

ASSISTANCE FOR PRIVATE DRAINAGE CONCERNS



Board of Public Works – October 18, 2021



INTRODUCTIONS



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PROJECT SCOPE

Cheryl Drive Stormwater Study

- **Task 1 – Flash Flooding Analysis Cheryl Drive**
 - Feasibility study to determine options to improve flash flooding along Cheryl Drive near Charleston and Jacquelyn
- **Task 2 – Citywide Backyard Drainage Program**
 - Research what other local governments do to aid in private backyard drainage issues.
 - Put together a recommendation for a potential new backyard drainage program. If approved by Council, this would be a citywide program.

<http://www.fitchburgwi.gov/2704/Cheryl-Drive-Stormwater-Project>

AGENDA

Cheryl Drive Stormwater Study

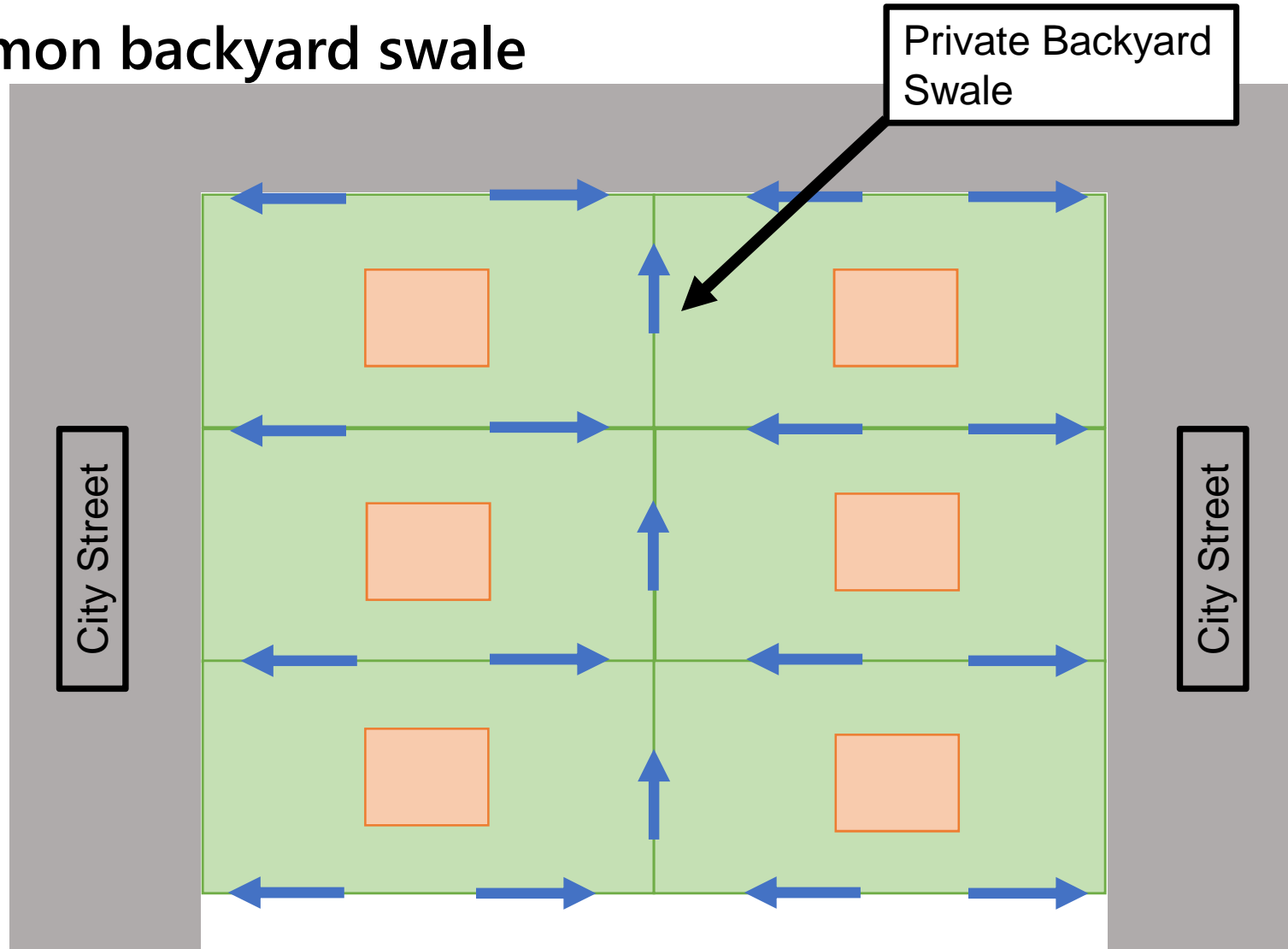
- Background Information
- Municipal Programs
 - Local/nearby programs
 - Regional programs
- Next Steps
 - Input from BPW

