



**AGENDA  
CITY OF CREVE COEUR  
STORMWATER SUB-COMMITTEE  
300 NORTH NEW BALLAS RD  
MARCH 10, 2025  
4:30 PM**

**CALL TO ORDER**

**ROLL CALL**

**APPROVAL OF AGENDA**

**COMMENTS FROM THE GENERAL PUBLIC**

**BUSINESS FROM STAFF**

1. Review the Stormwater Cost Share applications for round 2 of the program.

**BUSINESS FROM MEMBERS**

**BUSINESS FROM COUNCIL LIAISON**

**NEXT MEETING DATE**

**ADJOURNMENT**

Posted by: \_\_\_\_\_

Date/Time posted: \_\_\_\_\_

***If you need special accommodations to attend a meeting, services may be arranged by contacting the Office of the City Administrator in advance.***



## DEPARTMENT OF PUBLIC WORKS STAFF MEMORANDUM

**DATE:** March 3, 2025

**TO:** Stormwater Committee  
Mark Perkins, City Administrator

**CC:** Jim Heines, Director of Public Works  
Steve Berez, PE, City Engineer and Assistant Director of Public Works

**FROM:** Dione Garson, PE, Civil Engineer

**SUBJECT:** City of Creve Coeur Stormwater Management Cost-share Program  
Round Two Applications

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### Overview

The City of Creve Coeur Stormwater Management Cost-share Program accepted applications from November 1, 2024 to January 14, 2025.

The program is funded under 05-61-71-9509. The FY2025-FY2029 Capital Improvement Program allocated \$120,000 for FY2025, of which \$60,000 is for the program's pilot phase and \$60,000 is for the second (current) round of funding.

For this round of funding, the program has budgeted \$40,000 for two Homeowner Association projects (50% match up to \$20,000 per project) and \$20,000 for four Individual Homeowners projects (50% match up to \$5,000 per project).

On December 11, 2024, the City hosted an information event from 4:45 pm to 5:45 pm at the Government Center. The event was attended by more than a dozen residents. At the event, residents had the opportunity to learn more about the program and application process. The event also introduced residents to a new City of Creve Coeur educational materials with resources about the function and design of rain gardens and bioswales. Educational materials from the event are available on the Stormwater page on the City's website. City staff has also emailed the materials to residents who have called with questions about the program.

For the second round of funding, the City received eleven individual homeowner applications and one Homeowner Association application.

In all maps shown in this memo, north is up.

## Staff review and comments – Individual Homeowner applications

### Application #1 – 17 Chamblee Lane

- Project location (Ward 4):



- Description of the problem:
  - The application reports that the stormwater drain in front the home backs-up when it rains heavily.
  - The home also experiences flooding from Smith Creek.
- Description of the proposed solution:
  - Construct a swale to keep water from flooding the home.
  - Install a pump and pipe system to direct water from the structure.
- Project costs:
  - One bid was submitted from Acculevel for \$40,540 that includes:
    - Exterior sump pump
    - French drain
    - Drain line with sump
    - Stormwater pipes
  - The bid shows quantities but not unit costs.
  - Fifty-percent of the estimated costs is more than the maximum match for Individual Homeowner projects of \$5,000.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP identifies CC-C-24 17 Chamblee Lane as a possible project.
  - The WMP problem description does not address structural or yard flooding. The description does address bank sloughing and exposed manholes surrounded by sinkholes.
  - The WMP recommended approach is stabilization of the outside bend and filling the areas surrounding the manholes with compacted fill.

- CC-C-24 has a total estimated cost of approximately \$109,000 and a total score of 0.20.
- Staff comments:
  - Background*
    - This home and lot are completely within the floodplain. Some areas of the site are also within the floodway.
    - If the project moves forward, a City-issued floodplain development permit will be required.
    - City staff met with the homeowners on July 26, 2024. The homeowners were informed:
      - The home is in the Special Flood Hazard Area (SFHA), Zone AR.
      - The City's Code Chapter 415 – Flood Hazard Control Regulations applies to this site.
      - Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program created a website that informs owners of what can be done to help reduce risks in a SFHA.
      - The homeowners were also sent copies of FEMA publications P-1037, *Reducing Flood Risk to Residential Buildings That Cannot Be Elevated* and P-312 *Homeowner's Guide to Retrofitting*.

*Comments related to the application*

- Pumps and pipes without mitigation are not in keeping with the requirements and intent of the program.
- The program does, however, intend to help residents with the installation of bioswales.
- The bid from Acculevel does not appear to include a swale system with a berm or a floodwall.
- FEMA Publication P-312 *Homeowner's Guide to Retrofitting* includes Table 3-10 lists the Advantages and Disadvantages of Levees and Floodwalls plus the following example of protecting a home with a levee and/or a floodwall.

