Public Health Survey

of

Woodburn, Oregon

1932
PUBLIC HEALTH SURVEY
OF
WOODBURN, OREGON
BY
LOWELL S. McGRaw.

Year 1932.
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INTRODUCTION

A health report of a community should not be delved into blindly without an understanding of what that community should be working towards in order to improve and to safeguard the health of its inhabitants. Therefore it seems that one should know the following essential principles which should guide any full fledged health department, in order that it may be a systematic working unit. These principles are set down in the simplest, and most comprehensible terms as follows:

1. To rid the environment in which people live of condition which are likely to cause disease, especially by guarding milk, water, and food supplies from contamination and by securing the clean and safe disposal of human wastes.

2. To guard against epidemics by preventing so far as possible the occurrence of the diseases which cause them and by holding them closely in check when they do occur.

3. To encourage the public to take advantage of preventive medicine as a means of building up health and warding off disease. The corner stone of preventive medicine is the periodic medical examination.

4. To educate the public in healthful living, through general publicity and especially through the nurses who teach health in the homes, and the teachers who guide children at school.

5. To keep accurate tally of births, deaths, and diseases, so that the community is aware of its gains, losses, and the points at which its safety is threatened.

As Woodburn, Oregon, has only a population of three thousand it
is unwarranted that such a small community should go to the expense of having an individual health department, with a personnel qualified to carry out the above principles. It is more reasonable, less expensive, to the tax payers, and just as efficient, if not more efficient to fall under the supervision and guidance of the county health department. Under these conditions, a better qualified personnel can be had at its disposal and a more organized and constructive plan of sanitation and health improvement, can be realized. It is well then that the community of Woodburn is under the supervision and constructive work of the Marion County Health Department. Because of this most desirable arrangement, a health report of Woodburn consists to a greater or lesser degree of a health report of Marion County. Therefore the following report, in general, is of Marion County with concentration upon the individual problems and essential facts of Woodburn.

A few essential facts may be of interest to relate concerning the development of health and sanitary conditions of Marion County. In 1924, the County School Superintendent surveyed the county schools, in an effort to make them more sanitary. There was no serious effort at this time, to keep milk supplies up to standard, and no effort at all to improve general sanitation of the county. In 1924 the voters turned down a proposal to pay the salary of a county nurse. Early in 1925, a public health staff was organized and the Marion County child health demonstration was begun. At first this consisted of part time health officers. Early in 1926, because of the smallpox epidemic, a full time health department was set up jointly by the county and city of Salem. In 1929, the Marion County Health Unit took over the work, and now
includes a health office, a full time assistant, who is also a physician, a half time dentist, a supervisor, and seven public health nurses, who divide the city of Salem and the rest of the county into districts. Each nurse does all kind of nursing service in her own district. There is also a dairy inspector, a sanitary inspector for the county, and two clerks.

Since 1925, Marion County has had a broader and more intensive health service and a larger health staff than any county in Oregon, except Multnomah. The health achievements are due to the facts that Marion County has a sound plan of health work, a staff to carry it out, adequate funds to finance it, and public opinion to back it up.

It is remarkable that Marion County has progressed so, because open country encourages a casual attitude towards problems of sanitation and water supply. It takes a long time to travel from one group of farms to another, so that transportation, time, and costs, loom large in any health service. It is not easy to cover the ground so thoroughly that communicable diseases are caught at their sources.

Any plan of health work must leave room for a good deal of flexibility; the health officer, the sanitary inspectors, and the nurses, must all seize opportunities for services as they come, plan their work carefully, and think quickly, and travel fast when emergencies arise.

Woodburn in itself has no special health department, except a public health officer, who supervises and inspects health condition of that city, as they are brought to his attention. The people of Woodburn are the same in their opinion as a whole as those of the rest of Marion County in that they are a very cooperative group of people who are desirous in reducing the health hazards, and in im-
proving the sanitary conditions of the community. Yet most of the health work falls upon the Marian County Health Department because of the town's rural character.
MILK SUPPLY

There is a certain correlation between the geographical character of the country in which people live and the special sanitary problems which they face. Woodburn is not faced with the danger of its inhabitants being wiped out by yellow fever, but milk, water, and miscellaneous food stuffs, are consumed by every one, and all of these can carry diseases. Milk from tuberculous cows can cause a crippling form of tuberculosis in children, milk from dirty dairies can carry typhoid fever, milk that has been handled by persons infected with diphtheria or scarlet fever can spread these diseases. Water contaminated with sewage may also carry typhoid fever. Foods may also be a source of many human diseases.

