....	988	372	274	1,234	1,182	31,759	3,008	744	32	32	582	4,285	
WEST SOUTH CENTRAL													
Arkansas.....	94	285	32	77	18	6,050	237	124	21	184	4	680	
Louisiana.....	69	208	51	16	9	7,622	115	41	15	59	14	596	
Oklahoma.....	83	108	7	15	2	3,601	129	107	7	57	6	252	
Texas.....	1,403	891	160	3,454	1	58,507	1,626	524	73	1,045	177	2,936	
MOUNTAIN													
Montana.....	813	42	2	2	36	1,949	9	137	6	401	70	70	
Idaho.....	365	17	3	3	72	2,796	10	1,156	5	43	93	93	
Wyoming.....	87	6	6	1	10	300	76	37	37	44	44	44	
Colorado.....	981	91	10	6	4	2,827	208	10	10	214	327	327	
New Mexico.....	72	47	6	36	15	56	24	31	3	157	181	181	
Arizona.....	119	43	1	2	4	5,003	69	28	5	310	325	325	
Utah.....	765	4	1	263	1	31,698	8	265	3	192	76	76	
Nevada.....	51	4	1	2	38	266	3	225	1	20	28	28	
PACIFIC													
Washington.....	1,363	73	3	166	3	6,085	2	463	26	1,143	115	115	
Oregon.....	633	64	44	1	62	5,577	12	182	5	188	131	131	
California.....	3,951	462	44	73	934	8,811	481	3,522	131	5,000	4712	4712	
Total.....	42,072	7,911	897	5,898	2,598	40,175	10,192	25,449	1,387	25,042	354	798	
Fourth quarter 1944.....	67,810	5,723	889	9,874	2,316	38,579	10,881	9,070	2,257	26,082	365	815	
Median, 1940-44.....	67,810	5,723	641	4,730	2,965	40,316	11,128	39,231	1,111	26,082	365	1,068	
Hawaii Territory.....	109	3	7	26	63	3	67	657	1	98	4	25	
Panama Canal Zone.....	25	58	7	10	28	28	180	2	5	9	9	10	

See footnotes at end of table.

Consolidated monthly State morbidity reports for October, November, and December 1945—Continued

Division and State	*Polio-myelitis	Rabies in man	Rheumatic fever	Rocky Mountain spotted fever	*Scarlet fever	Septic sore throat	*Small .pox	Tetanus	Tra-choma	Trichi-nosis	*Tuber-culosis, all forms	Tuber-culosis, respi-ratory	Tula-remia	*Ty-phoid and para-ty-phoid fever	Para-ty-phoid fever	Ty-phus fever, endemic	*Un-dulant fever	Vin-cent's infec-tion	*Whoop-ing cough
NEW ENGLAND																			
Maine.....	21				341	4				2	106	100		12	2		11	10	399
New Hamp-shire.....	2				158	13					28						2	2	220
Vermont.....	19				79	2					9			3	1		14	41	344
Massachusetts.....	197				1,361	32		2		3	688	646		25	17		22		1,265
Rhode Island.....	3				97	2					113	106		6	3		10		807
Connecticut.....	67				231	38		1		2	317	309		15	5		39		592
MIDDLE AT-LANTIC																			
New York.....	416	1		3	2,726	17		4		7	2,834	2,670		65	9	8	69		3,460
New Jersey.....	159			1	570			1		3	715			17	4	4	22		2,031
Pennsylvania.....	179		148	2	1,764			1			784			55			32		2,030
EAST NORTH CENTRAL																			
Ohio.....	148		21	1	2,886	36		3			1,592	1,580		47	14	1	27	8	1,713
Indiana.....	56				776	39		7			980	900		16	1		11	33	310
Illinois.....	309	1	60	1	1,662	28		10	12		1,559	1,382		22	3		77	46	1,190
Michigan.....	82		99		1,764	46		4			1,292			44	24		52		1,835
Wisconsin.....	394				1,066	51					579			9			83		951
WEST NORTH CENTRAL																			
Minnesota.....	102		21		473	127		3			377			7	1		56		184
Iowa.....	140				529	5					132			5			12	266	78
Missouri.....	138	1	26	1	978	4	1				446			23			10		97
North Dakota.....	1		3		108	5	2		10		30			5	1		6	15	12
South Dakota.....	6				77				15		98			1		1	11	3	29
Nebraska.....	40				333	7	4				116			8			62		51
Kansas.....	43		3		832		4				115	110		7		1		32	256
SOUTH ATLANTIC																			
Delaware.....	7				61			1			40	40		10		1			22
Maryland.....	21		30		538	27		1			593	583	15	11				8	418

