

Legislative History for Connecticut Act

SA25-231

<b>Act</b>	<b>Year:</b>	1925
<b>Number:231</b>		
<b>Bill</b>		
<b>Number:SB566</b>		
<b>Appropriations</b>		
	1-15	
	<b>Page Total:</b>	15

Transcripts from the Joint Standing Committee Public Hearing(s) and/or Senate  
and House of Representatives Proceedings

Connecticut State Library

Compiled 2013

**SA25-231**

Committee hearings, Appropriations. 1925.

✓ Senate Bill No. 566

CONCERNING WATER SUPPLY FOR MANSFIELD STATE TRAINING SCHOOL AND HOSPITAL AND THE CONNECTICUT AGRICULTURAL COLLEGE - \$225,000.

Hearing before Committee on Appropriations held February 3, 1925. Senator Platt presiding.

DR. LAMOURE, SUPERINTENDENT AT MANSFIELD: We need considerably more water. Our institution is growing all the time, as well as Storrs College. In the last two years we have had a shortage in the summer time so that it has been very hard work to conduct the institution. We even have a shortage at the present time so that we are not using water the way we should use it. We have a scheme figured out. The only way is to increase the reservoir capacity. At present we have a small dam with an intake above it. There is plenty of water in the fall. If it was held back it would accommodate both institutions.

SENATOR PLATT: Does this affect the College as much as the other institution, Dr. Beach?

PRESIDENT BEACH: Not at present, because Mansfield is expanding very rapidly.

DR. LAMOURE: We have 750 people there and three buildings that should be opened this spring which would accommodate 250 more.

SENATOR PLATT: There is no question but that they will be filled?

DR. LAMOURE: I have over 450 on my waiting list now. The buildings will take only 250.

SENATOR PLATT: How many have you now?

DR. LAMOURE: 750 now. The new buildings will accommodate

350 more. They are getting in shape so that we can open them in the spring if we have sufficient water. I don't dare open them and run short of water the way we have the last two years, in July and August. We are short now and saving it in every possible way.

MR. WADSWORTH: Have you reservoir capacity?

DR. LAMOURE: Not in the storage reservoir.

MR. WADSWORTH: Haven't you any dam that accommodates water?

DR. LAMOURE: Only five million gallons.

SENATOR PLATT: How long would that last?

DR. LAMOURE: We use between three and four hundred thousand gallons for the two institutions every day.

MR. WADSWORTH: Do you depend on a brook?

DR. LAMOURE: Two small brooks.

MR. WADSWORTH: The College takes from the same source?

DR. LAMOURE: Yes. It pumps to both places. We use between three and four thousand gallons a day. That includes Storrs.

DR. BEACH: We use about 100,000.

SENATOR PLATT: I think it would be a good idea for one of you to explain to this Committee just what the layout is.

MR. WADHAMS: Tell them what your condition was when you had wells and the construction of this little intake.

DR. LAMOURE: When the Epileptic Colony was started they drove an eight hundred foot well. They only had 100 patients. When we moved there with the feeble minded and had six times as many patients of course that was not enough. This supplemental supply was put in in '17 and '18. Of course it wasn't planned to take care of fifteen hundred or two thousand people.

SENATOR PLATT: Wasn't there an appropriation made two years ago?

MR. WADHAMS: In 1919 - \$130,000.

DR. LAMOURE: That included a pump house and filtration plant and also included pipelines running from the pumping station to Storrs College and our institution.

SENATOR PIERSON: How far from your two institutions is this proposed or present water supply?

DR. LAMOURE: ~~1 1/2~~ and a half - right between them.

SENATOR PLATT: What do you have in mind with reference to this supply - where is it to come from - how much water is available - and whether you intend to build an additional reservoir four or five miles back.

MR. JOSEPH DOMAN, ENGINEER FROM SANITARY PRODUCTS COMPANY OF STAMFORD: It is fourteen hundred feet back of the present pump house on the same stream, just for storage.

SENATOR PLATT: How much storage?

