

*City of Belton
Public Works
Annual Report
April 2010-March 2011*



Public Works Department

MISSION

Provide the safest & most reliable infrastructure possible with the highest quality services related to drinking water, sanitary sewer, storm water, and transportation.

VISION

The Public Works Department will be the best in the region.



*City of Belton
Proud Past
Bright Future*

Citizens of Belton:

It is our pleasure to present to you this report summarizing the past fiscal year (April 1-March 31) activities within the Public Works Department. Every year presents its own unique challenges and this year was no different. Just to name a few there were extremely heavy rainfall events on top of already saturated soils, above normal snowfall, and leadership changes with the retirement of long-time employee Cliff Fain, Director of Public Works. It has been a year of adjustments as a result of these challenges, and there were also several achievements and lessons learned.

The West Belton Stormwater Improvements were completed and the Citizens voted and approved a no tax increase bond for street improvements that will begin in April 2011. The Wastewater Treatment Plant UV Disinfection Project began in December and will be completed in the fall of 2011. This project is necessary to meet regulatory requirements that protect our natural resources. Snow removal operations were very difficult due to the above average amounts received, but the team responsible for that service performed extremely well and we are very proud of them. The evaluation of the community's long term water needs was a primary focus this year and decisions will be made soon toward a short and long term solution.

Another key achievement for the team was the creation and adoption of its first Strategic Plan (located on the city's website www.belton.org) that will provide improved focus to the public works team and a more deliberate approach to preparing and planning for the future. A specific focus of the plan is to turn over every rock and find opportunities for increased efficiency that will result in improved performance as a team and great services to the community. For example, the Mayor and City Council approved on-call engineering service contracts that will improve our responsiveness to the needs of the community and reduce contract administration time. This coupled with the implementation of a project management program will provide some of the resources necessary to produce high performing capital projects. There have been some low cost technology improvements that will enhance operations and capabilities in

many areas to also produce efficiencies. Staff will continue to look for opportunities to utilize new and innovative technology to improve services.

The future for our community is very bright indeed and is one of the reasons I joined the team in August. The Public Works Department is made up of very qualified and caring individuals who want to be the best they can be and provide the community with great services. You can expect some exciting things ahead like the development of a Stormwater Master Plan, a significant amount of street and sidewalk improvements, a serious commitment to a future drinking water source and the completion of several stormwater improvement projects. I hope you will also notice that we care about what we do and that you can count on us to do the right thing for the community in everything we do.

Thank you,
Jeff Fisher
Director of Public Works

Annual Report FY11

VALUES

Leadership
Integrity
Trust
Customer Service
Teamwork
Communication
Attitude



Public Works Department

GOALS

Create the most efficient, effective, and professional Public Works Department possible

Improve public confidence in Public Works

Create long term financial sustainability in Public Works

Achieve accreditation from the American Public Works Association (APWA) with 95% full compliance



*City of Belton
Proud Past
Bright Future*

Administration

Jeff Fisher—Director

Karen Bienfang—Assistant to the Director

Ryan Vaughan—GIS/IT Specialist

Passing the Torch

Ryan Vaughan has joined the city as the GIS/IT Specialist, replacing Bill Kostopolus who has retired after 15 dedicated years with the city. Ryan graduated from Mississippi State University with a Masters Degree in (GIS) Geographic Information System. Ryan will bring GIS expertise to the public works department assisting with the city's asset management program. This program is critical to the timely maintenance and improvements to infrastructure.

Using Best Practices to Provide Critical Services

In the Department's Strategic Plan, it is a goal to achieve accreditation through the American Public Works Association. It is a challenging process that not many organizations are willing to endure but has lasting positive impacts that will benefit the community through the utilization of best practices in the industry and it encourages continuous improvement due to the required reaccreditation every four years. With the recent support from Mayor and City Council, staff under the direction of Ben McCabe as the Accreditation Manager, has begun preliminary work toward that goal and expects a completion date in winter of 2012.

If you don't know where you are going, you will wind up somewhere else.—Yogi Bera

More Value In Street Maintenance Dollars

In March of 2011, City Council adopted the new Unit Rate Price Street Maintenance Contract (URPC) that was awarded to Superior-Bowen Asphalt. This is a unique approach to partnering with the private sector to improve the cost effectiveness of street maintenance. The City realizes reduced unit rates that allow the City to do more work with the same dollars. The contract is also designed as a cooperative resource that other agencies in Cass County and including Grandview can utilize for the same benefits, and it reduces the time associated with contract administration that allows staff to commit that time to other essential activities.