District of Columbia.....	38	162	704				374	1	11	1	6	81
Virginia.....	52	1,217	5	3		386	663	12	42	9	4	438
West Virginia.....	13	957	28			498		7	16	2	2	200
North Carolina.....	43	990	28	1		612		4	11	50	4	676
South Carolina.....	27	156		2		189		4	15	71	4	881
Georgia.....	42	340	50	1		408		6	34	400	27	218
Florida.....	58	89	15	14		239		2	28	73	7	44
EAST SOUTH CENTRAL												
Kentucky.....	19	728	16		19	417	412	55	42		4	6
Tennessee.....	116	661	45	2		816		16	44	43	9	43
Alabama.....	24	312		5		569		5	32	144	17	224
Mississippi.....	35	320		15	9	416	413	10	13	64	16	1,106
WEST SOUTH CENTRAL												
Arkansas.....	20	225	275	5	1	289	276	17	39	11	11	70
Louisiana.....	58	263	237	4	20	415	389	4	31	137	19	19
Oklahoma.....	32	288	43	4	4	441			19	5	9	84
Texas.....	134	1,404	205	2	24	1,309		7	136	12	131	1,357
MOUNTAIN												
Montana.....	30	191	39	4		99	37	1	15		3	48
Idaho.....	11	140	70	5		76			3		7	216
Wyoming.....	10	39	5			16		2	2			10
Colorado.....	35	401	69			148			20	1	2	287
New Mexico.....	10	203	11			364	371		17		1	78
Arizona.....	14	149	5		60	292			7	2		86
Utah.....	54	237	7			31	29	4	6	2	8	111
Nevada.....		42	15		2	28			3			38
PACIFIC												
Washington.....	128	423	56			808			13	3	15	421
Oregon.....	31	325	67	2		126	122		13	4	14	124
California.....	415	2,958		12	9	2,618	2,476	4	57	28	63	1,543
Total.....	4,008	32,260	2,441	71	104	25,514	15,124	246	1,076	1,505	1,262	27,460
Fourth quarter, 1944.....	4,606	37,725	1,843	67	108	27,208	15,302	282	1,052	1,607	1,191	24,204
Median, 1940-44.....	3,219	32,746	1,843	149	108	27,068	14,818	282	1,410	1,146	860	40,763
Hawaii Territory.....		7	12			223	210		3	3	3	1
Panama Canal Zone.....	4	2				169	109		2	1		107

See footnotes on next page.

FOOTNOTES FOR PRECEDING TABLE

\* Diseases marked with an asterisk (\*) are reportable by law or regulation in all the States, including the District of Columbia. Typhoid fever is reportable in all the States; paratyphoid fever in all except 6 States. Syphilis is reportable in all the States and the District of Columbia but is not included in the table. Chickenpox, conjunctivitis, influenza, and pelagra were dropped from the list of reportable diseases in North Carolina in 1946. Rheumatic fever has been made reportable in Louisiana.

1 For reports for first, second, and third quarters of 1945, see pp. 622, 1150, and 1508 of the PUBLIC HEALTH REPORTS of June 1, Sept. 28, and Dec. 14, 1945, respectively.

2 Includes cases of kerato- and suppurative conjunctivitis and of pink eye.

3 In some States practically all in the military.

4 Lobar pneumonia only.

5 Includes 103 cases of pneumonia not previously reported.

6 New York City only.

7 Exclusive of prisoners of war.

8 Off-shipping.

9 Includes the cities of Colon and Panama.

10 In the Canal Zone only.

11 Includes septic sore throat.

12 Includes delayed reports.

13 Includes 194 cases of rheumatic fever reported from the U. S. Naval Hospital at Dublin, Ga.

The following list includes certain rare conditions, diseases of restricted geographical distribution, and those reportable in or reported by only a few States:  
 Actinomycosis: Massachusetts 1, Connecticut 1, Illinois 1, Minnesota 4, Kansas 1.  
 Botulism: California 13.  
 Coccioidiomycosis: New Mexico 3, California 13.  
 Dengue: South Carolina 4, Louisiana 24, Idaho 2.  
 Dermatitis: New Hampshire 4, Missouri 103.  
 Diarrhea: New Jersey 1, Ohio 170 (includes enteritis), Indiana 1, Illinois 1, South Dakota

