

A PRELIMINARY REPORT ON A SANITARY SURVEY OF GALESBURG, ILLINOIS

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The object of this sanitary survey is to determine general sanitary conditions in the city of Galesburg and to make specific recommendations for the betterment of the same.

Location. Galesburg, the county seat of Knox County, lies on a high prairie in the upper Illinois glaciation, on the crest of the water-shed between the Illinois and Mississippi rivers. It is 165 miles southwest of Chicago and about 50 miles east of the Mississippi river. It is a large railroad center, an important division point of the C. B. and Q. railroad, has large shipping and switching yards, employing in normal times over 3000 employees, some 25 manufacturing plants and two flourishing colleges. Its area has a total of about 5,760 acres. It is a well treed city, has 38 miles of paved streets, and about 60 miles of water mains and sewers. It has four parks containing over 200 acres, and there are in its environs several small artificial lakes which give a surface water supply for the railroads and some factories.

Topography. Galesburg lies in an upland prairie district; the soil is mostly brown silt loam, sprinkled here and there, particularly in the southeastern part of the city, with light clay loam and in the eastern part with yellow silt loam. The valley of Cedar Fork, an open sewer which flows through the town, is a deep glaciated deposit, but in most parts of the city the drainage is poor because of the impervious clay subsoil. The surrounding region is rolling prairie, but there is very slight drainage for the city sewage.

Climate. Galesburg climate is favorable to health. It meets Huntington's requirements in that it has rather sudden changes and great extremes in temperature. The mean temperature in summer is about 79 degrees Fahrenheit and in winter about 40 degrees Fahrenheit.

Population. At the last census the population was 27,696, the greatest percentage being American born, al-

though the Swedish population is quite large. There are also many negroes, mostly in the southwest part of town, some Irish and Germans, a few Italians, fewer Slavs, and a small colony of Mexicans, most of whom are employed by the railroads.

Water Supply. Galesburg is well supplied from the St. Peters and Potsdam sandstones. There are three wells in use ranging from 1,245 to 2,240 feet in depth. The city pumping plant contains seven pumps, five of which are emergency pumps. There is in connection with the pumping station a reservoir of about 6,500,000 gallons capacity with a daily consumption at the present time of about 1,250,000 gallons. The reservoir itself is in need of more adequate protection against pollution, and better fencing should be used to keep trespassers off the premises. During the summer months, the water receives copper sulphate treatment for algal growths and is tested each week by the state bacteriological officers.

Milk Supply. The milk supply is not so adequately protected. In the first place there is no adequate supervision by the city authorities of either dairy herds or dairies. The state inspection of dairy cattle is not checked up by the city health authorities and in consequence some milk from tubercular cattle sifts into the city milk supply. Some of the dairies are sanitary and would comply with a moderate grade of inspection, but several of them are notoriously dirty. Pasteurization is made by some dairymen, while others supply raw milk. Tests made at the laboratory of Knox College of several different milk supplies revealed usually a high butter content but also a high bacterial count. There is need of this city adopting the standard Pasteurization requirement now being adopted by many cities of the state, but this requirement would be inadequate with the present health machinery of the city.

Protection of Health. At the present time the city of Galesburg has no adequate health department capable of maintaining health standards. There are on the statute books many model sanitary statutes although no sanitary code as such has been compiled. There is, however,

no machinery capable of carrying out their statutes. The amount of money spent, for example, by the water department of the city of Galesburg, according to the 1921 tax levy order, is \$3.19 per capita. The fire department spent \$1.158 per capita. The police department spent .976 per capita. The health department, which consists of the mayor, a health commissioner and a city physician, spends only .177 per capita. In a comparison with a number of other cities of the same size in the United States, Galesburg stands at the foot of the list in the amount of money spent for health protection. Fortunately for the city there are a number of health organizations, such as the Red Cross, a Visiting Nurse Association, a Day Nursery, The Associated Charities, The Free Kindergarten and the Salvation Army, all of whom aid indirectly in maintaining the health of the city. Two school nurses are provided also by the Board of Education. The city of Galesburg should change its present method of health expenditure and obtain the services of a full time health officer who would have jurisdiction over milk and food supplies as well as public health statistics and other health matters.

Sewage Disposal. Galesburg has been criticised as a city with an open sewer. No time will be spent here in discussing this situation, as an adequate report has been made by Paul Hansen in his article entitled "The Pollution of Cedar Creek by Galesburg", pages 196-224, University of Illinois Bulletin, Vol. 13, number 19, Jan. 10th, 1916.

