

## Bank Stabilization Project Will Have National Impact

"This is the most important project on the Missouri River in years." That is how Dave Derrick, Research Hydrologic Engineer from the Army Corps of Engineers' (Corps) office in Vicksburg, MI, described Lewis & Clark's (L&C) bank stabilization underway near Vermillion, SD. He is serving as the technical advisor for construction of the "modified stone-toe revetment," which is a close to one mile bank stabilization project that begins about a half mile north of the Vermillion-Newcastle Bridge. National Parks Service (NPS) officials are also very involved in the project.

The modified stone-toe revetment (bank stabilization) has been used in smaller streams in the United States, but this is the first time this more environmental approach to bank stabilization has been used on a river the size of the Missouri. Corps and NPS officials are eager

to use this project as the "poster child" for similar projects throughout the nation. Rather than just using rock to rip rap the bank or burying the rip rap inland and letting it launch once the erosion reaches it, this approach involves sloping the bank and placing rip rap on it. After the rock is covered with top soil, vegetation is planted. The result is a more natural view. The project also includes positioning "extreme locked logs" (35' to 100' trees) in the river to soften the impacts of the current on the shoreline. The trees are "locked" into place about 50' apart by placing rock on top of them. In addition, seven 150' long "key trenches" are being dug and filled with rock perpendicular to the river bank to serve as a second defense against erosion. Highlighting the need for the revetment, the river bank eroded up

to 25' in some places from the time it was surveyed in March 2007 until construction began in late October.

Work has progressed very well and has continued through the winter. The revetment and willow pole planting portions of the project were completed in early February. 51,000 ton of rock was placed and 48,000 willow poles were planted. Other "upland vegetation" will be planted this spring further up the river bank – a combined 59,000 cottonwoods and dogwoods. Lake Regional Contracting of Spicer, MN, is the subcontractor on the revetment portion of the project. The general contractor, Welfl Construction of Yankton, SD, plans to begin work this spring on the well facilities (pump houses, vaults and piping), which is the second part of the \$5.5 million contract.



## Pipeline Construction Update - continued from page 3

### Treated Water Pipeline – Segment 9:

Half the pipe has been installed on this eight and a half mile segment of 36" and 30" steel pipe that runs along 85th Street in a more urban area south of Sioux Falls. Construction began in September on this "emergency connection" for Tea and Harrisburg and the deadline for substantial completion is 7/1/08.

### Tea and Harrisburg Service Lines:

Winter Brothers Underground of Sioux Falls will begin construction this spring on the combined three and a half miles of service lines to Tea and Harrisburg (16" PVC pipe). The deadline for substantial completion is 7/1/08.

### Treated Water Pipeline – Segment 5:

Pressure testing and clean up continues on this 16 mile segment of 54" steel pipe that runs along 467th Avenue from 281st Street to the Clay County line.

### Iowa – Segment 1

This nine mile segment of mainly 16" and 10" PVC pipe between Sioux Center and Hull was completed last September. Until Lewis & Clark (L&C) water arrives, this segment will be used as a short-term "emergency connection" for Hull. An agreement is in place for L&C to purchase water from Sioux Center and re-sell it to Hull. Operation is scheduled to begin on May 1, 2008.

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## Project Receives Significant Federal Funding Increase – \$26,568,000 Approved For FY08

An early Christmas present was received in mid-December when project officials received word that the FY08 Budget included \$26,568,000 for Lewis & Clark (L&C). This is a significant increase over last year's funding of \$21 million. "Given that Congress extensively reduced their appropriations bills in order to avoid a veto, this is nothing short of a Herculean effort by our Congressional

delegation and demonstrates its steadfast support," said Executive Director Troy Larson.

The L&C Board and staff express its sincere thanks and appreciation to Senators Tim Johnson, John Thune, Chuck Grassley, Tom Harkin, Norm Coleman and Amy Klobuchar, and Representatives Stephanie Herseth Sandlin, Steve King and Tim Walz.

Each played a critical role, with the SD delegation again taking the lead. This funding increase puts the project in much better shape for the FY09 Budget as L&C officials and its Congressional leaders continue to work toward reaching the \$35 million level needed to keep construction on schedule, which is about three and a half years behind its originally scheduled completion of 2016.

