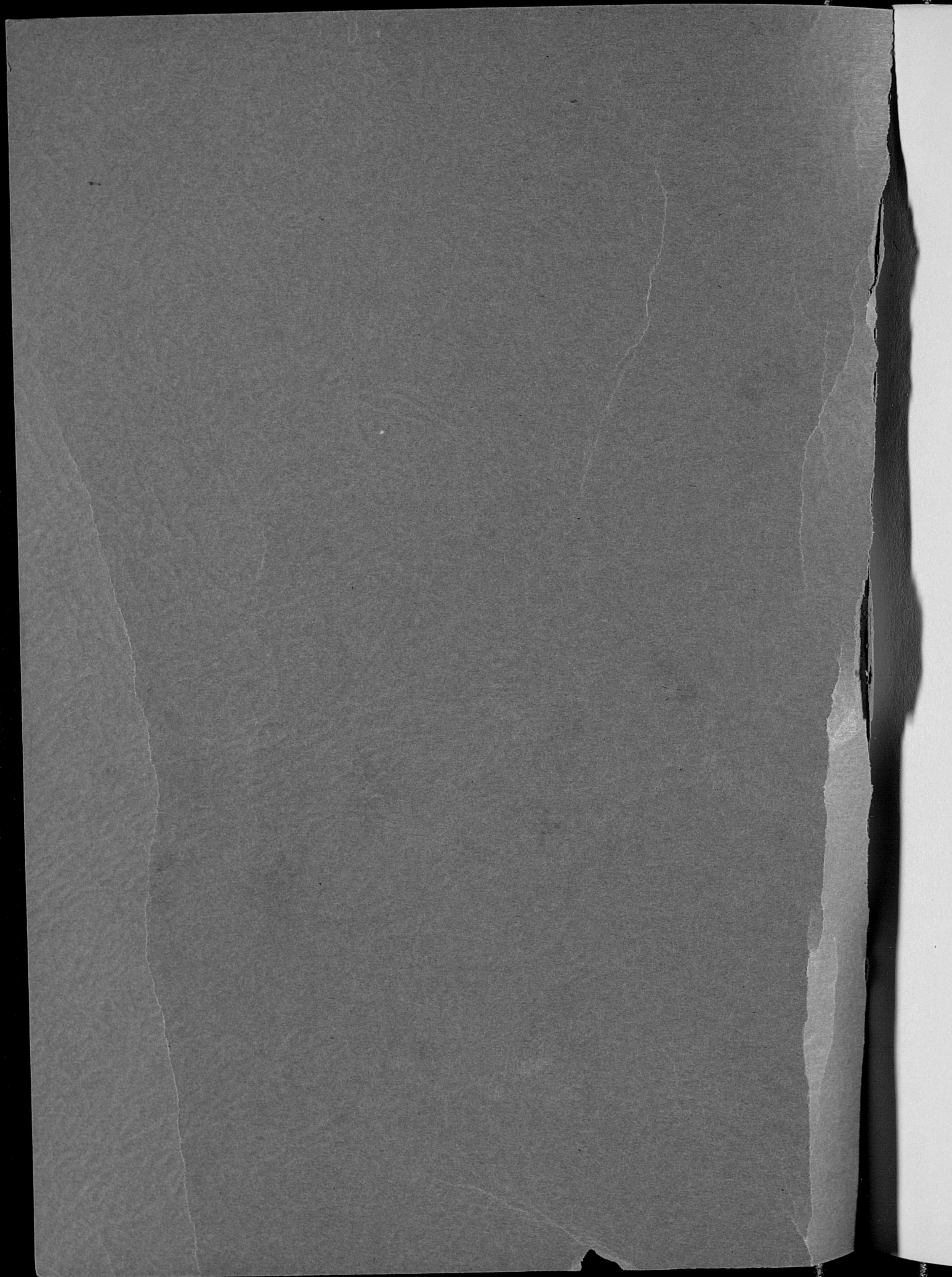


REPORT
OF
SANITARY SURVEY

1940-41

DEPARTMENT OF PUBLIC HEALTH
LOUISVILLE. KY.



REPORT OF THE
SANITARY SURVEY
OF
LOUISVILLE, KENTUCKY
1940 - 1941
WORK PROJECTS ADMINISTRATION
(Official Project #165-1-43-54)
(Work Project #6228-56)

Under Direction of
FOOD AND SANITARY DIVISION
City of Louisville Health Department
Charles M. Davidson
Sanitary Engineer

Published by the
CITY OF LOUISVILLE HEALTH DEPARTMENT
Dr. Hugh R. Leavell
Director

MEMORANDUM

FOR THE RECORD

TO :

FROM :

DATE :

SUBJECT :

(Official Project, 100-1-42-42)

(Work Project 400-40)

1. On 10/10/42

at the residence of

Mr. [Name] of the

City of [City]

was observed

by the

City of [City]

at [Address]

at [Address]

Foreword

This booklet has been prompted by the desire of the City Health Department to make Louisville a better City in which to live. It has been generally known that there existed a great many insanitary privies, that too many premises were not supplied with City water, that rats and hog pens were very much in evidence; but this information was not in usable form.

The staff of the Food and Sanitary Division is much too small for even their present duties and could not undertake this survey alone. It is with deep appreciation that the aid of the Work Projects Administration is acknowledged. With these combined efforts accurate information on 13,504 premises is now available.

