Lewis & Clark REGIONAL WATER SYSTEM
Explorer
Spring 2025

Phase 3 Progress for Treatment Plant

PKG is making good progress on the third and final phase of the water treatment plant. Three areas of focus most noticeable are the three-million gallon underground clearwell, two solids contact basins and maintenance area. There is also a lot of interior work taking place, such as electrical and HVAC. The clearwell is part of L&C's first expansion from 44.19 MGD to 60 MGD. The rest of Phase 3 is part of the Base System.

All the walls have been poured for the clearwell and water proofing and backfilling is taking place. PKG is in the process of pouring the top slab. For the solids contact basins, the underground piping has been installed and PKG is currently working to encase in concrete the existing 54-inch raw water pipeline to protect it during construction of the new basins. This critical line delivers raw water from the wellfield to the plant.

"There are three different substantial completion deadlines for various components of the project. The first deadline was this past March for the conversion to gas chlorination, but PKG is experiencing delays getting the necessary actuators, control board upgrades and other mechanical items so there will be a time extension. PKG feels they are on schedule to meet the other two substantial completion deadlines – December 2026 for the clearwell and October 2027 for the rest of the project," said Operations Manager Jim Auen.

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Pouring the support slabs for the 54-inch raw water pipeline. Once the eight slabs are completed, the entire raw water pipeline will be encased in concrete to protect it during basin construction.

Delivery of two 4,000-gallons lime slurry tanks to replace two existing 2,000-gallons tanks; upsizing is needed to handle the two new solids contact basins

The new maintenance area shown with the three doors to the left adds 30% more space to the existing maintenance area

Progress on the top slab of the clearwell

Chairman's Report

Chairman Murray Hulstein

Banner will soon complete an Appraisal Level Study on a possible second expansion to the Lewis & Clark system. Lewis & Clark was incorporated in 1990 and the first expansion that will increase our total capacity to 60 MGD will be completed in 2030. Knowing firsthand it takes decades to complete large-scale drinking water projects, in 2019 we started looking at a second expansion to address the members' growing water needs beyond 60 MGD for the next 40 years (2030 – 2070).

Reclamation's design criterion for water projects is based on the estimated water needs for the next 40 years. The Appraisal Level Study is based on adding 82.8 MGD of capacity, the results of an informal survey in January 2024 of existing members. Banner's very preliminary estimate is the second expansion will cost over $2 billion and will need to be constructed in distinct phases. By comparison, the Base System of 44.19 MGD is estimated to cost $825 million when completed.

A resurvey of the members' future water needs from 2030 – 2070 was completed in May. **The updated total of 95.37 MGD will be used for the Feasibility Study**, which is the next step in the process that we anticipate starting this fall. The more detailed Feasibility Study by the engineers will take roughly 18 months, and will allow them to better refine the cost estimate.

We have been working closely for over a year with our tristate congressional delegation, particularly Senators John Thune and Mike Rounds, on two different legislative approaches that will authorize Reclamation to cover up to half the estimated $2.7 million price tag for the Feasibility Study using existing program funding. No appropriation is needed. In the meantime, we continue to closely follow the progress of the proposed Dakota Mainstem Regional Water System, which is a possible alternative to a second expansion.

Final Federal Funding Secured for Base System!

$553.2 Million Approved Over 25 Years

The FY25 Appropriations Bill signed into law on March 14 included $6.825M for L&C, which L&C officials expect will be the final federal funding needed to complete construction of the Base System! This is on top of the $1M in previously unallocated funds Reclamation approved for L&C in September 2024 from the FY24 Appropriations Bill, as well as an additional $13.17M in FY25 infrastructure funding approved for L&C in January 2025. "The FY25 Appropriations Bill did not include any congressionally directed spending requests, but that did not impact us because of the additional funding we received. Even so, we again thank Senators John Thune, Amy Klobuchar, Mike Rounds and Tina Smith for submitting a funding request on our behalf. They went above and beyond," said Executive Director Troy Larson.