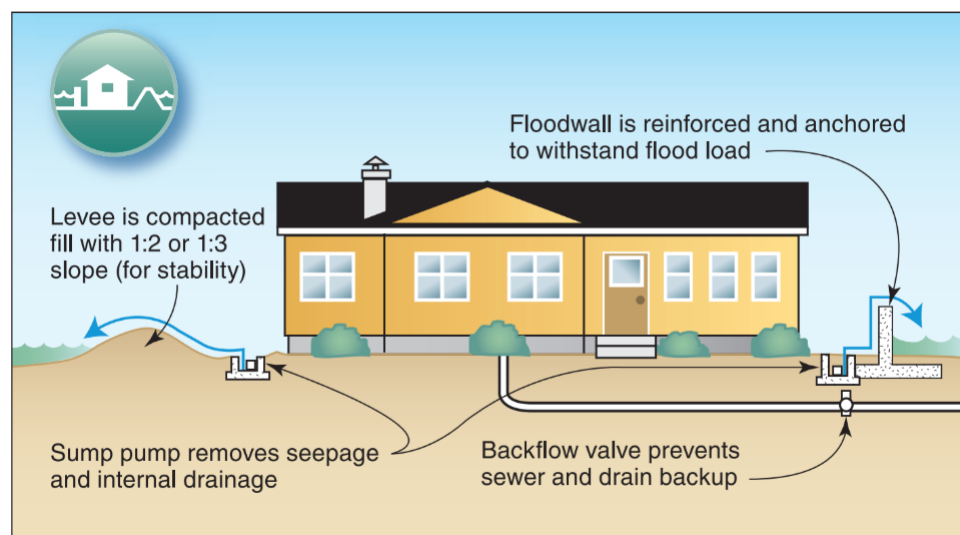
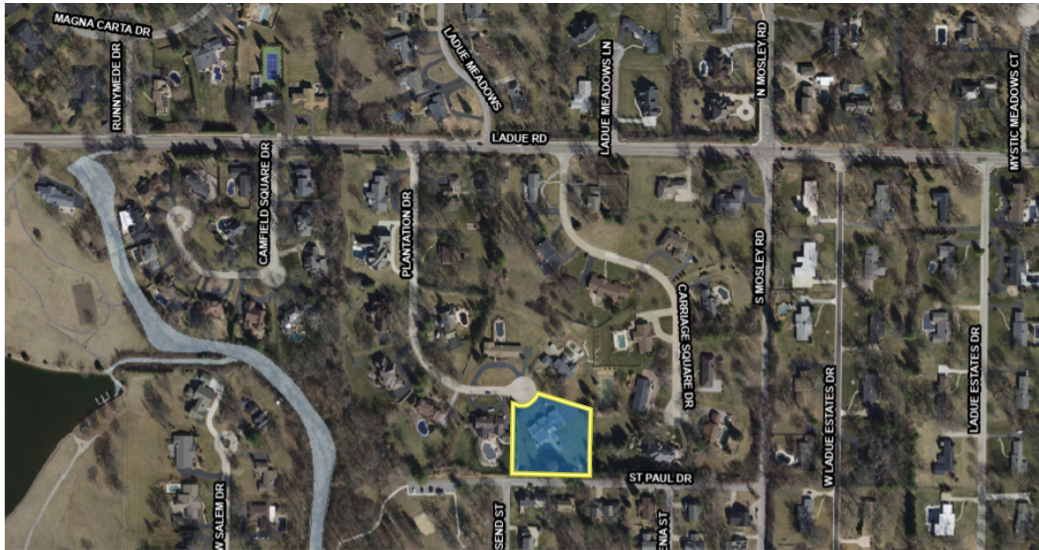


Figure 3-17 from FEMA's *Homeowner's Guide to Retrofitting*

- When the creek is out-of-bank, pumping and piping water to the creek alone may not be effective in keeping water from the yard and structure.
- A swale system with a berm or wall that is higher than the base flood elevation may be more effective at reducing flooding risks. FEMA recommends that levees and floodwalls should provide at least one-foot of freeboard (P-312 *Homeowner's Guide to Retrofitting*, page 3-34).
- For this approach, the homeowner may consider working with an engineer who can help:
  - Assess the onsite soils to determine the suitability of the site for swales and/or a wall.
  - Design the system to be structurally sound and able to resist erosion, scour, and seepage.
  - Verify that protection is one-foot or more about the base flood elevation.
- Staff recommendation:
  - Meet with homeowners to talk about:
    - Staff's concerns with a plan that includes a pump and pipe system without an accompanying swale and berm or wall.
    - Provide the homeowner with additional FEMA resources with information about strategies for reducing flood risks.