Before the health department of Marion County was organized there was a state law in Oregon requiring the milk producers in the state to observe minimum standards, but there was very little enforcement of this law except that the dairy herds were tested for tuberculosis. In 1925, it was found by inspectors that seventy percent of all the milk they tested was dirty or fairly clean, thirty percent was fairly clean, and none of it was clean. In 1929, there was special work done in inspecting the milk and educating the milk producers. At that time six percent of the milk tested was fairly clean and ninety-four percent of the milk was clean. This refers only to the actual dirt which could be screened out through a piece of cotton cloth and which appeared as sediment.

Even more important in the purity of the milk is its lack of its bacteria which may cause disease. In 1925, sixty percent of the milk was pasteurized. However it was done so poorly that all the milk tested
showed more than 100,000 bacteria per cubic centimeter. In 1929, eighty percent of the milk was pasteurized, and ninety percent showed counts under twenty-five thousand, and the average was eight thousand five hundred. In 1932, eighty-five percent of the milk was pasteurized and showed an average of ten thousand bacteria per cubic centimeter.

The largest dairy, furnishing milk to Woodburn, is that of Gottfield Halter. The dairy is situated about three miles north of town, in very desirable surroundings. It furnishes about one hundred quarts of milk daily to customers in the city. The rest is sold to a creamery. The milk is not pasteurized, but it is subjected to a cooling system until delivered. The milk is tested about nine times a year by the county, and has always seemed to be clean and pure. The milking is done by the members of the family who, although they have never had physical examinations, seem to be in perfect health. The herd consists of thirty well kept, clean cows. They are tested twice a year for tuberculosis, and none of them have ever tested positively. The milking utensils and separator were clean and always are washed with hot water before being used. The place where they are kept was clean and sanitary. The barn was clean and well kept. It is cleaned thoroughly every day, and the refuse is removed each time that the cows are turned into the pasture.

Another large dairy is that of John Kirsch located about one-half mile south of Woodburn. It furnishes about one hundred and ten quarts of milk daily to the people of the city and also furnishes varying amounts of cream. The milk is not pasteurized, but is also kept in coolers until it is delivered. The milk is separated in a place set aside in the basement for that purpose. The utensils and separator were clean and the surrounding conditions seemed to be sanitary. The
milking is done by members of the family. As far as any one knew they were all in perfect health and free from disease. Not one had had a physical examination however. The dairy herd consisted of twelve cows, all of which appeared to be clean and well kept. The cows are tested twice a year for tuberculosis and none of them have ever tested positively. The barn where the milking is done by hand was in very clean condition. The floor and the surrounding walls were very clean.

The third source of milk supplied to Woodburn is a very small dairy situated in the city limits and owned by Mrs. Wise. She furnishes about thirty quarts of milk daily to customers. Here also the milk is not pasteurized but furnished raw. Until it is delivered it is kept in a cooler. The same information given concerning the other two dairies can apply also to this one, except that the barn was not found clean nor was the place adequate to be handling milk.

The above are the three main sources of the milk supply of Woodburn. However they are not the only source of supply. Many people about town have their own cow which is not only their own source of milk supply but also that of a neighbor or friend. These cows are tested also for tuberculosis, but the milk is not supervised by any authority as to the cleanliness or purity of it. Nor are the surroundings and conditions under which it is handled controlled as a large dairy would be. Therefore a large portion of the milk consumed by the people is not pasteurized or subjected to a cooling system. This milk, as any one can see, can be a source of infection to a part of the people, but they, in turn could be carriers of different diseases so that in a round about way this milk can be a great danger to a large number of people.
WATER SUPPLY

Woodburn is one of those cities which is very fortunate in having a source of water supply sufficient to furnish all the needs of the entire population at a minimum cost production and without having to bother with a lot of necessary sanitary procedures with which other communities have to deal.