4, Maryland 41, South Carolina 1,828, Florida 11, Colorado 4 (includes enteritis), New Mexico 65, Utah 1, Oregon 2 (includes enteritis), California 19.  
 Dog bite: Illinois 1,991, Michigan 1,303, Arkansas 63.  
 Fleas: Minnesota 1.  
 Food poisoning: Maine 1, Indiana 5, Illinois 2, South Carolina 24, Louisiana 7, California 141.

Granuloma (unspecified): Ohio 28.

Granuloma inguinale: Missouri 2, Florida 63, Tennessee 20, Mississippi 156, Louisiana 67, Montana 1, Arizona 1.

Impetigo contagiosa: Ohio 3, Indiana 28, Illinois 22, Michigan 574, Missouri 4, Kansas 13, Maryland 7, Montana 7, Idaho 18, Colorado 10, Nevada 52, Washington 362, Hawaii Territory 14.

Jaundice (includes hepatitis and Weil's disease): Maine 5, Ohio 1, Indiana 43, Illinois 63, Michigan 32, Minnesota 5, Kansas 6, Maryland 10, South Carolina 13, Florida 2, Louisiana 4, Montana 6, Idaho 6, Utah 22, Oregon 10, California 108, Hawaii Territory 16.

Leprosy: Louisiana 3, Texas 1, California 1, Hawaii Territory 10.

Lymphocytic choriomeningitis: Massachusetts 2, Minnesota 1, Tennessee 7.

Lymphogranuloma venereum: Missouri 7, Florida 30, Tennessee 20, Louisiana 46.

Psittacosis: New York 1, Pennsylvania 1, Illinois 1.

Puerperal septicemia: Tennessee 1, Mississippi 44, Louisiana 20, Oregon 1.

Rabies in animals: New York 137, Ohio 146, Illinois 72, Michigan 3, Iowa 12, Kansas 4, Maryland 11, District of Columbia 1, South Carolina 28, Alabama 123, Arkansas 49, Louisiana 13, Texas 235, New Mexico 3, Utah 2, California 90.

Rat bite fever: Tennessee 1, Oklahoma 1.

Relapsing fever: Kansas 1, Texas 2, Nevada 2, California 2.

Ringworm disease: Pennsylvania 279, Illinois 1,559, Michigan 835, Minnesota 170, Iowa 7, Missouri 4, Kansas 22, Montana 7, Idaho 8, Nevada 4, Washington 192.

Scabies: Pennsylvania 47, Ohio 1, Michigan 401, Missouri 4, South Dakota 2, Kansas 33, Montana 26, Idaho 36, Nevada 33.

Silicosis: Ohio 3, Idaho 1, New Mexico 3.



