



LUCAS COUNTY SANITARY ENGINEER

ANNUAL REPORT

2018

BOARD OF LUCAS COUNTY COMMISSIONERS

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LUCAS COUNTY SANITARY ENGINEER

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EXECUTIVE SUMMARY

This document describes the activities of the Lucas County Sanitary Engineer's (LCSE) department. The LCSE department operates through the authority of the Lucas County Board of Commissioners. Services that the department provides to its customers include: Water Distribution, Wastewater Collection, Wastewater Treatment, Engineering, Surveying, Inspection, Operation and Maintenance. Additionally, the department is coordinating the remediation of a dormant landfill (King Road Landfill) in Sylvania Township. In 2006, the Solid Waste Management District officially became part of the department.

LCSE Department Description

Water Distribution: The department operates and maintains approximately 450 miles of water lines with approximately 5,000 fire hydrants and three water booster pumping stations. The distribution system has 2.5 million gallons of surface storage capacity and 4.0 million gallons of elevated storage capacity.

Wastewater Collection: The department operates and maintains approximately 300 miles of sanitary sewer/force main lines and 50 wastewater pumping stations.

Wastewater Treatment Plant (now Water Resource Recovery Facility): The department operates and maintains a 22.5 million gallons per day (mgd) water resource recovery facility, which discharges treated water to the Maumee River. In 2005, we officially increased our capacity by 7.5 mgd and we have a site capacity to expand another 7.5 mgd to 30 mgd in the future.

Engineering, Surveying, Inspection: The department consistently has thousands of feet of water supply lines and sanitary sewer lines under review, design, and/or construction. These improvements are being undertaken in response to petitions by property owners, service to new developments, and to enhance the dependability of the public water and sanitary sewer systems.

King Road Landfill: The department coordinates the remediation of the dormant landfill on King Road. The feasibility study has been accepted by the Ohio Environmental Protection Agency (OEPA) for determination of the appropriate remedial action. We are coordinating efforts with the OEPA.

Solid Waste Management District: The District provides programs and services for all Lucas County residents, including efforts to reduce, reuse and recycle. The District's primary service includes collection of recyclables at drop-off locations throughout the County. District duties are made to comply with the approved District Solid Waste Management plan.

LCSE MISSION STATEMENT (WATER/SEWER)

To provide customers with high quality, safe, cost effective and sustainable water and wastewater services in accordance with applicable Local, State and Federal requirements for a healthier today and a sustainable tomorrow.

SOLID WASTE MANAGEMENT DISTRICT MISSION STATEMENT

To develop and enhance programs which enable residents to easily recycle common household wastes as well as to assist business and industry with the implementation of waste reduction and recycling programs, with programs/services to reduce, reuse and recycle.

WATER RESOURCE RECOVERY FACILITY MISSION STATEMENT

To operate and maintain the Lucas County WRRF in a cost effective, reliable, and safe manner with meets all State and Federal permits and regulations.

2018 Accomplishments

SE - Permits/Taps/Tappers:

Water connection fees paid

318 in 2018 (270-'17, 304-'16, 287-'15, 292-'14, 285-'13, 195-'12)

Sewer connection fees paid

260 in 2018 (223-'17, 269-'16, 247-'15, 247-'14, 240-'13, 154-'12)

Paid sewer taps

244 in 2018 (244-'17, 279-'16, 270-'15, 247-'14, 238-'13, 148-'12)

Licensed sanitary sewer tappers

51 in 2018 (51-'17, 49-'16, 44-'15, 42-'14, 40-'13, 41-'12)

SE - Maintenance (Emergency Response 24/7):

23 - Fire Hydrants Hit responses (23-'17, 12-'16, 20-'15,)

235 - San Sewer PS alarms, primarily after hrs (401-'17, 372-'16, 367-'15)

13 - Sewer backup responses (incl private issues) (30-'17, 23-'16, 30-'15)

50 - Water main break responses (35-'17, 27-'16, 57-'15)

2018 Accomplishments (continued)

SE - General:

