Facility Spotlight – Ewing, Nebraska

Bruce Long is the water/wastewater operator from Ewing, which I've known since 1986 (but that is another story) is always proactive.

I met Mr. Long for the second time about 2 years ago when he asked me questions about his NPDES permit, which we went through and found that Mr. Long basically had more accurate flow information, because he knew what his pumps were accurately pumping, which was 10 times the amount of wastewater which was previously reported.

Secondly, Bruce was measuring flow by which I call the "bucket method" to record his effluent flows. To explain a little the bucket method is calculating flow by how long it takes to fill a known volume and calculate it to MGD (million gallons per day). Bruce felt this was a primitive way of measuring flow and investigated how he could make it better. He had discussions with the Village of Ewing's engineer a developed a sample/flow manhole to put flow measuring equipment in with DEQ approval. He received bids of $7500 just to build the manhole, this did not include the flow measuring equipment which was slightly over $2000. Bruce thought the price for the flow manhole was very high and didn't think the village board would approve, so he decided to build it himself, which the board approved. He purchased the flow equipment and built the manhole for approximately $5500 considerably less than $9,500.

He requested DEQ for a irrigation permit

Helps surrounding communities with operational help

Help set up testing with local communities to met fecal coliform testing hold time requirements. Purchased pH and DO meters to meet compliance on hold times

I understand that some communities would not be able to do the same things that Bruce has done, but figures out a way to accomplish them.

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Creativity reaps big rewards for small community!

Bruce Long, who is the water/wastewater operator for the Village of Ewing, recognized a need for a more modern way of measuring the town's effluent flows but did not have the capital necessary to make the updates…So he began brainstorming ways to make it happen.

The current system measures effluent by what I would call the "bucket method". This is where the flow is calculated by how long it takes to fill a known volume and convert those numbers to MGD (million gallons per day). Understanding that Ewing can monitor all of its effluent flow through one manhole, Mr. Long began investigating the possibility of this form of measuring the effluent flow.

The first step was to meet with the Village of Ewing's engineer to begin designing a sample/flow manhole, which would house the flow measuring equipment and would meet DEQ's approval. The village of Ewing received a bid of $7500 to build the manhole and needed to also include the $2000 cost for the flow measuring equipment. This was more than the village could spend to upgrade the system, so Bruce decided to design his own, with the village board's approval.

Bruce designed a concrete deck which housed the flume to measure the height of the wastewater within a 6' x 4' cement manhole barrel. This allowed them to use updated equipment to measure the effluent flow more accurately. By creating the sample/flow manhole himself, Bruce saved the Village of Ewing $4000.

Pioneer thinking like this allows small communities to continue to move forward into tomorrows technology, using the funds available to them today.

If your community has designed something unique and/or cost effective please contact me at (402) 443-5216.