



The Bee Branch Watershed Flood Mitigation Project is a multi-faceted approach to address the severe and frequent flash flooding experienced in the Bee Branch Watershed.

Flood disasters have repeatedly impacted residents and employees of businesses within the watershed. Between 1999 and 2011, six Presidential Disaster Declarations were issued with total damage estimates of almost \$70 million.

The project consists of several infrastructure improvements that will reduce the volume of stormwater, slow the rate of stormwater through the upper watershed, and increase the safe conveyance of stormwater through the flood-prone area.

The City has received \$160 million in the form of grants, forgivable loans, and other financial savings to help fund the \$219 million project.

For more information, visit www.cityofdubuque.org/beebranch.

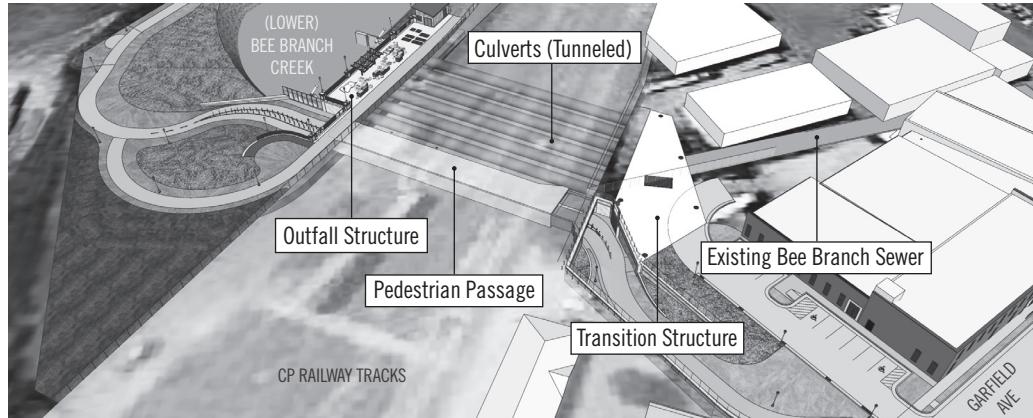


Bee Branch Watershed

Flood Mitigation Project News

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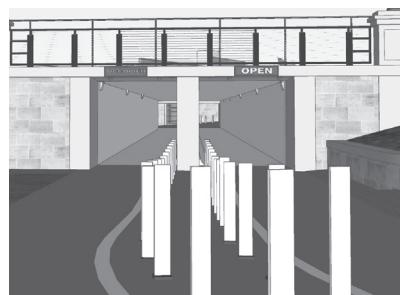
Railroad Culverts Project Expected to Begin Soon



The Railroad Culverts Project is a critical phase of the larger Bee Branch Watershed Flood Mitigation Project and, once completed, in 2021 will greatly increase the flood mitigation system's capacity to protect the area — from a 75-year rain event to a 500-year rain event. The project involves using tunneling methods to install six, 8-foot diameter culverts under the Canadian Pacific Railway (CP) tracks along Garfield Ave.

"Once completed, [the culverts] will increase the flood mitigation system's capacity to protect the area from a 75-year rain event to a 500-year rain event."

When the City sought public input on the design of the Bee Branch Creek improvements, residents voiced a desire for pedestrian passage either above or below the railroad tracks. The City continued to receive this feedback after the Bee Branch Creek Greenway opened and people began using the new trail system.



A rendering of the east entrance to the pedestrian passage under the railroad tracks.

The project plans include utilizing the two existing Bee Branch box culverts for both flood control and as a hike/bike path under the railroad tracks. This will allow for the direct connection of the trail systems associated with the lower and upper sections of the Bee Branch Creek.

The City plans to award a contract in February 2019 with construction starting in the spring of 2019. It is estimated that tunneling will begin this summer and the system will be functional by the spring of 2021.

The Bee Branch Railroad Culverts Project received \$9 million in federal HUD National Disaster Resiliency Competition grant funds. Per the terms of the grant, construction of the Bee Branch Railroad Culverts Project must be complete by June of 2021.