MR. DOMAN: Seventy-eight million gallons. Here is a map showing present and proposed features. The red line shows the drainage area. Right above the pump house is the present reservoir - two of them. They are small, the total overflow capacity is about five million gallons in the two reservoirs. The total drainage area is five square miles. One of these two streams practically runs north and south, the other slightly from the west. They drain that area of five square miles. The water comes through the filtration plant into the pump house and is pumped from there to Storrs and Mansfield. The institutions are about a mile and a half from the pump house. The Mansfield Storage tank is on the western end of the water shed. They split right at the pump house. It is a two inch main. The main is adequate. They simply haven't the water to feed it.

The big trouble is, you have a drainage area plenty big enough to supply the water, but the water isn't stored, and therefore when you have a low run off from the storage area you don't get water enough to supply the institutions. Perhaps I better explain how we can arrive at how much storage is necessary for any water supply where you derive your water from rainfall, as on this area. During the summer you get very small rainfall, hence the stream flow is very small, sometimes you might not get any stream flow at all, for two months very little. Your minimum won't be spread over a very long period. The longer the period the greater the flow will be for that particular period. If you get 10,000 gallons for one month per square mile, for two months the minimum might be 20,000. The main idea is to provide enough storage over the minimum period to provide for the consumption.

SENATOR PLATT: How much of a dam should be put there?

MR. DOMAN: The dam we propose is 1400 feet, about three hundred fifty feet long;— a concrete dam.

SENATOR PIERSON: Does the amount of money asked for cover purchase of land?

MR. DOMAN: As it happens there won't be much land to purchase. I think that amount will cover it. Most of the site is already owned by the State. I think there are three owners who own together about fifty acres that will have to be purchased.

SENATOR PLATT: Will they sell or will it have to be condemned?

DR. LAMOURE: I think they will sell. It is not improved land at all. It is away from everything. It can't be used for agriculture. I think it could only be used a little for timbering, possibly.

SENATOR PLATT: Any definite proposition on the land, President Beach?

PRESIDENT BEACH: No, we have not consulted the owners.

MR. WADSWORTH: Where is the burying ground?

PRESIDENT BEACH: Along side the present emergency reservoir. No

Burying ground in the new land.

SENATOR PLATT: It doesn't affect the water shed at all?

MR. DOMAN: No, that land between the brown and red lines would be cut out from the new reservoir. It wouldn't drain into the new reservoir. The cenetery is out of it entirely.

SENATOR PIERSON: In figuring the amount of water supply available by this dam do you figure you have enough for the two institutions as they are, or as they would like to be?

PRESIDENT BEACH: It will care for all our present needs and probably all future uses. Would allow for reasonable expansion. The new reservoir with the water shed will provide what we call a safe yield. We figure with the worst conditions of rain fall from actual records and apply it to this shed in proportion to its size. Working that way, which is the standard way, this reservoir and contributory water shed will supply a yield of 460,000 gallons a day during the worst conditions, which will take care of both institutions for the present and perhaps all future needs.

SENATOR PIERSON: What do you get out of the present system for fire protection?

MR. DOMAN: I haven't gone into that. I think from the standpipes at Mansfield you should have somewhere near fifty pounds or so for fire protection, just from the lay of the land and location of the standpipes.

SENATOR PIERSON: What is the difference in elevation?

MR. DOMAN: About 300 feet I think. The present dam is located at an elevation of 400 and the storage tanks at Mansfield at about 600.

SENATOR PIERSON: What power will be used for pumping?

MR. DOMAN: Electric power, taken off the main line at

Stafford Springs.

SENATOR PLATT: Do you use a well at Storrs at all?

PRESIDENT BEACH: Yes, in emergencies. It is hooked up ready to use. This summer we operated it about a month.

MR. CLARK: How far is it from the front of the old dam to the new dam?

MR. DOMAN: About 2600 feet. The total basin will be 1400 acres.