Louisville, Kentucky
September 29, 1941

Charles M. Davidson
Sanitary Engineer

DEFINITIONS OF TERMS USED IN MAKING STUDY

- Adequate Screening - Wire screening, in good condition, covering every opening from outside into the premise.
- Adjacent - If city water lines or city sewer lines abut any side of the property, it is adjacent.
- Animal Outbuilding - Outbuilding used to house any animals other than hogs or chickens.
- Carry containers - The carrying of water from one premise to another, as a regular occurrence, the premise to which it is carried having no other drinking water.
- Cesspool - A pit into which sewage is directly discharged. Can be loosely lined or not lined at all. A disposal system by itself and not to be confused with an effluent pit.
- Chemical Vault - A vault privy equipped with chemical tanks which are built water-tight. They are usually made of metal and are filled with water in which caustic soda, or similar chemical is dissolved. The organic matter is decomposed chemically and the bacteria are largely destroyed.
- Community System - A private system that serves more than one premise.
- Drainage field - A series of farm tile constructed with open joints, laid in trenches in loose material such as cinders, gravel or crushed rock, through which effluent may drain and leach into the earth.
- Effluent Pit - A pit dug into the earth to collect the effluent from a septic tank or drainage field. The effluent leaches into the soil. This is used only as a part of a sewerage system.
- Enumeration District - A geographic area composed of a number of blocks bounded by definite streets or roads, used as a working area in the survey and for identification purposes.
- Field Schedule - Enumeration card answering questions pertaining to the structure and sanitation facilities.
- Flush Toilet - A toilet, equipped with running water, connected to a water carriage sewerage system.

- Flytight - A privy so built that flies cannot enter the pit or vault. This necessitates automatic self-closing seats and no opening to light in the pit or vault.
- Grease Trap - A small, metal, tile or concrete basin installed for the sole purpose of collecting grease, soaps or similar substances from waste before it enters a septic tank, cess-pool or drainage field.
- Hog Pen - Outbuilding or pen used to house hogs.
- Inadequate screening - Screening in such condition that flies can enter, or the existence of a single opening into the premise that is not screened.
- Other - Any discharge that does not fit regular classifications.
- Outbuilding - One used to house animals.
- Pit Privy - A privy built so that its contents leach into the soil. They are usually found to be loosely lined with timber, stone or brick, and in many instances there is no lining. Not to be confused with a vault privy.
- Plain Vault - A vault privy with no outlet or chemical tanks. This type must be cleaned out periodically.
- Residential Premise - Any structure wherein human beings live.
- Riser - A seat constructed over the privy pit or vault, which may or may not have flytight lids.
- Septic Tank - A water-tight tank, with a definite inlet and outlet, constructed in the earth to provide for the collection of sewage. It may be constructed of concrete, brick, tile or metal and may or may not be divided into compartments. (If there was no outlet, the facility was enumerated as a cesspool.)
- Septic vault - A vault privy wherein the organic matter is decomposed, much of it being liquefied or gasified. An overflow pipe is provided through which the overflowing liquids pass into the soil.
- Sinkhole - A natural or artificial opening into the earth into which sewage may be discharged. They are invariably connected to underground and cavernous formations through which water may be flowing.
- Sump Pump - A pump used to discharge water from a basement or cellar.

