



Explorer

Lewis & Clark
REGIONAL WATER SYSTEM



FALL 2016

Two Pipeline Projects in Minnesota Now Operational

Rock County RWD Fully Connected to Lewis & Clark!

With favorable weather conditions, Carstensen Contracting of Pipestone, MN made quick work of two pipeline contracts. Construction started in April on Minnesota – Segment 3A; six miles of 24-inch steel pipe from Luverne to a point 3½ miles south of Magnolia. The last section of pipe on this \$5.2M project was installed in late July. They then installed the 3 ½ miles of 16-inch PVC pipe for the Magnolia service line. The last section of pipe on this \$1.9M project was put in four weeks later, which included a 300-foot bore under I-90. They successfully pressure-tested both pipeline segments on their first attempt, and after two passing bacteriological tests both lines reached substantial completion on September 15 – two months sooner than required. Banner’s Dennis Odens is the lead engineer on both of these projects.

Along with completion of the Magnolia meter building a month earlier, completion of these two pipeline projects allowed Lewis & Clark (L&C) to begin delivering water to Rock County RWD at the second of their two connections. “Congratulations to Rock County! They are now fully connected and have access to 300,000 gallons a day. It has been a long wait for Rock County and their customers, so we couldn’t be happier for them,” said Executive Director Troy Larson.

Magnolia is also a connection point for Lincoln Pipestone RWS. Construction on their 21-mile line between Edgerton and Magnolia, which is not part of L&C, will not be completed until October 2017 so it will be a year before they receive water.

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Two Pipeline Projects in Minnesota Now Operational *continued*



24-inch pipe on MN-3A



Pipe being installed in Magnolia



16-inch pipe being pulled under I-90 for the Magnolia service line



Last section of pipe on MN-3A

\$2.5M Surplus for Engineering and Easement Acquisition

At its September 23 board meeting the SD Board of Water & Natural Resources approved an amendment to the agreement between L&C and the state, which allows L&C to use an estimated \$2.5M surplus from SD's \$7.7M "federal funding advance" toward engineering and easement acquisition for the middle three segments (32 miles) of the Madison service line! Thanks to a favorable bidding environment, bids for the Crooks meter building/pump station, Madison meter building and Madison – Segments 1 and 5 came in significantly lower than expected.

The engineers estimate \$2.3M is needed to complete the engineering and easement acquisition for Madison – Segments 2, 3 and 4. L&C asked for approval to use the remaining funds for this purpose. SD Department of Environment & Natural Resources officials recommended approval. "The Board of Water & Natural Resources and Department of Environment & Natural Resources have been incredible supporters of L&C through the years. We greatly appreciate this agreement amendment and cannot thank them enough for their continued support," said Executive Director Troy Larson.



Banner's Tim Conner Honored at Annual Meeting

The 26th Annual Membership Meeting was held in Tea on May 26. In addition to officials from the 20 members, attendees included several state legislators and staff from Senators Grassley, Thune, Klobuchar, Franken and Rounds, as well as Representatives King, Walz and Noem. Updates were provided on project construction, funding and operations.

Banner's Tim Conner was presented with the Lewis & Clark Trailblazer Award, which is the System's highest honor. Tim became lead engineer of the project in 2013, but has worked

on L&C pretty much full time since 2001 and helped with the early studies before that. He has played a key role in virtually every engineering aspect of the project.

In making the presentation, Chairman Red Arndt said, "Our heartfelt congratulations to Tim on receiving this well-deserved honor! In our society we probably overuse words like 'commitment' and 'dedication.' In this case though I cannot think of a more fitting way to describe Tim and his countless contributions. Whether it is working late nights or on weekends, Tim has always went above and beyond to do whatever it takes to get the job done and done right. He bleeds Lewis & Clark. We extend to Tim our deepest thanks and appreciation for his exemplary service and hard work in helping bring us to where we are today. We couldn't have done it without him."