BACKGROUND INFORMATION

COMMON TYPES OF PRIVATE DRAINAGE CONCERNS

BACKYARD DRAINAGE ISSUES

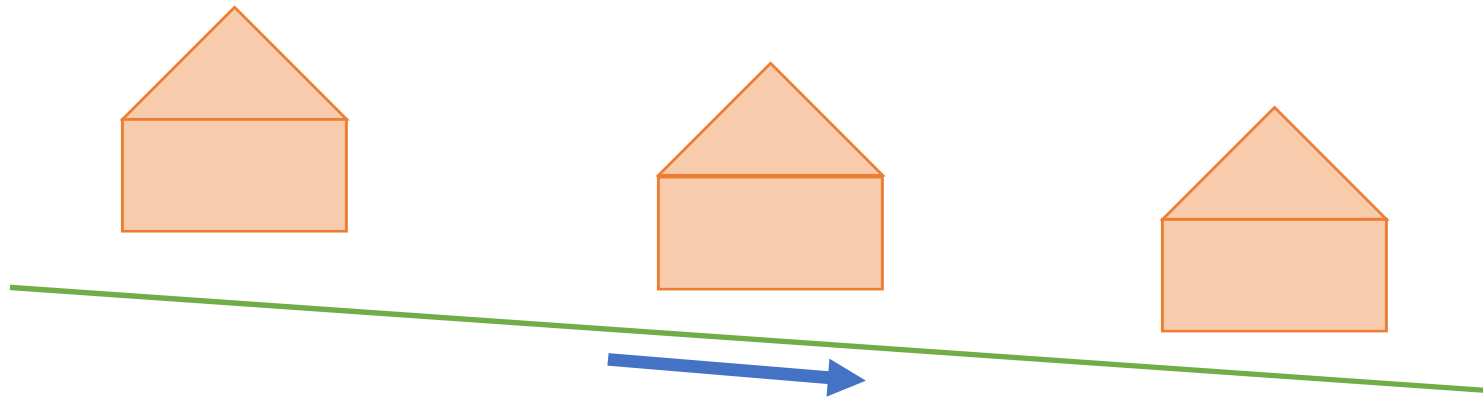
Common backyard swale



→ Flow Direction