Form Y and Z		SANITARY SURVEY		LOUISVILLE, KENTUCKY		SOURCE <input type="checkbox"/>	
NAME _____		OWNER OR AGENT _____		E. D. _____		BLOCK _____	
ADDRESS _____		OCCUPANT _____		BUSINESS _____		PREMISE _____	
ENUMERATOR _____		DATE _____		TENANT <input type="checkbox"/>		OCCUPANTS _____	
VACANT <input type="checkbox"/>							
I WATER		II SEWAGE		III TOILETS		IV PREMISES	
A. TYPE WATER SUPPLY		A. TYPE OF SEWAGE DISP.		H. CONSTRUCTION OF CESSPOOL		O. DISCHARGE OF SEPTIC TANK	
1. City <input type="checkbox"/>		1. City System <input type="checkbox"/>		1. Earth <input type="checkbox"/>		1. Drainage Field <input type="checkbox"/>	
2. Well <input type="checkbox"/>		2. Septic <input type="checkbox"/>		2. Concrete <input type="checkbox"/>		2. Effluent Pit <input type="checkbox"/>	
3. Cistern <input type="checkbox"/>		3. Cesspool <input type="checkbox"/>		3. Brick, Tile, or Stone <input type="checkbox"/>		3. Stream or Pond <input type="checkbox"/>	
4. Spring <input type="checkbox"/>		4. Drainage Field <input type="checkbox"/>		4. Sinkhole <input type="checkbox"/>		4. Sinkhole <input type="checkbox"/>	
5. Other <input type="checkbox"/>		5. Sinkhole <input type="checkbox"/>		5. Other <input type="checkbox"/>		5. Other <input type="checkbox"/>	
6. Surface <input type="checkbox"/>		6. Surface <input type="checkbox"/>		6. No Discharge <input type="checkbox"/>		6. No Discharge <input type="checkbox"/>	
7. Stream or Pond <input type="checkbox"/>		7. Stream or Pond <input type="checkbox"/>		7. Stream or Pond <input type="checkbox"/>		7. Stream or Pond <input type="checkbox"/>	
8. Privy <input type="checkbox"/>		8. Privy <input type="checkbox"/>		8. Privy <input type="checkbox"/>		8. Privy <input type="checkbox"/>	
B. KIND OF SYSTEM		I. CONSTRUCTION OF EFFLUENT PIT		F. DISCHARGE OF DRAINAGE FIELD		B. KIND OF PRIVY	
1. Private <input type="checkbox"/>		1. Earth <input type="checkbox"/>		1. Surface <input type="checkbox"/>		1. Vault <input type="checkbox"/>	
2. Community <input type="checkbox"/>		2. Brick, Tile, or Stone <input type="checkbox"/>		2. Effluent Pit <input type="checkbox"/>		2. Pit <input type="checkbox"/>	
3. Public <input type="checkbox"/>		3. Public <input type="checkbox"/>		3. Stream or Pond <input type="checkbox"/>		3. Surface <input type="checkbox"/>	
4. Industrial <input type="checkbox"/>		4. Industrial <input type="checkbox"/>		4. Sinkhole <input type="checkbox"/>		4. None <input type="checkbox"/>	
C. LOCATION OF SUPPLY		J. CONDITION OF SEPTIC TANK		G. GREASE TRAP		C. TYPE OF VAULT	
1. Inside Struct. <input type="checkbox"/>		1. Good <input type="checkbox"/>		1. Yes <input type="checkbox"/>		1. Septic <input type="checkbox"/>	
2. Outside Struct. <input type="checkbox"/>		2. Bad <input type="checkbox"/>		2. No <input type="checkbox"/>		2. Chemical <input type="checkbox"/>	
3. Carry Contain-er <input type="checkbox"/>		3. Public <input type="checkbox"/>		3. Public <input type="checkbox"/>		3. Plain <input type="checkbox"/>	
D. TYPE OF WELL		K. CONDITION OF CESSPOOL		D. OVERFLOW PIPE		D. HEAT	
1. Drilled <input type="checkbox"/>		1. Good <input type="checkbox"/>		1. Yes <input type="checkbox"/>		1. Gas <input type="checkbox"/>	
2. Driven <input type="checkbox"/>		2. Bad <input type="checkbox"/>		2. No <input type="checkbox"/>		2. Other <input type="checkbox"/>	
3. Dig <input type="checkbox"/>		3. Sinkhole <input type="checkbox"/>		3. Sinkhole <input type="checkbox"/>		3. Other <input type="checkbox"/>	
E. STORAGE TANK		L. CONDITION OF DRAINAGE FIELD		E. OVERFLOW DISCHARGE		E. TYPE OF GAS HEATER	
1. Yes <input type="checkbox"/>		1. Good <input type="checkbox"/>		1. Stream or Pond <input type="checkbox"/>		1. Open <input type="checkbox"/>	
2. No <input type="checkbox"/>		2. Bad <input type="checkbox"/>		2. Surface <input type="checkbox"/>		2. Indirect <input type="checkbox"/>	
		3. Sinkhole <input type="checkbox"/>		3. Surface <input type="checkbox"/>		3. Vent Through Roof <input type="checkbox"/>	
				4. Pit or Tank <input type="checkbox"/>		a. Yes <input type="checkbox"/> b. No <input type="checkbox"/>	
				5. Drainage Field <input type="checkbox"/>			
F. SOURCE DISTANCE FROM		M. CONDITION OF EFFLUENT PIT		F. FLY TIGHT		V. OUT-BUILDINGS	
1. Premise _____ Ft. <input type="checkbox"/>		1. Good <input type="checkbox"/>		1. Yes <input type="checkbox"/>		A. TYPE <input type="checkbox"/>	
2. Barnyard _____ Ft. <input type="checkbox"/>		2. Bad <input type="checkbox"/>		2. No <input type="checkbox"/>		1. Animal <input type="checkbox"/>	
3. Ex. Disp. _____ Ft. <input type="checkbox"/>		3. None <input type="checkbox"/>		3. No <input type="checkbox"/>		2. Hog Pen <input type="checkbox"/>	
				4. No <input type="checkbox"/>		3. Chicken House <input type="checkbox"/>	
G. DRAINAGE TOWARD WATER SOURCE - FROM		N. DISCHARGE OF COMMUNITY SYSTEM		H. POSITION OF EXCRETA SURFACE		B. CLEANLINESS <input type="checkbox"/>	
1. Drainage Field <input type="checkbox"/>		1. Public Sewer <input type="checkbox"/>		1. Over Surface <input type="checkbox"/>		1. Animal <input type="checkbox"/>	
2. Cesspool <input type="checkbox"/>		2. Stream or Pond <input type="checkbox"/>		2. At Surface <input type="checkbox"/>		a. Yes <input type="checkbox"/>	
3. Privy <input type="checkbox"/>		3. Sinkhole <input type="checkbox"/>		3. Under 5 Feet <input type="checkbox"/>		b. No <input type="checkbox"/>	
4. Effluent Pit <input type="checkbox"/>		4. Surface <input type="checkbox"/>		4. Over 5 Feet <input type="checkbox"/>		2. Hog Pen <input type="checkbox"/>	
5. Barnyard <input type="checkbox"/>		5. Other <input type="checkbox"/>				a. Yes <input type="checkbox"/>	
6. Terrain <input type="checkbox"/>						b. No <input type="checkbox"/>	
7. Away <input type="checkbox"/>						3. Chicken House <input type="checkbox"/>	
						a. Yes <input type="checkbox"/>	
						b. No <input type="checkbox"/>	
H. AUXILIARY SUPPLY CONNECTED TO CITY				I. SUPERSTRUCTURE CONDITION		C. MANURE DISPOSAL <input type="checkbox"/>	
1. Yes <input type="checkbox"/>				1. Good <input type="checkbox"/>		1. Screened Vault <input type="checkbox"/>	
2. No <input type="checkbox"/>				2. Fair <input type="checkbox"/>		2. Unscreened Vault <input type="checkbox"/>	
				3. Bad <input type="checkbox"/>		3. No Vault <input type="checkbox"/>	

This card was used to collect all field information. Form Y is a white card and Form Z is yellow. Form Y was filled out on all premises, but in the event additional water systems or sewerage systems were present, yellow cards were also filled out on each of these secondary facilities.

METHOD OF OPERATION

The identification map of the Louisville Real Property Survey of 1938, made by the Louisville Municipal Housing Commission and the Louisville Planning and Zoning Commission with the assistance of the Works Progress Administration, was used by this survey in the plan of enumeration, thus making the enumeration districts and block numbers of the two surveys correspond.

The first work step was to refer to the field schedules of the Real Property Survey, which carried information concerning each and every dwelling in the City of Louisville. From these were taken the addresses of all residential premises that did not have an inside flush toilet. Then the sanitary inspectors' files were consulted for any additional premises known to have a privy. To these were added all residential premises for which building permits had been issued since the time of enumeration of the Real Property Survey. In this manner the addresses of premises which might have had insanitary conditions was believed to have been obtained, though it should be noted that not every premise in the city was inspected.