The water bureau was owned privately until 1912 at which time it was purchased by the city at a cost of $9650. At that time the city issued $25,000 general obligation bonds to purchase the private system and to improve and to extend it. These were serial bonds payable at the rate of one-tenth of the amount from five to fifteen years after date. The amount borrowed by bond was expended the first year. The interest on the bonds was paid from the water department revenues in a considerable part at least, but the principal was paid by the city as these serial bonds came due. With the exception of the original $25,000 the water department has been developed from its own revenues. It has not been a constant burden to the tax payers. It is rather unusual to find a water system against which there is not a cent of indebtedness except of course the current monthly bills.

The following figure for the year 1931 indicates that the water system is well able to maintain itself:

Revenue-------------$3958.81
Operating cost-------$3785.61
Power cost----------$1162.60

On July 1, 1932, the valuation of the water system was $74,822.
The source of water supply is three wells situated in the heart of town. The original well is 126 feet deep. At 124 feet there is a strata of sand, but at the depth from which the water comes from this well there is gravel formation. The other two wells in the system are 136 feet deep and from these wells nature furnishes water that has been filtered through several strata of sand and gravel. The wells are lined with Mate son steel pipe so that the water does not come into contact with any source of infection from the time it leaves the bottom of the wells until it flows from the household faucet. The water is pumped directly from the wells into the water mains under a pressure of fifty-two pounds. If the mains are full, the water is pumped into a 66,000 gallon tank, which acts as a reservoir. The pumps and the tanks, and all connections are sealed, so that the water comes in contact with no source of infection. The pumps work automatically and electrically, so that at all times the pressure is maintained. For emergency there is a gas engine attached to one pump, so that it may be employed in the case of the failure of the electricity.

In 1926, the reservoir tank was cleaned and painted. It is now cleaned and painted once a year with a new preparation that has neither odor nor taste. Mr. Soule, who has been superintendent
of the water bureau for the last eighteen years, said that the water was tested every so often and that it had always been reported as being pure. I obtained the following reports from the Marian County health office at Salem as to the grade of water:

<table>
<thead>
<tr>
<th>Date</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-24-30</td>
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</tr>
<tr>
<td>9-3-31</td>
<td>A</td>
</tr>
<tr>
<td>11-24-31</td>
<td>B</td>
</tr>
<tr>
<td>12-7-31</td>
<td>B</td>
</tr>
<tr>
<td>7-19-32</td>
<td>C</td>
</tr>
</tbody>
</table>

From this report it can be surmized that Woodburn has at most times a grade B water. Why in August 1932, the water was only a grade C, it is hard to determine.

The water bureau has 575 connections. Last year it furnished 47,000,000 gallons of water. In hot weather the mains are flushed out twice a month all over town. During the cooler months the mains are flushed out only once a month. Under such conditions the populus should not receive any stagnant water. The following shows the type of mains that are in use at the present time:

- Black and galvanized screw pipe-------42,008 feet
- Wood pipe-----------------------------12,085 feet
- Matheson steel pipe ----------------3,850 feet
- Cast iron pipe------------------------7,145 feet

The 12,085 feet of wood pipe mains are not in good condition because they have been in use since the water system started. The city realizes this and is replacing them with steel pipes as rapidly as possible. Notwithstanding this fact, this is one of the objectionable thing of the system.
ORDINANCES
GOVERNING THE

RATES, RULES AND REGULATIONS

...OF THE...

WATER DEPARTMENT
...OF THE...
CITY OF WOODBURN, OREGON

PUBLISHED BY ORDER OF THE COMMON COUNCIL OF THE CITY OF WOODBURN, ORE.
COMMUNICABLE DISEASES

In the ideal community there would never be an epidemic. If all citizens had a lively sense of responsibility to the public, and if the machinery of control worked smoothly the diseases spread by bacteria would disappear. Since we are far from this state of conditions, one of the important duties of the health department is to guard against contagious diseases. The first step in such procedure is to find the diseases. This is done by the law requiring certain kinds of infections to be reported, by sending nurses into schools to examine children whom the teacher suspects of having infectious diseases, by removing such children from the school room and putting them under a doctor’s care before the infection spreads, by putting them under quarantine, and by the regular examination of persons handling milk.