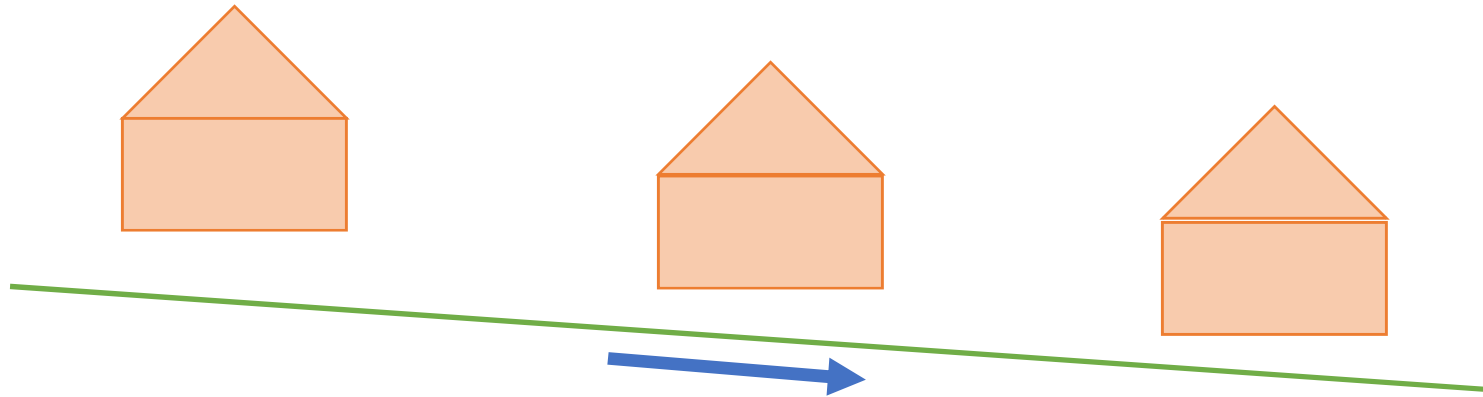
COMMON BACKYARD SWALE

As built

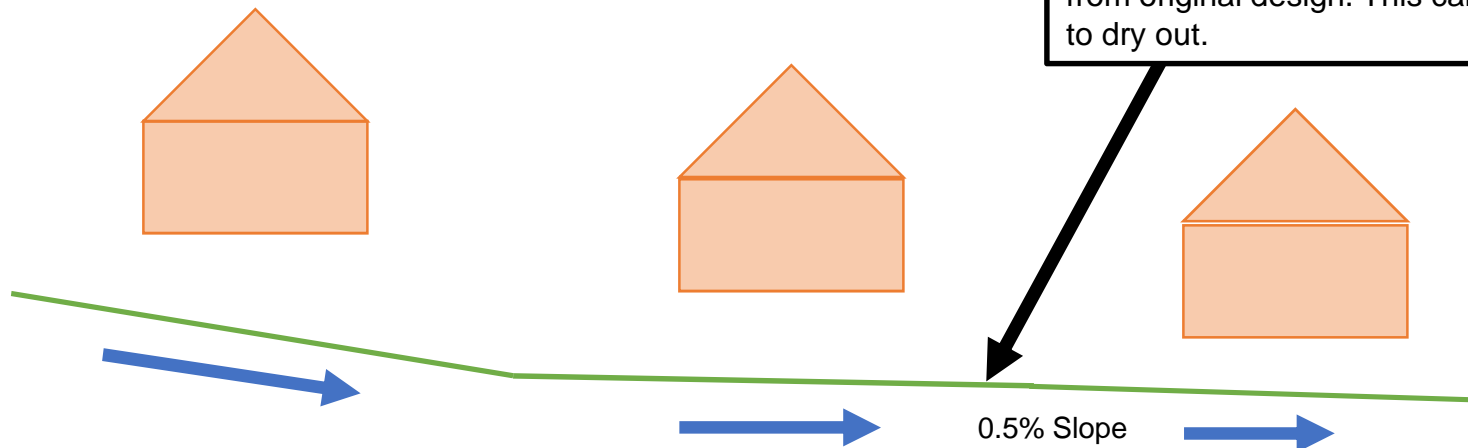


COMMON BACKYARD SWALE

As built



Over time

