



Phosphorus Reduction from Businesses: Using a City-wide Inventory

Minnesota Technical Assistance Program ■ FACT SHEET

If your wastewater treatment facility (WWTF) does not know which of its users are contributing phosphorus to its system, consider doing a city-wide inventory to understand which commercial, industrial, institutional, domestic and water treatment plant sources contribute phosphorus to your facility.

Brainerd-Baxter Case Study

The cities of Brainerd and Baxter plan to build a shared wastewater treatment plant by 2009. They needed to reduce phosphorus inputs to meet the new regulatory standard of 1 mg/L. The cities also needed to document phosphorus reduction strategies in a Phosphorus Management Plan by early 2007.

To develop their phosphorus reduction strategies, the cities decided to inventory businesses likely to discharge phosphorus, to better understand their users and to offer reduction assistance. Funding from a U.S. Environmental Protection Agency pollution prevention grant through the Minnesota Pollution Control Agency supported a student worker to work on the project, whose work was directed by MnTAP.

The WWTF operators and city managers in Brainerd and Baxter identified businesses likely to discharge phosphorus and sent them a letter indicating they would be contacted regarding phosphorus issues.

The student worker conducted 112 site visits out of 131 businesses contacted. Types of businesses visited included manufacturers, restaurants, car washes, nursing homes, hospitals, dental offices and schools. In addition to phosphorus, the student also provided information on biological oxygen demand (BOD), total suspended solids (TSS), fats/oils/greases (FOG) and mercury.

The student identified 35 businesses using products that contained phosphorus. Some businesses explored switching to a low- or non-phosphorus product. A survey conducted following the project indicated eight businesses reduced the equivalent of 880 pounds of phosphorus per year. If the remaining 27

businesses switched products, they would reduce an estimated additional 3,000 pounds per year.

Conducting a City-wide Inventory

Promotion and outreach

- Identify all businesses in the city with phosphorus discharge or operations that generate phosphorus.
- Send out a letter from the city to businesses promoting phosphorus reduction and asking businesses to find alternatives to phosphorus containing products.
- Publish newspaper articles on the problems with phosphorus and opportunities for reduction and assistance.
- Send bill stuffers with information on the problems with phosphorus and opportunities for reduction and assistance.

Assistance

- Contact each business to set up a site visit.
- Conduct site visits at companies interested in discussing problems related to phosphorus and opportunities for reduction and assistance.
- Follow up with the company to provide additional assistance.

Evaluation

- Send out a survey to determine the impact of outreach and assistance, and the amount of phosphorus reduced.
- Document phosphorus reductions.

For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that prevent pollution at the source, maximize efficient use of resources, and reduce energy use and cost. Our information resources are available online at <mntap.umn.edu>. Or, call MnTAP at 612/624-1300 or 800/247-0015 from greater Minnesota for personal assistance.

(12/06)