The following is a report of the communicable diseases in Woodburn for the year of 1932, up until the month of November:

<table>
<thead>
<tr>
<th>Disease</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallpox</td>
<td>0</td>
</tr>
<tr>
<td>Typhoid Fever</td>
<td>0</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>0</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>0</td>
</tr>
<tr>
<td>Pink Eye</td>
<td>0</td>
</tr>
<tr>
<td>Mumps</td>
<td>0</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>0</td>
</tr>
<tr>
<td>Trench Mouth</td>
<td>0</td>
</tr>
<tr>
<td>Vincent's Angina</td>
<td>0</td>
</tr>
<tr>
<td>Eczema</td>
<td>0</td>
</tr>
<tr>
<td>Erysiphalis</td>
<td>0</td>
</tr>
<tr>
<td>Encephalitis</td>
<td>1</td>
</tr>
<tr>
<td>Amebiosis</td>
<td>1</td>
</tr>
</tbody>
</table>
Scabies---------- 2
Bronchopneumonia---- 2
Impotigo---------- 3
Scarlet Fever------ 3
Pneumonia---------- 3
Influenza---------- 4
Measles---------- 4
Ring Worm---------- 6
Chickenpox---------- 21

Personally I think that this is a remarkable record. Yet some may say that all the cases were not reported, but I can safely assure anyone with such a thought that, if a case was brought to the doctor's attention, it was reported. Doctor Smith of Woodburn is a very competent and conscientious health officer. It may be true that all the cases were not brought to his attention. However such cases would be few.

It is pleasing to note that there have been no cases of small pox since many people are not yet convinced that vaccination is a safe and reliable measure. Vaccination is not compulsory for school entrance as it is in many communities, but all children entering school who will submit to it are vaccinated. Not only the students, but their younger brothers and sisters are given an opportunity to be vaccinated at special clinics held at school and health center held through Marion County. In 1932, about fifty-eight percent of the students were in the protected group. It has been the health officer's endeavor to reach as many children as possible, and to vaccinate them before any signs of the disease have developed, and when an actual case appears, all those who have been exposed are urged to protect themselves.

It is also pleasing to note that no cases of diphtheria have been
uncovered, since there always seem to be a small number of children in any community who have this infection without being sick them-
selves, but who can give the disease to others. For this reason it is hard to stamp diphtheria entirely out. When a case of diphtheria is found in a school cultures are taken from the throats of all students and in this way some of these diphtheria carriers are discovered and can be treated. At the schools and the health department in Salem clinics are held at which toxin-antitoxin was given free to all children whose parents approved. In 1932, about fifteen percent of the children under six years of age, and about sixty-five percent of the school children were reasonably safe from diphtheria.

Since 1927, the popularity of both vaccination against smallpox and inoculation against diphtheria has been increased by requiring children who wished to qualify for the annual county "Heralds of Health" in the schools to complete both treatments. Since that time the number of children who have won this distinction has increased. More children of Woodburn are protected against diphtheria than against smallpox. This seems to be due to the fact that it appears to be a prevailing idea of the people that vaccination is not necessary lest there be an epidemic of smallpox.

There was no record of any tuberculosis or venereal diseases having been reported. These diseases are hard to restrict due to the nature of the infection. When tuberculosis is diagnosed by a physician and is reported to the health department, a nurse is sent to visit the home and either urges the patient to enter the state sanitorium or in cooperation with the doctor helps the family to arrange proper home care. A nurse visits the home fairly often to check upon the condition of the patient and to help as much as possible.
Children, whose condition, when examined at school or the health centers suggests that they may have tuberculosis, are given an opportunity to take a special examination. Skin tests are made and a chest clinic is held at the health department headquarters in Salem for the careful study of children and adults. Sputum tests are made when necessary, but X-Ray study must be made at the expense of the patient. No preventive measures are taken, but in the schools, health teaching helps to better physical conditions of the children and to increase individual resistance to infection.