## WEEKLY REPORTS FROM CITIES

City reports for week ended February 16, 1946

This table lists the reports from 87 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomylitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
<b>NEW ENGLAND</b>												
Maine:												
Portland	1	0		0		0	0	0	6	0	0	8
New Hampshire:												
Concord	0	0		0		0	0	0	1	0	0	
Vermont:												
Barre	0	0		0		0	1	0	6	0	0	
Massachusetts:												
Boston	3	0		1	58	1	17	1	32	0	0	22
Fall River	0	0		0		3	2	0	5	0	0	7
Springfield	0	0		0	5	0	0	0	16	0	0	3
Worcester	0	0		0	6	0	14	0	7	0	0	6
Rhode Island:												
Providence	0	0		0	3	0	6	0	5	0	0	34
Connecticut:												
Bridgeport	0	0	1	1	1	0	2	0	3	0	0	1
Hartford	0	0	1	0	1	0	4	0	5	0	0	6
New Haven	0	0	1	0	3	0	0	0	3	0	0	3
<b>MIDDLE ATLANTIC</b>												
New York:												
Buffalo	5	0		0	42	1	4	0	15	0	0	35
New York	10	1	18	1	391	6	92	3	284	0	0	47
Rochester	0	0		0	94	1	0	1	14	0	0	9
Syracuse	0	0		1	637	0	3	0	11	0	0	8
New Jersey:												
Camden	2	0		0	14	1	0	0	3	0	0	
Newark	0	0		0	231	1	8	0	14	0	0	19
Trenton	0	0	2	0	0	0	6	0	4	0	0	2
Pennsylvania:												
Philadelphia	2	0	4	2	694	2	23	0	41	0	0	29
Pittsburgh	2	0		1	2	3	9	0	15	0	0	6
Reading	0	0		1	63	0	2	0	4	0	0	12
<b>EAST NORTH CENTRAL</b>												
Ohio:												
Cincinnati	7	0	1	2	36	0	9	0	9	0	0	2
Cleveland	0	0	2	1	7	1	9	0	32	0	1	10
Columbus	4	0	1	1	3	0	4	0	6	0	0	5
Indiana:												
Fort Wayne	0	0		1		0	1	0	0	0	0	
Indianapolis	2	0		0	230	1	5	0	18	0	0	5
South Bend	0	0		0		0	0	0	2	0	0	
Terre Haute	0	0		0		0	4	0	2	0	0	
Illinois:												
Chicago	1	1	1	1	758	6	39	0	63	0	2	57
Michigan:												
Detroit	8	3		1	1,154	4	16	0	46	0	1	43
Flint	0	0		0	17	0	2	0	3	0	0	3
Grand Rapids	0	0		0	41	0	1	0	10	0	0	
Wisconsin:												
Kenosha	0	0		0	1	0	0	0	4	0	0	
Milwaukee	0	0	1	1	174	2	4	0	17	0	0	15
Racine	0	0		0	2	0	0	0	0	0	0	
Superior	0	0		0	1	0	0	0	0	0	0	1
<b>WEST NORTH CENTRAL</b>												
Minnesota:												
Duluth	5	0		0	3	0	2	0	3	0	0	1
Minneapolis	1	0		0	9	2	2	0	4	0	0	1
St. Paul	0	0		0		1	6	0	9	0	0	6
Missouri:												
Kansas City	5	0		1	123	0	15	0	16	0	0	3
St. Joseph	0	0		0	26	0	0	0	1	0	0	
St. Louis	6	0	2	0	30	4	12	0	8	0	1	4

City reports for week ended February 16, 1946—Continued

	Diphtheria cases	Ecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
<b>WEST NORTH CENTRAL—continued</b>												
Nebraska:												
Omaha.....	0	0	-----	0	6	0	5	0	6	0	0	-----
Kansas:												
Topeka.....	1	0	-----	0	253	1	0	0	6	0	0	3
Wichita.....	0	1	-----	0	37	0	4	0	5	0	0	1
<b>SOUTH ATLANTIC</b>												
Delaware:												
Wilmington.....	0	0	-----	1	3	0	5	0	0	0	0	-----
Maryland:												
Baltimore.....	13	0	4	3	92	2	13	0	41	0	0	11
Cumberland.....	0	0	-----	0	-----	0	1	0	3	0	0	-----
Frederick.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
District of Columbia:												
Washington.....	0	0	5	0	48	3	10	0	22	0	1	4
Virginia:												
Lynchburg.....	1	0	-----	0	-----	1	1	0	2	0	0	11
Richmond.....	0	0	-----	1	17	2	5	0	7	0	0	3
Roanoke.....	0	0	-----	0	-----	0	0	0	2	0	0	-----
West Virginia:												
Wheeling.....	2	0	-----	0	1	0	0	0	3	0	0	1
North Carolina:												
Raleigh.....	0	0	-----	0	9	0	3	0	1	0	0	-----
Wilmington.....	1	0	-----	0	1	0	1	0	1	0	0	3
Winston-Salem.....	0	0	-----	1	1	0	1	0	8	0	0	2
South Carolina:												
Charleston.....	0	0	23	1	7	0	0	0	3	0	0	1
Georgia:												
Atlanta.....	2	0	17	1	4	1	3	0	3	0	1	1
Brunswick.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
Savannah.....	0	0	11	0	-----	0	0	0	0	0	0	-----
Florida:												
Tampa.....	0	0	-----	0	20	1	2	3	4	0	0	-----
<b>EAST SOUTH CENTRAL</b>												
Tennessee:												
Memphis.....	1	0	5	3	32	0	11	0	9	0	1	2
Nashville.....	0	0	-----	1	33	0	9	0	2	0	0	2
Alabama:												
Birmingham.....	2	0	3	0	1	0	2	0	2	0	0	-----
Mobile.....	0	0	45	0	-----	0	4	0	0	0	0	-----
<b>WEST SOUTH CENTRAL</b>												
Arkansas:												
Little Rock.....	0	0	10	0	10	1	2	0	2	0	0	-----
Louisiana:												
New Orleans.....	*11	0	24	3	7	5	*10	1	5	0	2	1
Shreveport.....	0	0	-----	0	-----	0	4	0	0	0	0	-----
Texas:												
Dallas.....	0	0	1	1	-----	0	5	0	7	0	0	1
Galveston.....	0	0	-----	0	1	0	5	0	0	0	0	1
Houston.....	1	0	-----	1	1	0	7	0	3	0	0	-----
San Antonio.....	0	0	5	0	8	0	5	0	1	0	1	1
<b>MOUNTAIN</b>												
Montana:												
Billings.....	0	0	-----	0	-----	0	2	1	0	0	0	-----
Great Falls.....	2	0	-----	0	-----	0	2	0	1	0	0	-----
Helena.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
Missoula.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
Idaho:												
Boise.....	0	0	-----	-----	1	0	3	0	0	0	0	-----
Colorado:												
Denver.....	1	0	16	1	30	1	12	0	14	0	0	14
Pueblo.....	0	0	-----	0	2	0	2	0	2	0	0	2
Utah:												
Salt Lake City.....	0	0	-----	3	16	0	2	0	8	0	0	-----