Garbage and Refuse Disposal. The city of Galesburg possesses an incinerator which is capable of burning about 25 tons of garbage daily. At the present time this incinerator, which is located within the city limits, is doing its work in a manner offensive to the people of the neighborhood. The garbage collection is also inadequately taken care of, some parts of the city in particular receiving extremely poor service. The garbage disposal force should be increased and the incinerator either be moved to a location outside the city limits or some smoke-consuming device should be installed which would prevent the odors now being given out.

Ashes are not collected by the city. In most cases they remain on the premises during the winter and are collected and dumped during the spring.

Food Inspection. So far as can be learned little or no attention is given by local health authorities to inspection of foods or manufacturing plants in which foods are handled. Some manufacturies and slaughter houses are in need of attention by the proper authorities. A full time health officer would remedy this condition.

Housing. The housing conditions have been particularly the object of investigation by the classes in public health in Knox College for the past three years. In the survey to date 327 out of a total of 506 city blocks have been surveyed; 65% intensively and satisfactorily. In the surveyed area there are a total of 3,239 houses. Of these 12.1% are brick; 87.9% are frame; 52% are classified as being in good condition; 24.7% in fair condition and 23.3% in poor condition. Turning to the sanitary conditions of the environment we find that there are in this area 395 localities where there were rubbish heaps, containing either ashes, manure, or materials capable of holding water. There were in the total area surveyed 1,828 privies and 1,854 wells, an average which means a well and a privy for every third house. Of the total number given 67% of the wells were within 100 feet of a privy, and 42% of both wells and privies were in use.

In this connection it is striking to note that the seventh ward, which is located in the extreme southeast part of the town and contains one of the two colleges of the town, is found to contain the most wells and privies. This and certain other similar wards are the ones that are served least adequately by sewers and water mains. It is stated also by physicians of the city that the typhoid outbreaks, which occurred in the years 1910, 1911, 1918, and 1919, were traced in most cases to the areas having the most wells and privies.

THE INTENSIVE SURVEY

General Housing Conditions. Galesburg has within its relatively small limits sanitary conditions of both extremes. The best residential district is found in the

third ward, or those blocks north of North Street and east of Broad. There excellent housing conditions prevail and the environment is good. There are smaller areas scattered around in the southeast and west parts that are good also, but there are no very large areas that do not have insanitary and poor housing conditions scattered through them.

Cedar Fork. The greatest potential source of danger to the city is Cedar Fork, the open sewer which runs diagonally through the center of the city. It and its tributaries form an environment in which are found some of the poorest and filthiest areas of the city. This creek has slight natural current, and the sewage wastes of almost the entire city are emptied undiluted into this creek through 30 large sewers. Samples of water tested showed the presence of the colon bacillus and over 250,000 colonies of bacteria to the cubic centimeter. Besides these sewers there are two large tributaries which contribute their waste to the main stream. One enters the stream at Holton Street and carries the wastes from the Standard Oil pumping station in the southwest part of the city. The banks of this stream are used as a dumping ground for refuse and garbage. The other branch is called Silver Creek and enters the main stream at West Street. There is almost no current in this stream and there is a filthy scum on its surface. The stream lies in the region of the poorest section of the city, and on the banks are wells, privies, manure heaps, and dilapidated structures used as homes for negroes and the poorest white people. About half a block up stream from the entrance of Silver Creek is another sewer that discharges daily about 8,000 gallons of the black oily gas house wastes into the stream. In the summer when the wind is in the right direction, the odor from the stream can be noticed for long distances from Cedar Fork, while people living on its banks find it almost unbearable. In times of drought the lowered stream leaves a sludge along the banks open to flies, dogs and small children.

Wells and Privies. Another great problem for Galesburg is that of the wells and privies. In an area of 30 blocks in the 7th ward, there were 248 houses and 245

privies, meaning a privy for almost every house in that territory, and there were 236 wells within 100 feet of the privy. There are a negligible number of privies, adequately protected and screened. In the region of Silver Creek, some of the filthiest privies are used by both whites and negroes, and many of these privies are within 25 feet of the stream. There is a decided indication of infection of the drinking water in such districts. In 1918 there were 32 cases of typhoid fever; in 1919, 46 cases; and most of these cases were found in the seventh ward, an area where there is an inadequate city water supply. Within 25 feet of Silver Creek is a well used by three families for drinking water. Two ladies, living at the foot of the slope to Silver Creek, complained of "being ailing all winter". It was found that all their drinking water came from a shallow well at the foot of the slope on which there were a number of houses and privies. Three wells taken at random in this region were tested and found to show the presence of the colon bacillus.

