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 Wastewater Treatment Plant
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To: Chairperson Baranowski and Members of the Utilities Committee

From: Director of Utilities Chris Shaw
 Deputy Director of Utilities Chris Stempa
 Environmental Programs Coordinator Brian Kreski

Date: January 30, 2019

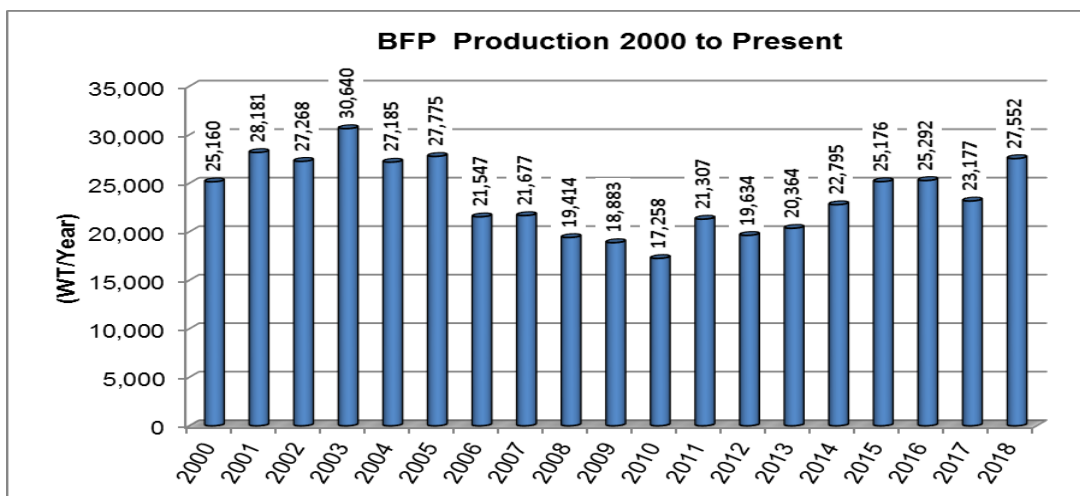
RE: **2019 APPLETON WASTEWATER TREATMENT PLANT
 BIOSOLIDS STORAGE UPDATE**

Appleton Wastewater Treatment Plant Biosolids Program:

Since 2000 the Appleton Wastewater Treatment Plant (AWWTP) has produced an annual average of 23,500 wet tons of biosolids (table 1) and applies approximately 22,000 wet tons to agricultural fields as part of the Biosolids Management Program. The program is committed to effectively manage and utilize 100% of the biosolids produced through beneficial use alternatives such as agricultural land application and biosolids composting. The AWWTP Biosolids Program is regulated by the Wisconsin Department of Natural resources (WDNR) and is required to provide 180 storage for the municipal biosolids produced (NR 204).

In 2018, the AWWTP generated 27, 552 tons of biosolids (Table 1) at 31.4% total solids and land applied 26,319 wet tons of this material. The biosolids program utilized 63 permitted sites totaling 1,135 acres of agricultural permit at distances up to 65 miles away in three Wisconsin Counties (Calumet, Waupaca, and Portage).

Table 1: Biosolids Production 2000-Present



Increases in hauled waste entering the AWWTP have contributed to the increase in annual biosolids production. Appleton is fortunate to have the capacity to receive this waste stream through the Hauled Waste Program. The Hauled Waste Program has become a significant revenue source (see Table 2), exceeding the \$3 million dollar plateau for the first time in 2018.

Table 2: Loadings & Revenues Summary Receiving Station Wastes

Year	Headworks			Receiving Station			Total	
	Tons	Revenue	%	Tons	Revenue	%*	Tons	Revenue
2010	71,516	\$339,701	53%	31,505	\$303,521	47%	103,021	\$643,222
2011	51,171	\$239,512	45%	31,822	\$348,565	55%	82,984	\$588,077
2012	36,056	\$186,512	28%	50,729	\$480,388	72%	86,785	\$666,900
2013	51,782	\$245,965	38%	31,818	\$373,057	62%	94,135	\$643,934
2014	96,358	\$413,882	39%	59,959	\$636,198	61%	156,317	\$1,050,080
2015	159,538	\$1,047,315	77%	47,820	\$425,532	23%	207,359	\$1,472,847
2016	241,906	\$1,633,161	79%	63,004	\$462,401	21%	304,910	\$2,161,440
2017	271,523	\$1,839,508	77%	78,935	\$862,051	23%	350,458	\$2,701,560
2018	341,334	\$2,471,075	75%	112,280	\$1,108,199	25%	453,615	\$3,576,217
5-Year Average	222,132	\$1,480,988	69%	72,400	\$698,876	31%	294,532	\$2,192,429

* Represents % of total yearly revenue.

Although the revenue has increased, the large volumes of hauled waste material entering the plant have contributed to significantly higher volume of biosolids in 2018 compared to the previous annual averages. The hauled waste, in combination with extremely wet weather conditions in the fall of 2018, created a potential need for AWWTP to landfill biosolids in 2019.

The AWWTP submitted a request to the WDNR in December, seeking regulatory approval to spread biosolids on frozen or snow covered agricultural fields (that meet NR 204 guidelines). The request was denied and the WDNR made recommendations to find alternate off-site storage, batch compost, or landfill a portion of the AWWTP's biosolids. Although landfilling will be the Utilities last option, we have proactively sought approval from two separate landfills (Outagamie County and Hickory Meadow).

It is our intention to start batching compost in early March which will provide approximately two weeks of storage and bring the AWWTP closer to land application. However, the land application is ultimately determined by the weather, field conditions, and road weight restrictions which can vary from year to year. AWWTP staff are evaluating a potential area located near the existing biosolids building which may allow for limited additional temporary biosolids storage. Below is a recap of the currently available options for biosolids beneficial use, temporary storage, and/or final deposition.

- Option 1: Land application (weather/fields/weight limits)
- Option 2: Composting (up to 1,500 wet tons of biosolids)
- Option 3: Temporary storage at the AWWTP (up to 1,500 wet tons)
- Option 4: Landfill (approved for 4,000 wet tons)

It is our mission at the AWWTP to provide environmentally responsible wastewater treatment, meet regulatory compliance, provide value for services, and sustainability. Recycling options will have first priority over landfilling AWWTP biosolids.

If you have any questions or require additional information regarding AWWTP Biosolids Program please contact Brian Kreski at 920-832-5945.