Each address was written on a field schedule, and then each schedule was numbered as to block and enumeration district according to the identification map. After checking for possible duplications, the cards were then ready for enumeration. A total of 13,504 residential premises in the city were represented, out of a total of 64,663 residential premises for the city as a whole.

At this time the supervisor held a training class for a week and thoroughly went over the definitions and plans for enumeration with all workers.

The workers were divided into five squads, four of which worked in the field and one in the office. Each squad was headed by a squad leader. A squad took an enumeration district and compiled all information before entering another district. A field clerk was assigned to each squad. The schedules were checked for plausibility and completeness by this clerk, then checked by the squad leader before they were turned in at the office, where they were checked again by the office workers. On completion of enumeration the schedules were checked once more and coded for tabulation, and the coding checked.

Block tabulation was made and recapitulated before table tabulation was begun. After table tabulations were completed, they were checked and correlated with block tabulation.

All data gathered was then placed within the files of the City Health Department, and is accessible to qualified and authorized persons. This is the first time data that is so complete in detail has been in the possession of the Health Department. Copies of this report may be obtained by writing to the City of Louisville Health Department, City Hall, Louisville, Kentucky.

SANITATION IN LOUISVILLE

Prior to 1828, Louisville had no organized department of health and sanitation. No one person or group of persons had vested authority to enforce health regulations. However, in 1828 the appointment of a Health Officer for the City of Louisville was authorized. Thirty-eight years later, in 1866, the first Board of Health was organized.

The present-day sewerage system was begun in 1871 with the installation of its first vitally important unit. Sewage disposal was becoming a greater problem with the rapid growth of the city. This first unit was completed two years later.

In 1878 a retrogressive step was taken when the position of Health Officer was combined with that of Chief of Police. Thus, the Chief of Police in Louisville had to assume the added responsibilities of matters of sanitation. This arrangement proved unsatisfactory and the two positions were soon separated.

In 1902 a laboratory was established and staffed with a chemist and bacteriologist. This aided considerably in matters of sanitation.

In 1905 the filter plant of the Louisville Water Company was built. After the plant had been in operation for one year, it was found that the death rate from typhoid fever was reduced 55%.

Within the next few years a separate Health Department was established in the city government, and a physician placed at its head as Health Officer. (The present Health Officer, Dr. Hugh R. Leavell, is the first full time Health Officer to serve the community.) A number of Sanitation Inspectors then became part of the department, and for some time functioned directly under the

Health Officer. Late in 1918 a Food and Sanitary Division was formed within the Health Department, and the Secretary of the Health Department became also the Chief of this new Food and Sanitary Division. The Sanitary Inspectors were then made responsible directly to the Chief of this division.

Organization, development, and progress continued, and, as a result, the City of Louisville Health Department was prepared in 1935 to deal with an epidemic of infantile paralysis which swept over the city. When cases were reported to the Health Department, sanitary inspections were made of the premises concerned. In a majority of the original cases it was found that the premises were not provided with sanitary toilet facilities or proper disposal of waste water.

At that time there were 11,936 privies in use. Sixty workers, furnished by the Works Progress Administration, were employed to disinfect these privies. Eight tons of chloride of lime were used in this disinfection. Notices were sent to all property owners, where a sewer abutted the property line, to install flush toilets and to clean the pits of the privies to a depth of ten feet and fill them with cinders or dirt. At the close of the fiscal year 4,129 privies had been eliminated and flush toilets installed.

In April, 1937 further progress was made in the department of health when a Sanitary Engineer was put at the head of the Food and Sanitary Division.

Today the Food and Sanitary Division of the Health Department is recognized as a vital part of the government in the City of Louisville. While there may still be phases of the program needing improvement, the development of health and sanitation

services in Louisville has made and will continue to make the city a better place in which to live.

THE LOUISVILLE SANITARY SURVEY

This survey was operated under the sponsorship of the City Health Department, Dr. Hugh R. Leavell, Health Officer, with the co-operation of the Work Projects Administration, which provided funds for necessary workers. The survey opened on September 28, 1940, with a staff of thirty WPA workers and one supervisory employee. This number was later increased to sixty-one WPA workers and two supervisory employees. Mr. Charles M. Davidson, Sanitary Engineer, was director of the project, which operated under the Food and Sanitary Division of the Health Department. Sanitary inspectors of the Division acted as technical supervisors.

Mr. Irving Levy, project supervisor, was in charge for the WPA. Approximately three months were required for field work, after which the staff was reduced to thirty workers to handle the tabulations. The latter work was completed in slightly more than three months.

I

WATER

General

The survey found 746 residential premises in Louisville that do not have a connection to the city water system. These premises are fairly well distributed throughout the city with the exception of three districts. One district, known as "Little Africa", (Enumeration District No. 7), contains 251 premises without city water; another, the Highlands north of Bardstown Road, has three such premises; the third, the Highlands south of Bardstown Road, has one such premise. There are a number of premises located so that they cannot connect to the city water system, but the large majority of these are located in alleys between two streets that have city water mains. These premises can be serviced at the present time only by crossing another owner's property.

When it is considered that numerous houses have been built on the rear of large lots, it is not difficult to understand that there are 540 premises that are using carry containers. Many premises so supplied are quite likely adjacent to a city water main, but for various reasons the owner has failed to provide separate service.

At first reading it may seem incongruous that 540 premises are using carry containers, that there are 322 sources other than city water, still 746 premises without city water. But there is no relationship to be assumed between these statements. It is very possible for all of the 540 premises to be using city water, though carried from nearby residences.