Rubbish and Garbage. In the main business district of the city the alleys are in a deplorable condition. One, which lies back of some very sanitary appearing food stores, extends east from Seminary Street, and is full of refuse and debris. No garbage cans are used, and the decaying food and vegetables are thrown out to the flies and rodents. A privy was moved recently but the vault was not cleaned out and an old box was thrown over the contents. The alley south of the Main Street business houses, between Prairie and Kellogg Streets, is filled with ashes, garbage, boxes and other refuse. On north West Street, near Silver Creek, are several barns beside which the manure is piled nearly as high as the buildings. A block from Cedar Fork is a large horse and mule exchange from which the manure is not hauled daily. The exchange is not screened. There is opportunity here for the breeding of flies on a large scale which could have easy access to the open sewer not a block away, and this might result in an epidemic of flyborn disease.

On the corner of Seminary and Simmonds Streets, at the rear of a large and well equipped grocery store, is a fenced-in area where garbage and rubbish are thrown,

but the white latticework fence can hide neither the sight nor the odor from the passerby. In a number of cases the garbage from private homes is thrown out to the chickens, and in the summer the decaying food causes a very offensive odor. In a section of the southeast side the garbage cans were full and overflowing, owing to the fact that the city had not collected for several weeks. Numerous calls to the health department had not relieved the situation. In the extreme south part of the city there was an even worse condition. At several houses visited the garbage was "just thrown out the front door".

Housing. There is very little overcrowding, and tenement houses are unknown in Galesburg, yet there are a large number of extremely poor houses. These are especially numerous in the Silver Creek and Cedar Fork areas. In the southeastern parts the houses are small but in good repair; they are quite sanitary except for the large number of wells and privies. In the southwestern part of town, south of Monmouth Boulevard and west of the C. B. and Q. yards is a large negro district, marked by small houses filled with large families. The houses lack paint and need repair. While some of these show thrift and cleanliness, others indicate shiftlessness and insanitation. This area is not adequately supplied with sewers and water mains, as shown by the large number of wells and privies found there. On east South Street is a large frame house of eleven rooms in which are living thirteen people, mostly foreigners. This a very dilapidated structure and should be condemned, for the foundation is crumbling, making the place dangerous to its occupants. There are several open garbage cans and a well and privy at the rear. Back of stores on the east side of Seminary Street, a block from Main Street, is an old house used for cheap lodgings. The floors are filthy and the walls and bedding are vermin infested, while near the back door is a shallow well and within a few feet is a large open privy.

Food Stores. The main food stores in the center of the city are for the most part sanitary and in good condition, although there are a few which are not as clean as they

should be. For example, in one on the south side of Simmonds Street between Prairie and Kellogg Streets. the kitchen was very dirty and the employees were not clean. The greatest trouble with the food stores is found in the small grocery and ice cream parlors which abound outside the district. There are at least a dozen of these located near the open sewers of the town, close enough to receive their share of flyborn disease from these sources. It sometimes appears as if the dirtiest and most insanitary districts were picked for the location of these small stores. One is placed on the bank of Cedar Fork at West Street, one on the bank of Silver Creek at North Street, one on the bank of another tributary at Academy Street and a fourth on the bank of Silver Creek at West and Locey.

Streets. There seems to be little regard for cleanliness and sanitary rules at any of these places. There are also some very small and crowded stores and eating places at the southwest corner of the public square which are operated by colored people, and the rear parts of the store and the upstairs parts are used as living rooms. Recent raids have proven the existence of dope dives here. This locality should be cleaned up, both physically and morally.

Recommendations. It is evident from the special evidence just cited in the above paragraphs that in addition to the establishment of an adequate health department the sewer and water supply should be extended into such parts of the city as do not have service at the present time, and that above all a Sanitary District should be established to take care of Cedar Creek and Silver Creek sewage.

The writers of this preliminary survey wish to thank the members of the public health classes of Knox College for the privilege of using first hand materials gathered by them, and wish to express their thanks to Prof. G. W. Hunter of Knox College for his suggestions and direction.