1. Succession Planning w/ employee promotions/transfers (Crew Leaders and Util Laborers)
2. Trunk sanitary sewer has been re-lined from WRRF to MH 2 under SR24
3. All Sanitary Sewer pumping station wet wells were cleaned
4. Facility Improvements (Design and bid of parking lot improvements)
5. Field technology - GIS for field staff via iPads
6. Manhole Investigation (MHI) and Sewer Televising (STV) programs ongoing
7. Ohio EPA water/wastewater licensed operator training provider
8. Using Bluebeam Revu program for plan reviews (another step toward becoming paperless)

SE - Ohio Utility Protection Service: CALL 811 BEFORE YOU DIG or (800) 362-2764
Thousands of locate requests are handled by LCSE staff as LUC 1201

WR – Lucas County Water Resource Recovery Facility: (22.5 MGD rated capacity)

2018 <u>Average Flow:</u>	15.049 MGD	<u>Max:</u>	36.174 MGD	<u>Min:</u>	9.875 MGD
2017 <u>Average Flow:</u>	14.913 MGD	<u>Max:</u>	35.521 MGD	<u>Min:</u>	9.345 MGD
2016 <u>Average Flow:</u>	15.381 MGD	<u>Max:</u>	31.747 MGD	<u>Min:</u>	11.179 MGD
2015 <u>Average Flow:</u>	15.847 MGD	<u>Max:</u>	42.898 MGD	<u>Min:</u>	11.085 MGD
2014 <u>Average Flow:</u>	15.906 MGD	<u>Max:</u>	21.439 MGD	<u>Min:</u>	12.768 MGD
2013 <u>Average Flow:</u>	15.371 MGD	<u>Max:</u>	19.029 MGD	<u>Min:</u>	12.371 MGD
2012 <u>Average Flow:</u>	14.901 MGD	<u>Max:</u>	22.670 MGD	<u>Min:</u>	11.247 MGD

WR - General

1. Anaerobic Digester upgrade to reduce reliance on electricity well underway
2. Replaced three (3) sludge recirculation pumps
3. Replaced and upgraded PLC's and SCADA system
4. Replaced 96 ultraviolet disinfection bulbs, sleeves and ballasts
5. Installed new return activated sludge (RAS) screw pump in east plant

In June, 2015, the Lucas County Board of Commissioners changed the name of the Facility (Maumee River Wastewater Treatment Plant) to the Lucas County Water Resource Recovery Facility (WRRF) to more accurately reflect the operations and purpose of the facility.

SW - General

1. Facility Improvements (Design and bid of parking lot improvements & Office Painting)
2. Received State Grant for "CORRECT RECYCLING" Education & Awareness Program
3. Received State Grant for Compactor to assist with recycling transfer site
4. Provide financial support for the Lucas County Sustainability Commission
5. Continued Recycling Truck replacement program
6. Completed the Ohio EPA Annual District Report in a timely manner
7. Established curbside collection for Holland & Whitehouse (Stevens) and Monclova Twp (Republic Services) and Jerusalem Twp (All Star)
8. Established E-waste & HHW Program for residential collection year around
9. Obtained final approval from the Ohio EPA on the Solid Waste Plan update
10. KTLCB saw longtime Executive Director, Juliana Sample retire & we welcome Adam Cassi

2018 Accomplishments (continued)

SW - Residential Recycling: All communities in Lucas County participate in recycling, either through curbside programs, or availability to District recycling drop-off locations. In addition, the District provides direct support for the City of Toledo's residential curbside recycling program, which in combination with the District drop-off program, allowed the District to satisfy Goal #1 (access and participation) of the State Solid Waste Management Plan.

SW - Dual Stream MRF: The District operates and maintains over 150 drop-off recycling sites throughout the county, accounting for the diversion of approx. 10,000 tons of material. The District has a contract with Gateway Recycling where commingled fiber is processed. The associated revenue sharing arrangement has proved beneficial for both parties. The District also has a contract with Republic Services to transfer and process commingled bottles/cans, however, the current commodity pricing has the District paying ReCommunity.

SW - Specialty Waste Program: The Specialty Waste Program targets household hazardous wastes, scrap tires, batteries, and electronics for diversion from landfill disposal. The District coordinates a pay as you throw program with private companies.

