



EAST COLUMBIA BASIN IRRIGATION DISTRICT

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August 10, 2022

Adams County Commissioners
210 W Broadway
Ritzville, WA 99169

Re: East Low Canal Bridges

Dear Commissioners Wiese, Thompson and Blankenship:

Thank you for your correspondence regarding county road bridges crossing the East Low Canal (ELC). We appreciate your efforts to address the widening of ELC crossings to allow the additional flows necessary to replace groundwater withdrawals for Adams County farmland currently dependent upon the Odessa Subarea Aquifer. We understand that the congressionally-directed spending request you made with Senator Murray was fully funded going into the draft appropriations bills. Congratulations for your effort.

As explained previously on our tour, the ELC bridge replacements are not something that lends itself to be considered a long term, phased endeavor. The nature of water conveyance in the Columbia Basin Project is dependent on gravity flow. The ELC has structures placed at topographically advantageous locations to allow regulation of those flows. As such, once water passes a regulation point, such as our Rocky Coulee Wasteway (RCWW) or Lind Coulee Wasteway (LCWW), the water needs to be conveyed to a delivery point or a wasteway. Please note, the next wasteway below LCWW is over 30 miles away and the ELC flows under numerous county road bridges to get there.

We have analyzed the individual bridges to identify which will back up flow to the greatest extent. We present them in order of greatest risk to overtopping the ELC, however, please recognize that replacing one immediately makes another the greatest concern. This continues until all bridges needing replacement are upgraded.

Adams County bridges aren't projected to impede flows significantly until after the next three systems beyond LCWW are operational (likely the EL 86.4, EL 80.6 and EL 84.7). Following those however, all remaining bridges, besides Lucy and Hatton Rd, will back up water in the ELC to levels that are unacceptable for safe operations. If the bridge-related flow restrictions aren't address by replacement or removal, avoiding unsafe canal conditions will necessitate interruption of deliveries which will negatively impact our collective landowners' operations. That is understandably unacceptable to landowners after the large economic investments they will have made to convert their operations to accept a CBP water supply. The District and State investments in the program would also be a concern.

The next groundwater replacement delivery system likely to be completed, for 2024 deliveries, is the EL 86.4 Delivery System located at the end of the ELC. Approximately 80 cfs (36,000 gpm) is needed to serve that system and that additional flow needs to pass under all bridges crossing the ELC once we send it downstream from Billy Clapp Lake, over 90 miles upstream. Based upon our review this additional flow should pass under existing Adams County road bridges and not necessitate replacements for us to operate safely. However, that additional

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flow will cause a water level rise, in addition to what we are currently observing near peak flows, at Grant County's Rd "W" bridge.

On a fiscally brighter note, our analysis did find some potential room for relief. Based on info available to us currently, it appears that the Lucy Rd and Hatton Rd Bridges do not need to be replaced to pass the flows expected for delivery of full groundwater replacement supplies as currently envisioned. We will survey these locations this winter to confirm these findings. No significant changes from previous surveys taken in the mid-2010s are expected. Once confirmed, this will greatly decrease the bridge replacement expense previously anticipated for full flow conveyance.

Bridge replacements, catalogued by increased water elevations based upon the analysis of data available, follows:

- 1) Rd "W" bridge, Grant Co., backed up water at 2021 peak flows following the startup of the first delivery system in 2021 (EL 47.5 Delivery System)
- 2) Booker Rd Bridge, Adams Co., sufficient until 4th system d/s of LCWW is operational
- 3) Rd 11 Bridge, Grant Co., sufficient until 4th system d/s of LCWW is operational
- 4) Providence Rd (Rd 12), Adams Co., sufficient until 4th system d/s of LCWW is operational
- 5) Sackman Rd, Adams Co., sufficient until 4th system d/s of RCWW or LCWW is operational
- 6) Cunningham Rd, Adams Co., sufficient until 4th system d/s of LCWW is operational
- 7) Foley Rd, Adams Co., sufficient until 4th system d/s of LCWW is operational
- 8) Herman Rd, Adams Co., sufficient until 4th system d/s of LCWW is operational

Note: Lucy and Hatton Rd bridges appear to provide sufficient width for canal expansion necessary to convey anticipated flows for full OGWRP development without replacement.

Please do not misconstrue this analysis. It provides a list of the ELC bridges by severity of the backwater elevation increases from bridge obstructions. Operating at increased elevations isn't an acceptable approach. The East Low Canal is designed to operate at specified elevations dependent on unimpeded flow conditions. Increased water elevations present additional stresses on the core bank of the canal which provides freeboard above the operating elevation as a safety and stability function.

For your planning purposes, three delivery systems d/s of LCWW are approaching 30% designs. One system could make deliveries as early as 2024. The other two are more likely to begin deliveries around 2026-2027 if the current plan to utilize NRCS PL-566 Small Watershed Plan grant funds is followed. If alternative funding is secured that timeline could be shortened. The Adams County bridges are ok for those three systems at their current lengths.

No other systems d/s of RCWW (or LCWW) are currently being designed. Two systems above RCWW (no impact to Adams County bridges) are beyond 30% design presently. The landowners on a system located just above the LCWW have started discussions to get the design process moving. Landowner support for any delivery system can expedite its completion and is difficult to predict.

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Additional systems coming on-line between the RCWW and LCWW will necessitate the Sackman Rd bridge replacement or removal, as will any additional systems below LCWW. Systems above RCWW do not impact Adams County bridges. Another system (a fourth system) below LCWW triggers the need for all bridges listed to be replaced.

Alternatively, with recognition of the reluctance to take bridges out of service, consideration of vacating lower-use bridges could help alleviate some of the pressure associated with scheduling and the funding needed for bridge replacements.

We have enclosed copies of the current delivery system layout and the ELC improvements that depict the bridge locations to assist visualization of the facilities mentioned.

We are available to discuss this information in greater detail if you would find it beneficial. The success of our delivery systems for groundwater replacement relies upon the passage of water beneath the county road bridges. We remain available to assist you in addressing the bridge replacement effort.

Sincerely,



Craig N. Simpson, P.E.
Secretary – Manager

CNS:wI

Enclosures

cc: Directors
Nate Andreini
John McCourtie
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