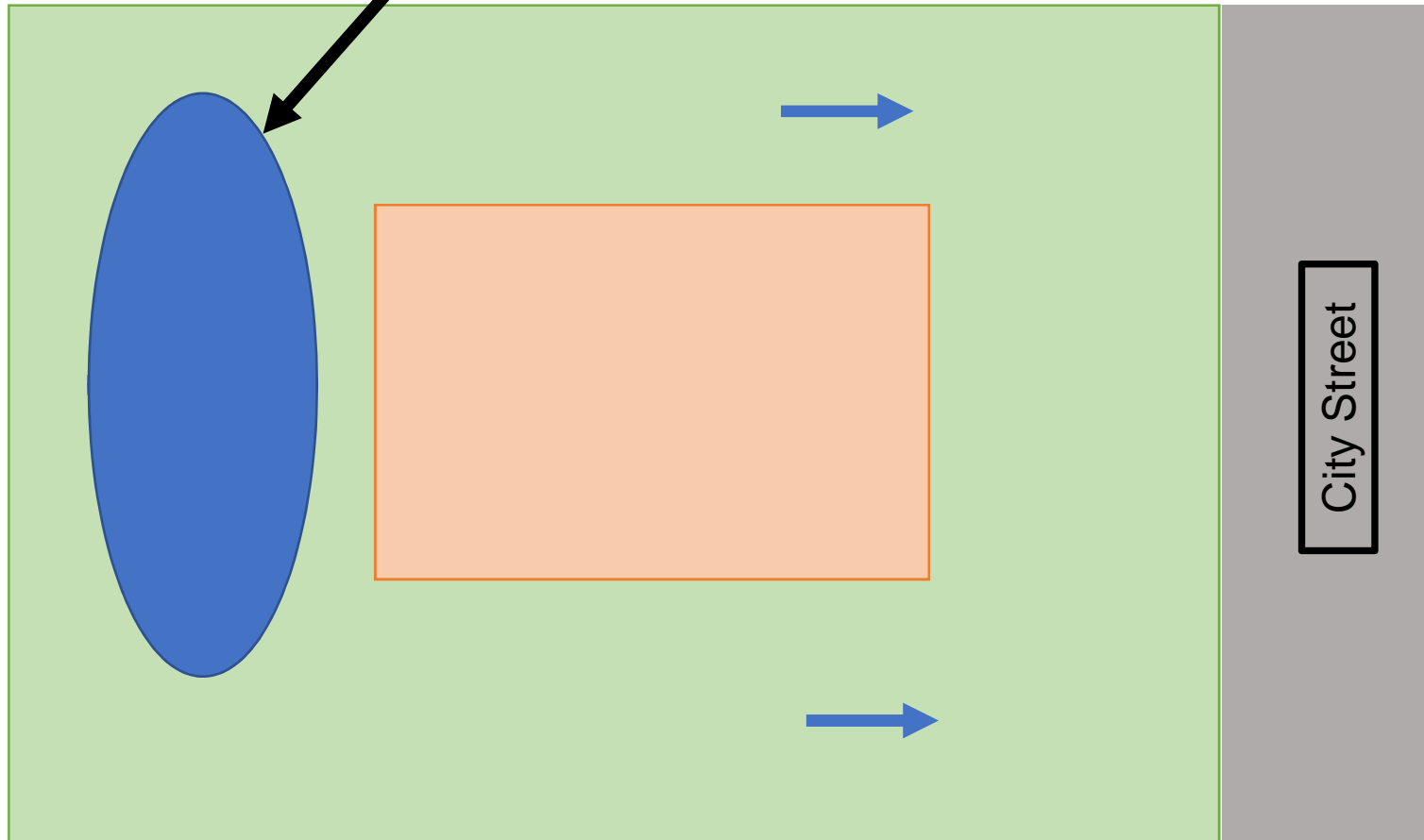


Over time, landowner projects or settling might cause backyard swale to change from original design. This can take longer to dry out.

