



**ms consultants, inc.**  
engineers, architects, planners



# LEAVITTSBURG

## Mahoning River Corridor Plan

Prepared by ms consultants, inc.



# LEAVITTSBURG

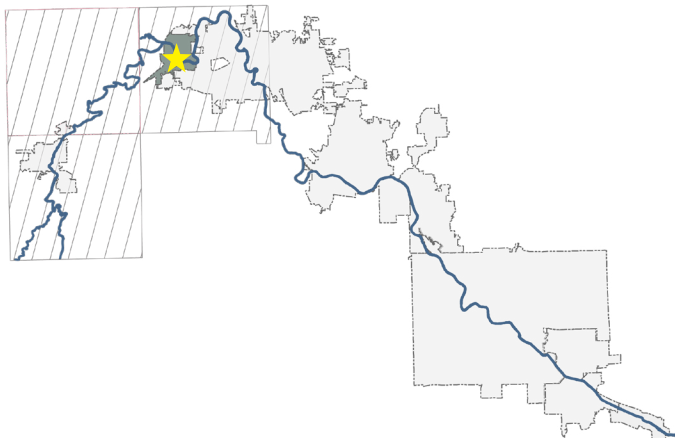
## COMMUNITY IMPLEMENTATION TOOLKIT

### Overview

The following toolkit explores how the corridor-wide objectives may be specifically applied to the Leavittsburg river section with an emphasis on the identified opportunity sites. Each community presents its own challenges and potential for revitalization and river restoration. The Community Implementation Toolkits outline these unique traits, provide context on existing conditions, and offer recommendations for the future. The recommendations are supported by action items and potential funding sources to support feasibility and help ensure implementation. The Community Implementation Toolkits should not serve as a stand-alone guide for the local community, but as an additional, specialized resource to the Mahoning River Corridor Revitalization Plan as a whole.

The Leavittsburg Community Implementation Toolkit includes the following sections:

- Existing Conditions
- Primary Opportunity Site
- Dam Removal
- Implementation Guide



### Existing Conditions

#### OPPORTUNITIES

Leavittsburg is a heavily wooded area with existing river access at Canoe City MetroPark. The existing popularity of the launch and convenient highway access make the park area an excellent opportunity for recreation tourism. The Mahoning River Water Trail flows through the community, further attracting paddlers and park users.

#### CHALLENGES

As a census-designated place, not a municipality or township, Leavittsburg has limited structured governance over its portion of the river corridor. Aside from the park, there is very little pedestrian infrastructure in Leavittsburg to support trail-oriented commercial. Furthermore, the environmental impact of the Leavittsburg dam requires long-term restoration and maintenance to ensure a healthy waterway for people, wildlife, and habitats.

### MAHONING RIVER CORRIDOR RIVERFRONT COMMUNITIES

TRUMBULL COUNTY		MAHONING COUNTY
Newton Township	Newton Falls	Youngstown
Braceville Township	Leavittsburg ★	Campbell
Warren Township	Warren	Struthers
Warren	Niles	Lowellville
McDonald	Girard	

2.9	River Miles
NATURAL	Character
1,516	People
1	Launch
<1	Trail Miles

### Dam Removal & Riverbank Restoration in Leavittsburg

Removal of the remaining lowhead dams along the Mahoning River will be a monumental leap forward toward the environmental and recreational goals of the Region. Lowhead dams, though small, significantly disrupt the natural flow of water, negatively affecting the river’s ecosystem and recreational opportunities.

Dam removal is an essential component to re-imagining the Leavittsburg corridor segment. Having outlived their useful life for industry, the Leavittsburg dam currently impedes seamless navigation for recreational users and fish species, negatively impacts water quality, and is costly to maintain. Perhaps most importantly, the Leavittsburg dam is highly dangerous. The hydraulics of lowhead dams create very unsafe conditions for paddlers and increase the likelihood of drowning.

