Lewis & Clark REGIONAL WATER SYSTEM
Explorer
Winter 2021

Lewis & Clark Loses Beloved Chairman Red Arndt

The Lewis & Clark (L&C) family was deeply saddened when Chairman Lennis "Red" Arndt of Luverne passed away in hospice care in Sioux Falls on January 7. He was 72. Never once crying in his beer, he displayed a remarkable and inspiring inner peace and courage during his over two year battle with pancreatic cancer.

Red was an original board member of L&C when it was incorporated in January 1990. He became vice-chairman in 1994 and then chairman in 2006. Red was a driving force in his relentless and tenacious efforts to bring critically needed drinking water to the tristate region. "He truly believed that Lewis & Clark was a generational legacy project, and knew it was something that would change our region for generations to come," said Director Scott Hain of Worthington.

Although his nickname was Red, he bled L&C blue. He made an estimated 60 trips each to Washington, D.C. and St. Paul to advocate for the project. One of Red's last messages to the directors and staff was "Just get the damn thing built." He asked that his ashes be buried in an urn that staff fashioned out of a piece of L&C's PVC pipe (photo at the top of page 2). No one doubted Red's utmost dedication and commitment to L&C, but that certainly sealed the deal.

Chairman Red Arndt
1948 - 2021

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"Red cut a very wide path. He was a force of nature who lived life to the fullest. Red was a visionary and passionate leader, but more importantly he was a dear friend and colleague to us all. What a tremendous honor it was for us to have worked and laughed with him. He will be deeply missed," said Executive Director Troy Larson.

The link to a photo slideshow tribute can be found under the Current News story about Red's passing at the bottom of L&C's homepage (www.lcrws.org).

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Chairman Red Arndt on his final construction tour on October 30

Baustian Appointed to Board of Directors

Mayor Pat Baustian of Luverne was appointed to the L&C Board of Directors on January 28. Pat began serving on the City Council in 2003 and became mayor in 2011.

He grew up on a grain/cattle/hog farm northwest of Luverne. Because he always had his hands in something he had the nickname “Grubs” or “Grubber”, which some still call him. After graduating in 1981 he joined the Air Force and served over five years as an Electronic Warfare/ Avionics Systems Technician. He then joined the SD Air National Guard (ANG) part-time for over two years before joining the ANG full-time in 1989. He retired as an IT Manager in January 2020.

Pat and Katie, who is also from Luverne, have three sons and one daughter. The youngest is a senior in high school. All four are following in their father’s footsteps by serving active duty or in the ANG. Pat loves smoking meat and grilling, doing projects around the house and a well-watered and manicured lawn. He is a fan of the Vikings, Twins and Wild.

“Pat will be the first to say nobody can fill the big shoes of long-time Chairman Red Arndt, but I cannot think of anyone better suited to serve on the Board. He has been a strong supporter and advocate for Lewis & Clark for the last 18 years and has a passion for public service. Pat and Red were good friends and spent a lot of time talking through the years about the project. He is definitely hitting the ground running,” said Executive Director Troy Larson.

Lewis & Clark Receives $17.5M for FY21

The tristate congressional delegation worked hard to increase funding for ongoing construction in the Bureau of Reclamation's Rural Water Program by an additional $114.7M in the FY21 Budget! The budget was approved by Congress and then signed into law by the president on December 27. L&C officials were notified by Reclamation on January 19 that the project would receive $17.4M of the additional funding. Combined with the $100,000 proposed by the administration in its FY21 budget, it brings L&C's total to $17.5M.

"This is really good news and we are very pleased! A big thank you to the tristate delegation for their efforts to secure additional funding for Reclamation's Rural Water Program. Their continued strong bipartisan support and leadership are greatly appreciated. Our thanks and appreciation as well to the Bureau of Reclamation. They continue to be outstanding partners," said Executive Director Troy Larson.

In FY20 L&C received $18 million. "Overall funding for the Rural Water Program is down $1.5 million compared to FY20, so a small haircut was expected," said Larson.