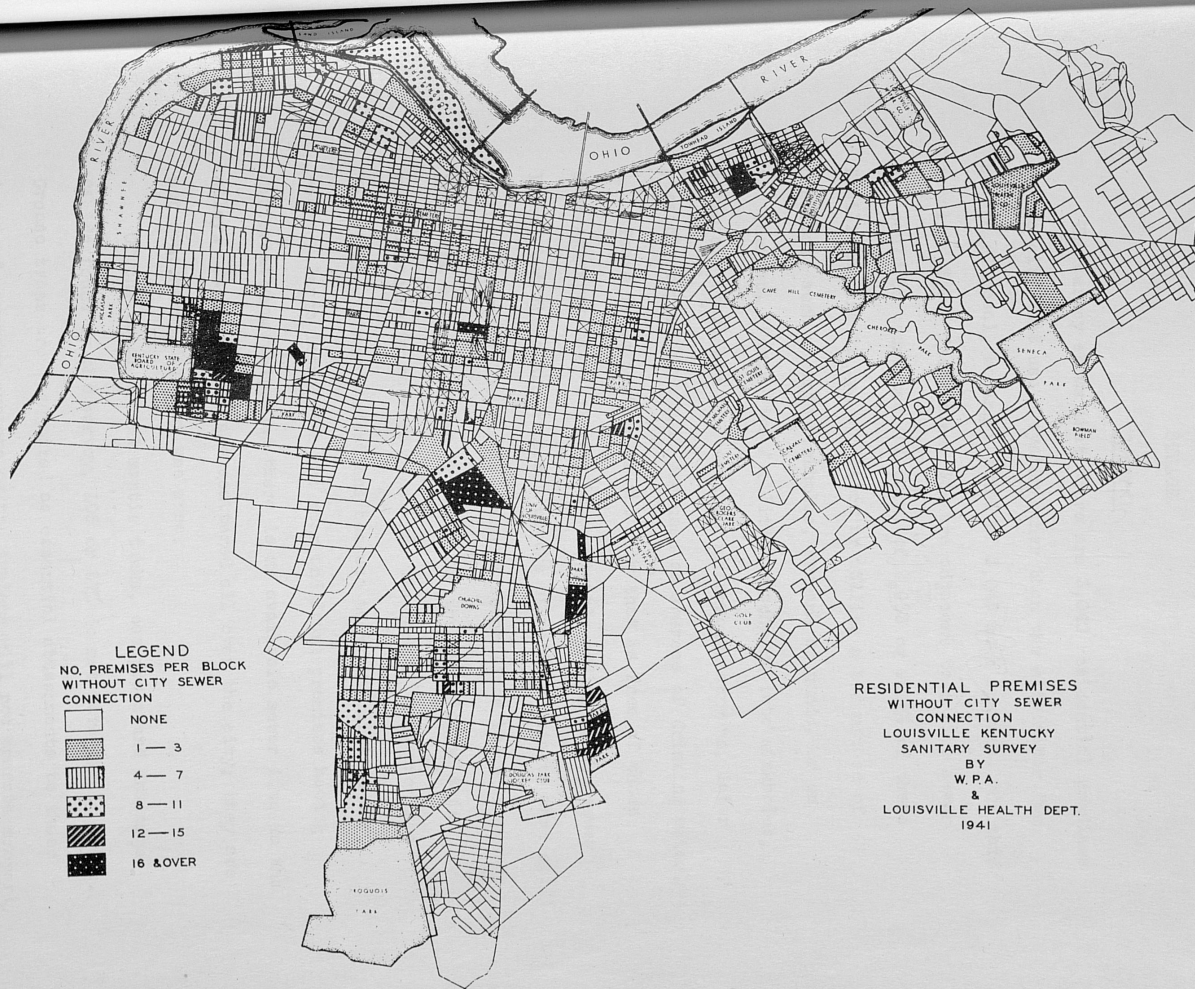
There are seventy-four premises which have both city water and a cistern, well or spring.

Sources







There are 382 premises using either cistern, well or spring water. As there are only 322 such sources, it is quite evident that, in many instances, one source is supplying more than one premise. A tabulation of the cisterns, springs and different types of wells indicates that thirty-four community systems are supplying water to ninety-three premises. The number of sources are: Wells drilled, 66; driven, 117; dug, 34; Total wells, 217; Cisterns, 104; Springs, 1.

Of the 382 premises using well, cistern or spring water, 210 or 55% of them are located in the area just east of the State Fairgrounds commonly called "Little Africa." It is generally agreed that the soil in this area is of a very sandy texture, and in most instances the water has received a natural purification to some extent.

Approximately 25% or eighty-one of the total 322 actual sources, are so situated that drainage from privy, cesspools, barnyard or the general terrain is away from the source. This shows that 75% of the water sources other than city water are receiving drainage from a fixed possible source of pollution.



LEGEND
 NO. PREMISES PER BLOCK
 WITHOUT CITY SEWER
 CONNECTION

	NONE
	1 — 3
	4 — 7
	8 — 11
	12 — 15
	16 & OVER

**RESIDENTIAL PREMISES
 WITHOUT CITY SEWER
 CONNECTION**
 LOUISVILLE KENTUCKY
 SANITARY SURVEY
 BY
 W.P.A.
 &
 LOUISVILLE HEALTH DEPT.
 1941

II

SEWAGE

General

The survey shows that there are 3,040 residential premises in the city that use a system other than the city sewer for sewage disposal, having a total of 3,045 such systems. Of this total of 3,045 facilities, 33% are adjacent to a city sewer and could be connected. A total of 2,933 or 96.8% of these facilities are in bad condition or utilize a bad method of disposal, such as into sinkholes, streams or ponds, or on the surface. Forty-five facilities discharge into sinkholes, which are invariably connected to underground streams, later possibly tapped by a well and used as sources of drinking water.

There is no section of the city that is free of these sewerage systems. The city is constantly adding to the sewer lines, but there are numerous blocks of various streets that still have no sewers. The installation of sewer lines is an enormous job. The city has grown too fast for the building of this modern necessity to keep pace with the needs. Many premises do not have sewer connections because they are built on the rear of large lots, with the rear and front premises having different ownership, and there is no available sewer line in the alley. Such premises are scattered all over the city; they are not concentrated in any one area.