## Lewis & Clark Officials Meet With OMB Director

Lewis & Clark (L&C) officials met on December 4 with Office of Management Budget (OMB) Director Jim Nussle. This was the first time project officials had ever met with an OMB Director. Being from Iowa, he was already familiar with the project. The purpose of the meeting was to urge the Administration to increase L&C funding in its FY09 Budget, while also emphasizing the importance of the project to improving the quality of life and economic development opportunities in the region. L&C is again requesting \$35 million, which is the amount needed to keep construction on schedule. Although Director Nussle did not make any commitments, which was not



Sioux Center Mayor Dennis Walstra emphasizing the importance of L&C to the region's economic development. Left to right: Walstra, Chairman Red Arndt, OMB Director Nussle, L&C's Troy Larson, Hull Director Randy Feenstra and lobbyist Dave Bockorny.

*"It is a priority for the Administration to finish water projects that are underway before starting new ones."*

-OMB Director Jim Nussle

expected, he said "It is a priority for the Administration to finish water projects that are underway before starting new ones." Meeting for the first time with the OMB Director was in itself noteworthy. The L&C officials also met with Senators Tim Johnson and John Thune and Representatives Steve King and Stephanie Herseth Sandlin, as well as staff members from the other tri-state Congressional offices, to update them on the project and ask them to urge the Administration to increase L&C funding in the FY09 Budget, which they eagerly agreed to do.

The Administration's FY09 Budget, which serves as a starting point for Congress, was released in early February. With a focus on holding the line on spending, the Administration again proposed \$15 million for L&C, which was the same number as in the FY08 Budget. The Administration had proposed \$21 million for L&C in FY07. "We are always thankful to be included the President's budget, but are disappointed the funding level was not increased. We hope our tri-state Congressional delegation will again be able to improve upon the Administration's budget during the appropriations process," said Chairman Arndt.

## Chairman's Report

The last four months have been a wild roller coaster ride as we've worked through the challenges of much higher than expected bids for the water treatment plant (WTP). At times it seemed we were going down the tracks up on one rail, but we're back on track with the Board's decision to build the WTP in phases (see page 4) and the substantial increase in federal funding.

Although building it as one project would have been less expensive, now that we know the plant will cost far more than originally expected, building it in phases makes sense when considering L&C's available funding and that the entire 45 million gallons a day (MGD) of capacity is not needed on day one. We deferred as much construction and equipment as possible until after 2012. We also made a number of permanent saving changes, but there simply was not a lot to cut. There was certainly nothing extravagant about the WTP design. The permanent savings identified will likely be offset by the additional inflation of extending the construction schedule for one year. The design is solid, which was reinforced by numerous outside engineers reviewing

the plans and specs the last four months. We have a cash flow problem, not a design problem.

With the phased approach and continued federal funding, we fully expect to deliver treated water to Sioux Falls, Tea, Harrisburg, Lincoln County RWS and Minnehaha Community Water Corp by 2012, with Lennox, Parker, South Lincoln



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RWS, Centerville and Beresford receiving water a year or two later. If for some unexpected reason the 2012 deadline is not met, L&C has an agreement whereby raw water can be delivered to Sioux Falls if the City finds itself in dire need of water. This is a worst case scenario that is very unlikely to occur given the large

## Tea and Harrisburg Meter Houses Bid

Bids were opened on February 14 for construction of the Tea and Harrisburg meter houses. The apparent low bid of \$XXX,XXX was from XXXXXXXXXXXXXXXXXXXX of XXXXXXXXXXXXXXX, XX.

Lewis & Clark's Board will meet on February 28 to award the contract. These 28' by 15' brick meter houses will be located on the north side of each community. Construction will begin this spring and the deadline for substantial completion is July 1, 2008. July 1 is also the substantial completion deadline for two related projects – three miles of 16" service lines to Tea and Harrisburg and eight and a half miles of 36" and 30" pipe for segment nine of the treated water pipeline (TWP-9). These three projects collectively are referred to as TWP-9. When completed, TWP-9 will serve as a short-term "emergency connection" to provide critically needed water to Tea and Harrisburg. Until L&C water

amount of additional cost Sioux Falls would incur for what would be a short period of raw water delivery, including construction of 750' of temporary 36" pipe near the WTP that is not included in Phase 1, and extensive cleaning of the main trunk line.

The key to any water delivery schedule is federal funding. We can't thank our congressional leaders enough for the increased funding. They really went to bat for us. A funding increase during a time of tightening budgets is not only a testament to the strong support and effective leadership of our congressional delegation, but also the merits and importance of the project itself. Before the FY08 Budget was even passed we were

working hard to increase funding in the FY09 Budget. This included meeting for the first time with the Office of Management and Budget Director, who does not typically meet with project officials. This was a unique opportunity to go to the top in making our case for increased funding.

arrives, which is estimated at 2012, the originating source of water would be

Sioux Falls. However, with various legal issues still pending involving Sioux Falls, Tea and Lincoln County Rural Water System (the current provider of water to Tea and Harrisburg), a water sales agreement has not yet been finalized. It is hoped those issues will be resolved by July 1.