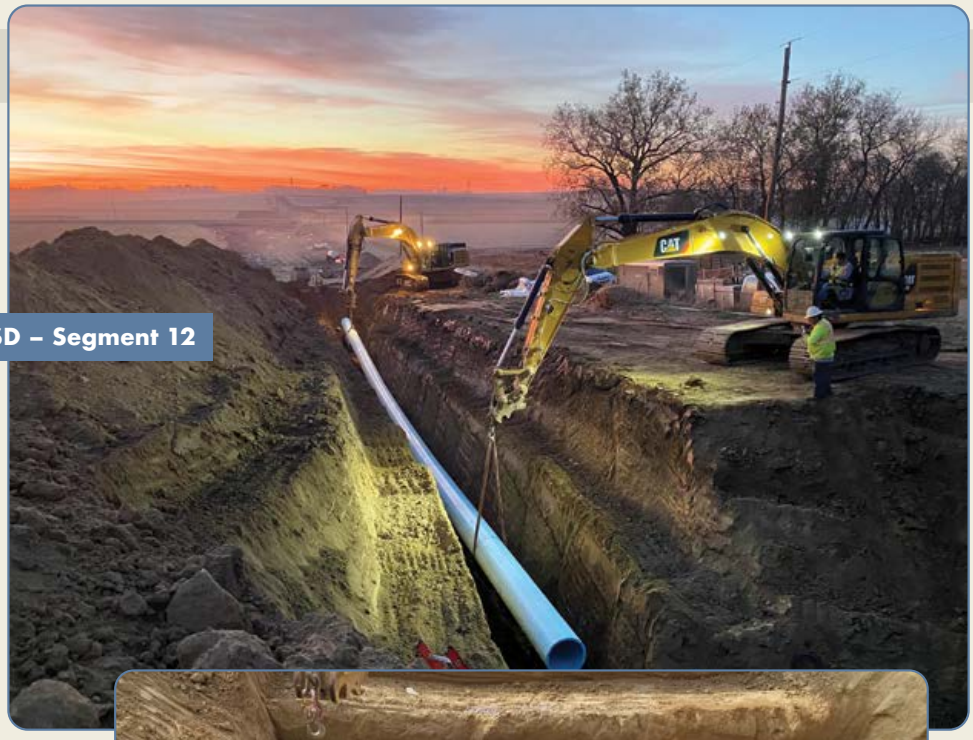
The funding will be used to complete construction already underway on a collector well near Vermillion (page 10) and a water tower at Beresford (page 8). In addition, a contract will be awarded later this year that includes three items – construction of the Sioux Center meter building, expansion of the Hull meter building and adding pumps to the Beresford pump station. "When construction of all the above mentioned projects is complete, which is expected no later than the spring of 2023, we will begin delivering long-awaited water to Sioux Center and Hull," said Larson. Including construction using the FY21 federal funding, this will put L&C at approximately 86 percent complete.

Sibley and L&C officials met with Senator Chuck Grassley in Sibley on August 26 to discuss FY21 federal funding. Sioux Center and L&C officials did the same with Senator Joni Ernst, Senator John Thune, and now Congressman Randy Feenstra (then a candidate) in Sioux Center on October 2. They also visited with Governor Kim Reynolds about a possible federal funding advance during the upcoming legislative session. Strong support was voiced by all.

Left to right in Sibley: City Administrator Glenn Anderson, Councilman and L&C Director Larry Pedley, Mayor Jerry Johnson, Grassley, State Rep. John Wills, State Rep. and Grassley staffer Jacob Bossman and Larson

Left to right in Sioux Center: Utilities Manager and L&C Vice-Chairman Murray Hulstein, Feenstra, Reynolds, Ernst, Assistant Utilities Manager Adam Fedders, retired Utilities Manager Harold Schiebout, Thune and Larson

Two Segments of Iowa Line Substantially Complete



SD – Segment 12

The 33.8 miles of the Iowa Transmission Line between Beresford and Sioux Center was divided into three segments. Carstensen Contracting was the successful bidder on all three contracts and is basically constructing the pipeline as one project. They reached substantial completion this fall on two segments and are making good progress on the third.

Isolation valve vault on SD – Segment 12

South Dakota – Segment 12: Wet weather in 2019 prevented Carstensen from reaching substantial completion that year on the 11.2 miles of 24-inch diameter PVC pipe starting at Beresford and heading east. They skipped over several wet areas that included a combined 10,000 feet of pipe and several vaults for isolation valves and air release valves. They resumed work in August and successfully pressure tested the line on November 23. Work on site restoration and punch list items will resume this spring.