Of the total of 184 septic tanks, cesspools and drainage fields found by the survey, 105 or 57% do not have grease traps. Grease traps are recognized as essential attachments to these types of sewerage systems as the systems will not operate properly very long without them.

Septic Tanks

The survey found ninety-three premises having septic tanks (See page Method of Operation). Thirty of these are in bad condition, and thirty-one are adjacent to a city sewer and could be eliminated by a connection to same. The final discharges of the septic tanks are as follows: Sinkhole, 30; Stream or pond, 12; Surface, 22; Drainage Field, 8; Effluent Pit, 17; Other, 4.

Caution should be exercised in interpreting these figures. There are numerous places in exclusive districts and in subdivisions of moderately priced homes where it has not been practical to build sewers. So there are a great many more septic tanks than are shown by this survey. In most cases these septic tanks are functioning properly, but when sewers are made available owners are notified to connect.

Cesspools

Eighty premises were found utilizing eighty-one cesspools of which seventy are in bad condition. Twenty-one have a city sewer line adjacent to the property line and should be connected to it. Only three of these cesspools have an overflow pipe, one discharging to a sinkhole and two discharging to the surface.

Drainage Fields

The drainage field is the system found to be used by ten premises. Eight of these are in bad condition. Seven of them are adjacent to a city sewer, and could be connected to it. One drainage field discharges to a stream, eight discharge to the surface and one is classified as "other" discharge.

Sinkhole

Fourteen premises were found to be discharging their sewage directly into a sinkhole. Five of these have a city sewer adjacent.

Surface

The largest number of premises using other than city sewer to dispose of waste matter fall under this category. There are 2,758 premises disposing of sewage on the surface of the ground, with 910 of them having city sewer available. In many instances these premises have privies, but throw waste water from kitchen and bath onto the surface of the ground at the most convenient place. Except for the two districts before mentioned as having so few systems other than city sewer, these are widely distributed over the city.

Stream or Pond

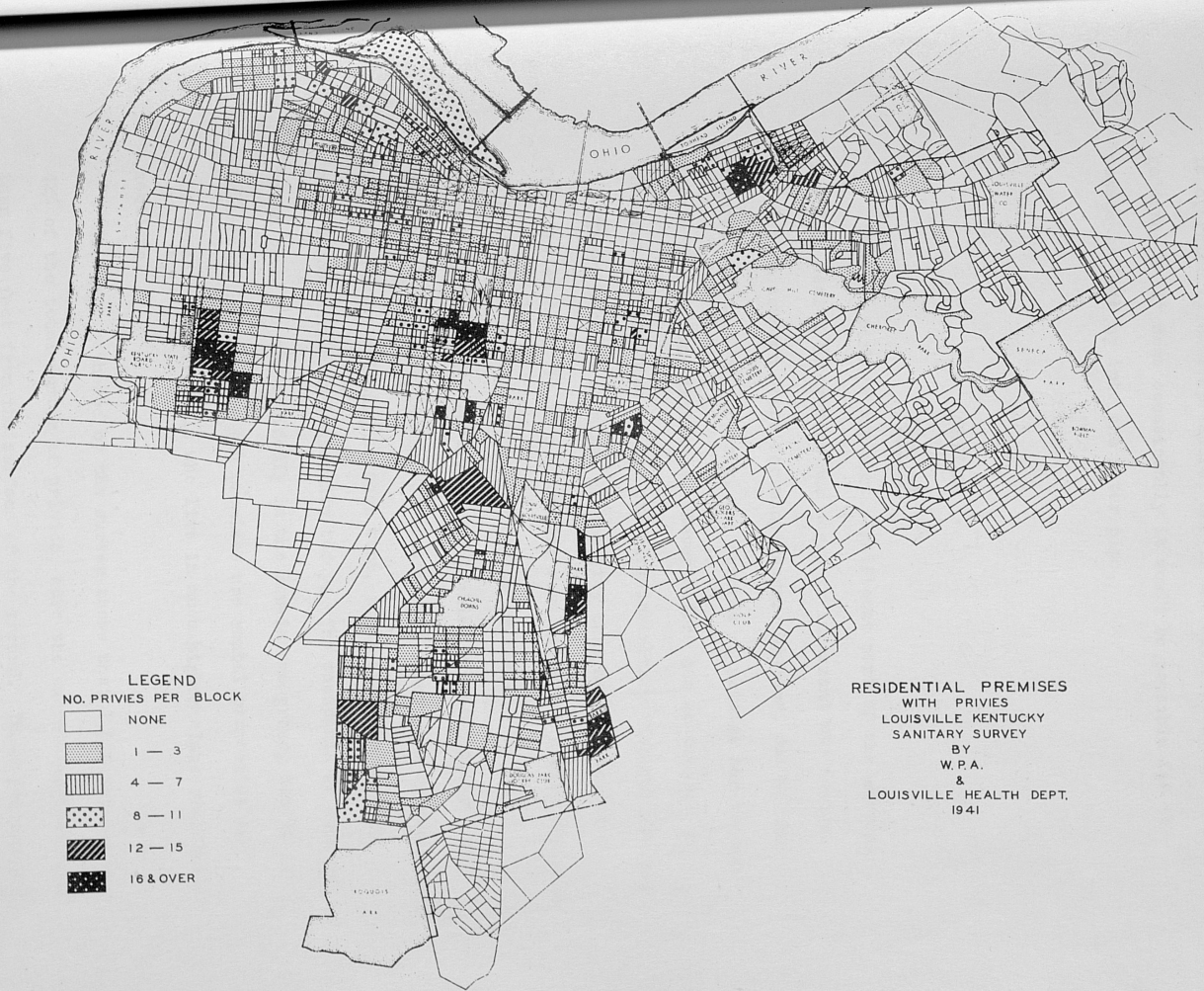
Thirty-seven premises discharge their sewage directly to a stream or pond. Twenty-one of these can connect to the city sewer which is adjacent to the property.