SENATOR PLATT: Have you secured any figures on what the dam will cost? Any estimate from a contractor as to what they will do it for?

MR. DOMAN: No, I figure the quantities involved for a concrete dam, figures out what an approximate section would be, estimated an average on that, and other basis of construction.

SENATOR PLATT: What do you estimate on concrete?

MR. DOMAN: \$20. a yard in place at the present price of labor.

MR. WADSWORTH: You have had no contractor's estimate?

MR. DOMAN: No, but my work is carried on in touch with contractors quite a bit. I think \$20. a yard will cover it.

MR. WADSWORTH: How far is that dam from the Depot?

MR. DOMAN: Nearly two miles.

SENATOR PLATT: About how many yards would there be?

MR. DOMAN: About six thousand, - sixty-five hundred, I should say. Straight concrete. There is plenty of gravel and sand to be taken out of the bank there.

SENATOR PIERSON: Is it on state property or private property?

MR. DOMAN: Some on state and some private property near by. It is questionable as to whether it would be cheaper to go to

to the private bank or state because of the extra haul to the state bank. There is about a mile difference in the haul. Doubled that would be two miles, or maybe a mile and a half.

SENATOR PLATT: What we would like to get at is how you estimate this certain amount.

MR. DOMAN: That blue print you have there shows the topography of the basin. Taking a cross section at the dam site you get the profile of the dam. Allowing a certain depth to the rock foundation you can figure practically the exact dimensions of the dam. In that way you get the average required.

MR. WADSWORTH: Have you dug any well to see what the soil is?

MR. DOMAN: The general soil indications are rock near the surface. It seems pretty compact. I doubt if it is seamy. It is good, hard rock. That will have to be investigated. Some tests will have to be made to definitely locate the rock and get its character, particularly in regard to fissures because it is serious if there are fissures under the dam. Details of that sort are more or less technical. I do not see any signs of stratification in the rock at all on either side of the proposed dam site. It is just a large mass of rock without any apparent seams.

MR. WADSWORTH: Granite?

MR. DOMAN: I do not know whether it would be granite or not. I think it is pretty close to granite - very hard, compact material anyway.

MR. OSBORN: What would be the highest elevation of the dam above the stream?

MR. DOMAN: About forty-five feet,

MR. CLARK: How long did you say it would be?

MR. DOMAN: 350 feet.

MR. CLARK: What would be the depth?

MR. DOMAN: The average depth of water would be seventeen feet. The dam might be about five feet more. It is hard to strike an average.

MR. CLARK: Is it a location that would allow much sediment to fill in?

MR. DOMAN: No, it is a good reservoir site, as far as I can see. The slopes are pretty well timbered. It is more loamy than sandy.

SENATOR PIERSON: Much stuff to move from the reservoir itself?

MR. DOMAN: No, except for the timber. I do not think it will cost much to have that removed. I wouldn't take it out by the roots except eight or ten feet below normal water level. It is an extremely favorable reservoir site, almost ideal, in fact.

MR. WADSWORTH: Any habitations on the water shed?

MR. DOMAN: The nearest to the reservoir is nearly half a mile. As far as that is concerned there is not much in the way of habitation in the whole water shed. The question of human pollution is not as serious as where you have a more thickly settled water shed, especially in view of the fact you have a treatment plant there which would provide protection anyway.

MR. WADSWORTH: You don't contemplate buying up the entire water shed?

MR. DOMAN: Oh, no. That is not at all necessary.

MR. WOOD, <sup>(W.C.)</sup> TRUSTEE OF THE COLLEGE: The Board of the College are much worried about fire protection. A bill is going in tomorrow providing request for additional sums for increasing the size of the pipes there. That is one reason we are so anxious to have the reservoir. We have great fire risks at present.

MR. WADSWORTH: Has the College been short of water supply during the past seven months?

MR. WOOD: Yes. Mr. Beach can tell you more about that.

MR. WADSWORTH: How much do the two brooks furnish daily now?

MR. WOOD: I do not know.

