ENVIRONMENTAL IMPROVEMENTS ADDENDUM to the

2019
ANNUAL REPORT

THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

EMS
ENVIRONMENTAL
MANAGEMENT
SYSTEM

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REDUCING IMPACT OF SIGNIFICANT ENVIRONMENTAL ASPECTS

We consistently review our activities, products and services to identify environmental attributes and their effects on the environment for each of our facilities.

The Columbus Department of Public Utilities (CDPU) is pleased to issue this addendum to the department's 2019 annual report to further detail our commitment and accomplishments for reducing our environmental footprint. Our department is charged with not only protecting public health by providing safe access to, and maintenance of, our most basic utility needs, but also being a responsible steward of our environment through a systematic adherence to our environmental management standards. The City of Columbus is one of very few public utilities in the country known to have an Environmental Management System (EMS) that self-declares conformance to the ISO 14001:2015 standard and, as one of the largest City of Columbus departments, we understand the critical role we play in protecting our air, land, and water.

2019 Accomplishments:

- **For the third year in a row the Division of Sewerage and Drainage achieved 100% beneficial reuse of its biosolids. (Page 3)**

- **The Division of Water obtained a new Ohio Environmental Protection Agency (EPA) general permit to beneficially use drinking water treatment residual material on land for agronomic benefit as a liming material. (Page 3)**
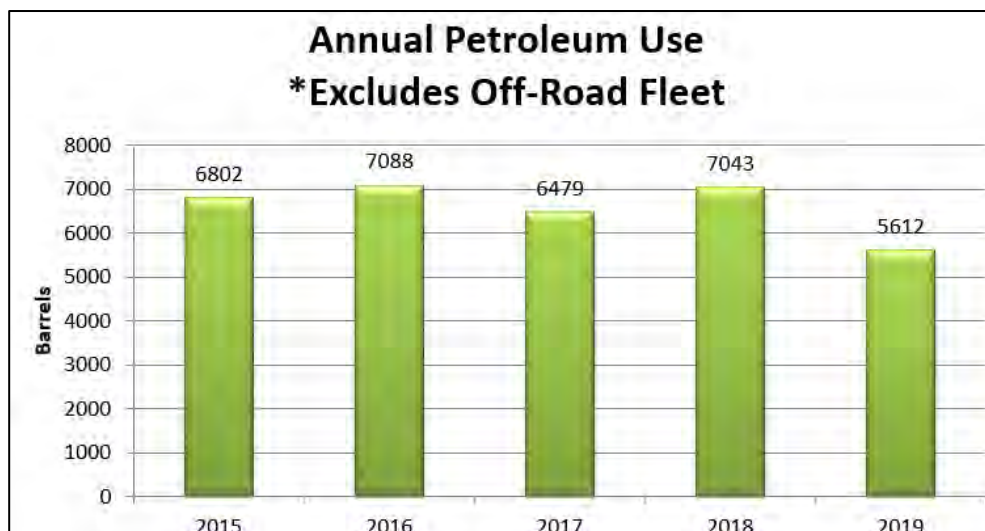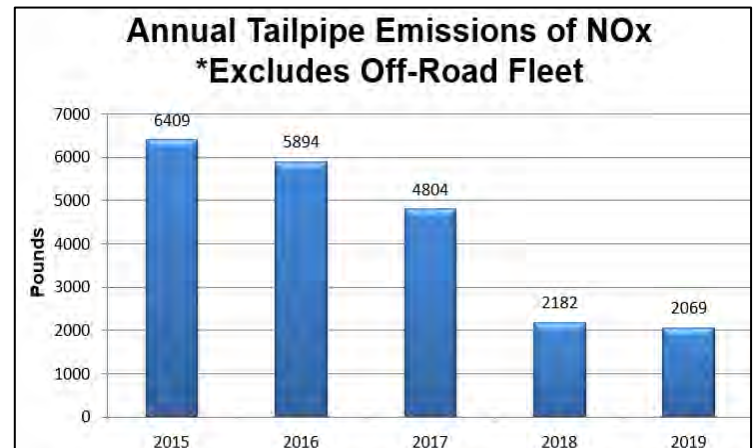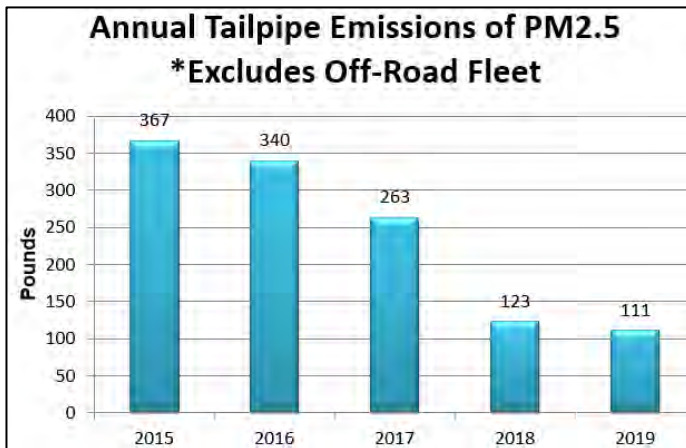
We are proud of the great contributions by all of our employees to deliver services that are environmentally sustainable. We maintain a commitment to not only meet our environmental obligations, but to exceed them at every opportunity in order to create a lasting impact for our community.