Enhanced Project Management

The Engineering Division of Public Works has taken steps over the last six months to enhance its ability to produce high performing projects through the implementation of new project management software and the project management manual (PMM). Both items are now fundamental resources to the way the engineering division does business and will produce measured results to the community.

Timely Replacement of Equipment

A best practice recently adopted by the City is the timely replacement of equipment like vehicles, computers, and other equipment. All equipment has a "useful life" expectancy based on mileage, hours and age that should be tracked and monitored so that the City avoids unnecessary maintenance costs when those items are beyond their useful life. This practice is limited to some degree on budgetary levels but is a great guide to utilize.

Annual Report FY11



Administration & Engineering

PUBLIC WORKS CONTACT INFORMATION

Admin & Engineering: 331-4331

Pollution Control: 331-7789

Transportation: 331-9455

Water Division: 322-1885

Vehicle Maintenance: 331-7516

Website: www.belton.org

**Follow us on Facebook &
Twitter**

Public Works Department

Engineering

Ed Ieans—City Engineer
Ben McCabe—Assistant Engineer
Ron Raines—Engineering Technician
Bill Kostoplous—Engineering Technician



North Cass Parkway

On July 28, 2010, MoDOT opened North Cass Parkway with a ribbon cutting ceremony. The new interchange at 187th Street and Highway 71 provides access for Belton residents near Peculiar Drive. This was a joint project between Belton, Raymore, Cass County and MoDOT at a cost of \$10.1 million.

West Belton Drainage

This complex storm drainage improvement project in the West Belton area was completed in the winter of 2010 at a total cost around \$1.6 million. This project included new box culverts, channel improvements, and enclosed storm sewers that met current design standards and provided flood relief to area residents.



**West
Belton
Drainage**



**Apple
Valley
Drainage**

Apple Valley Drainage

This storm drainage project began construction in February of 2011. The project includes a retention lake in Memorial Park and storm sewer infrastructure to reduce potential storm water issues in the Apple Valley subdivision. Overall design and amenities for the lake is a result of a cooperative effort between the Public Works and Parks Departments. The new drainage system and amenities are planned in conjunction with the Memorial Park improvements. The total cost of this project is estimated at \$ 621,000.00

Park to Berry Drainage

This storm drainage project is designed and scheduled to begin construction in late spring/early summer 2011. The existing drainage system will be upgraded with inlets, conveyance pipe, and swale systems to reduce potential flooding and meet current design standards. Project costs are estimated at \$1 million dollars.



*City of Belton
Proud Past
Bright Future*

Annual Report FY11

Cleveland Lake

Cleveland Lake is a storm water retention facility that was approved by voters in a 2006 bond issue. This project is designed to reduce flooding downstream of Cleveland Road, subsequently removing 22 homes from the floodplain. It will also include recreational amenities like trails and outdoor classrooms. The total cost is estimated at \$2.6 million.

Cimarron Trails Drainage

This storm drainage project is designed and anticipated to begin construction in late spring/early summer of 2011. The existing drainage system will be upgraded with inlets and conveyance pipe to reduce flooding and meet current design standards. A drainage swale will be constructed in Markey Park improving the drainage near homes. Project costs are estimated at \$850,000.

Kingsland/155th St

The design of this project is underway. It will reduce flooding of commercial property along North Scott. Construction is estimated to begin in June 2011 at an estimated cost of \$2.4 million.

163rd St (Y-Hwy) Widening

The City of Belton will continue to enhance the 163rd street corridor by widening the existing roadway. Street lights, traffic signals, sidewalks and hiking paths will be installed to provide access for pedestrians. This project will reduce congestion by replacing 4 lanes of pavement for .5 miles between Turner Road and M-58. It is scheduled to begin construction around May 18, 2011 with an estimated completion date of November 31, 2011. The total cost is estimated to be \$4.5 million.

Mullen Road Widening

This road widening project is designed and anticipated to begin construction in the summer of 2011. Roadway improvements include grading, full depth pavement reconstruction, curb & gutter, storm sewer, medians, sidewalk, modular retaining walls, signing & pavement marking, and railroad crossing reconstruction from 600 feet south of 58 Highway to Silver Maple Drive. Project costs are estimated at \$2.1 million.



Cimarron Trails Before



163rd St (Y-Hwy) Before



Mullen Road Before

Public Works Department

PRIORITIES

To safely and efficiently convey and treat wastewater in a manner consistent with state and federal regulations in order to protect the health and wellbeing of our citizens, community and environment.

