City of Appleton Municipal Biosolids Management

March 20th Biosolids Symposium
Public Relations
AWWTP OVERVIEW

- Serves a population of approximately 75,000
- Treats over 5 billion gallons of wastewater annually
- 10 Significant Industrial Users are permitted, tested and inspected through the Industrial Pretreatment Program.
- Produces approximately 25,000 wet tons of biosolids annually
- 12,000+ acres of inventory within 7 counties and use approximately 1,000 acres per year...
- Land applies approximately 22,500 wet tons of biosolids to agricultural fields annually...
- Compost approximately 2,500 wet tons of biosolids for giveaway and sale...
public relations

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noun

the professional maintenance of a favorable public image by a company or other organization or a famous person.

- the state of the relationship between the public and a company or other organization or a famous person.
  "companies justify the cost in terms of improved public relations"

Feedback

Translations and more definitions
BIOSOLIDS PROGRAM

The City of Appleton’s Wastewater Treatment Plant (AWWTP) produces approximately 20,000 wet tons of biosolids per year, equivalent to filling Lambeau Field to the height of 15 feet. The AWWTP Biosolids Management Program is committed to effectively manage and utilize 100% of the biosolids produced through beneficial use alternatives such as agricultural land application while maintaining maximum standards of human and environmental health.

The AWWTP Biosolids Management Program adheres to the guidelines and regulations set forth in the United States Environmental Protection Agency’s Code of Federal Register (CFR) 40 part 503 and the State of Wisconsin Department of Natural Resources (WDNR) Code 204. Biosolids application by the City of Appleton on farm fields has been a longstanding practice that is consistent with the “green” philosophy that is being emphasized now more than ever. The AWWTP continues to evaluate technologies that include biosolids composting and heat transformation that are capable of diversifying beneficial use alternatives.

Biosolids are the stabilized and nutrient-rich organic material produced at the end of the domestic sewage treatment process at the AWWTP. The AWWTP utilizes two biological processes, aerobic aeration and anaerobic digestion to break down waste matter and remove nutrients from incoming wastewater streams. The anaerobic process reduces pathogens and minimizes odors, forming a safe and natural agricultural product.

Appleton biosolids are rich in plant essential nutrients such as nitrogen (N), phosphorus (P), and potassium (K) and also contain other beneficial nutrients. The United States Department of Agriculture provides information on the nutrient content of biosolids. The major components of biosolids include:

- **Nitrogen (N)**: Essential for plant growth, nitrogen is a key component of proteins and enzymes.
- **Phosphorus (P)**: Important for plant growth, phosphorus is a key component of DNA, RNA, and ATP.
- **Potassium (K)**: Essential for plant growth, potassium is a key component of cell membranes and plays a role in photosynthesis.

The City of Appleton uses biosolids beneficially on local farms, enhancing soil fertility and nutrient content. This practice not only promotes sustainable agriculture but also contributes to the environmental health of the region.

For more information on biosolids applications and the City of Appleton’s commitment to sustainable waste management, please contact the AWWTP at 920-746-7300 or visit the City of Appleton’s website.

To learn more about biosolids management and the City of Appleton’s efforts, visit their website at [Appleton.gov](http://Appleton.gov).
INTERNET KEY WORD SEARCH: “BIOSOLIDS”
Approximately 75% of the biosolids produced annually is spread to permitted fields outside the LFR basin.