Bee Branch Healthy Homes Program: Structural and Social Resiliency



Historically, the primary focus of disaster recovery programs has been repairing damaged structures. Installing sump pumps, waterproofing basements, having adequate gutters and downspouts, and positive property drainage are vital to creating healthy and safe living environments. But, through partnerships with the Visiting Nurse Association, East Central Intergovernmental Association, and the University of Iowa, the Bee Branch Healthy Homes Resiliency Program has taken disaster recovery one step further. In addition to home renovations and repairs, the program helps people build social resiliency. This holistic approach is creating positive and long-lasting impacts that will be felt by generations to come.

Helping people requires flexibility. There isn't a "one shoe fits all" solution. We look at each family's individual situation. Home advocates meet with participants to learn about the home's flood history; other household concerns such as heating and cooling, pests, and possible lead hazards; home and neighborhood safety; family health issues; transportation; education and employment; and other basic needs. The goal is to identify barriers the participants feel they are facing, and then to connect them to the resources they need to overcome those challenges.

Needs can be as simple as cleaning items such as a vacuum or as complex as helping a family find health insurance for their children. Whatever needs arise – big or small – the advocates have a network of community partners from all different sectors that are able to provide assistance.

Bee Branch Healthy Homes Before and After Photos



BEFORE

Before: At a minimum, this property flooded three times per year. During rain events, stormwater pooled in the yard and leaked in through the basement.



AFTER

After: The deteriorated exterior stairwell entrance was removed and replaced with a new door system, and the area was regraded and resurfaced to create positive drainage away from the foundation.

While the advocates are identifying family social needs, the inspectors are identifying ways to improve on-site stormwater management and other household concerns. Several families participating in the program reported having water in their basement every time it rained. Several others had water pooling in their yards.

Common repairs to reduce water intrusion include sump pumps with a back flow valve and battery backup, soil modifications to improve drainage, new gutters and downspouts with splash blocks, interior and exterior drain tile, replacing or sealing off basement windows, and repairing foundations. Other improvements include replacing the furnace and water heater and installing exhaust fans, carbon monoxide alarms, and radon mitigation systems.

Since launching the program in November 2016, the City has received 558 inquiries. To date, 207 applications have been approved, 61 units have been completed, and an additional 21 units are under contract. The average cost per unit is \$18,979. Approximately \$1.6 million in contracts for improvements has been awarded to local contractors and subcontractors.

This program is funded by an \$8.4 million disaster resiliency grant from the U.S. Department of Housing and Urban Development (HUD). It is available to owner-occupied homes, single-unit rentals, and small, multi-family residential units located in the BBHH eligibility area and meet the income requirements established by HUD guidelines.

If you are interested in applying for the program, please call 563.690.6168 or visit www.cityofdubuque.org/bbhh.



BEFORE

Before: This property flooded every time it rained. Water and dirt were running through the foundation and the basement was full of items that were absorbing moisture.



AFTER

After: Items were cleared out of the basement and a 3-inch perimeter drain tile, waterproofing dimple board, and a sump pump with a battery backup were installed. The foundation walls were also tuck-pointed.

► To see more before and after photos, check out the BBHH completed projects map at www.cityofdubuque.org/bbhh.

Storm Sewer Capacity Improvement Projects



A new concrete storm sewer is installed along 22nd St. in October 2018.

22nd St. / Kaufmann Ave.

The first phase of the 22nd St. / Kaufmann Ave. project started in April 2018. Work started at Elm St. and progressed west across Washington St., Jackson St., and White St. stopping short of Central Ave. The project included the relocation of underground utilities, a new 10 ft. x 6 ft. concrete storm sewer and high-capacity storm drains to reduce street flooding, and total street and sidewalk reconstruction. Construction of the first phase finished in early December 2018.

Phase two of the project is expected to begin in April 2019. Construction will continue west across Central Ave. up Kaufmann Ave. to Kliene St. Looking forward to 2020 and 2021, the goal is to expand the storm sewer up to Kane St. However, the project schedule and limits will be contingent on funding. To receive updates about the project, including road closure and detour notices, sign up for Bee Branch Project email and/or text alerts at www.cityofdubuque.org/notifeme. Additional information about the project limits and schedule are available at www.cityofdubuque.org/22ndkaufmann.



New precast concrete storm sewers before installation in August 2018.

17th St. / W. Locust St.

The first phase of the 17th St. / W. Locust St. project took place from August to December 2017 at the intersection of 17th and Elm streets. Crews relocated underground utilities and built a new 10 ft. x 5 ft. concrete storm sewer and installed high-capacity storm drains to reduce street flooding.