SYSTEM ATTRIBUTES

- Extended air, activated sludge wastewater treatment plant with a hydraulic design capacity of 2.27 mgd (dry weather) or 7.70 mgd (peak hourly flow)
- 677,087 feet of sanitary sewer pipe
- 2,714 manholes
- 8 lift stations



*City of Belton
Proud Past
Bright Future*

Pollution Control

Dennis Hudson—Superintendent
Rex Olinger—Chief Operator (treatment plant)
Randy Braun—Operator II (treatment plant)
John Clawson—Operator II (treatment plant)
Tom Tucci—Operator II (treatment plant)
Neal Honderick—Maintenance Supervisor
Ivan Everett—Maintenance Worker II (field maint)
Joe Don Harrell—Maintenance Worker II (field maint)
Don January—Operator II (field maint)
Marty Schien—Operator II (field maint)
Mike Willson—Maintenance Worker II (field maint)
Linda Beard—Secretary

UV Disinfection Project

In November 2009, voters approved a \$3.5 million bond issuance for improvements to the City's wastewater treatment plant. These improvements are required to meet new state and federal regulatory requirements under the Clean Water Act. These water quality standards help reduce pollution in lakes, rivers and streams.

Bids were received and opened in July 2010. The project was awarded to the

David E. Ross Construction Company in the amount of \$2,817,848. The design has been completed and the ground breaking was the second week in March 2011. The project is scheduled to be completed in October 2011. Watch for project updates on the City web site and on the City's Facebook page.





Annual Report FY11

Statistics

- 154,930 feet of pipe cleaned
- 9,999 feet of pipe televised to identify defects
- 192,161 feet of sewer pipe smoke tested to identify defects
- 92 responses to sewer backup calls
- 595,200,000 gallons of wastewater treated by Belton's Wastewater Treatment Plant
- 690,400,000 gallons of wastewater treated by Little Blue Valley Sewer District
- 177.6 dry tons of sludge produced by Belton's Wastewater Treatment Plant
- 57.4 inches of rainfall recorded at Belton's Wastewater Treatment Plant



Public Works Department

PRIORITIES

Continually seek ways to deliver the highest quality services with the most cost effective solutions and take measures that will meet or exceed expectations

Improve performance by enhancing the skills, knowledge, and abilities of our employees

Ensure all employees are healthy, safe, and secure in the workplace

SYSTEM ATTRIBUTES

- 286 lane miles
- 2,612 signs



*City of Belton
Proud Past
Bright Future*

Transportation

David Frazier—Superintendent

Donald Bays—Foreman

Gary Dupus—Equipment Operator

Gale Lawson—Equipment Operator

Tim Kuykendall—Equipment Operator

Paul LePage—Street Worker I

Gary Smith—Street Worker I

Jeff McRoy—Street Worker I

Josh Loehr—Street Worker I

Paul Ngo—Street Worker I

Randy Elkins—Street Worker I

Steve Eatinger—Street Worker I

Jaime Crow—Secretary



Winter Weather Operations

This winter season required another significant effort from the Public Works snow removal crews. Countless hours were worked by all to clear almost 30" of snow over eight winter weather events. I think we all remember the February 1st "blizzard" where our area saw nearly 16" of snow in a twenty-four hour period.



Crews used 1,223 tons of salt and sand this year and it was our second season for using salt brine where we used 5,659 gallons of liquid salt. Remember the white lines? That was our crews pretreating the roads; a very cost effective procedure in our operations.

Street Preservation Bond Issue

The Transportation Division was excited to assist the Council and administration this past year in preparing for an initiative to begin improving the quality of our street network with a no tax increase bond issue. On November 2, 2010, voters overwhelmingly passed this bond issue where approximately \$7.35 million dollars worth of projects are identified to be completed.

- \$1.9 million for overlay in 2011
- \$2.3 million to refinance MoDOT loan for 163rd and 71 improvements. By doing this, \$300,000 a year is saved in the Capital Improvement Sales tax budget
- \$1.5 million for the remainder of the 163rd Street Improvements. Construction to begin in summer of 2011
- \$600,000 to finance the funding gap for the South Mullen Road Project
- \$496,000 for curb replacement to be completed in 2011
- \$250,000 for sidewalk replacement to be completed in 2011

The contract for the overlay, curb replacement, and sidewalk placement projects was awarded to Superior Bowen Asphalt Company.

Statistics

- 7,873 potholes repaired
- 250 tons of asphalt used for potholes
- 2,090 tons of asphalt used for patches
- 146 signs repaired and replaced
- 572 storm drains cleaned
- 17,975 pounds of crack seal material used
- 628.5 cubic yards of debris moved while sweeping performed twice a year
- 1,223 tons of salt and sand used
- 5,659 gallons of salt brine used
- 892 vehicles at clean-up days-held twice a year

Annual Report FY11



Public Works Department

PRIORITIES

Provide quality and safe drinking water.