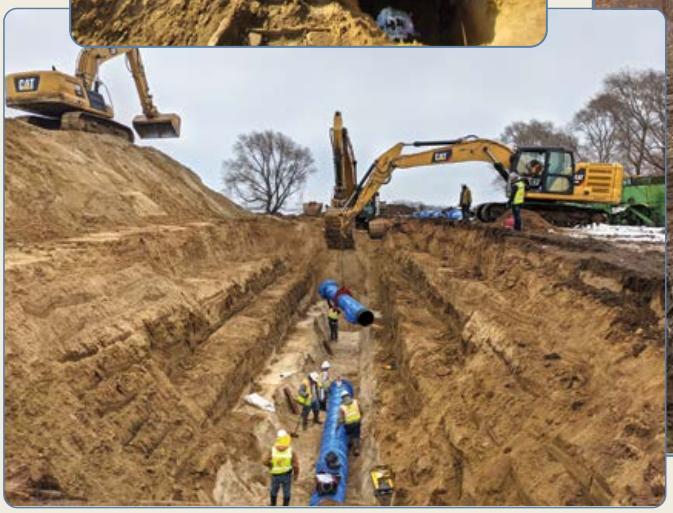
Iowa – Segment 2: Dry weather in 2020 allowed Carstensen to make quick work of the 10 miles of 24-inch PVC pipe starting at Sioux Center and heading west. They started construction in early June and successfully pressure tested the line on October 22. Work on site restoration and punch list items will resume this spring.

IA – Segment 2

Iowa – Segment 3: Carstensen began construction in early October. Including the various crossings, they installed 6.5 miles of 24-inch pipe before demobilizing for the winter on December 19 (51% complete). They will resume pipe installation this spring.

Due to higher operating pressures in the middle 12.6 miles between Beresford and Sioux Center, which includes the Big Sioux River crossing (pages 6-7), the contract called for ductile iron pipe instead of PVC. Steel pipe though is being used for the various road, waterway and railroad crossings. The ductile iron pipe has a zinc coating on the exterior and a plastic V-Bio Wrap. Both provide corrosion protection. The steel pipe has a different type of exterior protective coating, but no plastic wrap.