ENERGY CONSERVATION

DEPARTMENT OF PUBLIC UTILITIES FLEET

A key component to our goal of improving air quality is our energy reduction initiative with a focus on reducing emissions. While the overall size of the department fleet has increased slightly since 2015, there have been several environmental footprint reductions. This includes drops in nitrogen oxides (NOx) emissions (68%), and particulate matter 2.5 (PM 2.5) (70%) over the last five years (emissions calculated using the 2019 AFLEET calculator provided by the U.S. Department of Energy). Older vehicles are being replaced and more alternative fuel vehicles are being added to help continue this trend.

Annual Tailpipe Emissions of PM2.5
*Excludes Off-Road Fleet

Year	Pounds
2015	367
2016	340
2017	263
2018	123
2019	111

Annual Tailpipe Emissions of NOx
*Excludes Off-Road Fleet

Year	Pounds
2015	6409
2016	5894
2017	4804
2018	2182
2019	2069

Annual Petroleum Use
*Excludes Off-Road Fleet

Year	Barrels
2015	6802
2016	7088
2017	6479
2018	7043
2019	5612

WASTE MANAGEMENT

DPU WASTE REDUCTION EFFORTS

2019 DPU WASTE DIVERSION (TONS)	
Hazardous/Non-hazardous/Universal Waste	8.8
Metals Recycling (copper, steel, aluminum, brass, cast iron)	543
Employee Recyclables (paper, cardboard, plastic, etc.)	216
Biosolids Beneficial Reuse/Compost/Yard Waste	132,439
Drinking Water Treatment Residuals Beneficial Reuse (*see below*)	10,005
TOTAL DIVERTED	143,212