## Application #2 – 191 Plantation Drive

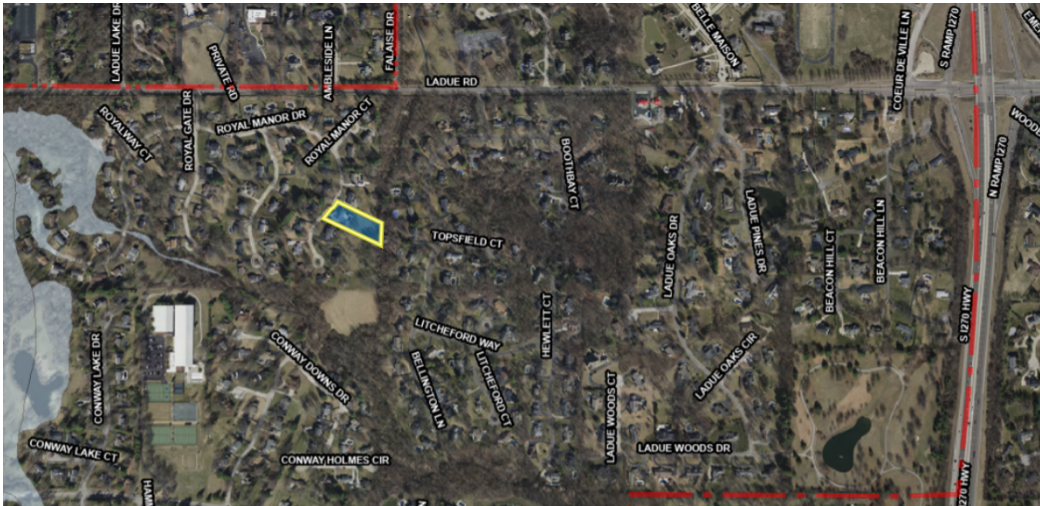
- Project location (Ward 2):



- Description of the problem:
  - Backyard flooding and erosion.
  - Existing stormwater system installed in the backyard is reported to be overwhelmed during some rain events.
- Description of the proposed solution:
  - Reshape and add depth to existing rain detention basins.
  - Create an overflow rock-lined swale.
  - Plant trees.
  - Add to an existing berm.
- Project costs:
  - One bid from Garcia Hardscape was submitted for \$9,555.46.
  - The 50% match for this project would be \$4,777.73.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue or issues near this location.
- Staff comments and recommendations:
  - This project appears to meet the intention and requirements of the program.

### Application #3 – 148 Royal Manor Court

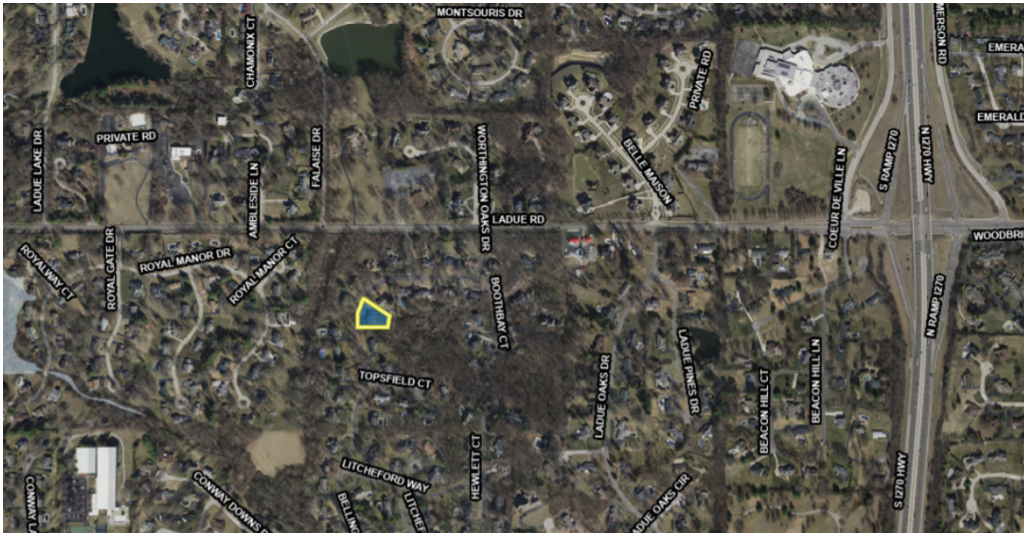
- Project location (Ward 3):



- Description of the problem:
  - Flooding of basement and garage.
  - Ponding water on the driveway and near the garage.
- Description of the proposed solution:
  - Install a catch basin and PVC pipes.
  - Regrade yard to direct flow away from the home.
- Project costs:
  - The application included one bid from Tennant Landscape Solutions, Inc. for \$10,189.22.
  - Fifty-percent of the estimated costs is more than the maximum match for Individual Homeowner projects of \$5,000.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP identifies CC-C-30 151 Royal Gate Drive as a possible project.
  - This project, however, is about two blocks west of 148 Royal Manor Court.
  - The WMP problem description does not address structural or yard flooding at 148 Royal Manor Drive.
  - Completing this potential cost-share project will have no impact on the possible public project listed in the WMP.
- Staff comments:
  - The plan does not include elements that would detain, retain, or slow the rate of runoff.
- Staff recommendation:
  - This project does not appear to meet the intention and requirements of the program.