SW - Business Waste Reduction Assistance Program - The District provides information, technical assistance and no cost waste and energy assessments to County commercial and industrial businesses primarily through a partnership with the University of Toledo Business Waste Reduction Assistance Program. The service identifies environmentally friendly solutions and cost savings for local businesses through waste minimization and process efficiency solutions. The goals of the program are to (a) increase manufacturing competitiveness through reduced solid waste disposal costs, reduced energy costs and optimized use of raw materials, packaging and floor space; (b) improve corporate image as companies become more green; (c) reduce pollution through reduced energy usage and the application of clean and renewable energy sources; and (d) decreased reliance of landfills for disposal. The Business Waste Reduction Assistance Program (BWRAP) identifies solid waste for diversion from landfills resulting in cost savings for Lucas County businesses. This program contributes to satisfying both goals #3 and #4 of the State Solid Waste Management Plan.

2018 Accomplishments (continued)

SW - Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB):

The District in partnership with Keep Toledo/Lucas County Beautiful, Inc. provides general assistance, educational materials and technical assistance in all areas of waste management, recycling, waste reduction, composting, yard waste management, market development, scrap tires, electronics, household hazardous waste as well as other solid waste issues. The aforementioned programs encourage environmental stewardship and satisfies goal #3 of the State Solid Waste Management Plan.

SW - Sustainability Commission: This Commission has a holistic model of sustainability which reflects the “triple bottom line” thinking. The District provides funding to support the work of the Toledo-Lucas County Sustainability Commission. The Commission worked to establish basic metrics for sustainability including documentation of the baseline carbon footprint for Toledo-Lucas County including development of measurable and prioritized goals through a carbon management action plan.

Trends / Opportunities / Tools

Software

1. Our annual subscriptions (AutoCad & ArcGIS) keep us up to date with the latest software.
2. Technicians use a variety of software versions.
3. Handheld devices are being used more and more for access on “the cloud”.

Survey (electronic field books)

1. We obtain field data electronically with an in-house Engineering Tech Surveyor.
2. Recent innovations and technology are coordinated with the County Engineer’s office.

Lucas County GIS (water & sewer layers)

1. We completed our back file data conversion by creating GIS layers and links to plan documents in 2006.
2. We currently utilize ArcGIS ESRI software for the GIS system and many varieties of queries are available and utilized.
3. ArcGIS Online (AGO) is an online tool to view water/sanitary sewer layers with the County Engineer’s storm water data and the Health Department’s data on the County website.
4. The AGO can be accessed through the Sanitary Engineer’s website.

Access to Sanitary Sewer permits

1. Sewer permits have been entered into the imaging system - OnBase
2. These records can also be accessed through the Sanitary Engineer’s website.

One-Stop Location for water, sewer & building permits & water taps and County Engineer data

1. Our joint location of Public Works has allowed us to issue water and wastewater permits, water taps and building permits at one location.
2. The Building Regulations Dept. relocated their operations as an attached office in 2000.
3. The Lucas County Engineer’s office and garage facilities relocated next door, just north of the Sanitary Engineer’s office in 2013.
4. These modifications have provided a user-friendly convenient service to our collective customers.

Countywide Refuse/Recycling Collection & Processing

1. By Agreement, the District has contracted for refuse/recycling collection services for Toledo, Maumee, Whitehouse, Jerusalem Twp, Holland and Monclova Twp.
2. The District continues to explore alternatives to develop a Material Recovery Facility (MRF) in the City of Toledo and continue to explore transfer options.

Growing Technology....

1. iPads were new to the Utility Crew Leaders for field access to GIS in 2015. We added more for additional field staff in 2018.
2. Verizon mobile phones, e-mail to text and monthly division meetings allow the department to communicate more effectively.
3. GIS continues to grow as a tool for all aspects of the LCSE operations.
4. Website information allows for public access to LCSE functions, programs and services.
5. Plan review software in 2018 has allowed us to continue on path of being paperless.

