

# Norfolk Insider

City of Norfolk, NE

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## “City’s Biosolids Used as Fertilizer”

The City of Norfolk Water Pollution Control Plant (WPC) not only cleans the city’s wastewater, it also takes the biosolids from the water for use as fertilizer on area farmland.

Over 3.5 million gallons of sewage enters the WPC plant on Monroe Avenue each day. At the plant, the sewage goes through physical and biological processes which clean the wastewater. Once processed, the water is 98% pure and released into the Elkhorn River. The solids are taken to a holding tank where the liquids rise to the top, are returned to the head of the plant and re-treated. Two belt filter presses remove more liquid from the remaining solids.



“Lime is added to the biosolids to help eliminate odor and then it is spread onto farm ground at correct agronomic rates. We regularly take soil samples of the farm ground to monitor nitrogen and other mineral levels,” said Todd Boling, WPC Plant Superintendent, “Each day we dewater the solids and three to four trucks that hold 25,000 pounds each spread the biosolids on the land. About 2,500 acres in Wayne, Pierce, Madison and Stanton counties are fertilized with the biosolids from the Norfolk WPC plant.”

Recently the Wastewater Division purchased a new truck to replace a solids applicator truck that had been in use since 1994. A spreader box from the older truck was put on the new \$175,000 truck.

“We use these trucks to spread the biosolids five days a week, every week of the year. Each truck holds 16 cubic yards of solids so every day WPC workers spread about 12 tons of solids on the farmland,” Boling said.

The application of the biosolids is closely monitored to adhere to Federal Environmental Protection Agency (EPA) and Nebraska Department of Environmental Quality standards.

A study by the Florida Department of Agriculture found that bio-solids from water pollution control plants are as effective as traditional synthetic fertilizer. Some minerals such as phosphorus, calcium and iron were higher in crops fertilized with bio-solids. According to the EPA website, “bio-solids are nutrient rich organic materials that

when treated and processed can be recycled and used as fertilizer to improve and maintain soils and stimulate plant growth.”

“Using bio-solids completes the cycle of returning the nutrients into the soil for fertilizer and beneficial use. Spreading the solids on the land also saves space in the landfill where it otherwise would end up,” Boling said.

At this time the WPC plant does not charge the landowners for the solids and is not selling it to the general public.