DRINKING WATER TREATMENT RESIDUAL BENEFICIAL

The Division of Water took advantage of a new Ohio EPA general permit to reuse drinking water treatment material for agronomic benefit. Each water treatment plant creates this material as a byproduct of the treatment of drinking water by the addition of lime. It is of beneficial use agriculturally as an ingredient in a soil blend, as a liming material for land application and helps to neutralize soil pH.
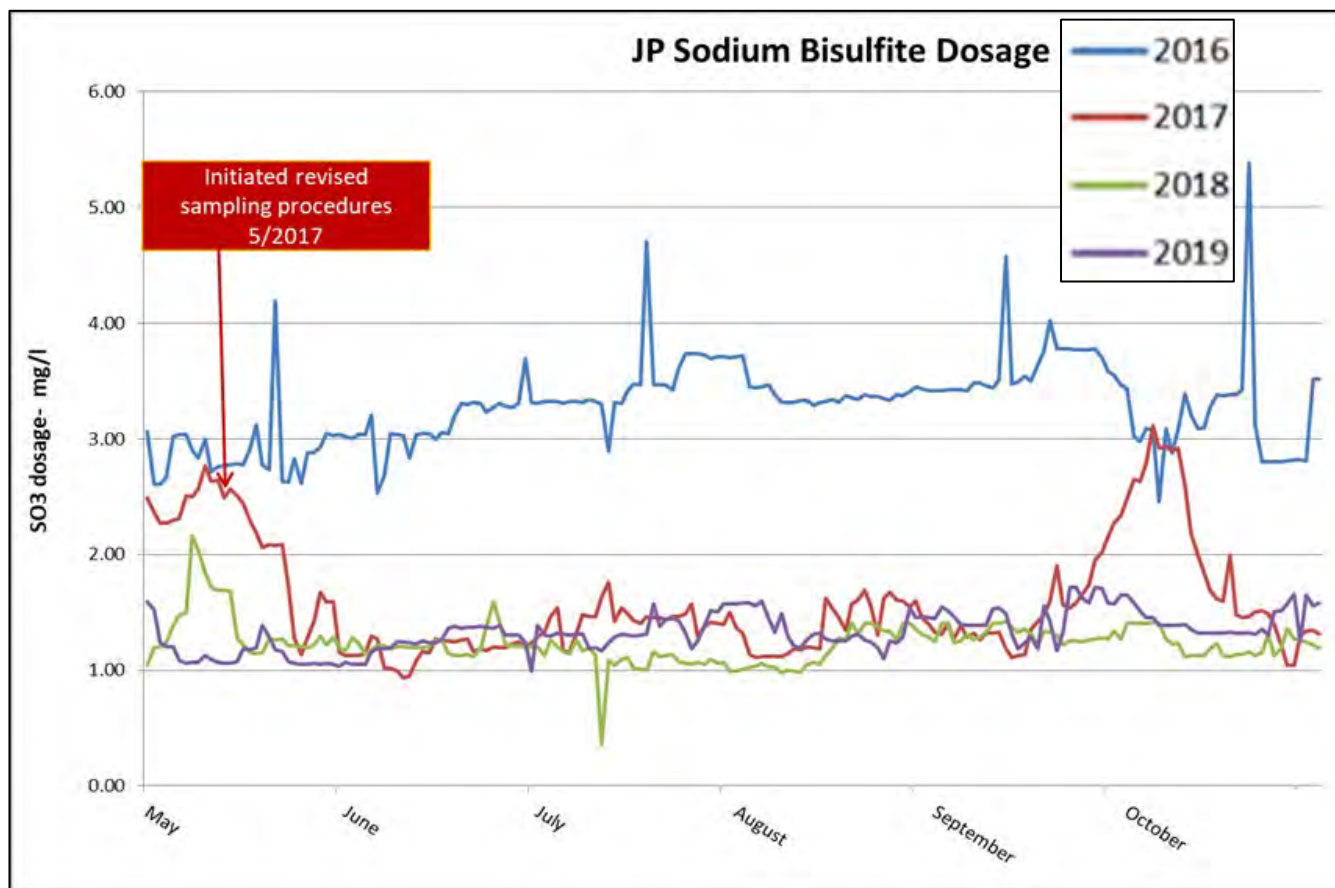
CLEAN & PROTECT

CHEMICAL REDUCTION

Per the National Pollutant Discharge Elimination System (NPDES) Permit, the Jackson Pike Wastewater Treatment Plant must disinfect its effluent to kill any remaining bacteria or pathogens that may be in the effluent during the months of May through October. Sodium Hypochlorite, a 15% bleach solution, is used for this process. However, since bleach is a strong oxidizer, prior to discharging to the Scioto River, the effluent must be de-chlorinated using Sodium Bisulfite. In 2014-2016, the plant used an average of 30 pounds of bisulfite per million gallons of effluent treated. In 2017 a new process of effluent sampling and bisulfite dosage calculation was implemented to try to reduce bisulfite use. For the years 2016-2019, the bisulfite dosage was successfully reduced to an average of 14.9 pounds per million gallons of effluent treated while still meeting NPDES Permit limits of E-coli and chlorine residual. This equates to an almost *60% reduction*. The Division of Sewerage and Drainage was featured in the *Columbus Monthly* magazine in July for the efforts to help restore the Scioto River.

EDUCATION & MITIGATION

PUBLIC EDUCATION AND OUTREACH

The department's Sustainability Team hosted an electronic waste (eWaste) recycling event in October for employees. The event raised employee awareness of eWaste in the home that should not be thrown in the trash (i.e. TVs, microwaves, home computers, printers). The event collected 2,783 pounds of eWaste.

INTERNAL EDUCATION AND AWARENESS

2019 exhibited low water levels along the Scioto River at the O'Shaughnessy Reservoir which provided an opportunity to collect litter along the shorelines. With support from Keep Delaware County Beautiful and a citizen, the City of Columbus and DelCo Water were recently recognized by the Delaware General Health District with a 2019 Partnership Award for Scioto River cleanup efforts.

The department and *Sustainable Columbus* helped launch the Sustainable Steps initiative. Sustainable Steps is the city's innovative and ambitious climate action plan to reduce air pollution and greenhouse gas emissions. Sustainable Steps provides all Columbus residents with simple, actionable ways to improve their lives and the health of their environment. A major goal of the initiative is to provide 30,000 home energy audits. Sign up at https://sustainablestepscolumbus.com/initiatives/.

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2019