KEY FOCUS AREAS FOR THE FUTURE

- 1. Working Safely in all aspects of the Department!**
- 2. Enhancing methods to improve communication between all employees to function as a responsible and knowledgeable team (SOPs, newsletters, emails, meetings)**
- 3. Improving overall effectiveness and efficiency of the workforce by:**
 - Improving internal communication, coordination, and documentation**
 - Creating/Updating SOPs to transfer knowledge or create efficiencies**
 - Incorporating succession planning in daily activities to allow others to learn**
 - Utilizing strategies to continually improve labor/management forums**
- 4. Working toward a future program allowing greater linkage between GIS and field activities.**

Goals for 2019

GENERAL GOALS

- < **Provide training to ensure adequate working knowledge and safe working conditions for staff and public.**
- < **Provide prompt and courteous response to customer inquiries and concerns.**
- < **Seek grants and available funding while increasing efficiencies to assist with budget to ease burden on customer costs.**
- < **Clean and maintain facilities so as to present an award winning appearance.**
- < **Continue to stay current with latest software/equipment for better utilization of technology for more efficient procedures.**
- < **Continue development of SOPs - Standard Operating Procedures to capture institutional knowledge and increase operational efficiencies.**

SANITARY ENGINEER GOALS

- < **Continue to maintain and update all safety devices and equipment (PPE, gas monitors, harnesses, signs, etc...) for a safer workforce.**
- < **Explore efficiencies in combining efforts, equipment and technologies with other agencies as appropriate (Co Engineer, Auditor, LCSIS, Twps, Cities, Villages...).**
- < **Continue improvements at the King Road Landfill including bike trail extension and water taps in the NWZ.**
- < **Continue to update the GIS system with water and sewer information as well as maintenance activities to prioritize capital improvements.**

MAINTENANCE (OPERATIONS) GOALS

- < **Ensure adherence with EPA standards and recommendations for documenting activities (incl CMOM).**
- < **Improve water valve inspections and continue fire hydrant inspections in systematic fashion.**
- < **Continue field to office transfer of information (water valves on/off; WMBs, FHHs, SBUs, PSAs) and increase GIS accuracy to enhance customer service**
- < **Continue system wide approach for inspecting, flushing & televising sewers**
- < **Continue manhole inspections and sewer watch list with efficient routes in response to need**
- < **Ensure pump stations operate with minimal downtime and reduced costs. Review Mission reports with staff.**

MAINTENANCE (OPERATIONS) GOALS (continued)

- < Update pump capacities periodically based on report information and clean pump station wet wells.
- < Increase inventory for items with an extended shelf life (pumps, check valves) when ordering results in long lead times.
- < Continue to maintain and update all vehicles by following the Vehicle Replacement program.
- < Continue to monitor and improve sewer odor & corrosion control in a cost effective manner (McCord Rd, Jer Twp, Silica PS, Strayer Rd, etc...)

PROJECT SECTION (DESIGN, CONSTRUCTION & INSPECTION) GOALS

- < Continue to update equipment/software for compatibility with other firms/agencies (COT, LCE, ODOT, etc...).
- < Continue to organize office areas and files (plan room, shop drawings, general areas...) to ensure ease of access.
- < Implement projects to loop water mains to stabilize service to customers.
- < Incorporate new technology for increased efficiencies in workflow of inspectors and office staff - online form reporting.
- < Improve communication with water pumping stations and pressure sensing locations for system knowledge – Toledo SCADA improvements.
- < Complete scope for water and sanitary sewer master plans - replace pumping stations and rehabilitate McCord Rd interceptor sewer as needed.
- < Replace equipment at water pumping stations per coordination with COT.
- < Continue to improve the accuracy and efficiency of inspections/plan drawings (sewer mains, water mains, sewer taps, water main breaks, etc...).
- < Update and maintain records on a consistent basis as part of the project workflow.

WATER RESOURCE RECOVERY FACILITY GOALS

- < Meet and/or exceed all federal, state and local requirements, and in accordance with the National Pollutant Discharge Elimination System (NPDES) Permit at the Maumee River Wastewater Treatment Plant.
- < Continue to maintain established plant odor control emissions by utilizing the plant's odor control process equipment.
- < Optimize existing electrical demand improvements and research Best Management Practices for increased efficiency.
- < Ensure plant equipment operates in a manner to satisfy Ohio EPA redundancy requirements and is functional with minimal downtime and at budgetary costs.
- < Ensure 24/7 monitored plant operation and functional ability to satisfy all Contract Community obligations.
- < Optimize digester gas through improvements to existing Digesters to reduce reliance on electricity in a cost effective manner.
- < Complete facilities improvements including SCADA update for facility

SOLID WASTE MANAGEMENT DISTRICT GOALS

- < Operate in accordance with State of Ohio Solid Waste Management Plan.
- < Maximize use of Matzinger Road materials recovery facility for increased recycling and determine future of site related to creation of a MRF.
- < Enhance partnerships with KTLCB and Univ. of Toledo to maximize effectiveness of programs/services.
- < Seek grants and available funding while increasing efficiencies to assist with budget.