IA – Segment 3



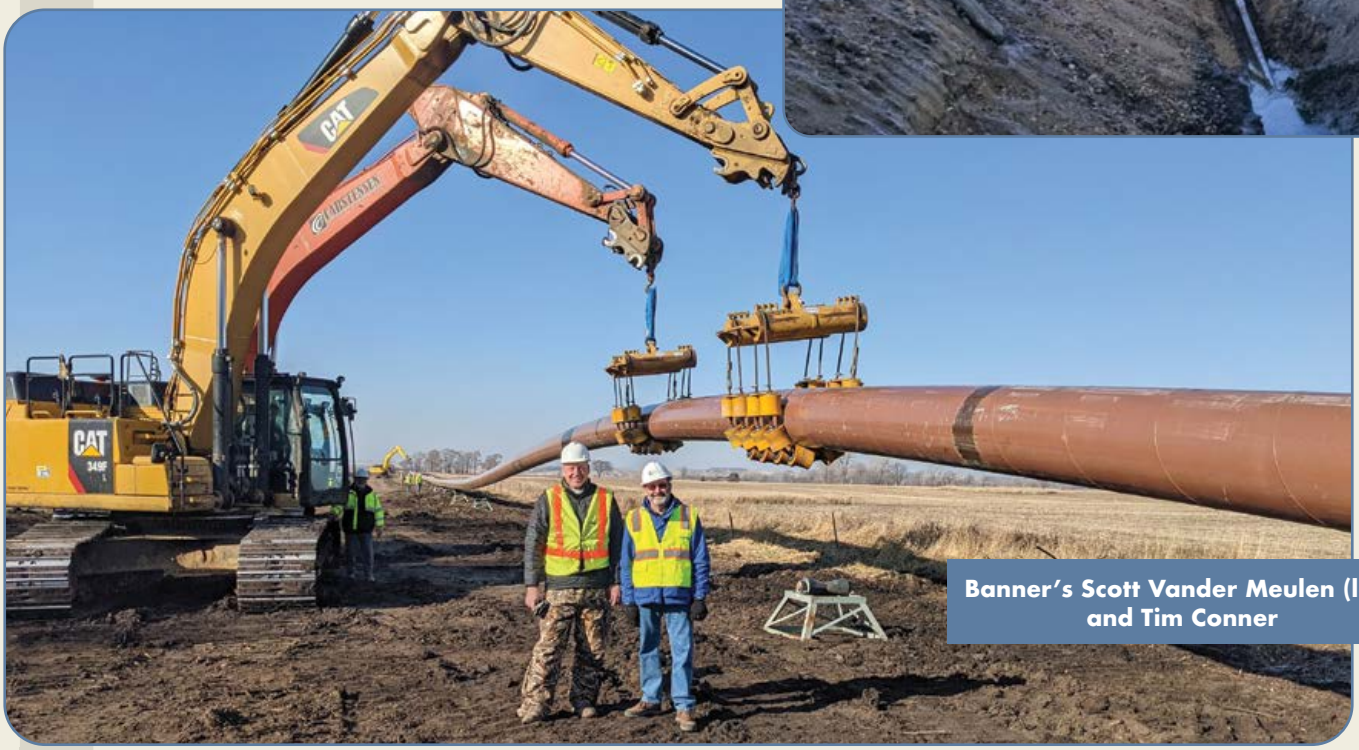
Big Sioux River Crossing Completed

Iowa – Segment 3 (page 5) includes the Big Sioux River crossing, which for all practical purposes was a separate project within the contract. Horizontal directional drilling for the 1,700-foot crossing under the river started on October 21 and was completed on November 21. Thankfully no major issues were encountered. New Tech Construction out of Nebraska City, NE was the boring subcontractor. 50-foot sections of steel pipe were welded together to erect a continuous length that was pulled under the river after the bore drilling was completed.

The initial pilot bore was 12 inches, and then it was reamed out to 24 inches and finally 36 inches. They drilled the bore from the IA side of the river to the SD side, but pulled the pipe from the SD side to the IA side. “By far the biggest hurdle we faced between Beresford and Sioux Center was the river crossing. A big weight was lifted from all our shoulders when the 24-inch pipe was successfully pulled through. It was very rewarding to watch,” said Banner’s lead engineer Tim Conner.

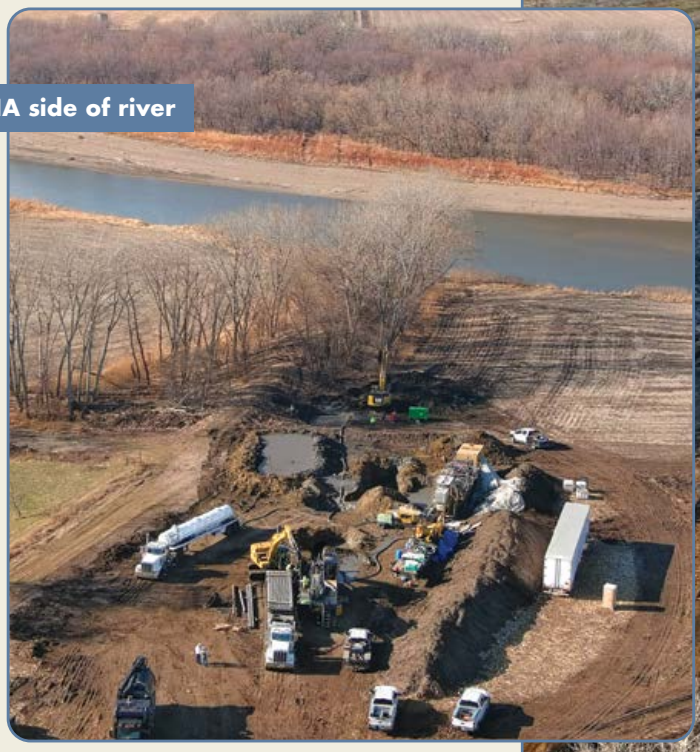
Pilot bore drilling


Start of pulling pipe through bore



Banner’s Scott Vander Meulen (left) and Tim Conner

SD side of river



IA side of river

Banner's Jordan Nelson inspecting interior of 24-inch steel pipe

End of the pipe on SD side

Foundation Completed for the Beresford Water Tower

Caldwell Tanks and their subcontractors completed the foundation on November 13 and demobilized until spring when they will begin work on the concrete pedestal. The revised substantial completion deadline is late February 2023. Caldwell is confident they are on schedule.

As explained in the previous newsletter, the original plan to use auger cast pilings did not work. The new plan involved Blackhawk Foundation Company driving 168 steel pilings into the ground; most to a depth of around 93 feet. Influent and effluent piping was installed. Ozark Mountain Construction then used a continuous pour of 340 yards of concrete (43 truckloads) on October 28 for the foundation cap, which basically is a large concrete donut with an outside diameter of 66 feet. The pedestal will be constructed on top of the foundation cap.