Land Application occurs up to 75 miles from AWWTP.
CHALLENGES FOR LAND APPLICATION

- Competing land uses.
  - Urban and rural sprawl
  - Expanding large dairy operations (CAFOs)
- Increasing and more stringent regulations.
  - Land based phosphorus standards.
  - TMDL
- Negative PR via social media, media stories, photo and videos
PUBLIC AWARENESS AND INFORMATION
GENERAL PROGRAM INFORMATION AVAILABLE

- City of Appleton Web Site: www.Appleton.org
  - Biosolids Application Program information
  - Biosolids Application Brochure
  - Composting Brochures and Research information
  - Pretreatment Program information
BIOSOLIDS APPLICATION BROCHURE

Appleton Wastewater Treatment Plant Biosolids
Management Program

Appleton Wastewater Treatment

CITY OF APPLETON

AWWTP Biosolids Program Objectives

The City of Appleton Wastewater Treatment Plant (AWWTP) produces approximately 20,000 wet tons of biosolids per year. The AWWTP Biosolids Management Program is committed to effectively manage and utilize 100% of the biosolids produced through beneficial use alternatives like agricultural land application while maintaining maximum standards of human and environmental health.

Biosolids application by the City of Appleton on farm fields has been a long standing practice that is consistent with the "green" philosophy that is being emphasized now more than ever. Biosolids application, incorporation, and site monitoring have traditionally been provided to landowners or tenants at no charge. This beneficial use partnership has provided farmers with an alternative to costly chemical fertilizers while providing the AWWTP a reliable outlet for its biosolids.

The Wisconsin Department of Natural Resources (WDNR) recognizes the AWWTP Biosolids Management Program as a leader among statewide Publicly Operated Treatment Works (POTWs). WDNR Wastewater Engineer Mark Cobert stated that the AWWTP facility operates an exceptional Biosolids Management Program, focused on the beneficial use of biosolids, and predicated on the protection of public health and the environment. The stellar implementation of this program, including land owner and contract hauler involvement, is a model among local and statewide POTWs.

Special points of interest:

- Improve crop production
- Improve soil health
- Reduce chemical fertilizer usage
- Reduce soil erosion and protect water quality
- Conserve landfill space

Contents

NURSERY BENEFITS  2
Pathogens in our Compost?

Our compost is tested for disease-causing micro-organisms such as fecal coliform per state and federal standards.

The wastewater treatment process kills more than 90% of such organisms and the composting process destroys any that may remain in biosolids. Laboratory results confirm that pathogenic organisms are not present in our compost and meets the designation of Exceptional Quality.

Disclaimer

The Appleton Compost facility ensures that all Appleton Biosolids Compost has been treated to the standards of the Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (WDNR). Treatment is by approved methods to reduce pathogens. Pathogen and metal concentrations are below regulatory limits established by the EPA and WDNR for exceptional quality (EQ) Biosolids. The City of Appleton and its partners are not liable in anyway for damage to crops, gardens, or other vegetative growth due to improper usage. Compost is environmentally safe when used appropriately.

DID YOU KNOW?

There are 261 operating biosolids compost facilities in the US as of 2010.

The Appleton Wastewater Treatment Facility is currently the only facility in Wisconsin Composting Biosolids.

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City Compost Project
The City of Appleton is producing compost from what were previously considered to be city waste products. These ingredients include: leaves, brush, and biosolids from the Appleton Wastewater Treatment Plant (AWWTP). Over time the composting process converts these ingredients into a stabilized, nutrient rich material. The compost has been certified by the United States Composting Council’s Seal of Testing Assurance program.
For more information on residential giveaways and program promotions please call 920-832-5945 or visit the compost webpage on the AWWTP departmental link at appleton.org/residents/utilities/compost-program.
CAREER FAIRS AND COMMUNITY EVENTS
NR 204 created to regulate the use and disposal of sewage sludge. Its purpose is to:

“...protect public health and to restore, protect and maintain the physical, chemical and biological integrity of the soil, air, surface water and groundwater of the state and to allow no detrimental effects to these resources, and the natural environment.”

“...sewage sludge and its recycling to the land as a fertilizer or soil conditioner is encouraged, rather than disposing of sludge through incineration or landfilling.”
City of Appleton
Wastewater Treatment Plant (AWWTP)

Meeting Regulatory Compliance and Future Challenges with Sustainable Solutions

Come visit us at http://www.appleton.org/