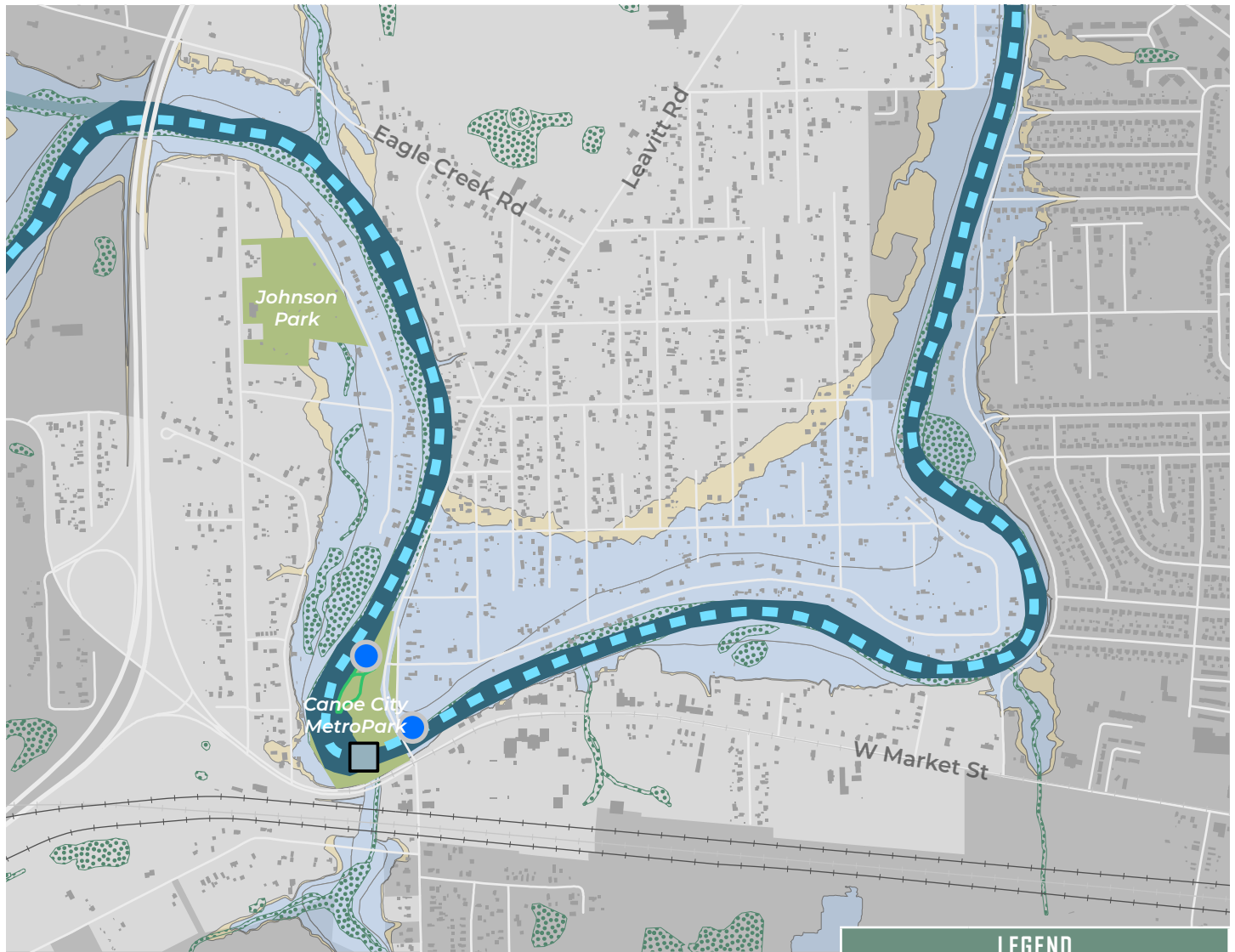
The Trumbull County Metropark, which owns the Leavittsburg dam, recently approved its removal. This dam removal will spur new economic development in the community, fully opening its 2.88 river miles to river-goers from around the region. Removal of this dam will normalize the river depth with the existing depth downstream from the dam at an average annual water depth of approximately 4 ft.

## LEAVITTSBURG



**MAHONING RIVER**  
Corridor Revitalization  
[www.mymahoningriver.com](http://www.mymahoningriver.com)

FIGURE 1 EXISTING CONDITIONS - ENVIRONMENT



LEGEND	
	Mahoning River Water Trail
	Dam Removal
	Existing Launch
	Existing Trail
	Public Park
	Wetland
	100-year Floodplain
	500-year Floodplain
	Leavittsburg Boundary