BACKYARD DRAINAGE ISSUES

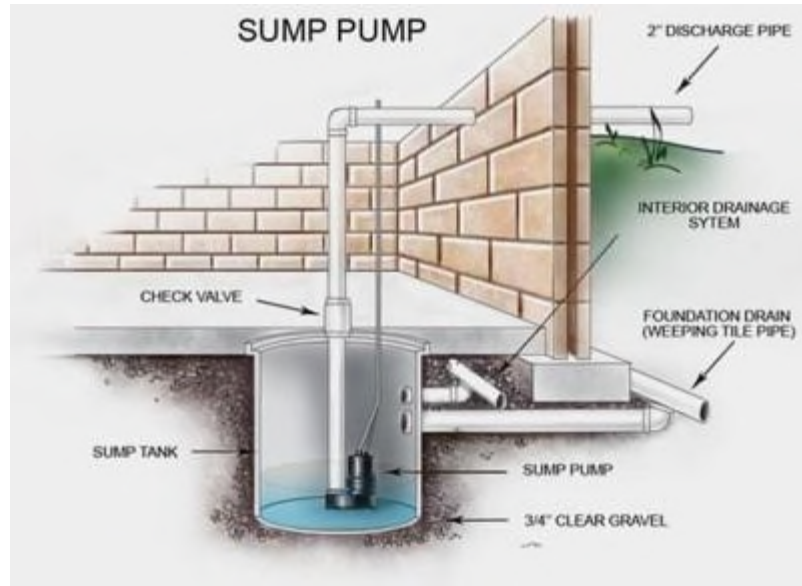
2. Low-lying areas

Low-lying/flat area that doesn't drain well



→ Flow Direction

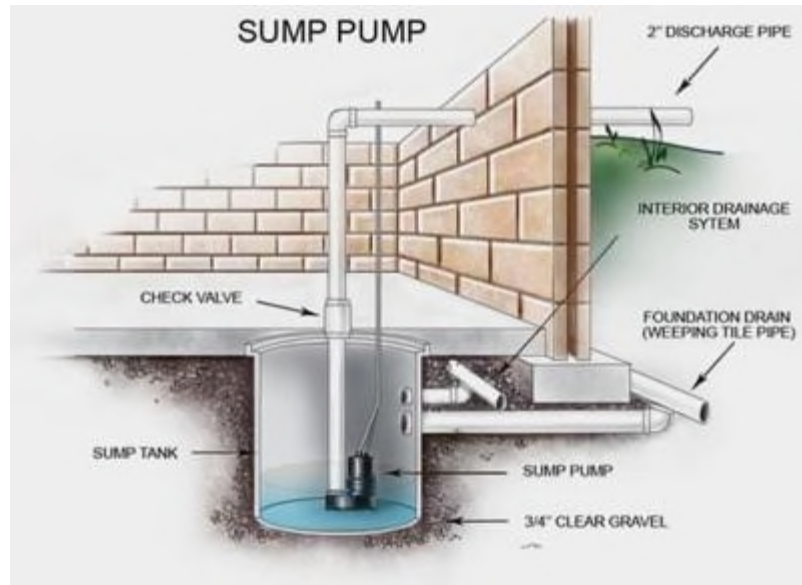
SUMP PUMP CONCERNS



A sump pump is a submersible pump installed in a sump pit dug at the lowest point of a home (such as in the basement).

- Typically discharges to grade,
- Often only turns on when needed, such as after a heavy rain

SUMP PUMP CONCERNS



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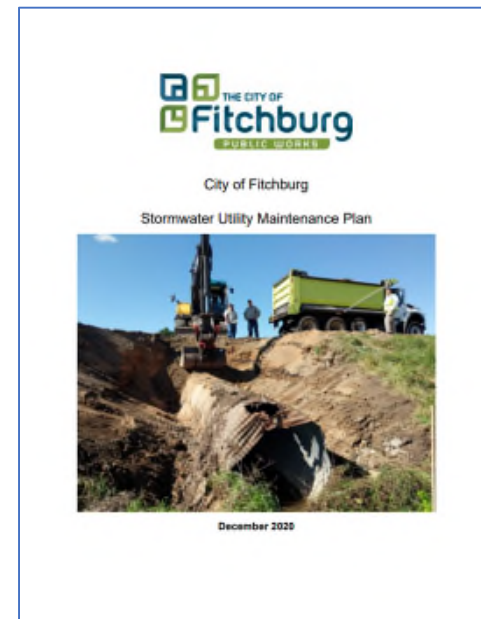
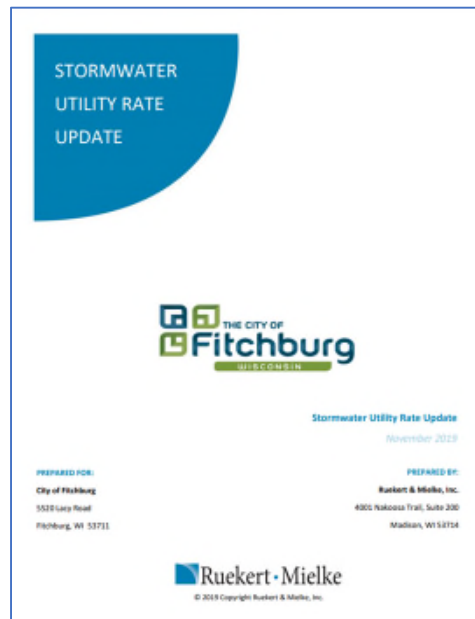
If groundwater is high, this can lead to sump pumps that run continuously. This can lead to several nuisance conditions including:

- Ice buildup in the streets during the winter
- Algae buildup on sidewalks in the summer,
- Extremely soft, soggy, and unmaintainable areas in the yard.

Stormwater Utility's Role

BACKGROUND INFORMATION

- Fitchburg's Stormwater Utility was established in 2002 to provide consistent funding for meeting the City's stormwater management responsibilities.
- Stormwater Rates are set based on a rate study, and reflect the City's current level of service for residents.