## Application #4 – 138 Bellington Lane

- Project location (Ward 3):



- Description of the problem:
  - 138 Bellington Lane has two MSD inlets on the property. The stormwater pipe system discharges into an open channel on the common ground south of the site.
  - On the roadway west of the home, two MSD inlets are located on both sides of the roadway.
  - The homeowner reports that the inlets surge during heavy rain events.
  - Stormwater ponds on the roadway, sidewalk, and yard.
  - In 2023, MSD removed debris from the western inlet on 138 Bellington.
- Description of the proposed solution:
  - The application states that the homeowner has asked MSD to address the issues. MSD responded that this possible project is not in the current programming.
  - The application suggested that the City address the issues.
- Project costs:
  - None included in the application.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - This issue was not identified in the WMP.
- Staff comments:
  - The homeowner reported stormwater issues after the reporting window for the WMP closed. This project has been added to a list of possible projects to score when the Watershed Management Plan is refreshed.
- Staff recommendation:
  - The homeowner did not include a plan for an individual project.
  - The project has been added to a list of identified issues that will be scored when the WMP is refreshed.
  - Under the City's Pavement Improvement Program, the sidewalks along Bellington Lane will likely be replaced within the upcoming FY2026-FY2030 Capital Improvement Program (CIP).
  - When the sidewalks are replaced, changes will be made to the grade and elevation that may reduce the frequency and severity of sidewalk flooding.

## Application #5 – 152 South Mason Road

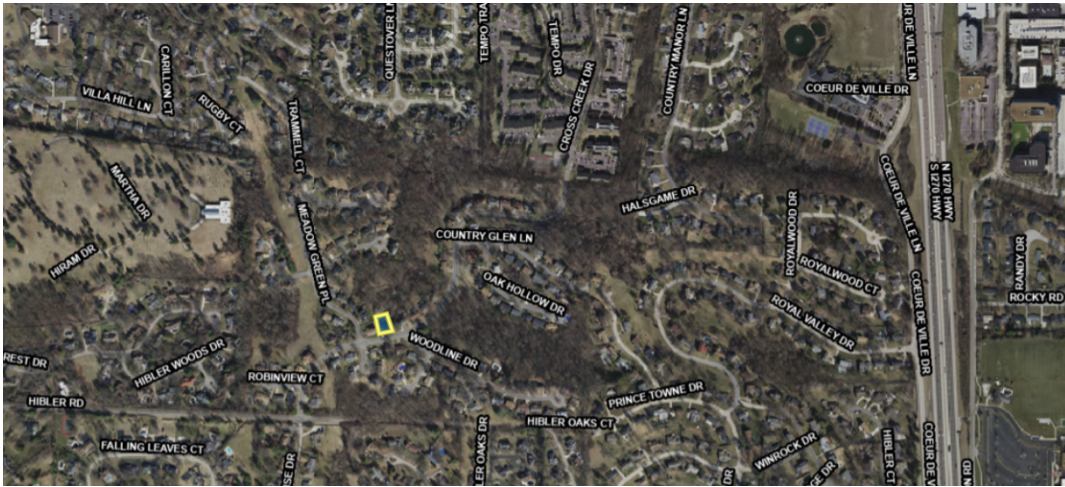
- Project location (Ward 4):



- Description of the problem:
  - MSD stormwater channel is on the site.
  - Two MSD inlets are west of the site and across South Mason Road.
  - A roadway culvert carries flows from west to east and onto an MSD stormwater channel on 152 South Mason Road.
  - The homeowner reports that the site receives runoff from the culvert (30-inch reinforced concrete pipe) into the MSD-identified unimproved natural channel.
  - The homeowner also reports that the site receives flows from the intersection of Ladue Road and South Mason Road. The intersection does not appear to have inlets. Flows are likely seeking the lower elevation of the natural channel that runs through 152 South Mason Road.
- Description of the proposed solution:
  - Bioswales with underdrains with perhaps a raingarden installed at the end of the bioswale.
- Project costs:
  - No proposals submitted. The homeowner listed lack of time as a reason.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue or issues near this location.
- Staff comments:
  - This application does not include a plan or bids.
  - More information is needed.
- Staff recommendation:
  - Suggest that the homeowner develop plans for the site and seek bids then apply to the third round of funding this fall.

## Application #6 – 495 Falaise Drive

- Project location (Ward 3):