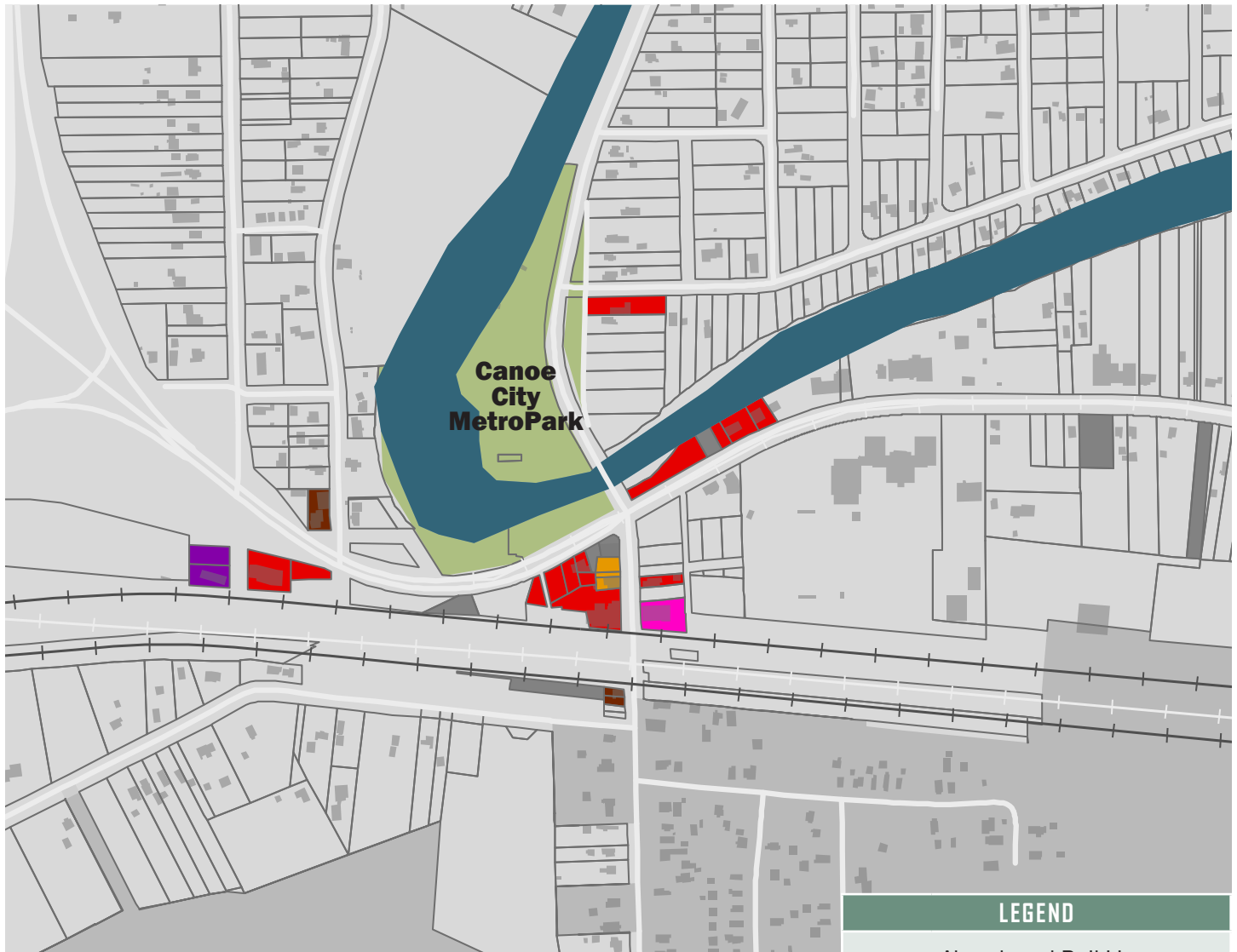
## THE ENVIRONMENT

### Existing Conditions

The community of Leavittsburg is one of the most unique in the region. Surrounded by the Mahoning River on three sides, Leavittsburg has developed around the River, creating Johnson Park and Canoe City MetroPark along its banks and becoming a hub for the regions river recreation. With portions of Leavittsburg located within the 100-year floodplain, protection of the community's assets from storm surges is critical.

The Trumbull County MetroPark, which owns the Leavittsburg dam, recently approved its removal. This dam removal will spur new economic development in the community, fully opening its 2.88 river miles fully to river-goers from around the region.

FIGURE 2 EXISTING CONDITIONS - ECONOMIC & COMMUNITY DEVELOPMENT



## ECONOMIC & COMMUNITY DEVELOPMENT

### Existing Conditions

As a small community within a rural, industrial township, Leavittsburg’s local economic and community development conditions are largely shaped by regional trends in manufacturing and development. Recreational tourism provides a local economic opportunity and will be impacted by existing conditions related to trail and pedestrian infrastructure.

There are multiple rail lines south of the river in Leavittsburg - all of which are either abandoned, inactive, or out of service - creating the potential for a rails-to-trails project. Investment in trail infrastructure should be complemented with commercial development that supports parks and recreation activities such as gear and equipment rentals/sales, eating and drinking establishments, and other retail uses.

