



THE SPIGOT

from the NORTH DAKOTA RURAL WATER SYSTEMS ASSOCIATION

'Pigging' Helps Keep Water Lines Clean

A great deal of work goes into keeping water flowing into homes. In July, North Dakota Rural Water Systems Association (NDRWSA) employees were hard at work assisting the city of Oberon southwest of Devils Lake with cleaning its water lines. This process, known as pigging, is used to clean out mineral and biofilm deposits in water lines.

A foam plug, called a "pig," is inserted into the water line and the flow of water through the line is used to move the pig along a given stretch of pipe. Pigging the lines requires knowledge of the water distribution system's layout in order to determine the route of any given pigging run. Many valves need to be located and operational in order to direct the flow of water, and the pig, to the fire hydrant designated as the end point of any particular pig run.

The designated fire hydrant is taken apart at the end of the pigging run, gate valves are adjusted according to the desired flow direction, and the water begins flowing out of the disassembled hydrant. At the beginning of a pigging run, clean water runs from the hydrant – much like what would be expected from a tap. As the pig moves, the pipe is swabbed, and mineral deposits such as calcium, manganese, iron, or biofilm are pushed through the water lines to an open fire hydrant at the endpoint of that particular pigging run. Eventually the water begins to change color, and dirty water flows out along with the pig. The line is left open until the water has been running clear for a set amount of time. If the water was particularly dirty, another pig may be launched to swab the pipe a second time.

Pigging can take a great deal of time, and problems can easily occur. If a water line has not been flushed or cleaned in some time, mineral deposits can accumulate and restrict the flow of the water through the pipe. If the flow of water through a pipe is constricted, the pig may get stuck, potentially causing a water main break.

NDRWSA circuit riders recommend that water systems regularly pig their distribution lines; however, aging infrastructure, especially hydrants and valves, can make the task impossible. Water systems interested in assistance with pigging are encouraged to call NDRWSA for an evaluation to determine if their water system is a good candidate for pigging.



A process known as "pigging" is used to clean out mineral and biofilm deposits in water lines.

Why Call it a Pig?

The process of sending an object through a pipeline to clean out the pipe originated in the oil and gas industry. In the late 1800s, pigs consisted of balls, rags, or leather sent through a petroleum pipe to clean out paraffin deposits.

The origin of the term, “pig” is said to be from Montana. While employees were using a cleaning device through a line, the metal device was scraping along the sides of the metal pipe making a sound resembling that of a pig. One employee allegedly remarked, “Listen to that pig squeal!” and the name has stuck.



Dirty water flowing from a disassembled fire hydrant.

NDRWSA Bids Farewell to Hanson, Says Hello to Sheeley

By Lisa Schatz

The North Dakota Rural Water Systems Association (NDRWSA) staff and board of directors thanks Dan Hanson for his service while employed with the Association as its eastern circuit rider. Hanson recently accepted a position as a distribution manager with the city of Grand Forks, but will be greatly missed by staff, operators, city auditors, and rural water personnel.

Hanson traveled countless miles and logged numerous hours providing assistance to rural areas and local municipalities. His extensive knowledge in leak location, water treatment, water distribution, and line location were a great benefit when visiting water utilities that needed assistance. His reputation of insight and expertise spread quickly among the water community and communities’ requests for assistance often filled his calendar.

Hanson also served as a committee member for the NDRWSA’s annual Rural Water Expo, helping organize training and education sessions for this conference.

He also used his strong organization and technical skills to assist and encourage individuals to become members of the National Rural Water Association’s WaterPro online community, which provides updates to new technology, upcoming regulations, and utility-specific topics.

NDRWSA staff will miss Hanson’s outgoing personality and optimistic attitude. Staff often joked about getting his autograph, because he was a participant in the 2015 Boston Marathon; which he ran while having a sprained ankle! NDRWSA’s board of directors and staff wish him the best of luck as he continues his career, and thanks him for his hard work and dedication.

Jeremy Sheeley joined the NDRWSA team in August as the new circuit rider for the eastern part of North Dakota. Sheeley was born and raised in Wahpeton and attended North Dakota State University (NDSU).

His utility experience and knowledge began with his position with the city of Glyndon as a water/wastewater operations specialist, where a majority of his work consisted of water treatment, maintenance, line locations, hydrant repair, and monitoring pump stations. He also worked for the city of Fargo as a water treatment operator, and is currently a licensed Class Four water treatment operator. His extensive knowledge of water treatment (using lime, soda ash, ozone, and other polymers) will be a great benefit when visiting both large and small water utilities.

Sheeley lives in Dilworth, Minn., with his wife, Krista, and their two children, 12-year-old Maizey and 10-year-old Drew. In his free time, he enjoys running, camping, watching basketball and football, and coaching his kids’ extracurricular activities.

NDRWSA welcomes Sheeley to the rural water team!



Jeremy Sheeley