



## CITY OF COLUMBUS

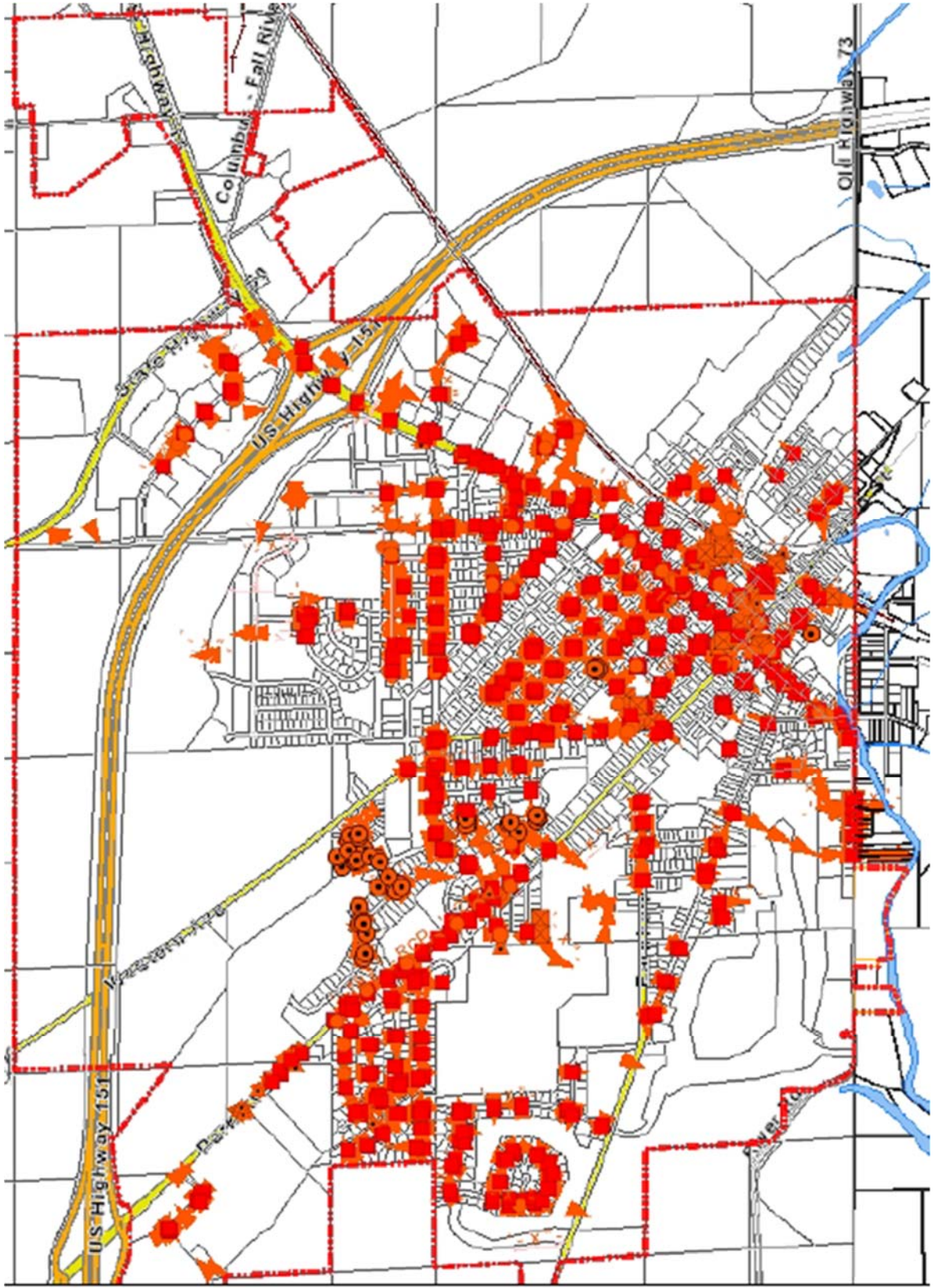
### STORM WATER UTILITY INFORMATION

#### What is the City's current infrastructure?

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1. The City's operation and maintenance obligations are substantial as it is responsible for nearly 8 miles of drainage channels
  - Crawfish River
  - (2) Unnamed Tributary to Robbins Creek
  - Robbins Creek
  - Tributary to 2<sup>nd</sup> Ward Creek
  - 2<sup>nd</sup> Ward Creek
2. 15 stormwater facilities covering 23 acres,
  - Two ponds at Drexel site
  - 1 pond at Duffy
  - 5 ponds at Columbus Commerce Center
  - Two ponds at Community trails
  - One ponds at Gateway
  - 1 pond at Highland phase 3
  - 1 pond at Highland Commons
  - 2 ponds at Cardinal Estates
3. 27 miles of streets with 986 storm water structures, and 2,111 stormwater pipes throughout the city

Pipe range in size from large box culverts 8' x 12' size to small diameter storm sewer made of CMP, plastic, clay and concrete. Some of the pipe under old streets is nearly 90 years old.



## What would the money be spent on?

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Currently the City has several projects anticipated for removal or replacement however a long-range capital plan doesn't exist. It is recommended that a plan be developed of what projects and priorities the City would spend the monies on so there was a "road map" to help ensure the funds will be used appropriately to address needs.