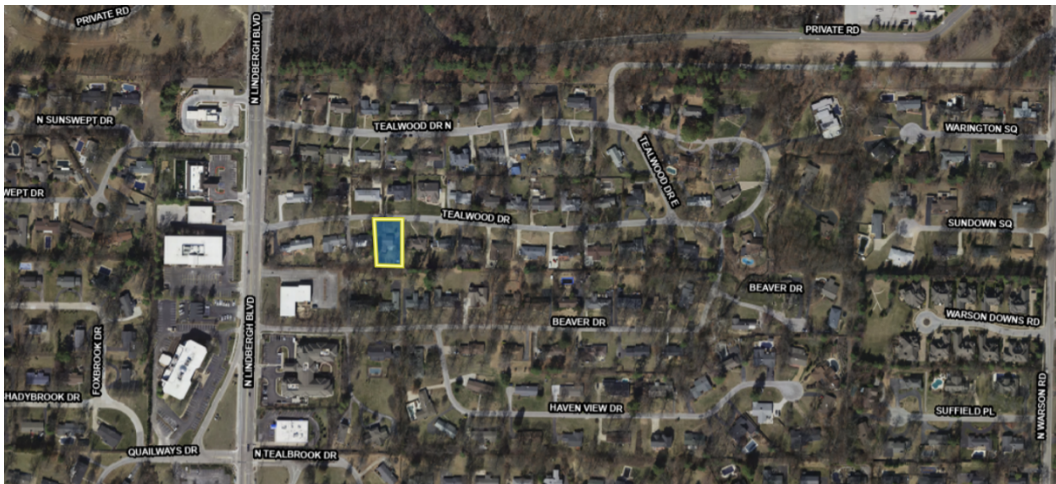


- Description of the problem:
  - 495 Falaise Drive is at a lower elevation than the adjacent site to the west (455 Falaise Drive).
  - An MSD-identified natural creek runs through the common ground that is adjacent and to the east of the site.
  - Unmanaged runoff flows from west to east causes issues such as:
    - Yard erosion
    - Ponding
- Description of the proposed solution:
  - Construct a berm and swale (8 feet wide by 20 feet long) on the west side of the lot to manage flows from 455 Falaise Drive that will direct flows to a raingarden.
  - Install a raingarden with an emergency overflow at the outfall end of the swale to capture and keep some of the runoff on the site.
- Project costs (the homeowner provided a range of costs, and the City is listing the most conservative estimates):
  - Homeowner will install the swale and raingarden
  - Excavation and swale creation = \$1,200
  - Soil preparation and materials = \$900
  - Native plants = \$500
  - Labor = \$1,800
  - Miscellaneous supplies = \$250
  - Total estimated costs = \$4,650
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
  - The WMP identifies nearby creekbank stabilization projects. None of the possible creekbank projects will address the yard erosion and ponding experienced on this site.
  - Completing this potential cost-share project will have no impact on the possible public project listed in the WMP.

- Staff comments:
  - This project offers water quantity and water quality benefits.
  - Encouraging infiltration with the use of a raingarden and bioswale will benefit both the individual homeowner and the community.
- Staff recommendation:
  - This project appears to meet the requirements of the program.

## Application #7 – 5 Tealwood Drive

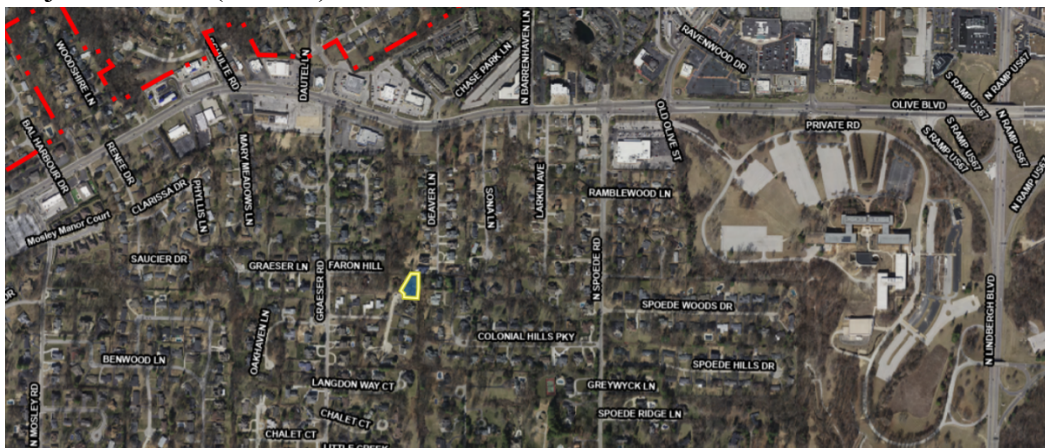
- Project location (Ward 1):



- Description of the problem:
  - The homeowner reports that the MSD clay pipe has failed (City staff reported the concern to MSD).
  - The issues listed in the application are yard ponding and flooding in the backyard.
- Description of the proposed solution:
  - Construct a dry retaining pool near the MSD pipe's outfall.
- Project costs (the homeowner provided a range of costs, and the City is listing the most conservative estimates):
  - The homeowner listed an estimated cost of \$3,500.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
  - The WMP identifies nearby creekbank stabilization projects. None of the possible creekbank projects will address the yard erosion and ponding experienced on this site.
  - Completing this potential cost-share project will have no impact on the possible public project listed in the WMP.
- Staff comments:
  - The driveway for 5 Tealwood Drive is shared with 6 Tealwood Drive.
  - Contour lines indicate that runoff will flow from north to south.
  - Two roadway MSD inlets are northeast of the site. The inlets flow into 12-inch clay pipe that outflows on the southeast edge of the site into an unimproved natural channel.
- Staff recommendation:
  - Suggest the possibility of adding amended soils and native plants to add a water quality component.
  - This project appears to meet the requirements of the program.