2018 STAFF

The department includes divisions that work together to provide water and wastewater services and solid waste programs/services on behalf of the County Commissioners for the residents of Lucas County. Employees are the most valuable resource in providing the necessary services that our customers expect.

Board of Lucas County Commissioners:

Pete Gerken, President
Tina Skeldon Wozniak, Commissioner
Carol Contrada, Commissioner

County Administration:

Megan Vahey Casiere, County Administrator
Matt Sutter, Deputy County Administrator
Jessica Ford, Deputy County Administrator

Administrative (6 employees):

Jim Shaw, P.E., Sanitary Engineer (NBU)
Matt Choma, P.E., Asst. Sanitary Engineer (NBU)
Robin Ratliff, Admin. Secretary (NBU)
Debbie Smith, Utilities Clerk Work Leader (NBU)
Veronica Jackson, Account Clerk
Val Robinson, Utilities Clerk

Maintenance (Water Distribution, Wastewater Collection, Facilities, Fleet - 25 employees):

Ed Jacobs, Auto Mechanic
Eric Schultz, Auto Mechanic
Mike Snavelly, Util. Crew Leader
Todd Melnyk, Util. Crew Leader
David Smith, Util. Crew Leader
John Krantz, Util. Equip. Operator
Tom Kralovic, Util. Equip. Operator
Ryan Kowalksi, Util. Equip. Operator
Rick Cajka, Util. Equipment Operator
Tara Jordan, Util. Laborer
Tim Farrell, Util. Laborer
Robert Lawson, Util. Laborer
Kevin Keller, Util. Laborer
Aaron Nova, Util. Laborer
John Griss, Util. Laborer
Gordon Schultz, Util. Laborer
Kyle Asher, Util. Laborer
Vacant, Util. Laborer
Ken Malkowski, Util. Worker
Darrel Phillips, Util. Worker
Mike Granata, Pump Crew Leader
Mike Keating, Pump Crew Laborer
Doug Romp, Pump Crew Laborer
Matt Watt, Pump Crew Laborer
Mike Clifton, Pump Crew Laborer

Project (10 employees):

Nate Inkrott, P.E., Project Engineer (NBU)
David Kovacs, Project Technician
Mike Harrigan, Design Technician

Water Resource Recovery Facility (23 employees):

Jason Collins, Facility Manager (NBU)
Mickey Shank, Asst. Plant Manager (NBU)
Marcia Malkin, Clerical Specialist

Project (continued)

Bob Heckman, Design Technician
Jeff Gensler, Project Inspector Crew Leader
Steve Riegle, Project Inspector
Ken Schwartz, Project Inspector
Paul Berente, Project Inspector
Pam Lawson, Survey Technician
Rick Cashman, Utilities Locator

Water Resource Recovery Facility (continued)

Terry Flood, Chemist III
David Haugh, Chemist II
Alexandra Slawinski, Pretreatment Coordinator
Gary Heid, WRRF Electrician
Greg York, WRRF Maintenance Coordinator
Terry Storer, WRRF Maintenance Coordinator
Jim McHugh, WRRF Maintenance Specialist
Brian Kozakiewicz, WRRF Maintenance Specialist
Tracy Schlipf, WRRF Maintenance Specialist
Greg Glowczewski, WRRF Maintenance Specialist
Tom Henneman, WRRF Maintenance Specialist
David Scanes, WRRF Operator
Nick Williams, WRRF Operator
Shannon Schmidt, WRRF Operator
Asher Fishman, WRRF Operator
Jerome Hall, WRRF Operator
Mike Seegert, WRRF Operator
Tony Roemmele, WRRF Operator
Joseph Haines, WRRF Operator
Vacant, WRRF Operator

Solid Waste Management District (10 employees):

Christopher Pizza, Manager (NBU)
Julie Riley, Office Manager (NBU)
Lydia Elizondo-Kokensparger, Clerk
Lou Posadny, Driver, Crew Coordinator
Terry Broshious, Driver, Crew Coordinator
Corey Allison, Driver
Thomas Sutton, Driver
Ron Keiser, Driver
Daniel Pietrzak, Driver
Alice Arnold, Waste Reduction Program Coordinator

We have a talented group of employees that provide services that are often taken for granted until there is a problem. For this, we are truly grateful for their dedicated service to the public.

