

Business First of Columbus - November 24, 2008
<http://columbus.bizjournals.com/columbus/stories/2008/11/24/story15.html>

COLUMBUS
BUSINESS FIRST

Friday, November 21, 2008

Sponsored by
brother.
at your side

There's more money to be drained from city's tons of sewage sludge

Business First of Columbus - by [Jeff Bell](#)

A research center at **Ohio State University** is helping Columbus dip its toe into finding the best ways to dispose of sludge at the city's sewage treatment plants.

If adopted, the recommendations from OSU's Center of Resilience could save money for the city and help the environment, said Joseph Fiksel, the center's executive director.

"We discovered some solutions that are win-win," he said. "They can reduce costs and greenhouse gas emissions significantly. It was a very nice result."

The center provided Columbus' **Department of Public Utilities** with an analysis that concluded up to \$2 million a year could be saved by making changes in sludge disposal at the Southerly and Jackson Pike treatment plants. That would represent a savings of nearly 25 percent on the city's \$8 million annual disposal bill.

In addition, the analysis said the changes have the potential to reduce greenhouse gas emissions from the plants by 9 percent to 40 percent and cut their energy consumption by 15 percent to 64 percent.

Burn it or bury it

Sludge is the solid matter produced in wastewater treatment. It adds up in a hurry at plants the size of the ones operated by Columbus, which generate 115 tons of dry sludge a day, said Dax Blake, administrator of Columbus' Division of Sewerage and Drainage.

Some of the sludge at the Jackson Pike plant is used by farming operations that inject it into the soil to enrich the dirt, Blake said. The rest is burned with the resulting ash going to a landfill. Sludge at the Southerly plant is incinerated or trucked to a composting site where it is converted to a soil product sold to the public.

The OSU analysis concluded that additional use of land applications for the sludge from Jackson Pike and a combination of incineration and composting at Southerly would lead to a balanced operation resulting in a 15 percent cost savings and 25 percent reduction in greenhouse gas emissions.

The cost savings estimates in the analysis need to be refined, Blake acknowledged, but the trends cited on greenhouse gas emissions and energy reduction are firm. The model used by OSU also helps to better quantify the various methods of sludge disposal, he said.

"Their contribution is pretty significant," Blake said of the Center of Resilience's work. "There is a real possibility to reduce greenhouse gas emissions and energy consumption (at the plants)."

Columbus paid \$25,000 to become a center sponsor last year. City Council recently signed on for that price for another year. Besides the sludge disposal analysis, the center created a carbon footprint assessment tool for all city operations.

Research effort

The sludge disposal recommendations grew out of an Eco-Flow modeling tool that has been developed by the center, Fiksel said. The model enables material flow networks to be designed and reconfigured to provide maximum profit and waste reduction.

Eco-Flow is part of a tool kit for industrial ecology, a process in which waste is converted to usable materials. It is the kind of work the center has focused on since its founding in 2005, Fiksel said, drawing on the expertise of more than a dozen Ohio State engineers, scientists and business scholars drawn from six colleges at OSU.

Leveraging more than \$20 million in research programs, the center works with companies in energy, transportation, agriculture and other industries to improve the resilience of their operating systems and the environments in which they work. It also works with government agencies, such as Columbus, on similar matters.

"We want to help them become leaner, more efficient and have fewer environmental impacts," Fiksel said.

614-220-5456 | jbell@bizjournals.com

All contents of this site © American City Business Journals Inc. All rights reserved.