MR. BEACH: We use about 100,000 gallons a day.

DR. LAMOURE: We use all of that.

SENATOR PIERSON: Any water coming over the dam?

MR. BEACH: The first of January none was coming over. We had to use our reservation supply reservoir. Since then it has picked up a bit. There was none at the intake.

SENATOR PLATT: What fire protection have you at present?

MR. BEACH: At the College we have a standpipe, a twelve inch ~~main~~ running to the end of the campus, eight inch ~~main~~ ~~main~~ covering about half the buildings. A bill will be in tomorrow to extend that ~~main~~ to afford protection to all college buildings, not including residences.

MR. WOOD: It seems necessary to increase the ~~main~~ judging from the fire underwriters. In case of fire what would you do, Doctor?

DR. LAMOURE: Get the patients out and let the buildings burn. I have no standpipes anyway. No use them with no water back of them.

MR. WOOD: Both places are without adequate fire protection, not only mains, but no water supply.

MR. LAMOURE: Our patients' buildings are all fireproof construction. Only the officers' and employees live in buildings that could burn.

SENATOR PIERSON: You haven't an available source of water supply to get water by gravity, have you?

MR. DOMAN: No, not a chance. Just one other point. Assuming that this proposed reservoir is going to be constructed, I do not think it can be built to provide water this coming summer. The question then comes up as to what will happen this summer, especially with the new buildings and increased population at Mansfield. Mansfield demands an absolute and positive supply, it seems to me. That holds true of this summer as well as any other time, it seems to me. While the dam is under construction, before it can be completed, to be of any service, I think we will probably be due for a shortage at Mansfield even if we have a normal summer with a normal rainfall and run off. I doubt if the stream there will be anywhere near enough to supply both institutions which will leave them without fire protection or water for ordinary use. We have made investigations to make sure of some water during the summer. We have prospected around the banks of the Willimantic River to see if it would be feasible to drive some wells and pump from wells into the mains. That can readily be done. On the D.S. sheet you will find just west of the banks the words "Proposed wells and pipe line". Some wells can be sunk on the bank of the Willimantic River and a pump house erected and pipeline laid directly to the Mansfield storage tanks and from there supply

Mansfield and their connections so that it can be carried to the College, and in that way assure perhaps 200,000 gallons a day to both institutions, which will be a very considerable help.

SENATOR PLATT: Drill the wells?

MR. DOMAN: No, dig. I should say it was compact gravel soil. It seems to yield water not quite so readily, but will yield. I should say those should be wells ten feet in diameter; dug to a total depth of forty feet, and that they would provide 200,000 gallons a day. Have a single pumping plant. You would have to lift it about 250 feet.

SENATOR PLATT: What would those wells cost?

MR. DOMAN: With the pipelines about \$60,000. I should say.

SENATOR PIERSON: That would be abandoned in case the other dam was built?

MR. DOMAN: No, you could use it. I think it would be economy. Between the bank and site of this well is one of the buildings, known as the Manor House. That was formerly supplied by a spring which has gone dry. That would have to be connected with the tank and would mean a pipeline and ditch. Perhaps a total length of 6000 feet. By increasing the size of pipe you could take care of that at comparatively little extra cost.

SENATOR PIERSON: Wouldn't it be cheaper to move the house?

DR. LAMOURE: There are five houses down there and we are planning on that site to accommodate our farm. There are six hundred acres over there.

MR. DOMAN: The supply will be right up in the midst of our garden area and the place where they keep cattle. That land there has to be irrigated during the summer at present. Also

at times they have taken the cattle to the river to drink. That water at times is certainly not fit for cattle to drink because it receives the sewage from Stafford Springs in addition to the mills. The soil would provide natural filtration so that you would get no pollution in the wells. We made a test well there and took samples of the water with excellent results.

MR. WADSWORTH: Was the water analyzed?

MR. DOMAN: Yes, from this well, and showed up very good.

MR. WADSWORTH: Is the water used at Storrs raw water?