## Application #8 – 6 Wedgewood Lane

- Project location (Ward 1):



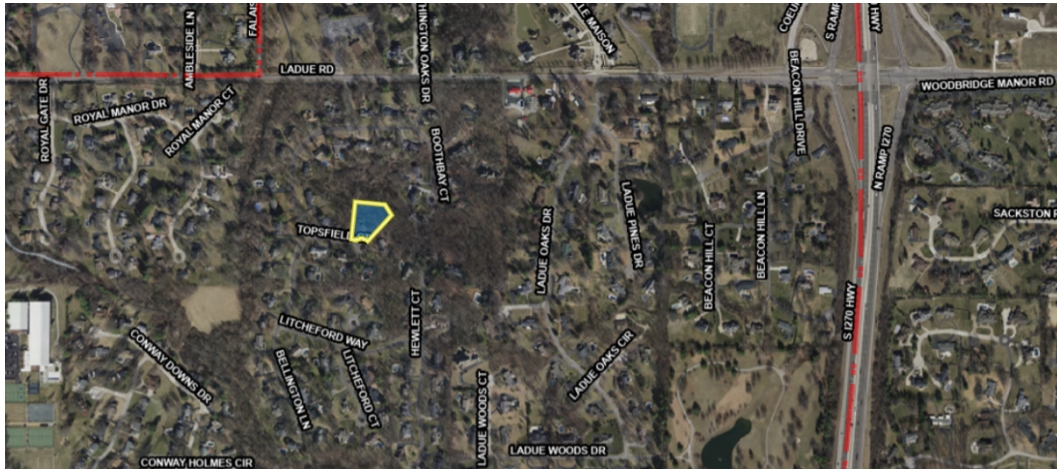
- Description of the problem:
  - Structural (basement) flooding resulting in more than \$30,000 in damages during 2023-2024.
  - Yard flooding and ponding.
  - Erosion.
- Description of the proposed solution:
  - Raise the height of the back retaining wall by 6 inches. Behind the wall, install a French drain system (perforated pipe and rock) that will intercept runoff from uphill.
  - Install a swale and berm system that outflows into a raingarden. The raingarden will reduce the volume of flows that runoff to the roadway.
  - Increase the size of existing French drains.
  - Update window wells by raising the grade around the window wells by approximately 4 inches.
  - Install a dry well.
- Project costs (the homeowner provided a range of costs, and the City is listing the most conservative estimates):
  - The application included a quote from Basile Landscaping & Lawncare LLC with the following line items:
    - Raise the height of the back retaining wall by 6 inches. Behind the wall, install a French drain system. = \$22,932
    - Swale, berm, and raingarden system = \$16,440
    - French drain = \$22,870
  - Fifty-percent of the total costs exceeds the maximum program match of \$5,000 for an individual homeowner.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - Possible project DC-S-16 Wedgewood Lane was identified in the WMP.
  - The project had estimated costs of approximately \$112,000 and a Prioritization Ranking Score of 0.63.
  - Even if a cost-share program is approved and completed, DC-S-16 Wedgewood Lane WMP may still move forward for programming consideration. Decisions

about programming DC-S-16 will be assessed when the City CIPs are addressing WMP-identified projects with similar scores.

- Staff comments:
  - The homeowners have made past attempts at addressing the stormwater issues.
  - The past stormwater management efforts have not been able to prevent basement and yard flooding.
- Staff recommendation:
  - This project appears to meet the requirements of the program.

Application #9 – 12363 Topsfield Court

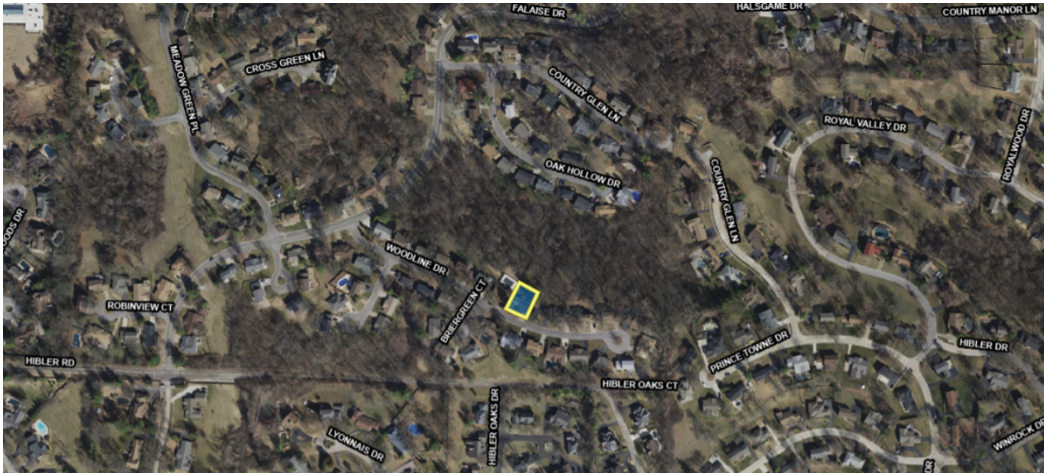
- Project location (Ward 3):



- Description of the problem:
  - Stormwater runoff from adjacent site is causing erosion and sinkholes.
- Description of the proposed solution:
  - Construct a 30 linear feet of French drain with a perforated pipe covered in a geotextile fabric.
  - Install gabion rock to help prevent erosion.
- Project costs:
  - The application included a bid from Topps Paving & Sealing, LLC – Drainage Solutions for \$6,481.
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
- Staff comments:
  - City staff met with the homeowner in December.
  - In the past, the homeowner had installed a perforated pipe system that is now failing and sinkholes are forming along the pipe trench. It seems likely that the perforated pipes were not wrapped in a geotextile fabric. Without fabric, soil is being transported along with the infiltrating water creating the sinkholes.
- Staff recommendation:
  - This project appears to meet the requirements of the program.