Documents can be found at:

<http://www.fitchburgwi.gov/232/Stormwater-Utility>

CURRENT LEVEL OF SERVICE

The Stormwater Utility maintains City-owned stormwater facilities, including inlets, manholes, and storm sewers located within the City right-of-way. In addition, the Stormwater Utility maintains regional ponds, infiltration basins, bioretention basins, greenways which are located on City property.

Repairing a corroded culvert



Clearing willows from a greenway



Sinkhole in need of repair

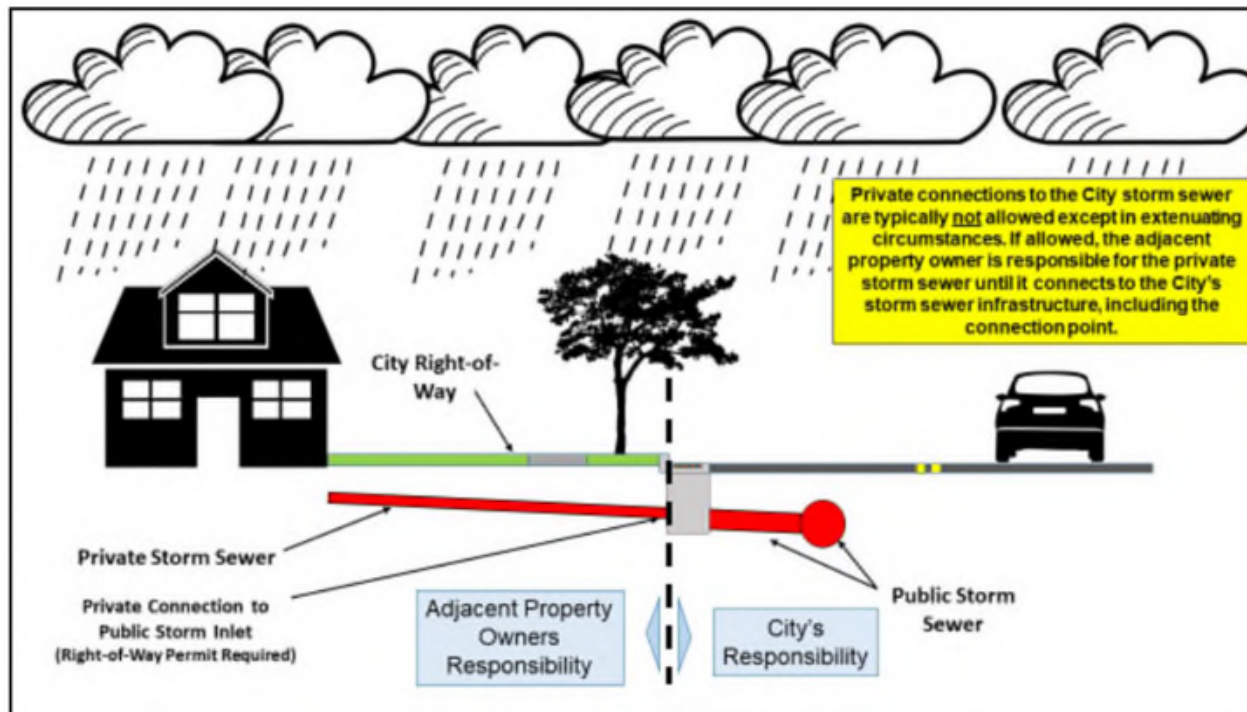


Street sweeping



CURRENT POLICY REGARDING ISSUES ON PRIVATE PROPERTY

- Addressing stormwater issues on private property are the responsibility of the landowner. This includes, but is not limited to: grading to alleviate drainage issues, the installation, maintenance and repair of any private storm sewers (including drain tiles), discharge of private sump pumps, as well as driveway culverts.