Tim Conner and Red Arndt

Magnolia Meter Building

Robert L. Carr of Marshall, MN reached substantial completion on the Magnolia meter building in mid-August, which is a joint connection for Rock County RWD and Lincoln Pipestone RWS



Contract Awarded for 12 More Miles of Minnesota Pipeline

Carstensen Contracting of Pipestone, MN was awarded a \$9.2M contract on July 21 for Minnesota – Segment 3B, which includes ten miles of 24-inch steel pipe and two miles of 16-inch PVC pipe between Magnolia and Lincoln Pipestone RWS's connection three miles east of Adrian. This is Carstensen's fourth consecutive pipeline project in MN. Their bid was 22% under the original budget – a savings of

\$2.55M as it relates to the federal funding ceiling! Funding for this project is being made available from a MN "federal funding advance" approved in 2015. There are 11 bores under highways, creeks and one railroad. They plan to complete the bores this fall and start pipeline construction in the spring. November 2017 is the substantial completion deadline. Banner's Scott Vander Meulen is the lead engineer.

Contract Awarded for Three-Projects-in-One

A \$3,616,200 contract was awarded on September 12 to Gridor Construction of Buffalo, MN that includes three different projects – the Rock County pump station 5½ miles south of Luverne, a meter building three miles east of Adrian, and adding pumps to the existing Rock Rapids-Rock County RWD meter building. The "Adrian meter building" is the second

of two connections for Lincoln Pipestone RWS. The original budget was just over \$3.8M, so a savings of \$200,000 as it relates to the federal funding ceiling! Construction is expected to begin in late winter. November 2017 is the substantial completion deadline. Banner's Kristin Bisgard is the lead engineer.

Rock County Reservoir Contract Awarded

Preload of Louisville was awarded a \$2,961,700 contract on September 22 for a four-million-gallon reservoir six miles southwest of Luverne. With a favorable bidding environment, L&C continues to see bids well below what was originally budgeted. This latest bid resulted in a savings of just over \$300,000 as it relates to the federal funding ceiling!

Construction is expected to begin in the spring. November 2017 is the substantial completion deadline. Banner's Chad Bachman is the lead engineer.

Scott Wynja and Todd Uhl



Todd Uhl Joins Board of Directors

Sheldon Public Works Director Todd Uhl was appointed to the Board of Directors in late September. He takes over for Scott Wynja, who is now the City Manager for Sioux Center. Chairman Red Arndt remarked, "Scott served on the Board for 13 years, including the last several as Secretary. He made many trips to Washington, D.C. and Des Moines to advocate for L&C, as well as attended countless other meetings with our elected leaders on the state and federal level. Along the way he was a highly respected leader on the Board. We cannot thank him enough for his outstanding service, and we greatly appreciate his willingness to continue advocating for the project in his new position."

Todd grew up in Mapleton, 90 minutes south of

Sheldon. He has lived in the Sheldon area since 1992 and has worked for the city for 16 years; the first five years in the water department and the last eleven as the public works director. Todd has two daughters – ages 16 and 14 – who are involved in many activities and keep him busy. When time allows you will find him at a local dirt track racing his hobby stock. He also enjoys softball, golf and bowling. Arndt said, "A warm welcome aboard to Todd! He has a lot of water experience and is familiar with the project, so we know he will hit the ground running."

Crooks and Madison Meter Buildings Nearing Completion

Water to be “Wheeled” to Madison in Late December

Gridor Construction of Buffalo, MN started work in June on two meter buildings – one is a combination meter building and pump station. The Crooks meter building/pump station is one mile west of Crooks and will serve as the second of three connections for Minnehaha Community Water Corp. The Madison meter building is located next to the city’s water treatment plant. Gridor is making good progress on both buildings and is currently on schedule to meet the late December substantial completion deadline on this \$1.4M project. Banner’s Kristin Bisgard is the lead engineer.

With Madison – Segments 1 and 5 being completed earlier than expected (see story on page 7), late December is when

water is expected to be “wheeled” to Madison. L&C will use Madison – Segment 1 and the Crooks meter building/pump station to sell water to MCWC, who in turn will sell water to Big Sioux CWS at a newly constructed inter-connection between those two systems. BSCWS will then use Madison – Segment 5 and the Madison meter building to sell water to the city. Madison will not receive L&C water so they will not be considered a connected member, but they will receive up to one million gallons a day of high quality water from BSCWS. This “wheeling plan” is expected to address the city’s water needs for up to 20 years, but hopefully federal funding will allow for completion of the middle three service line segments (32 miles) much sooner.