Privy

The survey shows that there are fifty-two premises that throw all waste water into a privy, and that twenty-seven of these can connect to the city sewer.

Sump Pumps

The survey was not all-covering as to sump pumps, for it would be necessary to visit every premise in the city to obtain complete information on this subject. (See Method of Operation). However, sixteen power-driven sump pumps and thirty-six water-ejector sump pumps were found. The latter type is very dangerous as it affords a possibility of pollution to the water system in use. It



LEGEND
NO. PRIVIES PER BLOCK

□	NONE
▨	1 — 3
▩	4 — 7
▧	8 — 11
▦	12 — 15
▤	16 & OVER

RESIDENTIAL PREMISES
WITH PRIVIES
LOUISVILLE KENTUCKY
SANITARY SURVEY
BY
W.P.A.
&
LOUISVILLE HEALTH DEPT.
1941

is operated by water pressure, and if the water pressure should go down, as it does occasionally it would be possible for the sewage to back up into the water pipe.

III

PRIVIES

General

This is perhaps the most significant part of the survey. The City Health Department has waged an incessant war against privies in sewered areas for many years. However, due to the natural exchange of property, the records on privies had become inaccurate in many instances. Never before has so careful an enumeration been made of the existing insanitary disposal devices.

There are 213 premises in the city that have no toilet facility at all. It is a startling revelation for a city the size of Louisville to have such a condition in 1941.

While the privy survey of 1935, which was co-incident with the poliomyelitis epidemic, disclosed that there were approximately 12,000 privies existing at that time, it is significant that only 3,739 remain in Louisville today. The occupants of some of these premises are decidedly in the low-income group, but it is important that many of the premises are rental properties and are owned by individuals who live in much higher class residential sections.

The data gathered by the survey shows that 1,576 privies or 42% of the total number of privies, have the excreta surface less than five feet from the surface of the ground. These privies will soon be full and overflowing.

About 25% of all privies are located in the southern part of the city, south of Winkler Avenue, but it remains a fact that there is no single enumeration district that is free of privies. In one of Louisville's most exclusive residential neighborhoods, extending from Cherokee Park to Bardstown Road, two privies were found. It was expected that the portion of the city known as "Little Africa" would be the district wherein the most privies would be found; this was not the case, but the district had the second highest number of privies.

Of the total of 3,793 privies enumerated, 1,333 or 35.6% are located on premises that have city water and either city sewer or city sewer adjacent so that connections could be made. There are seventy-seven privies located on premises that also have flush toilets. There are in all, 3,853 premises that do not have a flush toilet.

While flies are not present in most cities today in numbers comparable to those in the days when transportation was chiefly by horses, they are still considered to be the enemies of man and can spread disease mechanically. It is therefore of utmost importance, when it is considered that flies present on the dinner table may have been feeding on the discharge of tubercular patients or those suffering from typhoid or dysentery, that fly control be practiced. The results of this survey show that 3,466 or 92.8% of all the privies enumerated are not flytight. Knowing full well that the water carriage system offers the most protection against disease carried by flies, it is the hope of this department that the day is not far distant when sewers will be made available for all residential premises.

Vault Privies

A total of 362 vault privies were found, of which two are septic, four are chemical and 356 are plain vaults. This latter type is one that must be cleaned periodically. One of the septic vaults discharges into a sinkhole and the other to the surface. Twenty-seven of the plain vaults are filled to the surface of the ground.

A total of 313 vault privies (86.4%) are not flytight, and ninety-three of them have a superstructure that is in bad condition. One vault privy has no riser or superstructure.