LEGEND	
+++	Abandoned Rail Line
---	Inactive / Out of Service Rail Line
Commercial Land Uses:	
	Mixed Use
	Retail
	Restaurant
	Commercial Garage
	Vacant Commercial
	Other Commercial
	Non-Commercial Parcels

# LEAVITTSBURG: PRIMARY OPPORTUNITY SITE

## Canoe City

FIGURE 4 SITE LOCATION WITHIN LEAVITTSBURG

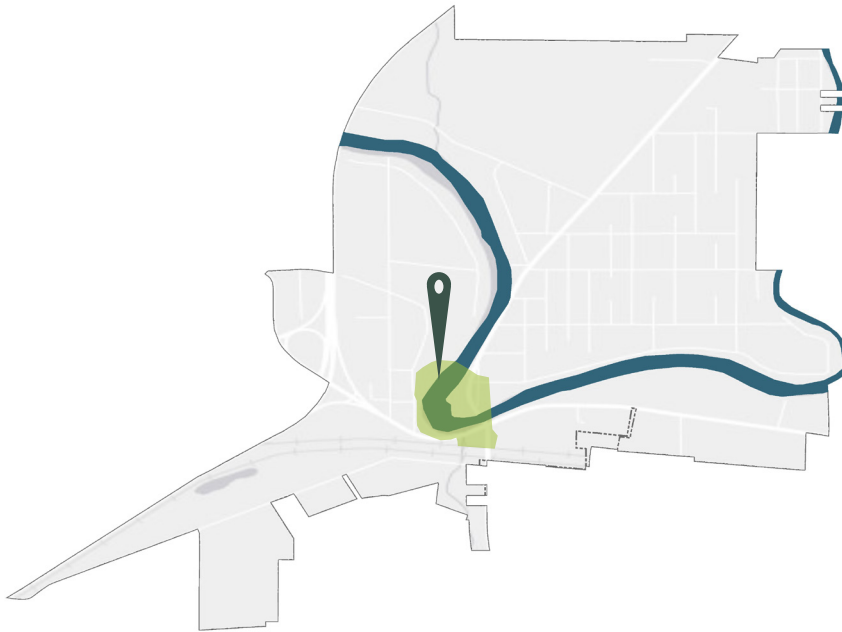


FIGURE 3 EXISTING IMAGERY



*Current conditions at the primary opportunity site in Leavittsburg include scenic views of the river and forested land, as well as debris and sediment buildup from the existing lowhead dam.*

### EXISTING CONDITIONS

<b>OWNERSHIP</b>	Trumbull County MetroParks, Private
<b>CURRENT LAND USE</b>	Public Park, Commercial
<b>LOCAL ZONING</b>	Parks & Recreation
<b>RIVER ACCESS</b>	Launch / Riverfront Park
<b>SIZE</b>	≈ 45 acres

### Additional Notes:

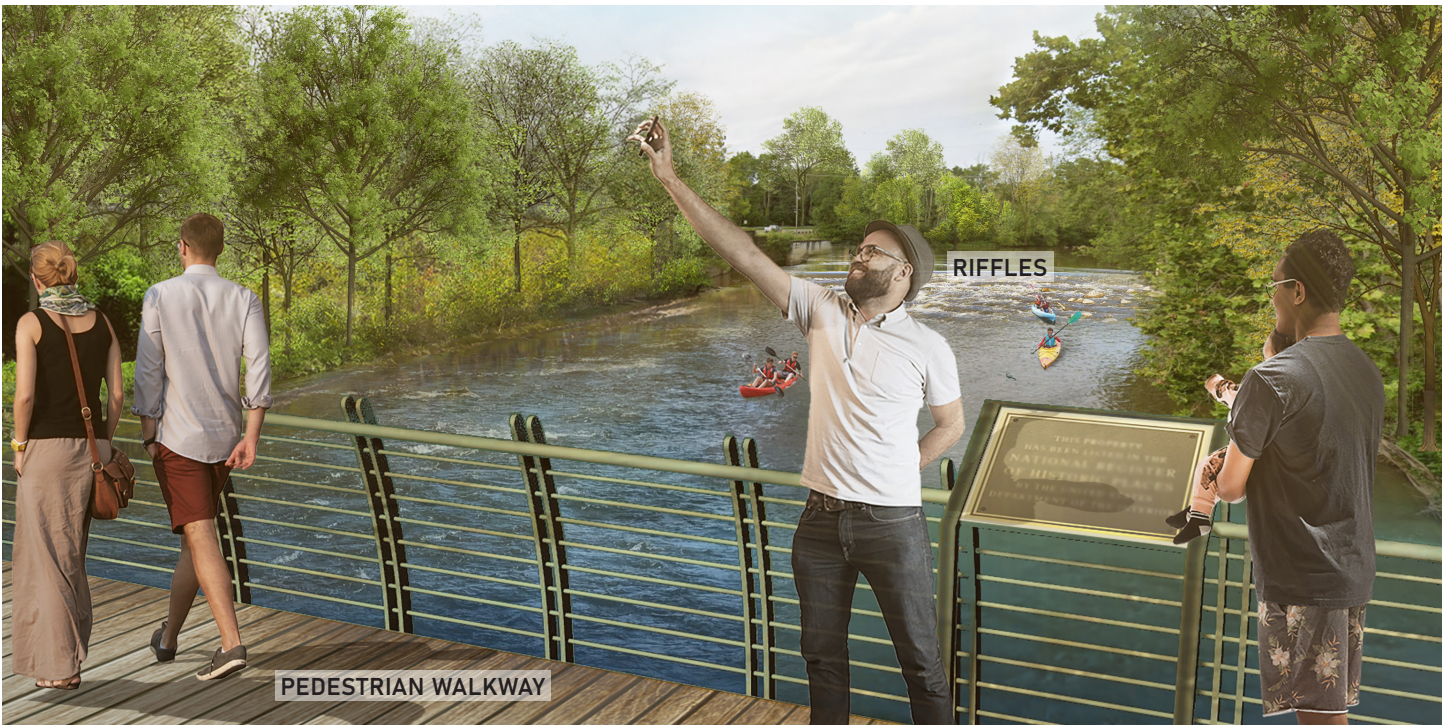
- Abandoned rail right-of-way south of the river
- Ohio Edison substation is located at the southern tip of the land park adjacent to the existing dam
- Mahoning River Adventures operates a livery on site
- Mahoning River Water Trail users must currently portage to the left at the dam



