

## **THE ISSUE:**

**There has been a clear and unintended impact on water levels throughout a portion of the Muddy River as a result of the Muddy River Flood Control project completed by the Army Corp of Engineers.**

## **CONSIDERATIONS AND A PATH FORWARD:**

- The Muddy River Flood Control project has spanned decades and has been a joint effort of local, state, and federal governments with long term support from a suite of stakeholders. This cooperative, comprehensive, and collaborative approach has been key to the vision, design and permitting, and construction of this project.
- The Non Federal Sponsors executed a project participation agreement with the Army Corps of Engineers for the design and construction of this project.
- The project was constructed in substantial accordance with the approved and permitted designs to provide flood damage for a 20 year storm event. Prior to the project, the Muddy River had a flood elevation of 18.0 (BCB). Following project completion, the River now has a flood elevation of 13.3 (BCB).
- As we near the conclusion of active construction it is clear there has been an unintended impact on the typical (dry weather) water levels upstream of Avenue Louis Pasteur. The water levels downstream of Avenue Louis Pasteur appear to be at the intended elevations.
- The new hydraulic dynamics have been in place for just a few months. This is a very brief amount of time in a riverine system and it will take much longer to understand how they will model in low, moderate, and high flow conditions. To better understand these dynamics the Non Federal Sponsors have undertaken an intensive and detailed survey effort to document these new water levels and correlate them with weather events and seasonal changes.
- CDM Smith have been contracted to collect bathymetric measurements in the Muddy River from the Flood Restriction Control Structure to Leverett Pond. These measurements were taken prior to the removal of the Flood Restriction Control Structure, after the removal of the structure, and will be taken monthly for a period of 12 months. These measurements will capture sand bars and other bathymetric features of interest. This information will support evaluation of areas of exposed riverbed sediment under various FRCS elevation scenarios.

## **THE PATH WE ARE SUGGESTING NOW:**

- There is agreement across all entities that the water levels have been impacted.
- It is the goal of the Non-Federal Sponsors to work together collectively and thoughtfully to ensure the best possible outcome for the long-term health of the Muddy River and surrounding ecosystem.
- Actions taken in haste may very well have additional adverse impacts of the hydrology of the River. It is prudent to have a set of data to review to more fully understand how the River will function now that “final” condition has been set.
- Working to review and analyze our own data set, in consultation with the Army Corps of Engineers, will inform the best path forward for the health and sustainability of the Muddy River.
- The USACE has agreed to monitor the water levels. The Non-Federal Sponsors intend to work with the USACE and their consultant to understand the data and develop recommendations for a path forward that maintains the flood storage conveyance and capacity, as well as protects the environmental and ecological health of the river.