## City reports for week ending February 16, 1946—Continued

	Diphtheria cases	Enecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
<b>PACIFIC</b>												
Washington:												
Seattle.....	3	0	-----	0	185	1	5	0	5	0	0	11
Spokane.....	0	9	-----	0	97	0	4	0	7	0	0	4
Tacoma.....	0	0	-----	0	34	0	0	0	7	0	0	-----
California:												
Los Angeles.....	7	0	31	1	80	1	5	1	51	**0	1	6
Sacramento.....	2	0	-----	0	18	1	3	0	1	0	0	-----
San Francisco.....	1	0	9	2	173	2	17	1	14	0	0	2
Total.....	115	6	244	41	6,088	62	494	12	999	0	12	501
Corresponding week, 1945.....	58	-----	99	35	515	-----	496	-----	1,773	0	16	590
Average, 1940-45.....	69	-----	679	151	4,203	-----	521	-----	1,555	2	13	839

<sup>1</sup> 3-year average, 1943-45.

<sup>2</sup> 5-year median, 1941-45.

\* Including report from Charity Hospital.

\*\* For the week ended Feb. 1, 1946, the Army reported 1 case of smallpox in Los Angeles, port of embarkation.

*Anthrax*.—Cases: Philadelphia, 1.

*Dysentery, amebic*.—Cases: New York, 3; Detroit, 1; Houston, 1; Los Angeles, 1.

*Dysentery, bacillary*.—Cases: New York, 5; Chicago, 1; Detroit, 1; Charleston, S. C., 6; Los Angeles, 3.

*Dysentery, unspecified*.—Cases: San Antonio, 8.

*Leprosy*.—Cases: Buffalo, 1.

*Tularemia*.—Cases: Winston-Salem, 1; Memphis, 1; New Orleans, 1.

*Typhus fever, endemic*.—Cases: Tampa, 1; Nashville, 1; New Orleans, 4; Dallas, 1; San Antonio, 1; Los Angeles, 1.

*Rates (annual basis) per 100,000 population, by geographic groups, for the 87 cities in the preceding table (estimated population, 1945, 34,217,200)*