## Primary Opportunity Site Overview

The vision for the future of the primary opportunity site on the Mahoning River in Leavittsburg is a recreation and nature-lover's oasis. The dam removal is a catalyst for restored river health and new adventure activities at one of the most celebrated parks in the region. Existing paddling sports and services at Canoe City MetroPark are enhanced by a riffle loop where the dam once operated. Spectators can view kayakers traversing the rapids from a bridge overlook, then access food, drinks, and other commercial amenities in walking distance via a pedestrian-friendly connection on Leavitt Road. Wayfinding, crosswalks, and patio seating invite park visitors to safely venture south of Market Street and soak up Leavittsburg's beautiful natural scenery.

FIGURE 5 PRIMARY OPPORTUNITY SITE: FUTURE RENDERING



# LEAVITTSBURG: PRIMARY OPPORTUNITY SITE

## Canoe City

FIGURE 6 PRIMARY OPPORTUNITY SITE: PROPOSED







### Proposed Character:

- Canoe City MetroPark offers enhanced river access and nature exploration for regional visitors
- Riffles provide a unique and extraordinary experience for paddlers of all ages and abilities



### Proposed Character:

- Safe and inviting access across Market Street connects park activities to neighborhood retail



### Proposed Character:

- A walkable neighborhood with places to live, relax, and support outdoor recreation

# LEAVITTSBURG: IMPLEMENTATION GUIDE

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## Preparing for the Future Now

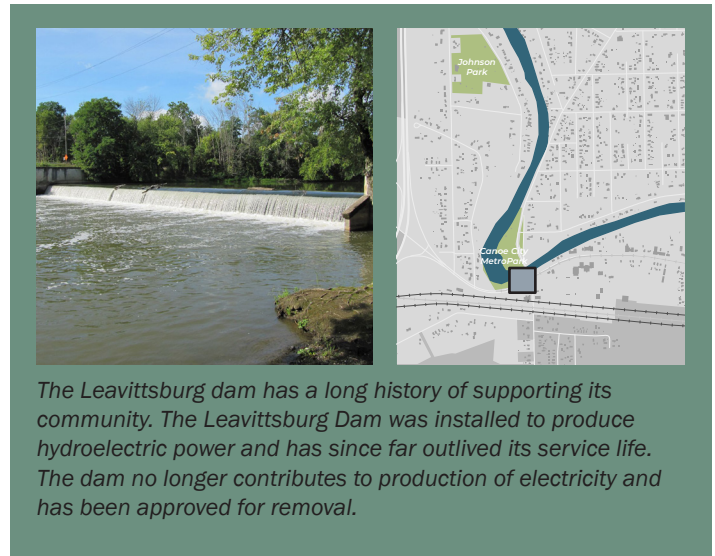
The recommendations provided within the Mahoning River Corridor Revitalization Plan represent goals for the region over the next few decades. The future vision for the Leavittsburg river segment should be pursued strategically by breaking down the ideal long-term state into manageable short-and immediate-term projects. The Implementation Guide provides further insight to assist local decision-makers in working together to achieve a revitalized downtown river district with best practices, industry standards, and potential funding sources. Though the guide is designed to be a simple and straightforward reference, these guidelines should not be treated so rigidly as to prevent adaptation should unforeseen circumstances arise during implementation. The Implementation Guide is not an exhaustive list and should be pursued in concert with the corridor-wide objectives identified in the larger Mahoning River Corridor Revitalization Plan. Regional collaboration and coordination is highly encouraged.