Construction of the Base System will be completed in 2028 when Phase 3 of the water treatment plant is scheduled to be finished, as well as installation of a second backup generator at the Tea pump station and a fourth generator at the treatment plant. "All the contracts to complete the Base System have been awarded, so we have a good idea how much federal funding is needed to finish the work," said Larson.

L&C's first federal funding of $1.6M was received in FY01. **A total of $553,243,584 in federal funding was approved over 25 years.** This includes funding from annual appropriations bills, the American Rescue and Recovery Act, the Bipartisan Infrastructure Law and Reclamation sources. A huge thanks to our entire tristate congressional delegation – past and present – for their strong bipartisan support and leadership across state and party lines!" said Larson. Including state and local funding, **construction of the Base System is estimated to cost $825M.**

FROM THE PIPELINE

Lincoln County RWS officials toured the plant and collector well on February 26. They also went into a softening basin that was being cleaned. Left to right: Assistant Manager Andrew Krege, DGR's Nathan Brandenburg, Board President Joe Burns, Operator Nick Larson, Operator James Nussbaum, L&C Plant Supervisor Mike Duchscher and Operator Tom Hruska.

One part of the high service pump station improvements project was installation of four additional pumps and 1,250 h.p. motors. The contract was awarded to PKG in December 2021. Due to a cascading series of delays and mishaps involving the pumps and motors that were out of PKG's control, it was not until March 2025 that this project was finally completed.

Two Reclamation officials in Bismarck who worked closely with L&C accepted early retirement offers. Program Manager Alicia Waters (March) and Area Director Joe Hall (April) retired after 33 and 22 years respectively at Reclamation. "Alicia started working on L&C in 2018 and was our main point of contact. Joe was involved in different facets of L&C his entire career. Both were rock stars. Their advocacy for L&C, as well as their can-do common-sense approach to the issues at hand, will be missed. A big thanks to Alicia and Joe and best wishes in retirement!" said Executive Director Troy Larson.

Office Training is hosted twice a year by the SD Association of Rural Water Systems. Business Manager Lori Seten (fifth from the right) and other rural water administrative professionals toured Maguire Iron's new manufacturing plant in Sioux Falls on March 16 as part of their two-day meeting.

Madison Mayor Roy Lindsay (maroon hat and jacket) was the guide for a bus tour on April 24 of projects benefiting the City that received federal funding, including a stop at L&C's ground storage reservoir

Banner staff used the ladder in the pedestal of L&C's 85th Street water tower in Sioux Falls on April 10 for fall prevention and rescue training, as well as to practice different climbing and safety techniques. Left to right: Will Smith, Hunter Garry, Daymein Lucas, Austin Stahlke, Trevor Stahl and Jordan Nelson.

The SDSU student chapter of the American Water Works Association toured the water treatment plant on April 10; mostly graduate students interested in the treatment process. Plant Supervisor Mike Duchscher is on the far right and advisor Dr. Chris Schmidt is fourth from the right.

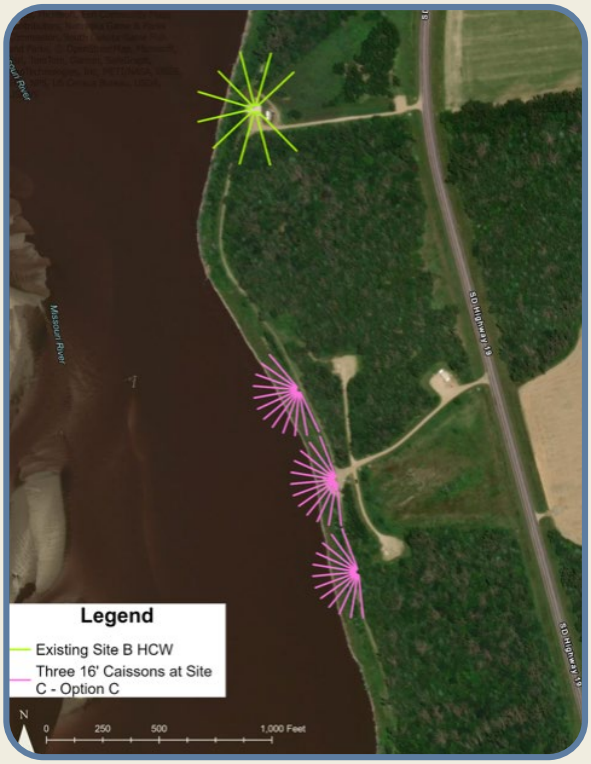
Pump Station Operational Despite Setback