Crooks meter building/
pump station



Madison meter building

Work Underway to Address Lime Drying Bed Problems



Construction for the French drain drainage system

Detlefsen Construction of Laurel, NE was awarded a \$272,243 contract on August 25 for a French drain drainage system. Construction started in early October and the substantial completion deadline is late October, so a very tight schedule. Banner's Weston Blasius is the lead engineer.

The French drain is an augmentation of field drain tile. To divert ground water infiltrating the three lime drying beds and preventing the lime sludge from drying properly, Banner recommended the drainage system be constructed around three sides of the beds. There is already a drainage channel along the fourth side. Lime sludge is a byproduct of the water treatment process and has agricultural applications. However, it needs to be dried down to a certain level before it can be handled.

During construction of the beds they were excavated and sloped. The lowest point is three feet below the surface. When the beds were designed the expectation was the lowest point would still be above the ground water. Unfortunately, the ground water is now quite a bit higher than when surveyed by the engineers several years earlier; elevations measured in May 2016 were 14 inches above the lowest point in the beds.

Knowing what they know now, the engineers would have designed the beds above ground, which would have required a significant amount of clay to be hauled in for the berms. They estimate this would have added \$1M to the construction cost. With concurrence from the Bureau of Reclamation, the Board decided to use federal funding for the French drain as it is an extension of the original construction. If this fully addresses the problem, which is not a guarantee, it will still be cheaper than if the beds had been constructed above ground.

Banner also recommended two other steps to mitigate the problem – use clay plugs to repair leaks around the pipes going into the beds and add fill to raise up the lowest ends of the beds to reduce the gap between the floors and the decant de-watering structures. The latter also involves re-compacting the bed floors. Weather permitting, repairing the leaks will start in late fall. Repairing the bed floors will need to wait until the lime sludge is removed; one at a time over a three-year period. The combined estimate of these repairs is \$400,000, which will be covered as part of operations/maintenance.

Madison Service Line Segments Ahead of Schedule

Winter Brothers Underground of Sioux Falls was awarded a \$2.95M contract on May 26 for Segments 1 and 5 of the Madison service line. Their low bid was 40% less than originally budgeted – a savings of \$1.94M as it relates to the federal funding ceiling! Funding for this project is from SD’s “federal funding advance” approved in 2015. Segment 1 is five miles of 16-inch PVC pipe from Benson Road northwest of Sioux Falls to a meter building/pump station one mile west of Crooks. Segment 5 is five miles of 14-inch PVC pipe that connects at L&C’s meter building next to Madison’s water treatment plant and then goes southeast.

The two segments will be used to “wheel” water to Madison (see story on page 5). Construction started in early September and the substantial completion deadline is June 2017. However, Winter Brothers is using two crews and has set an aggressive schedule that, weather permitting, will allow them to reach substantial completion by early December. Banner’s Scott Vander Meulen is the lead engineer.



Installation of 16-inch pipe



Boring under Highway 38



Installing pipe under Highway 38



Operations Update – Annual Water Sales Increase 16%

L&C transitioned to operating 24/7 on April 1. Prior to that the System was turned on and off each day after 14 to 16 hours. According to Operations Manager Jim Auen, “The transition has gone very well – even better than expected. Our six operators have adjusted nicely to the new schedule. As expected, the improved efficiencies of operating the plant 24/7 means sizeable reductions in the cost for electricity and chemical. We also have a much more consistent water quality, instead of the peaks and valleys that were inherent with starting and stopping the plant.”

Luverne being connected in March and the increased demand from the other 12 connected members were the main reasons for the change to 24/7. This is reflected in a 16% increase in water sales from FY15 to FY16. From October 1 through September 30 L&C delivered 5.34 billion gallons, a daily average of 14.58 million gallons that included a daily record of 21.97 million gallons on August 9.

A landowner reported the System’s first leak along the Parker service line in early October. It was thankfully a small slow leak, which staff quickly repaired. “Hopefully we will not have too many leaks going forward, but when they happen our goal is always to repair leaks ourselves if possible. However, we also have local contractors we can call on if the job is too big,” said Auen.



Distribution Operator Justin Walsh taking a sample for testing on MN-3A



Jessica McBride and Adam Wek from Senator Thune’s DC office toured the plant in August



New treatment plant custodian Jon Johnson