The spread of venereal disease is not at all satisfactorily under control. If any child or adult is found suggesting the presence of syphilis, a blood test is made at the expense of the patient if he can pay, and if he can not the health department gives it free. The treatment of the disease is left to a private physician, and the health department has as yet no means of making sure that a case is under treatment, or that it remains under treatment until the danger of its spread is over. In some cases the health department gives the treatment at the actual costs of the materials used, for the patients who are unable to afford private care.

In Woodburn there is a constant war against communicable diseases. Therefore the schools are free from epidemics as a rule. In 1932, there were no epidemics at all.
HEALTH IN THE SCHOOLS

The school system of Woodburn consists of one grade school and one high school. Both buildings are clean and well kept. Every child entering school for the first time has a complete physical examination. They are examined for correct posture, poor nutrition, eye trouble, ear disorder, tooth decay, tonsil inflammation, chest, and heart trouble. Serious disorders are called to the parent's attention and a visit to the family physician is suggested. Often in the school clinics the examining physician discusses the value of hot lunches, the necessary child diet, the value of iodine to prevent goitre, the need of correct posture, the need of good lighting to avoid eye strain, and the way to avoid skin diseases.

Again in the fifth or sixth grade the child is examined thoroughly. The county health nurse makes periodic visits to
the schools to see the children that the teacher feels need attention. Sometimes the nurse gives special classes in child care and hygiene. She also sends home suspected cases of infectious diseases, and arranges for vaccination or inoculation.

All the children in the schools are given courses in personal hygiene and physical culture. Setting up exercises are practiced in the grade school and proper time is allowed for relaxation and recreation. Drinking fountains are plentiful and can not be considered as a likely source of infection.

The ways in which health is taught in the schools are numerous. Health bulletins are posted and each student is impressed with the importance of reading them. Reading and writing lessons are often about health. Art lessons are often based on health. Health plays are often dramatized. Daily inspections are made with emphasis on cleanliness. Themes and essays are written and often small health surveys are made of other schools.

In the high school the home economics department runs a cafeteria where nourishing and well cooked food is served at a minimum cost. Girls study their own diets while they are learning to cook. They also learn healthful principles of clothing while they are learning to sew. The boys study personal hygiene in their science classes.

The football team and other athletic teams have complete physical examinations. Showers are provided, and a tank from the showers to the dressing room contains a five percent solution of sodium hypophosphite for the prevention of the spread of "athletic's foot". Doctor Smith acts as physician at all games thereby providing ample medical attention.
SEWAGE

The question of sewage in Woodburn is a problem. Outside of a small area which is sewered, most of the houses have private privies. It can be said that most of these are fly proof, and quite properly ventilated, and well lined with concrete. Yet many of them are not fly proof, not well ventilated, and not lined with concrete, so that in the low lying areas the soft spongy ground is soon polluted by the seepage from the pit. Of course this could not contaminate the water supply of the town, but it is a sad state of affairs for such a progressive town.

The only portion of the town supplied with a sewage system is the main part. The southern part, the part west of Cleveland street, and the part north of South street are not supplied. This area covers a great deal of the best residential district. Most of the eastern part is supplied. There are four sewage outlets emptying into Ferrier Slough. Two of these outlets are within the city, after which it runs through a good deal of the residential district. Two are out side of the city. This slough is about five feet across and not very deep. Its flow is slow and in the summer its often quite dry. This slough empties into the Pudding River just north of Aurora, Oregon, so that the sewage has to travel ten miles before it is received by a proper means of being carried away. However at the end of the sewage system there is a large septic tank that cleans and purifies the sewage before it is carried on to the Pudding River. This tank was in good condition and appeared to be an adequate filter and a suitable purifier, for the debri. Yet the distance of slow progress from the septic tank allows for a great deal of stagnation before it reaches the Pudding River. This appears to be
an unsanitary condition, from which flies and other insects may become contaminated and carry disease to the households. Human beings could become infected by coming into direct contact with the slough. Therefore its direct excessability is a great danger to the community.

Homes not supplied with the sewage system have cess pools or septic tanks, which seem to be satisfactory for the needs of the household. These types of system seem to work very satisfactorily.
Industri

Situated just outside of Woodburn is a large cannery. This is one of the largest fruit canning industries in the west. The employees are residents of Woodburn, so that it may be considered that the cannery is part of Woodburn. Seven hundred and fifty people are employed at the cannery making two shifts, a day shift and a night shift. Women are employed to sort the fruit and to do most of the handling of it. Men are employed to tend to the machinery and the mechanical processes, through which the fruit must go.

