

Utilities Department - Solid Waste & Recycling Division

Key Services:

Solid Waste (Garbage) - Weekly Collection
Recycling – Weekly Collection
Yard Waste – Weekly Collection
Leaf Pickup – Seasonal (10 weeks in Fall, 4 weeks in Spring)

SW&R currently provides collection for 41,782 (4/10/17) customers each week.

SW&R provides solid waste collection of on-street garbage receptacles in the downtown, uptown, medical district, Czech Village, and New Bo neighborhoods.

Division also supports Spring and Fall CleanUpCR drop-off events, nuisance abatement, litter enforcement, and the City Manager's 1-bag Challenge.

Customer Service Information:

1. Monday- Friday daily service areas are broken into 10 garbage/recycling and 7 yard waste routes, requiring the respective number of vehicles and drivers to perform.
2. Services are provided every weekday, including working on the holidays of President's Day, Good Friday, Veteran's day, Day after Thanksgiving, and Christmas Eve. The following holiday exceptions (New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, and Christmas Day) are when collection carries into Saturday.
3. Infrequently, there may be delays or cancellation due to extreme weather conditions.

Critical Issues:

1. Continued growth within the City and adjustments needed to ensure gross vehicle weight compliance will require route changes. SW&R division will recommend a day of the week re-balancing to take effect late 2017 or 2018 that will moderate current daily collection count imbalances. Prior to the route re-balancing, we will be utilizing two mixed garbage/yard waste routes to help manage potential growth and vehicle weight compliance (for example, truck could collect garbage in the morning, wash-out, and then collect yard waste in the afternoon – this process will vary depending on disposal location of collected materials).
2. Recycle materials market value is decreasing and the cost to recover them have risen. Paper materials have historically been a large percentage of recycled tonnage and consumers have dramatically changed what they recycle (less newsprint, more cardboard). Glass is a particular challenge because the market is extremely limited and it can easily contaminate other much more valuable recycle product streams.
3. State legislature action on bottle bill repeal was not successful this past session, but further action is anticipated next session. Eliminating the bottle bill will move a significant, unknown amount of tonnage from that option to our curbside container that will cost at current rates \$65/ton to process; the cost to landfill is \$40/ton.

Utilities Department - Water Division

Key Services:

Well (Raw Water) Production
Water Treatment Plants (J Ave, NW)
Utilities Engineering, Business Office (Customer Billing), Customer Service, Safety
Treated Water Distribution & Maintenance, Meter Services
Lab Services (Water Lab)

Key System Capacities:

Well System: 5 – Horizontal Collector Wells (sixth is under construction); 45 – Vertical Wells
Well Production: 70 million gallons per day (mgd), dependent on river bed permeability
Water Treatment: 60 mgd (J Ave Plant – 40 mgd; NW Plant – 20 mgd)

Water Usage Summary:

Average day usage – 38 to 42 mgd, without significant irrigation or cooling usage
Maximum day usage - 53.7 mgd (July 25, 2012; also peak max day – drought conditions)

Customer Service Information:

- Regional service provider for Cedar Rapids, Robins, part of Marion, and Linn County. Wholesale to Poweshiek Water Association for use outside of Linn County.
- Water currently provides service to 51,753 customer accounts, and of those accounts 3,310 are lawn/irrigation only (4/10/17).
- 65% of average day usage is used by about 20 industrial customers and approximately 35% of average day usage is consumed by one user (ADM Corn Processing).
- There are about 670 miles of public water main and 10 elevated tanks or storage reservoirs are in service throughout the distribution system. An eleventh storage tank will begin construction this year (Kirkwood elevated tank).

Critical Issues:

1. Aging water treatment and distribution system infrastructure repair and replacement.
2. Lime sludge disposal quality, quantity, preferred method, and cost.
3. Staying current with scheduled and updated Paving for Progress projects.
4. System reliability (staff targets projects to improve process redundancy and resiliency).
5. Capacity Expansion:
 - a. As needed for increased community growth and new or expanding industrial customers.
 - b. Drought Contingency Plan implementation as necessary to limit capacity expansion solely to support lawn irrigation.
 - c. High level study of future water supply options and nitrate removal treatment costs has been completed. Applying these technologies will depend on need and assimilating cost.
 - d. Currently working with US Geological Survey to improve our understanding of the City's alluvial aquifer for consideration of future water supply alternatives (week of May 1st).
 - e. Interest in C.R. water as a supply alternative for metro/corridor partners.
6. Safe Drinking Water Act maximum contaminant levels requirements for nitrates.
7. Additional information available for all areas: "Cedar Rapids Utilities Department – Water Division Issues & Challenges" Bruce Jacobs, PE Utilities Engineering Manager

Utilities Department - Water Pollution Control (WPC) Division

Key Services:

Wastewater Treatment Plant, Off-site Lift Stations
Utilities Environmental Section
Lab Services (Main Lab)