Rice Lake was on cruise control to meet the April 18 substantial completion deadline for the Larchwood pump station, but they hit a roadblock on February 21. A fuel supplier filling the tank of the backup generator caused an accident that damaged the fuel tank, motor, generator and enclosure beyond repair. The damaged generator set was removed and a temporary generator will soon be installed. It is expected to take one year to get a new generator set.

In late April the process piping was completed, along with pressure testing and disinfection. The pump station was started up on May 8 and it is now operational and has been running well. The driveway was poured and fencing is being installed. This project, which also included adding one pump and motor (fourth overall) to the Dove Avenue meter building/pump station on the IA side of the IA-SD border, is part of the expansion to 60 MGD. ARPA funds from the State of Iowa that need to be spent by December 2026 are being used. Rice Lake is "confident" that will happen.

Progress meeting on April 9. Left to right: Banner's Hunter Garry, Operations Manager Jim Auen, Banner's Taylor Fuhr, Banner's Kristin Bisgard, Construction Administrator Clint Koehn, Rice Lake's Chad Nepstad and Rice Lake's Chase Jacobson.

Three Collector Wells Planned for Site C



The Board of Directors last fall decided the long-term plan for Site C was to have two 16-foot diameter caisson collector wells instead of one 20-foot diameter caisson collector well at Site C for multiple reasons, including less cost. Based on updated information, the engineers switched the choice to three 16-foot wells or two 20-foot wells. The three smaller wells are an estimated $30M less than the two larger wells. As recommended by the staff and engineers, on April 24 the Board affirmed the previous decision to use 16-foot wells. The existing Site B collector well shown at the top of the illustration has one tier of 10 lateral screens in an almost 360 degree array. The future Site C collector wells will each have two tiers with a total of 12 lateral screens in a half-moon array. Goal is more screens closer to the river. Yankton used a similar design. Best case scenario is this design will add as much as 14% more screen compared to Site B (up to 330 feet more).

Six additional bores were completed by Thein in March to determine the location of bedrock in previously unexamined areas as shown at left. Modeling shows there is 80 MGD of capacity at Site C; the combined rated capacity of two 20-foot wells. Each 16-foot well has a rated capacity of 25 MGD regardless of how many are running, so total rated capacity of 75 MGD. **Bids will be opened in July for one 16-foot caisson at Site C, with a bid alternate for a second 16-foot caisson.** A contract for the well house for the first collector well will be awarded separately. The timing of the second well house for the second collector well is currently unknown.

"As we look at Site C, we need a total of **68 MGD** in well capacity in order to delivery 60 MGD of firm capacity when accounting for line and treatment losses. We currently get **22 MGD** from our Site B collector well. When we eventually have two collector wells at Site C with rated capacities of 25 MGD each, we will have total well capacity of **72 MGD.** It is always good to have some cushion so we don't need to run the wells as hard. It also provides more operational flexibility when a well is shut down for maintenance and repairs," said Operations Manager Jim Auen.

Lewis & Clark
REGIONAL WATER SYSTEM

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Operations Update

A one mile stretch of rock revetment armors the riverbank just north of the Vermillion-Newcastle Bridge to protect L&C's twelve wells from erosion. The original revetment constructed in 2008 used boulders that were not as large as the ones that have been used in a series of erosion damage repairs. A 1,700-foot stretch of original revetment is in need of repair. The estimated $2.4M price tag is an O&M expense. Bids will be opened in mid-July. The end of December is the substantial completion deadline. "Lessons were learned with the original design. We are pleased with how the larger boulders have held up in the areas previously repaired. After this repair only about 1,000 feet of original revetment will remain," said Operations Manager Jim Auen.

Revetment repairs in 2021