## Application #10 – 12351 Woodline Drive

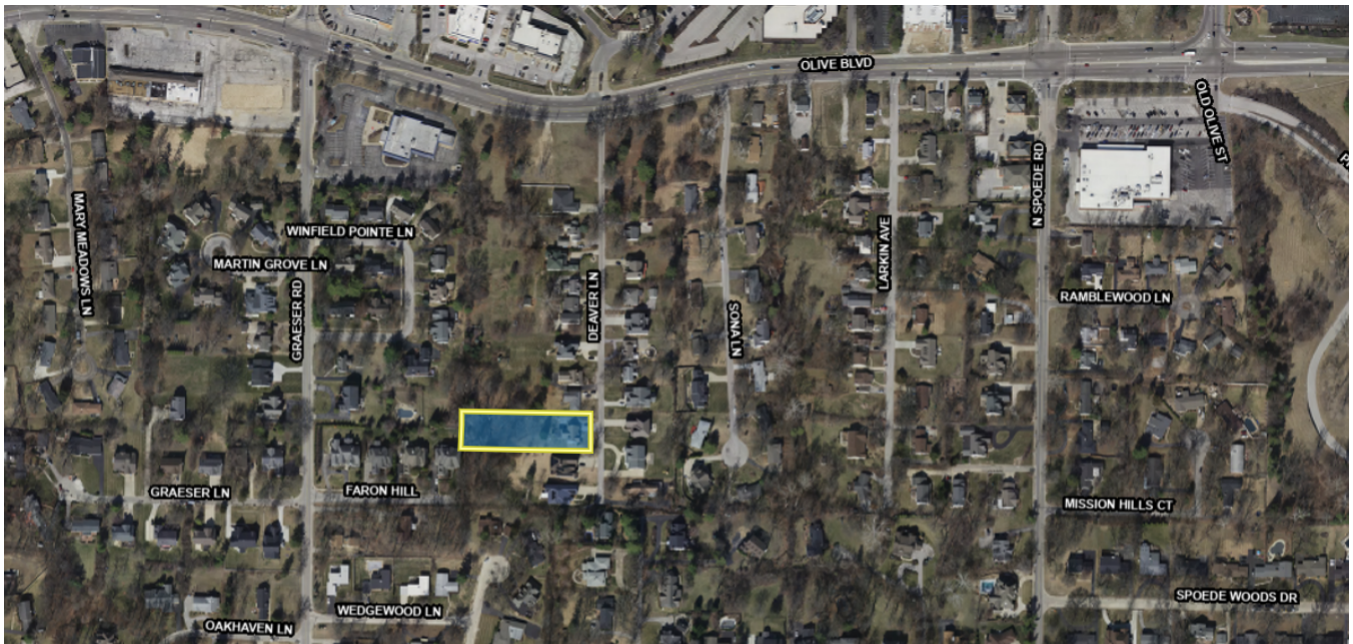
- Project location (Ward 3):



- Description of the problem:
  - Yard erosion creating gullies, ruts, sinkholes, and fallen trees.
  - The homeowner reports that the erosion has accelerated in the past few years.
- Description of the proposed solution:
  - Extend existing gabion stone rock bed.
  - Plant more native and ground-cover plants.
  - Rebuild a retaining wall to improve stormwater drainage from the roadway to the backyard.
- Project costs:
  - Expansion of gabion stone rock bed and natives = \$3,869
  - Material costs for ground-cover plants and wall = \$635
  - Total estimated costs = \$4,504
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
- Staff comments:
  - City staff met with the residents onsite and discussed past efforts made to address erosion issues.
- Staff recommendation:
  - This project appears to meet the requirements of the program.

## Application #11 – 815 Deaver Lane

- Project location (Ward 1):



- Description of the problem:
  - Backyard flooding (runoff from the driveway is not reaching the MSD stormwater inlet on the property's western edge).
- Description of the proposed solution:
  - Install a bioswale and raingarden to both detain and direct runoff to the MSD inlet.
- Project costs:
  - Labor = \$3,600
  - Raingarden soil = \$400
  - Plants = \$725
  - Tax = \$50
  - Incidentals = \$225
  - Total estimated costs = \$5,000
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
- Staff recommendation:
  - This project appears to meet the requirements of the program.

## **Staff review and comments – Homeowner Association application**

### Application #1 –Mill Crossing Condominium Association

- Description of the problem:
  - An existing storm drain is blocked with debris and no longer functions as designed.
  - Without a properly functioning storm drain system, surface flows are not being managed with some flows going onto neighboring sites.
- Description of the proposed solution:
  - Removal of debris.
  - Identify and implement preventative measures that may extend time between maintenance activities.
- Project costs:
  - Approximately \$5,000
- Was this project identified as a possible project in the 2024 Watershed Management Plan (WMP)?
  - The WMP does not include a possible project to address this issue.
- Staff comments:
  - The application was submitted by the submission deadline. The HOA was seeking bids but did not receive any bids before the application was due.
  - The contact for this project had unexpected medical issues.
  - City staff contacted the HOA and requested bids.
  - The application estimates costs of \$5,000.
- Staff recommendation:
  - Recommendation to be determined after bids are submitted.
  - If no bids are submitted for this round, perhaps the HOA should resubmit an application during the next round of funding.