Service Area Information

The Lucas County Sanitary Engineer's department provides water and sanitary sewer service to more than 100,000 people including residential, commercial, industrial, and institutional customers. The Solid Waste Management District provides programs and services for all of Lucas County (population of ~435,000).

Water Distribution: Water for the county water distribution system is supplied by two sources: the City of Toledo and the City of Oregon. These water supplies are secured through agreements with the supplying communities. The department serves more than 25,000 customers (approximately 75,000 people) in Jerusalem, Monclova, Spencer, Springfield, Sylvania, Swanton, Washington, and Waterville Townships; the Village of Ottawa Hills; Village of Harbor View; and Village of Holland. Additionally, the county supplies water to the Village of Whitehouse, and Fulton County as bulk customers.

In 2005, the County established a new water agreement with the City of Toledo that extended the existing contract an additional ten years (Oct. 10, 2024) and allows service to areas along the border of the previous agreement. In 2006, the County also approved an agreement with the City of Toledo to allow the provision of water to other areas, such as: Richfield, Spencer, Harding, Swanton and Providence Townships.

Wastewater Collection/Treatment System: Treatment of wastewater for the county collection system is provided by three sources: Lucas County, the City of Toledo and the City of Oregon. Treatment is provided through agreements with the noted communities.

The county provides wastewater collection services to approximately 19,000 (approx. 57,000 people) customers in Jerusalem, Monclova, Springfield, Swanton, Sylvania, and Washington Townships; the Village of Ottawa Hills ; Village of Harbor View; and Village of Holland. Additionally, the county's wastewater treatment plant provides treatment services to Monclova, Spencer, Springfield, and Sylvania Townships and has contractual arrangements for treatment services with the City of Maumee, City of Sylvania, Village of Waterville and Village of Whitehouse.

Solid Waste Management District: The area covered by the district includes the entire County along with all Cities, Villages and Townships. In addition to the events and programs, we operate drop off centers located throughout the County.

2018 Fund Information

Sanitary Engineer

5010 Sanitary Engineer

5020 Water Operation

5021 Water Capital Improvement/Debt

5022 Water Projects...

5040 Sewer Operations

5041 Sewer Capital Improvement/Debt

5042 Sewer Projects...

(3010 Bond Retirement - Water/Sewer)

Water Resource Recovery Facility

5030 WRRF Operation & Maintenance

5031 WRRF Capital Improvement/Debt

5032 WRRF Projects...

Solid Waste Management District

5050 SWMD

<i>Beginning Balance (\$)</i>	<i>DEPARTMENT FUND (calendar year)</i>	<i>EXPENSES (\$)</i>	<i>RECEIPTS (\$)</i>	<i>Ending Balance (\$)</i>
4,988,561.68	Sanitary Engineer 5010	6,661,579.90	5,684,860.34	4,011,842.12
2,022,420.55	Water Operation 5020	806,731.43	1,133,758.12	2,349,447.24
1,451,506.08	Water Capital Improvement/Debt 5021	750,976.66	1,331,629.95	2,032,159.37
			Water	4,381,606.61
1,296,382.53	Sewer Operations 5040	1,148,749.53	1,121,740.74	1,269,373.74
1,543,552.24	Sewer Capital Improvement/Debt 5041	668,025.90	1,039,758.07	1,915,284.41
			Sewer	3,184,658.15
4,431,651.40	WRRF O & M 5030	4,339,998.10	4,632,940.84	4,724,594.14
5,122,728.46	WRRF Capital Improvement/Debt 5031	4,661,808.92	1,829,626.55	2,290,546.09
			WRRF	7,015,140.23
6,434,824.39	Solid Waste Mgmt District 5050	10,540,353.20	12,745,627.24	8,640,098.43

**LUCAS COUNTY SANITARY ENGINEER
SEWER TAP AND WATER/SEWER CONNECTION FEE HISTORY**

