

Norfolk Insider

City of Norfolk, NE

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May 20, 2015

“Getting Sand out of Norfolk’s Wastewater”

At one time literally tons of sand and gravel traveled through the entire wastewater cleaning system at the City of Norfolk Water Pollution Control (WPC) Plant on Monroe Avenue. It was hard on the pumps and was abrasive to the plant equipment. With the addition of a new grit wash system, the dirt and sand is taken out of the waste stream and can even be used for a future fill projects.



Lonnie Tucker, Water Pollution Control Plant Supervisor, shows the cleaned sand that was filtered out of the wastewater going through the plant.

Todd Boling, WPC Plant Superintendent, said the new grit wash system was installed earlier this spring at a cost of \$315,000. When the wastewater gets to the plant, the grit system slows down the stream of wastewater and allows for the heavy sand, gravel and other sediment to settle to the bottom. The system previously used would remove the grit but since it still contained organic material, the dirt and gravel would have to be hauled to the landfill.

“After the heavy particles are filtered out of the wastewater, water is used to rinse that collection of gravel and dirt which removes the organic material. The organic material is returned to the wastewater treatment system while the gravel and dirt is clean and dried and ready to be hauled out and used,” Boling said.

The gravel and dirt is free of contaminants so can be used as fill material in paving projects. Each week from three to four tons of sand and gravel is collected from the grit collector/wash system.

“Taking out the sand and gravel at the beginning of the waste treatment process not only protects our pumps and equipment downstream, it also saves nearly four tons of gravel per week from ending up at the landfill. That gravel and sand can now be used for road projects,” Boling said.

The WPC Plant routinely cleans three and a half million gallons of the city’s wastewater each day. Once treated, that water is released into the Elkhorn River 99% free of contaminants.