MR. BEACH: No, treated water, filtered and chlorinated. Quite elaborately treated and chlorinated, treated with alum, and sometimes soda and ash to remove the color.

SENATOR PLATT: If you get these wells it wouldn't make a permanent supply?

MR. DOMAN: For agricultural and garden purposes I should say it should be put on a permanent basis. If you use that you don't have to draw from the domestic supply to irrigate gardens. It seems to me you need it from an economical standpoint.

MR. CLARK: What is the estimated cost of the whole layout?

MR. DOMAN: \$225,000. will cover the whole thing, buy the land and all. I think that will be pretty nearly as close to contractor's figures as it is possible to estimate now. I think the contract may be a little lower.

MR. WEATHERHEAD: Is there any sanitary reason against the water drawn from the wells?

MR. DOMAN: I think not, but if there is it isn't much of a job to chlorinate it.

MR. WEATHERHEAD: It couldn't be piped down so that it could be run through the present chlorinating plant?

MR. DOMAN: It could be, but it would be poor practice. The water in itself would be a very fine supply. It is a question as to whether it would even need chlorination, but as a safeguard I think perhaps we should have it done.

SENATOR PIERSON: How much right of way to the reservoir will you have to buy?

DR. LAMOURE: Nothing. It is our land.

SENATOR PIERSON: How far would you have to carry your power to the plant by the river?

DR. LAMOURE: Not very far. I think perhaps quarter of a mile, maybe less. The Willimantic line is right there.

MR. CLARK: What would be the expense of maintaining these pumps?

MR. DOMAN: I haven't figured it closely but should say perhaps \$500. per year, altogether.

DR. LAMOURE: They would only have to be pumped part of the day. One of our engineers could go there part of the day.

MR. WEATHERHEAD: Would it be possible to operate these pumps with electricity generated there?

DR. BEACH: It isn't generated at the College. We buy from the Willimantic Power Company.

DR. LAMOURE: We generate all electricity for our own buildings, machinery, motors, etc. Of course the cost of running heavy wire from the power house to our pumping station would be too great. That is why we buy the electricity there.

MR. CLARK: How wide did you say the dam would be at the widest point?

MR. DOMAN: 350 feet.

SENATOR PLATT: Does this money you are asking for clean up and repair the present system?

DR. LAMOURE: You don't need to clean it if you work it the way we have planned.

MR. DOMAN: I wouldn't want to include that in this proposition.

MR. WADSWORTH: Would a six inch main to Mansfield be adequate?

MR. DOMAN: It depends on the pumping capacity.

SENATOR PLATT: What have you for present pumps?

MR. DOMAN: There are several pumps. I have a record of them here.

SENATOR PLATT: Have you anything further to say, President Beach?

DR. BEACH: No, we are interested of course in a permanent supply and interested in the fire protection side of it, because war buildings of course are not all fire proof.

DR. LAMOURE: When we get a water supply we intend to put hydrants around the houses.

DR. BEACH: All we have is hydrants, hose, small chemical engine, hand fire apparatus.

MR. CLARK: Do you think, Mr. Beach, these two systems are necessary?

DR. BEACH: Not for the College.

MR. CLARK: Would you for Mansfield?

DR. BENOITE: Yes. I have to have something to tide me over next summer. I have a well but we can only pump about half an hour at a time. For the last two summers I have been up against it.

MRS. VINTON: As I understand it the supply for Spring Manor has given out?

DR. LAMOURE: It is so low I cannot get any more water there.

I send my cattle all to the river.

MR. WEATHERHEAD: In order to get at the time it would take to do that, would it be better than to go right to work on the dam?

MR. DOMAN: I think the well supply could be put in in two or three months easily, perhaps less than that, all equipped and ready to work. We could begin work there now even.

MR. WEATHERHEAD: The dam project would take the best part of a year?

MR. DOMAN: Yes, by the time we got bids and had the contractors get at it. I wouldn't look for any water from the dam this year. We would need wuite a bit of rain to fill the reservoir.