	Diphtheria case rates	Enecephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Pollomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	10.5	0.0	7.8	5.2	201	10.5	120.2	2.6	233	0.0	0.0	235
Middle Atlantic.....	9.7	0.5	11.1	2.8	1,003	6.9	68.0	1.9	187	0.0	0.0	77
East North Central.....	13.5	2.5	3.7	4.9	1,487	8.6	57.6	0.0	130	0.0	2.5	86
West North Central.....	36.2	2.0	4.0	2.0	979	16.1	82.5	0.0	105	0.0	2.0	38
South Atlantic.....	31.8	0.0	100.5	13.4	340	15.1	75.4	5.0	167	0.0	3.3	62
East South Central.....	17.7	0.0	312.8	23.6	390	0.0	153.5	0.0	77	0.0	5.9	24
West South Central.....	34.4	0.0	114.8	14.3	77	17.2	109.0	2.9	52	0.0	8.6	11
Mountain.....	23.8	0.0	127.1	31.8	389	7.9	182.7	7.9	199	0.0	0.0	127
Pacific.....	20.6	0.0	63.3	4.7	928	7.9	53.8	1.2	134	0.0	1.6	36
Total.....	17.6	0.9	37.3	6.3	930	9.5	75.5	1.8	153	0.0	1.8	77

## TERRITORIES AND POSSESSIONS

## Hawaii Territory

*Plague (rodent)*.—A rat found on December 26, 1945, in District 1A, Kukuihaele area, Honokaa, Hamakua District, Island of Hawaii, T. H., was proved positive for plague on December 31, 1945. Two rats found on January 11, 1946, in District 4A, Kapulena area, Honokaa, Hamakua District, Island of Hawaii, T. H., were proved positive for plague on January 16 and January 19, 1946, respectively.

Panama Canal Zone

*Notifiable diseases—December 1945.*—During the month of December 1945, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	Panama		Colon		Canal Zone		Outside the Zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox.....	3		4		6		1		14	
Diphtheria.....	30		2		2		8		42	
Dysentery:										
Amebic.....	2						6		8	
Bacillary.....	2	1	1		3		1		7	1
Malaria <sup>1</sup> .....	12		7		51		67	5	137	5
Measles.....					1		1		2	
Meningitis, meningococcus.....	1		3				1		5	
Mumps.....	2		1		6				9	
Paratyphoid fever.....	3		1				1		5	
Pneumonia.....		5		1	43	1		2	<sup>2</sup> 43	9
Poliomyelitis.....	1								1	
Relapsing fever.....							2		2	
Scarlet fever.....							1		1	
Tuberculosis.....		25		7	5			5	<sup>2</sup> 5	37
Typhus fever (murine).....							2		2	
Whooping cough.....					4			1	<sup>2</sup> 4	1

<sup>1</sup> 19 recurrent cases.

<sup>2</sup> In the Canal Zone only.

# FOREIGN REPORTS

## CANADA

*Provinces—Communicable diseases—Week ended January 26, 1946.*—During the week ended January 26, 1946, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox.....		11	1	160	305	50	49	64	140	780
Diphtheria.....		2	4	35		7			2	50
Dysentery:										
Amebic.....						1				1
Bacillary.....					1				1	2
German measles.....				6	17			6	8	37
Influenza.....		1,075			126	2			28	1,231
Measles.....		20	10	193	951	5	14	13	112	1,318
Meningitis, meningococcus.....				1	27				1	3
Mumps.....		1	1	92	221	42	13	74	124	574
Poliomyelitis.....				1	1		1			3
Scarlet fever.....		7	20	72	60	12		16	28	223
Tuberculosis (all forms).....		20	5	113	50		16	14	49	267
Typhoid and paratyphoid fever.....				11	1				3	15
Undulant fever.....				1						1
Veneral diseases:										
Gonorrhoea.....		12	17	133	182	38	36	53	94	565
Syphilis.....		12	2	126	140	13	13	13	25	344
Whooping cough.....			2	156		6	5	2	1	172

## CUBA

*Habana—Communicable diseases—4 weeks ended February 2, 1946.*—During the 4 weeks ended February 2, 1946, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis.....	1		Malaria.....	2	
Chickenpox.....	11		Tuberculosis.....	13	5
Diphtheria.....	30	2	Typhoid fever.....	32	1

*Provinces—Notifiable diseases—4 weeks ended January 26, 1946.*—During the 4 weeks ended January 26, 1946, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana <sup>1</sup>	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer.....	1		3	16		12	32
Cerebrospinal meningitis.....		1					1
Chickenpox.....		8					11
Diphtheria.....	2	25	3		1		31
Hookworm disease.....		24		3			27
Leprosy.....	1	2					3
Malaria.....	2	12		2	3		56
Measles.....							3
Rabies.....		1					2
Tuberculosis.....	8	38	9	56	26	58	195
Typhoid fever.....	13	56	3	30	13	60	175
Typhus fever (murine).....					1		1

<sup>1</sup> Includes the city of Habana.