*To learn more about funding opportunities, visit Chapter 05 Next Steps of the Mahoning River Corridor Revitalization Plan.*

# LEAVITTSBURG DAM REMOVAL

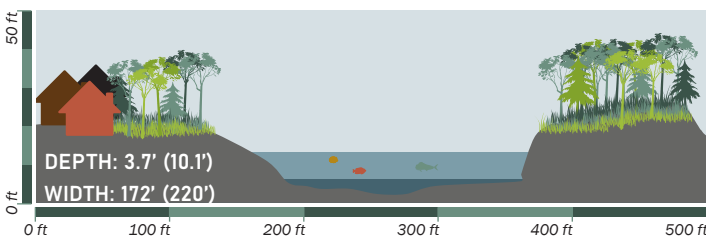
## Projected Dam Removal Impacts

Although the benefits of lowhead dam removal are massive, the decision to remove a dam requires careful consideration of many factors. An engineering study of existing and future river conditions was performed to calculate how the river profile may change if dams were removed. A hydraulic engineering model was developed to evaluate the 21 mile stretch of the river between Leavittsburg and Lowellville. Based on the results of the model, the removal of the Leavittsburg dam is not expected to negatively impact the river's ability to support a wide range of recreation, provide water to industrial facilities along its banks, or impact the river's capacity during storm events. To read more about the results of the hydraulic model and the potential impacts of dam removal on the flow of the Mahoning River, please refer to Chapter 2 of the Mahoning River Corridor Revitalization Plan and the Mahoning River Dam Removal Analysis Hydraulic Report.



## Expected Changes Upstream

Currently, the Leavittsburg dam is significantly impeding the natural flow of the Mahoning River, pooling water behind it and raising the existing water level. Currently, the river is 10.1 ft deep just upstream from the Leavittsburg dam. If removed, it is projected that for an average day, the river's water depth be 3.7 ft. This projected water depth is consistent with the depth of the water downstream from the dam today. This change in water depth will also come with a reduced river width in the area immediately upstream from the existing dam which could become dedicated riparian space in the future. See the cross section below to see this expected change.



## Expected Changes Downstream

Existing water levels downstream from the Leavittsburg dam significantly lower than those upstream from the dam, at a water depth very close to the expected depth of an unimpeded Mahoning River. If removed, it is projected that for an average day, the river's water depth would be 4.7 ft, almost identical to the existing conditions. The river width in the area immediately downstream from the existing dam would stay very similar to the existing river width on an average day. Ultimately, the projected river conditions immediately downstream from the dam are strikingly similar to what we see in Leavittsburg today. See the cross section below to see this expected change.

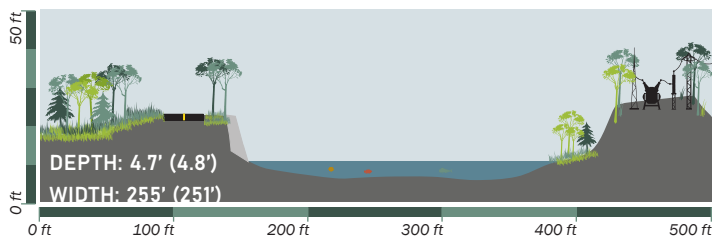
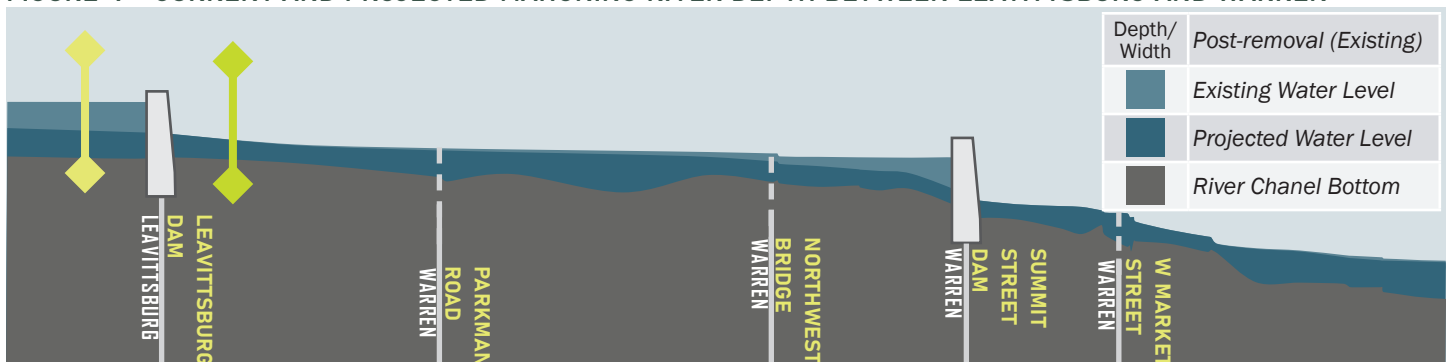