Key System Capacities:

Flow: 56 mgd average wet weather, 130 mgd maximum daily pumping capacity
CBOD (Carbonaceous Bio-chemical Oxygen Demand): 406,000 pounds per day
TSS (Total Suspended Solids): 168,000 pounds per day
TKN (Total Kjeldahl Nitrogen): 21,300 pounds per day
Total Phosphorous: Report due to IDNR approximately June 2019

Recent Usage Summary:

WPC Influent Parameter	Units	Average Total Loading to Plant (Date)
Avg Wet Weather Flow	MGD	46 (12/1/16 – 2/28/17)
Daily Max Flow	MGD	130.0 (several Fall 2016)
CBOD	lbs/day	274,500 (12/1/16 – 2/28/17)
TSS	lbs/day	133,900 (12/1/16 – 2/28/17)
TKN	lbs/day	18,500 (12/1/16 – 2/28/17)

Customer Service Information:

- Regional service provider for Cedar Rapids, Marion, Hiawatha, Palo, most of Robins, and part of Linn County. Hauled wastes like septage and portable toilet from outside the gravity sanitary sewer system service area are accepted and subject to a 50% surcharge.
- WPC currently provides service to 46,920 (4/10/17) City of C.R. customer accounts. Wastewater treatment revenues from residential and commercial accounts in Cedar Rapids are shared with the Public Works – Sewer Maintenance (65% - Sewer Maint., 35% - WPC).
- Actual service area population for WPC is approximately 180,000 but CBOD population equivalent is ~1.5 million due to our concentration of food-processing and other bio-tech industries. WPC retains all revenues from large industries and contributing cities.

Critical Issues:

- Regulatory Requirements:
 - Sewage sludge incinerator maximum achievable control technology deadline (completed, original cost est. \$3.75M, actual \$530K thru use of engineering study recommendations)
 - Iowa Nutrient Reduction Strategy requirements, timeline begins w/reissued NPDES permit, Master Plan Study of nutrient reduction and solids handling process underway
 - Chlorine system upgrade (in process)
- Documenting/Allocating changes (up or down) in future industrial demand, IPP requirements
- Impact of regulatory or capacity expansion capital infrastructure projects on ratepayers
- Aging collection system flow contribution vs. WPC Main Lift & plant flow capacity
- Ongoing need for I&I private sewer lateral program, cooperative project w/Public Works
- Odorous air system management, performance expectations (CIP work in progress)
- Next generation solids handling options (incineration, drying, blend, other)
- Ownership/Operation of off-site localized lift stations (transfer program in progress)
- Operation of flood control pump stations (several stations under construction)

Utilities Department – Business Administration Section

Key Business Services:

Customer Service

Customer Information System Ownership, Customer Billing and Reporting

Customer Collections and Severance Processes

Meter Services, Meter Reading, Cross Connection Control

Rate Development and Implementation, Cost of Service Modeling

Customer Service Information:

- Service provider for Water, Sanitary Sewer/WPC, Storm Water, Solid Waste and Recycling with combined services on bills.
- Customer base includes Cedar Rapids, Robins, Poweshiek Water, parts of Marion, Hiawatha and Linn County.
- Monthly and Bi-Monthly billing of 48,793 customers with over \$84M of annual revenue.
- Read, service and maintain over 51K meters.
- Manage over 51K Water, 46K Sewer, 46K Storm Water, 41K Solid Waste and 41K Recycling Service agreements within our Customer Information System.

Critical Issues:

1. Ongoing maintenance and upgrades to the Utilities Customer Information System known as CC&B (Customer Care and Billing by Oracle). Application service packs, versions as well as the database upgrades, servers and backbone architecture.
2. Implementing CC&B Functionality that was not completed with the 2010 implementation:
 - Write-Off Processes with Automation (all manual now)
 - Unclaimed Property (Credit Bal. < \$5)
 - Write-Off Balances < \$25
 - Collection Agency - Data Transfer > \$25 and Non-Lienable Accounts
 - Lien Process
 - Budget Billing (Currently not an option)
 - Customer charges automatically applied to Customer's Account upon Field Activity Completion (Currently a manual process)
 - Review and Modification of Field Orders and Field Order Completion Steps/Process to reduce manual effort
3. Print Solution for Utilities and other City Departments.
4. Customer Access to Account information with Electronic Bill Presentment and Electronic Payment Options.
5. Outsource of Bill Printing, mailing and Electronic Bill Presentment.
6. Data Cleanup of existing data issues.
7. Determine strategy for future of Customer Information System:
8. CC&B Upgrades and implementing limited Functionality improvements
 - a. CC&B Re-Implementation to resolve current configuration issues and implement full Functionality
 - b. Implement New Vendor solution with full Functionality
9. Continued implementation of Automated Meter Reading throughout the entire Customer base within budget limits.
10. Utility resources needed to complete project work and management while maintaining current systems, operations and work effort.