MUNICIPAL POLICY REVIEW

MUNICIPAL POLICY REVIEW GOALS

1. Understand how other local municipalities approach private drainage issues
 - Lack of written or formal policies
 - Required phone and email conversations with municipal staff

2. Look to larger region for examples of formal policies and programs
 - Municipalities with guidance available online or known programs
 - Required phone or email conversations for answers to detailed questions if needed

LOCAL POLICY REVIEW

We first examined at existing private drainage policies in neighboring municipalities:

- City of Madison
- City of Sun Prairie
- City of Middleton
- City of Verona



CITY OF MADISON

During an existing street project, if there are known areas with high groundwater or persistent sump drainage, the City will install PVC stubs at the back of inlets.

- City work is assessed at 100%
- Private connections to City-installed stubs are required in problem areas and 100% the responsibility of the property owner

CITY OF VERONA

Typically, the City of Verona does not fix private property drainage issues in rear yards.

For cases where sump pump discharge is impacting the public right-of-way, the City may install public storm sewer for private property owners to connect to. The following conditions apply:

- Always considered on case-by-case basis
- Much more likely as part of streets projects, and where it benefits multiple properties
- If approved, City would pay 100% within the right-of-way
- Private connections to the system would be 100% the responsibility of the property owner

CITY OF MIDDLETON

Typically, do not get involved in private drainage issues, but will allow and facilitate connection to public storm sewer when requested by property owners.

- Any City work in ROW is usually assessed at 100%
- Connection costs are 100% responsibility of the property owner
- There is typically no cost-share or assistance provided

During a scheduled street project, the City may:

- Install rear-yard surface drains to address common swale problems
- Install sump pump feeder lines to address sump discharge problems
- The likelihood of City work is greater for problems that affect multiple properties, are a public safety issue, or are causing freeze/thaw road damage
- City pays 100% for surface drains, feeder lines, and connection of existing buried sump connections
- Property owner pays 100% for new buried connections

BROADER POLICY REVIEW

We next examined examples of formal policies at other municipalities.

- City of Oshkosh, WI
- City of Sheboygan, WI
- City of Iowa City, IA
- City of Sioux Falls, ND
- City of Wood Dale, IL

These were known to City staff through previous project work or found online - don't represent a "typical" municipal approach or assistance level.

Mini-Storm Sewer / Storm Lateral program

- Annual budget for City installation of storm laterals and drains 1' onto private property
- City pays 100% for lateral and drain (SWU fund)
- Property owner pays 100% for sump pump drainage connection (including maintenance)

Mini-Storm Sewer program

- Annual budget for City installation of rear-yard City mains (must serve multiple properties)
- City pays 100% for rear-yard drain but must be given no-cost easement
- Property owner pays 100% for sump pump drainage connection (including maintenance) and must connect within 90 days
- Property owner pays all fence repair and landscape restoration

Drain Tile program

- In public hazard areas, City may install drain tile collection system in ROW
 - City pays 100% for collection system
 - Property owner pays 100% for connection

Slide 26

CG1

I removed the BMP program because I don't think it's relevant. That's more related to water quality than drainage issues.

Claudia Guy, 10/18/2021

CITY OF SIOUX FALLS, ND

Sump pump collection systems are installed in all new developments. The City may install a retrofit if there is a clear public need.

- City pays 100% for collection system
- Property owner pays 100% for connection (connection required but not strictly enforced)

CITY OF WOOD DALE, IL

General cost-share program for resolving private drainage issues

- Program can address both “common swale” and sump issues
- City pays 50% (up to \$3,000) for approved private projects. Property owner assumes ownership and maintenance for any connections to public storm.
- Extensive criteria (documentation of problem, multiple bids, inspections, etc.) and priority for multiple property solutions

LOCAL POLICY REVIEW

	Backyard Drainage Assistance	Sump Pump Collection
City of Madison	City will install stubs in ROW, 100% assessed.	City will install stubs in ROW, 100% assessed.
City of Sun Prairie	City will install read-yard surface drains to address common swale problems (with caveats, permanent easement, etc). City pays 100%.	City will install sump pump feeder lines in ROW during road reconstruct projects. City pays 100% for feeder lines and connection of existing sump pump connections. Property owner pays 100% for new buried connections.
City of Middleton	No assistance.	Any City work in ROW is 100% assessed.
City of Verona	No assistance.	If new storm sewer is needed, 100% covered by Stormwater Utility. Private connections to the Stormwater Utility are 100% property owner responsibility.