## Pipeline Construction Update

Pipeline installation wrapped up for the winter in mid-December. To date, 64 miles of pipe have been installed with another 15 miles still under construction.

Based on the value of the contracts, as opposed to miles of pipeline, the 79 miles of mainly 54" diameter pipe represents close to 50% of the total pipeline projects (does not include the treatment plant, wells or reservoirs).

Except for the Tea and Harrisburg service lines, SJ Louis Construction of Waite Park, MN, is the contractor. The last 11 mile segment of the main 54" trunk line in Clay County is planned for bid this spring.

### Treated Water Pipeline – Segment 6/7A:

Three and a half miles have been constructed of this 11 mile segment of 54" steel pipe along 467th Avenue from the Clay County line to 308th Street. Construction began in September and the deadline for substantial completion is 11/1/08.

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## Water Treatment Plant to be Built in Phases



The Lewis & Clark (L&C) Board on December 20 agreed to a new course for the water treatment plant (WTP). Rather than building the WTP as one project, it will now be built in phases to better match L&C's available funding. The bids received on September 6 were \$45 million higher than the engineer's estimate and subsequently rejected on October 25. Building the plant in phases helps L&C stretch its available funding by deferring certain costs and gives the system flexibility to expand in the future as the need arises, but will likely cost more in the long-run when compared to a single project. "We're back on track," declared Chairman Red Arndt after the Board's action.

*"We're back on track."*

*-Chairman Red Arndt*

Phase 1 is planned for bid this summer. This includes the high service pumps, clear wells and electrical building, which are separate structures from the main plant and make for a natural first phase. Based on the bids received, Phase 1 includes about 17% of the overall WTP project. A final decision has not been made on the number, scope and timing of the remaining phases. However, project officials are working toward the goal of bidding Phase 2 in 2009, which would give L&C the ability to deliver treated water to five L&C members by 2012.

Sometime after 2012 when more capacity is needed, the remaining phase(s) of the WTP would be constructed. When all the phases are completed the WTP will deliver 45 million gallons a day (MGD) as originally planned. The WTP is being built with the ability to expand to 60 MGD in the future, which is the capacity of the pipeline.

In addition to building the WTP in phases and deferring some construction and equipment beyond 2012, a number of changes resulting in permanent savings were made. However, it is anticipated the permanent savings will be offset by the increased inflation by adding an additional year to the construction schedule. Most of the permanent savings involved eliminating back up process equipment that would have allowed L&C to continue producing 45 MGD while portions of the plant are down for maintenance or repair, and eliminating the EPA certified laboratory.

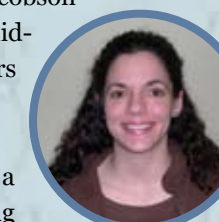
## Easement Acquisition Update

Graham Land Acquisition Associates of Nevada, IA, continues to make good progress on the easements. This past fall Lewis & Clark (L&C) finally reached the point where there are no critical deadlines to secure easements, which was a challenge for the project during the first few years of construction. All the easements have been secured for the last 11 mile segment of the main trunk line in Clay County. Once the segment is bid this spring, depending on federal funding, another pipeline project is not anticipated to be bid until around 2012. Funding will instead be used toward the water treatment plant.

Parker/South Lincoln RWS (19 miles combined). Acquisition work should begin by this fall on the lines to Lennox and Beresford (six miles combined). Over half of the easements on segment 10 of the treated water pipeline (TWP-10) have been secured. TWP-10 runs nine miles from Harrisburg's service line, which is a half mile east of Cliff Avenue on 85th Street, to a point in Iowa two miles east of the Big Sioux River. Although TWP-10 will not be constructed until after 2012, crossing the Big Sioux River poses unique challenges because the river banks are culturally sensitive areas. The sooner the

easements are secured the sooner L&C can begin obtaining all the regulatory approvals needed prior construction.

In other easement news, Acquisition Coordinator Jenny Jacobson left the L&C staff in mid-January after two years of dedicated service, but she is not going far. Jenny has started a home-based consulting business. She will continue to perform the core responsibilities of the position as a part-time consultant.



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