As far as could be learned, the girls who come into direct contact with the fruit are not examined or tested in any way as to their healthful condition. They are required to wear clean white uniforms and to be clean and neat personally. They work on eight hour shifts during which time they are given, at intervals, ten to fifteen minutes for relaxation and recreation. A trained nurse is kept on duty at all times to tend to any one needing first aid treatment. From each employee's salary one dollar and one-half is deducted monthly for protection against illness and accidents. This is in accordance with any industrial accident insurance.

The factory itself is housed in a frame building. Every twenty-four hours the floors and the tables, upon which the fruit is handled, are scoured and scrubbed thoroughly. Upon inspection the tables were very clean and the floor about them was not covered with debris. In front of each table there was a trough one foot across and about one-half foot deep, in which water was running all the time carrying away discarded parts of the fruit. These troughs were clean and free from any stagnation.
This cannery cans all kinds of berries, prunes and pears. This fruit is obtained from the surrounding country, this being the largest berry country in the world. The canning of pears was in progress at the time of this inspection. These were peeled automatically and then cut and sorted by the girls. They were then put through a washing and drying process before being placed in the cans. The latter are not sterilized before the fruit is placed in them, but after being filled the entire product is run through the sterilizer for fifteen minutes. Immediately after emerging from the sterilizer the cans are sealed. The fruit is then cooked in boiling water and then run through cold water in order to finish the process. Sterilization and all necessary sanitary precautions are taken in handling the fruit from the time it enters the cannery until it is canned and packed in boxes ready for shipment. In the sample room, every shipment that leaves the cannery is tested for quality and purity of the article.

The water used by the cannery is obtained from its own private well, it is a two hundred foot well, so that the water should be of the best grade. The water from it is tested by the state and has never showed any contamination. Because of some misunderstanding on the part of the manager as to what my business was, I was unable to see the well. When
he found out that I was asking questions, I was no longer a welcome visitor, even though I explained to him what I was doing. Later I found out that this was due to the fact that the cannery had had a lot of trouble concerning the disposal of waste material. In the last few years they have had several law suits about the matter, therefore they are suspicious of any one.

At the beginning of the canning season, the waste was pumped into the Pudding River, which is a short distance from the cannery. Because of a law suit concerning this the dumping of the waste has been changed, it is now very finely ground up and mixed with water, and pumped into a field about one hundred and fifty feet from the main building, and left there to take care of itself. The water seeps into the ground, and leaves the pulverized fruit waste on the surface. This is a very disagreeable and unsanitary condition. I would have liked to have obtained a picture of it, so that one could see the true situation. Because of my unwelcomeness, I was unable to do this. Some means should be taken to overcome this condition.
VITAL STATISTICS

Accurate records of births and deaths have been kept in Marion County for the past twelve years. From these records it can be seen that the birth rate for the last five years has been around 18.5 per 1000 population. In other words there has not been much of a decrease or increase in the number of births in the past few years. Notwithstanding this fact it has been said that Marion County is the best place in Oregon for babies. The county has reduced its infant mortality nearly one-fourth in the last five years. It has done twice as well as the state and four times as well as the nation at large. The average of stillbirths has been 3.2 per hundred live births in the last five years. The average maternal death rate for the same period has been about 4.5 per 1000 live births.

The number of births for Woodburn alone for 1932, has been thirty-two, making a birth rate of 10.7 per 1000 population. There were no stillbirths, nor maternal deaths. This speaks very well for a small community.