FIGURE 7 CURRENT AND PROJECTED MAHONING RIVER DEPTH BETWEEN LEAVITTSBURG AND WARREN



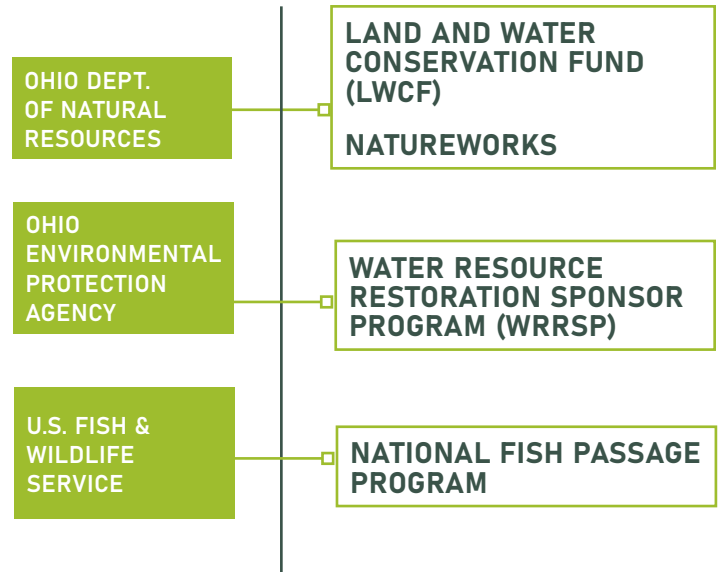
## RECREATION TOURISM (RIFFLES)

### Defined Project(s)

As its name indicates, Canoe City is already a popular destination for paddling sport enthusiasts in the region. The park is a prominent stop on the Mahoning River Water Trail and provides an excellent opportunity to increase interest and income to the Leavittsburg community by further supporting recreational tourism.

In addition to its many benefits for water health and habitat restoration, removal of the Leavittsburg dam will also allow for the creation of riffles. Riffles - where water breaks over rocks or other barriers - are visible by their wavy, quicker movement (whitewater if fast enough) and are followed downstream by pools of calmer, deeper water. The drop-offs created by lowhead dams may appear like riffles, but their hydraulics create dangerous potential for drowning and do not provide the environmental or ecological benefits of natural disturbances to the river's flow. A riffle park at Canoe City could offer paddlers a unique and exciting experience while maintaining safe and seamless travel on the Mahoning River. Nearby park and commercial attractions would also offer entertainment for spectators to view the riffle users as part of their visit to Leavittsburg.

### Funding Opportunities



## CASE STUDY:

### RiverScape, Dayton, OH

Completed in 2017, RiverRun at Dayton's RiverScape MetroPark demonstrates how dam removal can breathe life back into a previously inaccessible waterway; generating enthusiasm and revenue for the community.

As part of a master planning process, a dam was removed in downtown Dayton to improve water quality and create riffle patterns that serve as a key attraction to the new MetroPark. Previously unnavigable due to the dam, the riffle park provides safe and exciting access to the river on a seven-mile stretch through the

City's downtown. The water features include both mild riffles for novice paddlers and whitewater for a more challenging experience. Users can even "river surf" where the whitewater riffles are navigated on surf and paddle boards. Dayton, Ohio is one of the few places in the United States that offers the experience of river surfing. The park also includes locations for spectators to relax and be entertained watching the paddlers, surfers, and kayakers navigate the river. Shoreline amenities include tables, event space, a food truck station, and private paddle sports rentals.



The RiverRun park includes overlook areas for spectators to watch paddlers and kayakers traverse the riffles.



The riffles, riverfront trail, and associated park amenities attract travelers from all over the canoeing to downtown Dayton.