The 2.5 million gallon composite water tower is being built in the southeast corner of Beresford city limits and is needed to deliver water to Sioux Center, Hull and Sheldon. At 220 feet tall at its peak, Caldwell officials said it will be the tallest 2.5 million gallon water tower in the nation.

Influent pipe on the left and effluent pipe on the right

Final steel piling is moved into position

Water tower site in the foreground with Beresford in the background

Pouring the foundation cap

Completed foundation

Former Director Gulbranson Passes Away

The L&C family was saddened to learn that former L&C director Jeremy Gulbranson passed away on Christmas Day at the age of 41. He was awaiting a liver transplant when he took a turn for the worse. Jeremy served on the Board of Directors from May 2018 to August 2019 while he was the Public Works Director in Lennox.

"While he was not on the Board long, he made a big impact for Lennox. The city when he arrived was only using 25 percent of their reserved capacity from L&C, but under his leadership the city switched to using L&C as their sole source of water and eventually sold their wells to South Lincoln RWS. This move continues to save Lennox a lot of money each year, not to mention having a much higher quality of water than when they were blending the two sources," said Executive Director Troy Larson.

Jeremy was an Iron Ranger from Eveleth, MN and enjoyed a successful baseball career at the University of Duluth. He enjoyed hunting and fishing and leaves behind a young son and daughter.

Collector Well Screens Exceeding Expectations

Well Capacity Could Increase by 2 MGD

Ten concrete sections were poured above grade for the caisson that were jacked into the ground by clamming material out with a crane and bucket while hydraulic pressure was applied with an H-frame

The 106-foot deep concrete caisson with an outside diameter of 20 feet was completed in mid-November. Layne began constructing the ten horizontal lateral screens that will draw in the water in late November. Five of the ten laterals have been completed as of February 7. Layne will work through the winter and anticipates finishing the laterals in early April. Welfl, the general contractor, will then start constructing the well house. The substantial completion deadline is currently May 2022.

Soil samples are taken during the pushing of the lateral casings to determine the proper slot size to use for each 10-foot screen section to accommodate the actual material. Very customized. Coarser material means wider slots and more capacity. The engineers have been pleased with the coarseness of the material.

Touring construction on August 20 (left to right): Welfl's Kevin Bender, HDR's Al Erickson, Operations Manager Jim Auen, Chairman Red Arndt, Executive Director Troy Larson, Plant Supervisor Mike Duchscher, Construction Administrator Clint Koehn and Banner's Kristin Bisgard

Sibley officials toured construction on September 23 (left to right): Layne's Kyle Harry, Councilman and L&C Director Larry Pedley, Wastewater Operator Jason Darnell, City Clerk Sue Sembach, Water Operator Dan Molendorp and Utilities Superintendent Cory Dykstra

The first five laterals angle toward the river, where as expected the soil conditions were ideal. Average expected design length of the ten lateral screens after the sections are connected is 175 feet, not counting the 10-foot blank section at the start of each lateral. L&C officials were very pleased Layne was able to push the first five screens much further; 230, 250, 250, 250 and 250 feet respectively.

Screen slot sizes to date have ranged from 0.76 to 3.8 millimeters (latter shown with quarter and nickel)

Above: Divers were used to set steel beams at the bottom of the caisson and help pour the slab of concrete for the floor

Below: 10-foot section of screen is lowered into the caisson

Added screen length provides a cushion in case obstacles are encountered that make some of the remaining laterals shorter than average, but more importantly it adds capacity. Design capacity of the collector well at Site B is 16 million gallons a day (MGD), but capacity could be increased by 2 MGD depending on the amount of additional screen that can be installed in the five remaining laterals, as well as the overall coarseness of the material.

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Operations Update

In calendar year 2020 L&C metered 6,698,044,446 gallons to the 15 connected members for a daily average of 18.3 million gallons. This is an increase of 4.4% over 2019. The peak day was a record 26 million gallons on August 25. Water loss was within the margin of error of the meters, so basically nil. Hats off to the operations team on another fantastic year!

After three years working as conditions allowed, Gacke Enterprises finished removing the remaining lime sludge from the middle drying bed last fall. A total of 57,374 tons was removed. In September a $414,693 contract was awarded to Rounds Construction of Brookings for improvements to the middle drying bed. Work began in mid-October and is expected to be completed by September 2021.

The improvements include adding French drains (photo to right), improving the slope of the floor and replacing the clay liner. These improvements were previously made to the other two drying beds, which have allowed the lime sludge to dry down much more efficiently and effectively. This in turn saves money on future removal costs.