Provide needed supply for fire protection.

To be the most efficient, effective, and professional team.

SYSTEM ATTRIBUTES

- 129 miles of water line ranging from 2 in to 16 in
- 2,761 water gate valves
- 7,929 meters—read once a month
- 1,253 hydrants
- 2 pump stations
- 2 water towers
- 1 reservoir (ground storage tank)



*City of Belton
Proud Past
Bright Future*

Water Maintenance

Monte Johnson—Superintendent

Don Tyler—Foreman

Todd Ballou—Equipment Operator (field maintenance)

Rick Doak—Equipment Operator (field maintenance)

Matt Jackson—Water Worker I (custodian)

Gerold Stephens—Water Worker I (field maintenance)

Tommy Dempsey—Water Worker I (field maintenance)

Kyle King—Water Worker I (utility line locator)

Brian Flickinger—Water Worker I (customer service rep)

Kenny Claybough—Water Worker I (field maintenance)



Water Samples

Every year 312 water samples are collected to ensure we are providing safe drinking water. Once a year, in July, a water quality report is published detailing the sample results. This report is available to all citizens, businesses, and can be viewed online at www.Belton.org.

Regulations/Laws

The water division follows all Missouri Department of Natural Resources and EPA Laws to protect our water supply and maintain the system.

Community Spirit

In support of Belton schools, all hydrants near the schools are painted with the purple and gold (yellow) of the Pirates.



Water Breaks

Water breaks can occur anytime of the year due to changing weather conditions, and aging pipes. Our goal is to repair these within 2-4 hours. If you see evidence of a water line break, please call the Water Division at 816-322-1885.

Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by monitoring of the amount of water your household is using & by looking for ways to use less. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle
- Turn off the tap when brushing your teeth
- Check every faucet in your home for leaks
- Check toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl

Statistics

- 665,689,332 gallons of water used last year
- Average of 1.8 million gallons used daily
- 25 water line breaks repaired
- 20 meters replaced
- 3 hydrants replaced
- 30 hydrants repaired
- 49 water taps (new services)
- 2700 Missouri One Call Locates

Annual Report FY11



Public Works Department

PRIORITIES

Provide vehicle maintenance services to all city departments in a safe, efficient, and timely manner.



Vehicle Maintenance

Mike Cochran—Head Mechanic

Jack Smart—Assistant Mechanic



The Vehicle Maintenance operation within the Public Works Department is responsible for maintaining the entire fleet for the City of Belton. It is staffed with two dedicated mechanics that have nearly 45 years of experience in the automotive repair industry. We look forward in the upcoming year to improving our customer service with new technology.

SYSTEM ATTRIBUTES

- 112 vehicles
- 28 pieces of equipment
- 376 repairs completed



*City of Belton
Proud Past
Bright Future*

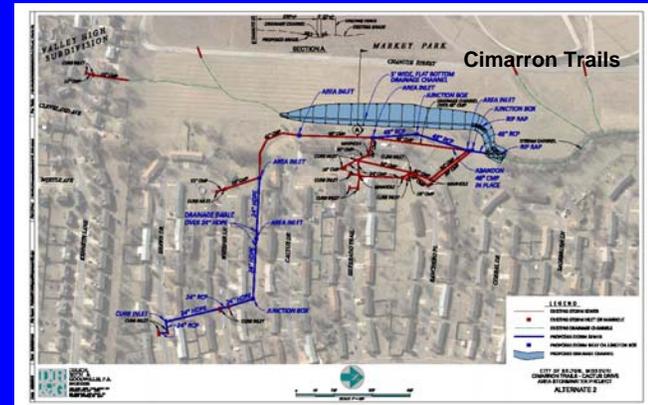


A Look Into the Future

Annual Report FY11

Completion Of:

- 163rd Street Improvements—2011 (Y Highway)
- Mullen Road Improvements—2012
- Cleveland Lake Project—2011-2012 (Stormwater)
- Park to Berry—2011 (Stormwater)
- Apple Valley Stormwater Improvements—2011
- Stormwater Masterplan—2012



Initiatives:

- Long-term drinking water source
- Construct required infrastructure to sewer the "Holmes Road" area
- Use cooperative contracting to accomplish more street maintenance for each dollar spent
- Complete a thorough needs assessment for the transportation system
- Utilize new asset maintenance management software to track and forecast all maintenance activities
- Conduct a thorough evaluation to identify opportunities to share resources and improve efficiency and performance in all operations

