

Penn State seeks to expand water reuse system

HIGHLIGHTS

Penn State seeks to add additional uses to treated water

Plan set to take effect in four to five years

University required municipal adoption for the sewage facility special study

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FERGUSON TOWNSHIP — The municipalities of the Centre Region adopted a special study by Penn State on Monday that will allow the university additional uses to the water produced by its treatment plant.

Plans to expand the university's water reuse system started in 1999, Penn State energy and engineering Director Robert Cooper told the Centre Region Council of Governments General Forum on Monday. Additional piping to convey the water has already been installed on campus, with more piping to come.

The issue arose when Penn State was notified by the state Department of Environmental Protection in March that the installation of the lines had not yet been approved and the university was in violation of the region's Act 537 sewage facilities plan, Cooper said.

The sewage facilities plan helps guide future sewage facility decisions in the community, according to the COG website.

According to the university's master plan, Cooper said, the campus uses 310,000 gallons of reuse water per day. This water is used for irrigation at the Living Filter spray fields.

Right now, he said, stormwater is reintroduced into the ground through stormwater facilities on campus, and is pumped out of the ground for use on campus. The objective, he said, is to pump as little out of the ground as possible.

During the past 25 years, the university has reduced its potable water use by 25 percent, he said. During this same time, the school has added about 10,000 students and 8 million square feet of building space.

After water is treated by the campus wastewater treatment facility, he said, it is pumped to the spray fields. More than 90 percent of this irrigated water recharges about 1.7 million gallons to the regional water table per day.

"But we think we can do a little better," Cooper said. "Our wastewater treatment plan is starting to show its age, and while its meeting its permit conditions and functioning properly, it's coming to the end of its functional life."

The university is taking the opportunity to change the plant to a microfiltration process, he said, which will generate Class A reuse water. Class A water meets DEP approval above potable water for irrigation, cooling tower use and toilet and urinal flushing.

This will reduce the groundwater usage by 300,000 to 500,000 gallons per day, he said.

In order for the Penn State study to be accepted, each individual municipality was required to adopt an individual resolution of approval.

No members of the public spoke during the public hearing portion of the presentation. Following a brief discussion, the meeting was called into recess, during which each municipality discussed and adopted the study.

Cooper said it will be another four to five years before the reuse plan fully goes into effect.

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