# MULTI-USE CONNECTIONS

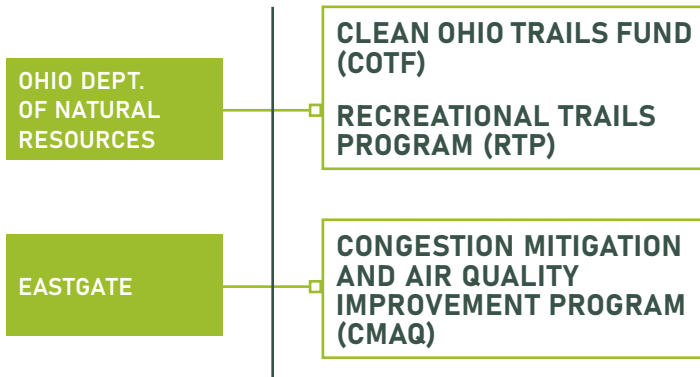
## Defined Project(s)

### CANOE CITY RAILS-TO-TRAILS

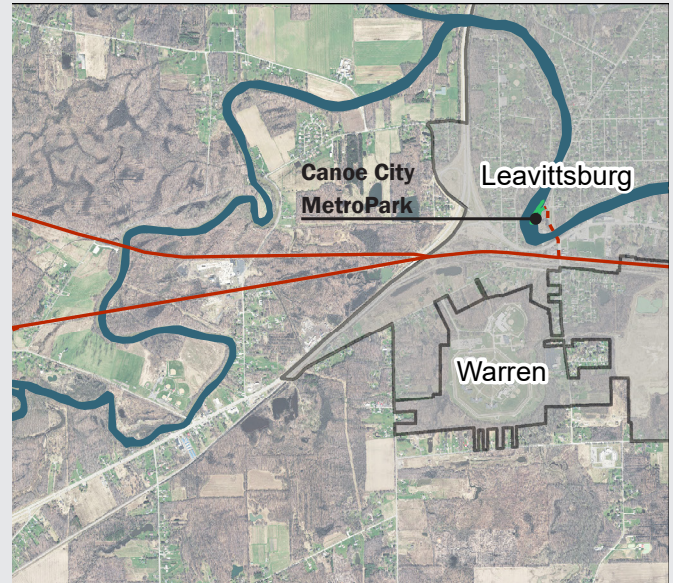
The only infrastructure dedicated to non-vehicular travel in the community (in addition to sidewalks), is located within Canoe City MetroPark. Internal walking paths offer scenic strolls through nature and provide access to the park.

The Leavittsburg community lacks multi-use accessibility outside of Canoe City, limiting its connectivity to the region. This plan proposes a regional connection through the Mahoning River Greenway trail with a spur providing access to Canoe City and recommended commercial amenities. The proposed on-street bicycle facility (i.e. bike lane) will enable users to enter one of the region's greatest kayaking, fishing, and nature observation destinations more safely and with personal choice of transportation mode.

## Funding Opportunities



## Leavittsburg's Mahoning River Greenway Segment



GREENWAY TRAIL NETWORK	
	Existing Trail
	Conceptual Trail*
	Proposed Street Bicycle Facility

\*As identified in previous planning efforts and identified in Eastgate's GIS database

## CASE STUDY:

### Rails to Trails, Bellville, OH

The Richland B & O Trail, built on the former route of the Baltimore & Ohio Railway, extends from Butler to Mansfield. The Village of Bellville capitalized on this opportunity by renovating its historic train depot to a welcome center with restrooms, parking, a bicycle repair station, and more. The depot's interior showcases local artifacts and provides information on nearby attractions. The Richland B & O trail is located a block away from the Village's Main Street which features a bed and breakfast, drug store, restaurants, and a market. Additionally, the parcel immediately adjacent to the trail depot offers a unique local antique shopping experience. Regional marketing efforts include information on Bellville shops, restaurants, and other attractions; all with an emphasis on their relation to the regional trail network.



Renovated historic train depot on the B&O Trail in Bellville, OH

## PRIORITY ACTIONS FOR IMPLEMENTATION

### ENVIRONMENTAL & RECREATION

- A.1** Convene with regional partners on dam removal to determine timeline and feasibility for riffles.
- A.2** Pursue trail construction of the proposed rails-to-trails Western Reserve Heritage Trail (the Leavittsburg segment of the Mahoning River Greenway).
- A.3** Install a pedestrian crossing on W Market St at Leavitt Rd.
- A.4** Identify and design a riparian zone.



*A crosswalk on W Market St provides an active transportation route to the River while promoting safe and accessible options.*

### ECONOMIC & COMMUNITY DEVELOPMENT

- B.1** Conduct a zoning code audit to ensure proposed uses and development patterns align with existing regulations.
- B.2** Develop a marketing campaign around the proposed riffle park and Canoe City amenities.
- B.3** Support activation of commercial uses south of Market St through a pop-up market, community event, or other intervention.