BROADER POLICY REVIEW

	Backyard Drainage Assistance	Sump Pump Collection
City of Oshkosh, WI		City pays 100% for lateral. Property owner pays 100% for sump pump connection (including maintenance).
City of Sheboygan, WI	City pays 100% for rear-yard drain (must serve multiple properties), but must be given a no-cost easement. Property owner pays for landscape restoration, fence repair, etc.	Property owner pays 100% for sump pump drainage connection.
City of Iowa City, IA		City pays 100% for collection system. Property owner pays 100% for connection.
City of Sioux Falls, ND		City pays 100% for collection system. Property owner pays 100% for connection.
City of Wood Dale, IL	City pays 50% (up to \$3,000) for approved private projects. Property owner assumes ownership and maintenance for any connections to public storm.	City pays 50% (up to \$3,000) for approved private projects. Property owner assumes ownership and maintenance for any connections to public storm.

MUNICIPAL REVIEW SUMMARY

- There is no standard local municipal approach to private drainage issues, and local policies are internal
- The amount of local assistance to private property owners varied widely
 - Several assessed all City work back to property owner at 100%
 - Sun Prairie provided the greatest level of support (up to 100%), but there were still conditions for City work to take place (street project, multiple properties, public concern, etc.)
- The broader (non-local) examples provided ideas for program types, levels of support, requirements, and funding structures.

NEXT STEPS

NEXT STEPS

- Get input from BPW and RCC on what a potential private drainage assistance program might look like in Fitchburg.
- Create draft application forms for assistance program and draft ordinance language for mandatory connection to sump pump. Come back to BPW and RCC for feedback.
- Based on feedback, bring proposal for a new private drainage assistance program to Common Council.
- Program to go in effect after budget becomes available to fund the program.

- **Common Swale – New Public Inlet or Endwall**
 - Application for assistance regarding common swale issues (must serve at least four lots).
 - Solution will include new public stormwater infrastructure (generally either an endwall or inlet).
 - Permanent Public Stormwater Easement granted to City at no cost. Minimum width shall be 20-feet. Survey and easement documents to be prepared by landowner as part of the application package.
 - Restoration to grass seed and straw (additional landscaping/sod, fence repair, raised garden beds, etc. will be 100% the property owner's responsibility).
 - Any connections to the new public line will be 100% the property owner's responsibility.

- **Common Swale – Grading along length of swale**
 - City to provide managerial role in addressing regrading of swale. City not to get involved unless all homeowners are on board for assistance.
 - Application for assistance regarding common swale issues – must be signed by all lot owners that would be effected.
 - Temporary access easement must be granted to City at no cost. Survey and easement documents to be prepared by the City and 100% assessed back to property owners. Must be signed by all home owners before continuing forward with project.
 - Construction costs to be 100% assessed to property owner.
 - Restoration to grass seed and straw (additional landscaping/sod, fence repair, raised flower beds, etc. will be 100% the property owner's responsibility).

BPW INPUT

- Do we want to provide assistance for other types of private backyard drainage concerns?
- Threshold for City involvement? (3 homes / 4 homes impacted?)
- Cap on City assistance?
 - Wood Dale, IL has cap of \$3,000 per project
- Cost-share or City paid?
 - Wood Dale, IL provides 50% cost-share up to cap

- Sump pump collection
 - Some municipalities assess sump pump feeder lines 100%. Others cover this type of expense 100%, given certain caveats (for example, if multiple homes are impacted, if there's already a road construction project in the area, etc.).
 - In the City of Fitchburg, sump pump collection systems have been proposed at Curry Court and Florann. The proposal was for the system to be 50% assessed and 50% covered by the Stormwater Utility. Assessment of this system has been extremely unpopular in both communities.
 - Consider having the Stormwater Utility cover sump pump collection systems in areas where it is deemed a public safety concern (reduce ice buildup in winter) and where at least three homes are impacted.
 - Mandatory connections via ordinance change.

PROJECT RESOURCES

- The following webpage will be used to post recordings of meetings and final reports related to this project:
 - <http://www.fitchburgwi.gov/2704/Cheryl-Drive-Stormwater-Project>
- Please sign up for the "Cheryl Drive Stormwater Project" notification list to receive updates regarding this project:
 - <http://www.fitchburgwi.gov/list.aspx>

QUESTIONS?

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