<table>
<thead>
<tr>
<th>Year</th>
<th>Figure</th>
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<td>15.6</td>
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</table>

# From January to October.
In the Year 1932, there were thirty-four deaths in Woodburn. Only two of these were due to communicable diseases, one being from influenza and one being from encephalitis. A majority of them were from chronic infections and heart conditions. For the last five years the average death rate has been 12.2 per 1000 population. In 1932, it was 11.3 per 1000 population. The following is a list of the causes of deaths given so that an idea of the conditions that have brought death about, may be obtained;

Carcinoma of prostate with metastasis to the spine
Carcinoma of the prostate and bronchopneumonia
Carcinoma of the cecum
Carcinoma of the rectum
Chr. Nephritis, aortic and mitral regurgitation
Chr. myocarditis, senile
Atherosclerosis  (3)
Cardio renal vascular disease  (4)
Rheumatic heart disease  (2)
Cerebral hemorrhage  (2)
Caranary thrombosis
Bright's diseases  (2)
Endocarditis
Postoperative pneumonia
Miscarriage, Pelvic abscess
Acute nephritis  Fractured Femor
Peritonitis
Acute miliary tuberculosis
Myelogenous Leukemia
Perforated gastric ulcer
Suicide—drowned
Meningitis
Influenza

Death rate per 1000 population
Marian County

<table>
<thead>
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<th>Year</th>
<th>Figure</th>
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</tr>
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<td># 1932</td>
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# From January to October.
TOURIST CAMPS

Woodburn has a city auto camp the same as most small towns, but because of the modern and up-to-date tourist camps along the highway, no one but tramps makes use of it. For this reason no measures are taken to keep it clean or attractive. As a result it is in a run down condition with no facilities whatever for camping purposes. The tramps that make it their home for one, two, or more days do not endeavor to keep it clean or in a sanitary condition. No one in particular tends to it, so that things, in general, are in a very poor state as far as cleanliness is concerned. Naturally the tramps that stay there do very little to keep the place fit for decent tourists. However none of the latter type of individual make it their stooping place. Therefore one can easily understand the amount of garbage, rubbish, and all types of debris that would tend to collect. Nothing specific can be said about the place except that it is in a very poor sanitary condition and unfit for camping purposes.

On the very edge of town, along the highway, there are several tourist camps. These are modern, well-kept places consisting of groups of individual, small cottages. Each is furnished with cooking facilities, running water, and sewers. Bed clothing is furnished to the people if desired. Upon inspection the cottages were found to be clean, well ventilated, modern places. After each set of tourists they are swept, scrubbed, and cleaned thoroughly. The bed clothing, if furnished, is well cleaned and made sanitary for the next group. There was no collection of debris about the places and every thing was in an orderly arrangement. The camps were well situated
in areas large enough so that there was no tendency toward crowding. These camps are inspected yearly by the county officer appointed for that purpose so that the camps are kept in very good condition. Sometimes inspection is made more often if it is felt to be necessary.
MISCELLANEOUS

There are two meat markets in Woodburn that furnish the majority of the people with meat. One of these markets obtained all its meat from a large distributing house in Salem where the meat was inspected by officials. This market was very clean and had means of keeping the meat in as cold and sanitary condition as necessary. The other market obtained its meat from its own slaughter house. The latter was situated out of town and in as neat and sanitary a condition as could be expected. The market itself was also well kept and clean. The meat was kept in refrigerators, and was not spoiled. The people also stated that very good meat was obtained from both markets.

There is no one who makes it a business to collect garbage from the store or houses. Many farmers collect garbage from the houses to feed to their pigs and in this way it is removed and made use of. Most of the places either burn their own garbage, and rubbish or bury it. Once a year the city collects from the houses all the old rubbish and tin cans and dumps it into a dumping ground situated outside of the city.

There are no public baths or public swimming tanks in Woodburn.

For fire protection, the city has a modern fire engine adequate for the needs of the city. It is situated in the heart of the city and could reach any part in a few minutes notice. The water pressure is sufficient to force the water any distance or height, that it might be needed.

Woodburn has no sprinkling system, nor does it necessarily need one.
RECOMMENDATIONS

After making this public health survey of Woodburn, Oregon, and considering all the situations as they exist I feel that the following recommendations can be made:

Pasteurization of the milk.

Yearly examination of all those who handle milk.

Require the vaccination of all school children against smallpox.

Require the inoculation of all school children with diphtheria toxin-antitoxin.

Extension of the sewers and provide for a better means of carrying the sewage away.

Demand the cannery to properly dispose of its waste material.

Organize some definite health department to help Doctor Smith, the health officer, to provide for a more detailed inspection and health conditions of Woodburn.