

# Public Works

## D I G E S T

Volume XXIX, No. 3  
July/August/September 2017



### This Issue: **Operations, Maintenance and Engineering**

Leader Commentaries	3
Operations, Maintenance and Engineering	6
Environmental	26
Awards	29
News and Technology	34
Professional Development	37



*Koontz Electric Company, Inc., employees update the hydropower plant at Soo Locks, Sault Ste. Marie, Michigan, by removing and replacing protective relays as part of the U.S. Army Corps of Engineers Detroit District operations and maintenance work for the locks. See article on page 19. (U.S. Army Corps of Engineers, Detroit District photo)*



# O&M management reduces treatment facility solid waste costs

by Randy Mize, Elizabeth Keysar and Kathy Lahaye

**R**educing municipal solid waste is one of the easiest areas to achieve quick wins in sustainability. A focus on solid waste reduction not only saves money, it also leads to greater awareness and engagement on other sustainability issues. Increasing diversion of materials from the municipal solid waste dumpsters through recycling is another highly visible way to show commitment to sustainability. Recycling leads to other diversion approaches and eventually to improved material management throughout a product's life cycle.

Medical Treatment Facilities typically have good quality data on their regulated medical waste and hazardous waste, and these waste streams receive significant operations and management focus. Solid waste and recycling do not tend to have the same focus. The municipal solid waste collection is seldom observed and data is not collected; these materials are often not weighed and volume data may be the only information available. This type of information is critical, however, to identifying and documenting operations and maintenance improvement opportunities.

The U.S. Army Medical Command Sustainability Program Team recently led efforts to improve data quality for the Command and, in the process, to identify and highlight successful efforts by individual Medical Treatment Facilities.

Environmental Services at Ireland Army Health Clinic, Fort Knox, Kentucky, has reduced the clinic's refuse hauling and disposal bills significantly by paying close attention to where the dumpsters are located and how frequently they are emptied. The Health Clinic is billed through a municipal solid waste disposal contract based on number of tips and receives a monthly bill from the installation Directorate of Public Works.

Some of the fiscal 2016 reduction disposal costs can be attributed to the August 2016 conversion of the hospital to a clinic. When this occurred, the clinic team looked into

how its organization was charged, number and type for containers, and how often the containers were tipped. This was primarily a situational awareness issue to gain understanding of how the bills were generated and paid. The clinic is charged the same per tip, whether the dumpster is overflowing or if it only contains one bag. It has had up to 18 or more 8-yard dumpsters that were frequently emptied, resulting in high annual disposal costs.

*From January through May, the resulting trash stream diversion has been a 56 percent reduction in annual refuse removal costs compared to the same time period in 2016.*

The team worked aggressively to identify all its containers and reduce those that aren't needed. The team members began surveying the contents of the containers the day prior to the scheduled tip date, noting that many were only 30 percent full. They were immediately able to eliminate eight 8-yard containers from the inventory of 18 scheduled for multiple tips per week with zero impact to the refuse mission requirement.

Subsequently, the team has continued to reduce the number and size of containers as well as frequency of tips per container with an overall reduction from 18 8-yard containers and one 8-yard compactor on Jan. 1 to three containers (one 8-yard, one 6-yard, and one 4-yard) and one 8-yard compactor. From January through May, the resulting trash stream diversion has been a 56 percent reduction in annual refuse removal cost compared to the same time period in 2016.

The team continues to explore the possibility of additional backhauling trash from adjacent buildings to eliminate an additional two to three containers with test runs now in progress. The team's goal for calendar year 2017 is to continue to reduce the Health Clinic's annual refuse cost.

The Ireland Army Health Clinic team also purchased and distributed desk-side recycling containers to enhance an already robust recycling program. Team members work very closely with the Fort Knox Recycling Center and receive outstanding support from the center's staff. With renewed emphasis on recycling from the U.S. Army Medical Command, combined with U.S. Army Medical Department Activity, fellow employee support and a solid understanding how the refuse charges are generated and levied, the clinic team is looking forward to a fruitful and successful recycling year with further reduction in municipal solid waste generation rates.

The success of the significant decrease in trash generation and increased recycling can be attributed to a Command-supported program combined with a responsive staff taking ownership in to the recycling program and their continued support of the program.

POC is Elizabeth Keysar, 770-631-0137, [keysare@ctc.com](mailto:keysare@ctc.com)

Randy Mize is with Ireland Army Health Clinic, Kathy Lahaye is the Sustainability Program manager with the U.S. Army Medical Command Headquarters G-9, and Keysar is an Energy and Sustainability Policy analyst with Concurrent Technologies Corporation. 🇺🇸