Phase two of the project began in July 2018. Work started at Elm St. and progressed west across Washington St., Jackson St., White St., and Central Ave. up to Heeb St. Construction of the new storm sewer and associated street work finished in late December 2018. The remaining curb and sidewalk work will be completed this spring. No street construction is planned for this project in 2019. The ultimate goal is to expand the storm sewer up 17th St. to W. Locust St. and continuing up W. Locust St. to Angella St. However, the project schedule and limits will be contingent on funding.

Lastly, in 2019, the City expects to bid the portion of this project that includes installing a new section of pipe underneath the Canadian Pacific Railway (CP) tracks between the east end of 17th St. and the Lower Bee Branch Creek. For more information, visit www.cityofdubuque.org/17thwlocust.

Bee Branch Watershed Flood Mitigation Project // Updated Timeline

Infrastructure Improvement	Status
Carter Road Detention Basin	Completed in 2003
West 32nd Street Detention Basin	Completed in 2009
Lower Bee Branch Creek Restoration	Completed in 2011
Historic Millwork District Complete Streets	Completed in 2012
Upper Bee Branch Creek Restoration	Completed in 2017
Bee Branch Creek Railroad Culverts	Est. Completion - 2021
22nd St./Kaufmann Ave. Storm Sewer Capacity Improvements	Est. Completion - 2021
17th St./W. Locust St. Storm Sewer Capacity Improvements	Est. Completion - 2021
Bee Branch Healthy Homes Resiliency Program (Assistance to up to 300 homes in the Bee Branch Watershed)	Est. Completion - 2021
Flood Mitigation Gate & Pump Station Replacement	Est. Completion - 2022
Flood Mitigation Maintenance Facility	Est. Completion - 2028
North End Storm Sewer Capacity Improvements	Est. Completion - 2028
Water Plant Flood Protection	Est. Completion - 2030
Green Alley Reconstruction	Est. Completion - 2038*



* Schedule to vary depending on available funding.

America's River III

A lasting improvement to protect our friends and neighbors.

The Bee Branch Creek amenities attract both residents and visitors. Joining the America's River III campaign is a meaningful and visible way to support the Bee Branch Creek Restoration Project. It also provides an opportunity to create a lasting legacy in honor or in memory of a business, family member, friend, or neighbor. Contributions to the campaign will help ensure this flood mitigation project continues to support sustainable neighborhoods and enhanced quality of life for Dubuque and Iowa.

Campaign Honorary Chairs



Norma Denlinger



Gary Dolphin



Sue Hafkemeyer

Campaign Committee Members

Joyce Connors
Ann Cremer
Lauren Czeshinski
Peggy Hudson
Pam Jochum

Audrey Morey
Ernestine Moss
Chip Murray
Eric Stierman
Dan White

Naming Opportunities



Memorial Bench



Limestone Bench



Bee Branch Bench / \$5,000

Two styles of benches are available. Memorial benches are located along the upper trail. They feature a laser-cut design on the back of the bench plus arm rests. Limestone benches are located along the lower trail and offer a wonderful spot to sit back, relax, and enjoy the creek. Both benches feature a 5.875" x 2" cast aluminum plaque that can be engraved with up to three lines of text, with 30 characters per line, which includes all spaces and punctuation marks.

Bike Rest Station / \$1,000

Several bike racks are located along the creek for visiting bicyclists to keep their equipment safe while enjoying the many park amenities. A 5.875" x 2" cast aluminum plaque that can be engraved with up to three lines of text, with 30 characters per line, which includes all spaces and punctuation marks, will be displayed on the rack.

Memorial Tree / \$500

A 5.875" x 2" cast aluminum plaque can be engraved with up to three lines of text, with 30 characters per line, which includes all spaces and punctuation marks. The plaque will be anchored securely in the mulch ring surrounding the tree.

Personalized Brick Paver / \$100

Personalized pavers can be engraved with up to three lines of text, with 12 characters per line, which includes all spaces and punctuation marks. Pavers can be installed in four different areas along the greenway.

A map of all America's River III naming opportunities and donation forms are available at www.cityofdubuque.org/ar3.
For questions or to make a contribution, call 563.690.6068.

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