## FINLAND

*Notifiable diseases—December 1945.*—During the month of December 1945, cases of certain notifiable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	9	Ophthalmia neonatorum.....	9
Chickenpox.....	1,300	Paratyphoid fever.....	267
Conjunctivitis.....	19	Pneumonia (all forms).....	2,394
Diphtheria.....	1,568	Poliomyelitis.....	16
Dysentery, unspecified.....	12	Puerperal fever.....	58
Gastroenteritis.....	2,509	Rheumatic fever.....	353
Gonorrhoea.....	1,483	Scabies.....	4,840
Hepatitis, epidemic.....	1,037	Scarlet fever.....	296
Influenza.....	850	Syphilis.....	570
Laryngitis.....	43	Typhoid fever.....	77
Lymphogranuloma inguinale.....	1	Vincent's angina.....	43
Malaria.....	3	Weill's disease.....	1
Measles.....	57	Whooping cough.....	1,007
Mumps.....	485		

## JAMAICA

*Notifiable diseases—4 weeks ended February 9, 1946.*—During the 4 weeks ended February 9, 1946, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis.....	3	2	Puerperal fever.....		3
Chickenpox.....		8	Scarlet fever.....	4	5
Diphtheria.....	2	6	Tuberculosis, respiratory.....	44	61
Dysentery, unspecified.....		5	Typhoid fever.....	24	121
Erysipelas.....	2	1	Typhus fever (murine).....	5	2
Leprosy.....		1			

## NORWAY

*Notifiable diseases—November 1945.*—During the month of November 1945, cases of certain notifiable diseases were reported in Norway, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	6	Measles.....	8,510
Diphtheria.....	567	Mumps.....	162
Dysentery, unspecified.....	13	Pneumonia (all forms).....	2,306
Encephalitis, epidemic.....	2	Poliomyelitis.....	99
Erysipelas.....	495	Rheumatic fever.....	203
Gastroenteritis.....	3,628	Scarlet fever.....	483
Gonorrhoea.....	645	Scabies.....	7,348
Hepatitis, epidemic.....	1,294	Syphilis.....	124
Impetigo contagiosa.....	5,002	Tuberculosis (all forms).....	641
Influenza.....	2,377	Typhoid fever.....	5
Laryngitis, acute.....	12,622	Typhus fever.....	8
Lymphogranuloma inguinale.....	2	Weill's disease.....	8
Malaria.....	1	Whooping cough.....	3,330

## REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during recent months. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

### Smallpox

*Gold Coast.*—For the week ended February 2, 1946, 112 cases of smallpox with 21 deaths were reported in Gold Coast.

*Morocco (French).*—For the period February 1–10, 1946, 175 cases of smallpox were reported in French Morocco. Regions reporting the highest incidence are: Agadir and frontier districts, 6; Casablanca, 58; Fez, 28; Marrakech, 19; Meknes, 11; Oujda, 1; Rabat, 52.

*Sudan (French).*—For the period January 21–31, 1946, 152 cases of smallpox were reported in French Sudan.

### Typhus Fever

*Belgian Congo.*—Typhus fever was reported in Belgian Congo as follows: Weeks ended—January 26, 1946, 240 cases, 23 deaths; February 2, 1946, 155 cases, 16 deaths.

*Ecuador.*—For the month of January 1946, 106 cases of typhus fever with 2 deaths were reported in Ecuador, including 41 cases reported in Riobamba Province and 11 cases reported in Cotopaxi Province.

*Egypt.*—For the week ended January 19, 1946, 78 cases of typhus fever were reported in all of Egypt.

*Morocco (French).*—For the period February 1–10, 1946, 153 cases of typhus fever were reported in French Morocco. Regions reporting the highest incidence are: Agadir and frontier districts, 28; Casablanca, 34; Marrakech, 59; Meknes, 12; Fez, 6; Oujda, 4; Rabat, 10.

*Turkey.*—For the week ended February 16, 1946, 69 cases of typhus fever were reported in Turkey. Ports reporting the highest incidence are: Balıkesir, 1; Icel, 3; Istanbul, 4; Izmir, 4; Kocaeli, 1; Samsun, 1.