Some area of focus would be to leverage any grant monies, if possible, to stretch the capability to do improvements. Another direction would be to focus on preventative and maintenance activities to reduce the large capital expenditures and extend the life of the infrastructure as far as possible.

- Key areas for costs
  - Maintenance
    - Removal of sediment
      - Ponds
      - Inlets
      - Ditches
      - culverts
    - Repair of damage
      - Sinkholes from pipe failure
    - Removal of trees / brush / vegetation
  - Capital projects
    - New project construction
      - Flood storage
      - Ponds
    - Replacement of aged infrastructure
      - Upgrade clay pipe
      - Upgrade rusting CMP pipe
        - Fuller street example
          - Bottom of large 60" culvert missing caused a sink hole in Fuller Street in 2020
      - Added capacity to street storm sewer
        - Larger pipe
      - More inlets
  - Planning
    - Grants
      - Matching funds
        - Most grants are 50% match
    - Studies







## **Example Costs of expenses?**

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Maintenance expenses for storm water have not always been allocated every year in the past city budgets. Some years the Council has budgeted around \$25,000 to do some of these mowing, cleaning and repair tasks for storm areas but that amount of money has not been enough to cover all of the needs and only a portion of the work has been addressed typically due to the inconsistent nature of available funds.

For example, expenses vary depending on the work.

- 2020 Removal of failing culvert in Fireman's Park – cost \$85,000
- 2022 Fuller Street culvert and storm sewer replacement – estimated \$285,000
- The average cost to replace storm sewer on a typical City block - estimated \$35,000

## **MS4 (municipal separate storm sewer systems) permit needs?**

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EPA program started in 1990 for large populations 100k +, expanded to smaller municipalities in 1999.

This program currently is required for select communities under 10K and most communities over 10K population in Wisconsin. Columbus has the Crawfish River in the City and the Crawfish is classified as an impaired waterway. There are strict limits on nutrient discharge into the River currently. It is anticipated that any year the state of Wisconsin will require a MS4 permit for Columbus.

What does that mean?

Owners/operators of regulated municipal separate storm sewer systems (MS4s) are required to develop, implement, and enforce a stormwater management program (SWMP). The focus of the SWMP is to describe how the MS4 will reduce the discharge of pollutants from its sewer system and addresses these program areas:

- [Construction Site Runoff Control](#)
- [Illicit Discharge Detection and Elimination](#)
- [Pollution Prevention/Good Housekeeping](#)
- [Post-Construction Runoff Control](#)
- [Public Education and Outreach](#)
- [Public Involvement/Participation](#)
- [Program Effectiveness](#)
- [Total Maximum Daily Loads](#)

Although Columbus is currently not required to obtain a MS4 permit, it is very likely in the future they will. These programs cost 10's to 100's of thousands of dollars annually to implement. The programs are also audited, and municipalities can be fined for not implementing and maintaining an approved program.

## **How much money does the city need?**

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Currently we have not done a detailed assessment City wide on the actual project need or have setup a capital improvement / annual maintenance program, but the following example is similar to what a community could expect without an MS4 permit to make improvements and perform preventative maintenance.

Examples:

Annually (storm water facilities) - Clean, maintain, mowing and make repairs annually - \$35,000

4 year rotational program – Clean storm inlets and structures, ditch cleaning – \$35,000 annually

Annual – Emergency repair or replacement of pipes, culverts, inlets, manholes, erosion, rip rap - \$100,000 (equivalent to 12 structures and 1,000 feet of small diameter pipe)

City has averaged \$100,000 on capital street or specific storm water projects annually in the past 10 years.

By adding up all these costs it is recommended at a minimum the need is estimated at \$270,000 Annually

Capital project costs are larger and can be added to the annual estimate for the activities above.

Example costs for capital type projects are:

- Fireman's Park culvert removal - \$715,000
- Half mile of creek channel dredging - \$250,000
- 1 acre pond construction - \$360,000

The Utility is expected to generate approximately between \$200,000 and \$225,000 annually depending on number of properties at given time and credits issued.

## **10 years of street projects, storm water repaired?**

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Dollars historically spent by the City on capital storm sewer to upgrade, upsize and replace failing. These values don't include maintenance activities. The below funds were expended to make capital improvements. All projects shown were projects the City had to borrow for with bonding as funds were not available in the general fund budget to complete these projects. As a result, the city had to pay interest through debt service for the borrowings.

2010 Udey Dam Repairs - \$389,000

2011 APC Way Street Reconstruction - \$144,914.50

2012 North Water Street Reconstruction - \$64,399.50

2013 Gateway Business Park - \$131,216.07 (New construction)

2016 Mill / Church / Prairie Street Reconstruction - \$198,950.00

2017 Hall Road - \$25,773.00 (New construction)

2018 S. Water Street / E. School Street Reconstruction - \$72,850.00

2020 Hibbard / Turner Street Reconstruction - \$392,290

2020 Removal of failing CMP at Deer Pen = \$85,000

Total \$1,115,393 in the past 10+ years (doesn't include channel maintenance, pond maintenance, culvert replacement).

The past 10 years of projects have only been reactive to the needs of the city and not proactive to the needs of the system.