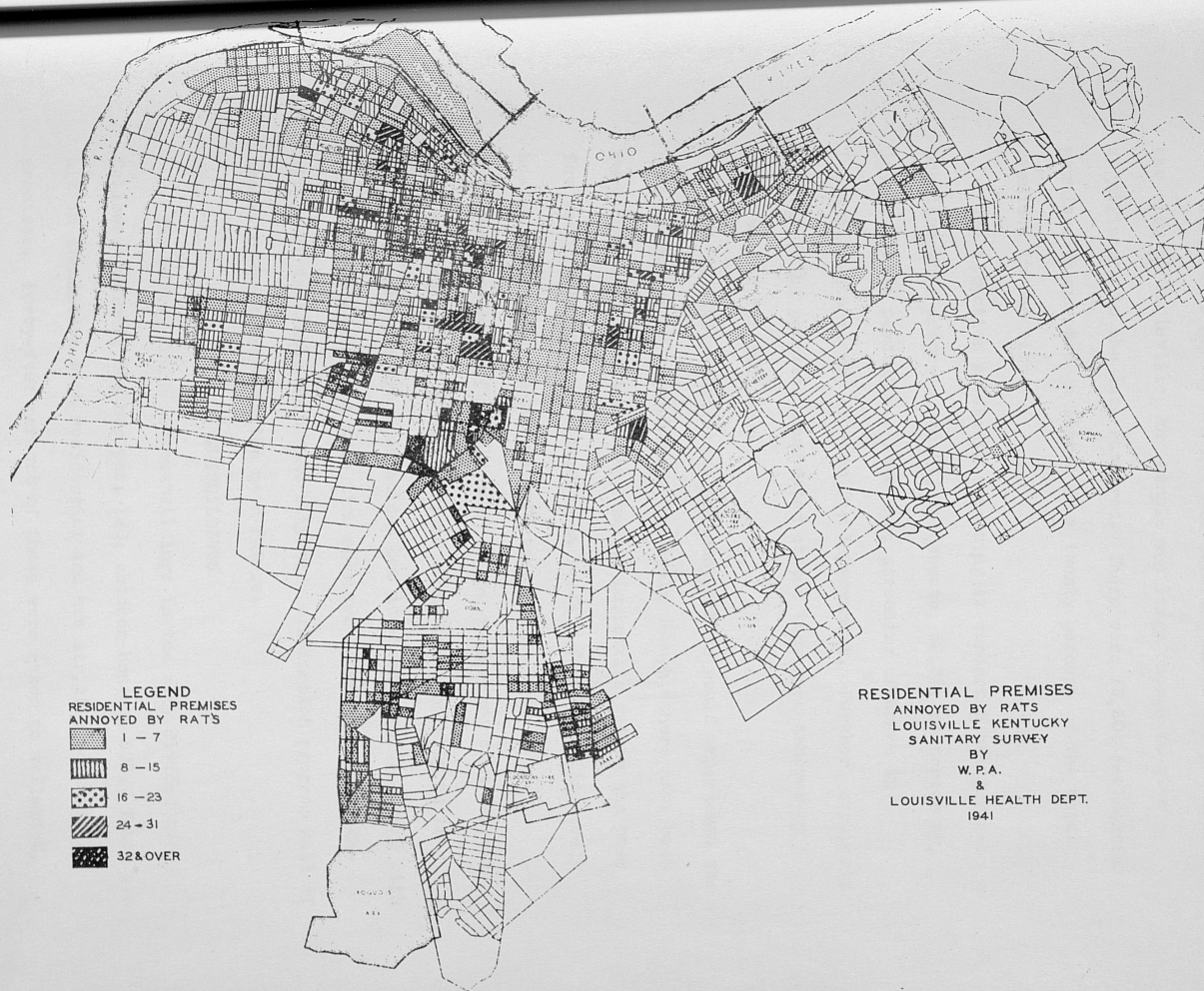
Surface Privies

The survey shows that there are sixty-eight of the surface type of privy. Of all types of privies, this one is most likely to pollute a water source such as a well, cistern or spring. Twenty of these premises have both city sewer and a surface privy. It can be well assumed that these residents and owners will immediately be notified to remove these insanitary devices. Tabulations further show that twenty-two additional premises having surface privies can make sewer connections. This will eliminate 61.8% of this type of privy. Forty-six or 67.6% of the surface privies have a superstructure that is in bad condition and all of them are not flytight.

Pit Privies

The pit privy is by far the most prevalent type, there being 3,309 of them in the city. Two-hundred and seventy-five of these are filled to the surface and 1,488 or 44.9% of them are filled to less than five feet from the surface of the ground.

A total of 3,085 of the pit privies (93.2%) are not flytight, and 1,162 have superstructures that are in bad condition (35.1%).



LEGEND
 RESIDENTIAL PREMISES
 ANNOYED BY RATS
 1 - 7
 8 - 15
 16 - 23
 24 - 31
 32 & OVER

RESIDENTIAL PREMISES
 ANNOYED BY RATS
 LOUISVILLE KENTUCKY
 SANITARY SURVEY
 BY
 W. P. A.
 &
 LOUISVILLE HEALTH DEPT.
 1941

IV PREMISES

While this survey was not all covering as to the premises in the city of Louisville, the sample was large enough to give significance to the data gathered. There were 13,504 residential premises enumerated, a little over twenty percent of the total premises in the city.

The situation as far as screening is concerned among these premises was: adequate, 33.9%, inadequate, 50.3%; no screening, 15.8%. These percentages show that screening of homes in Louisville has plenty of room for improvement. Further, occupants of 67% of the premises enumerated stated they were annoyed by flies within the dwelling.

It is likely that those and many others would experience the same annoyance by mosquitoes. Strangely enough, there have been very few cases of malaria reported in Louisville within the past few years. The malaria mosquito is readily found, but it rarely has an opportunity to become infected.

The occupants of nearly half of the enumerated premises said they were annoyed with rats. River towns are generally quite infested. The average householder has not been careful enough with food and garbage and at this time rats are found throughout the city. It is likely that some city-wide elimination program will of necessity be started in the near future.

OUTBUILDINGS

The survey found 768 outbuildings in the city divided as follows: animal, 86; hog pen, 180; chicken houses, 502. These are all in connection with residential and not strictly commercial premises. Forty-four percent of these were rated as well-kept. Efforts are made during the summer months to eliminate all hog pens.

RECOMMENDATIONS

For many years the Health Department has had complete information regarding wells located on industrial property, used in addition to city water. Periodic bacteriological analyses of private water sources on residential premises can now be made, since a complete roster of these has been made available by this survey. This should be begun, and carried forward without exception, in the same way that the work has been done previously on industrial wells.

Cisterns and wells found to be unfit for human consumption must be condemned, the owners of the property immediately notified, and the users warned to seek water elsewhere. The Louisville Water Company should be supplied with the information on these condemned cisterns and wells, so that they may possibly make additions to their mains providing water for the areas of these condemned sources.

An educational program should be started as a means for eliminating the throwing of waste water on the surface of the ground and the keeping of private sewerage systems in good condition in areas where city sewer connections are not available. At the same time a redoubled effort to enforce connections to the city sewer, where available to the premises, should be made.

A campaign should be begun to force premises without any toilet facilities to install a proper facility. At the same time a relentless drive to eliminate surface privies and to force the elimination of privies after the installation of flush toilets should be made. Included in the educational program mentioned above should be information on keeping privies in good condition on premises where city sewer is not available.

It would also be fitting for the educational program to include proper screening and proper care of food and handling of

garbage.

With the increase in population due to defense work and the resultant housing shortage, overcrowding and attendant sanitation problems, always serious, have become acute. It seems an obvious conclusion that the Food and Sanitary Division of the Health Department should now fasten its immediate attention to these problems. These are not small tasks, however, and they require a staff both capable and of sufficient size. Up to the present, though the department has realized the existence of many of these problems, it has been severely handicapped by lack of personnel. Funds should be made available to the Department of Health so that the program for elimination of these health hazards can be properly carried forward.

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