### Summary of estimated costs – Individual Homeowner applications

The table below shows the estimated costs for each of the applications submitted for the second round of funding. The maximum City funding for Individual Homeowner projects is 50% of paid costs up to \$5,000 per project.

City staff offers recommendations for projects that appear to meet program requirements. Staff opinions are not binding and intended only as one possible consideration for the Stormwater Committee.

Projects completed under this program are unlikely to have any impact on the possibility of a WMP-identified project to be programmed.

The Stormwater Committee makes final determinations about which project will be recommended for funding to the City Council. City Council approves project funding with a resolution.

| Submitted Individual Homeowner Applications |                |                        |                                       |
|---------------------------------------------|----------------|------------------------|---------------------------------------|
| Project Location                            | Estimated Cost | Potential City Funding | Appears to Meet Program Requirements? |
| 17 Chamblee Lane                            | \$40,540       | \$5,000                | No                                    |
| 191 Plantation Drive                        | \$9,555        | \$4,778                | Yes                                   |
| 148 Royal Manor Court                       | \$10,189       | \$5,000                | No                                    |
| 138 Bellington Lane (No costs provided)     |                |                        | No                                    |
| 152 South Mason Road (No costs provided)    |                |                        | No                                    |
| 495 Falaise Drive                           | \$4,650        | \$2,325                | Yes                                   |
| 5 South Tealwood Drive                      | \$3,500        | \$1,750                | Yes                                   |
| 6 Wedgewood Lane                            | \$62,242       | \$5,000                | Yes                                   |
| 12363 Topsfield Court                       | \$6,481        | \$3,241                | Yes                                   |
| 12351 Woodline Drive                        | \$4,504        | \$2,252                | Yes                                   |
| 815 Deaver Lane                             | \$5,000        | \$2,500                | Yes                                   |

**Table 1: Summary of Individual Homeowner Applications  
Submitted to the Second Round of Funding**

The following table shows a summary of estimated costs for the proposed projects that, in City staff's opinion, appear to meet program requirements.

| <b>Individual Homeowner Applications that Appear to Meet Program Requirements</b> |                       |                     |                                              |
|-----------------------------------------------------------------------------------|-----------------------|---------------------|----------------------------------------------|
| <b>Project Location</b>                                                           | <b>Estimated Cost</b> | <b>City Funding</b> | <b>Appears to Meet Program Requirements?</b> |
| 191 Plantation Drive                                                              | \$9,555               | \$4,778             | Yes                                          |
| 495 Falaise Drive                                                                 | \$4,650               | \$2,325             | Yes                                          |
| 5 South Tealwood Drive                                                            | \$3,500               | \$1,750             | Yes                                          |
| 6 Wedgewood Lane                                                                  | \$62,242              | \$5,000             | Yes                                          |
| 12363 Topsfield Court                                                             | \$6,481               | \$3,241             | Yes                                          |
| 12351 Woodline Drive                                                              | \$4,504               | \$2,252             | Yes                                          |
| 815 Deaver Lane                                                                   | \$5,000               | \$2,500             | Yes                                          |
| <b>Total</b>                                                                      |                       | <b>\$21,845</b>     |                                              |

**Table 2: Summary of Estimated Costs for Applications that Appear to Meet Program Requirements**

### **Summary of estimated costs – Homeowner Association applications**

The maximum City funding for Homeowner Association projects is 50% of paid costs up to \$20,000 per project.

For this round of funding, one application was submitted with an estimated project cost of \$5,000 for up to \$2,500 in program funding.

### **Program Funding**

The current FY2025-FY2029 Capital Improvement Program (CIP) has allocated \$120,000 in FY2025 under 05-61-71-9509. Of the total budgeted \$120,000, \$60,000 was allocated for the first round of funding and \$60,000 for the second round of funding.

### **Funding – Individual Homeowner Category**

During each round, the program allows for up to four Individual Homeowner projects to be funded. The maximum funding for each Individual Homeowner project is 50% of paid costs up to \$5,000. The total allocated budget for Individual Homeowner projects is \$20,000 for each funding round.

To date, the program has paid a total of \$4,821 for one completed first-round Individual Homeowner project.

Seven Individual Homeowner proposed projects appear to meet program requirements. The total requested funding for the seven projects is **\$21,845**. It seems reasonable that the Stormwater Committee could determine that these projects are qualified and recommend funding.

### **Funding – Homeowner Association Category**

During each round, the program allows for up to two Homeowner Association projects to be funded. The maximum funding for each Individual Homeowner project is 50% of paid costs up to \$20,000. The total allocated budget for Individual Homeowner projects is \$40,000 for each funding round.

To date, the program has paid a total of \$8,586 for one completed first-round Homeowner Association project.

**Attachments:****Individual Homeowner Applications:**

- 17 Chamblee Lane
- 191 Plantation Drive
- 148 Royal Manor Court
- 138 Bellington Lane (*No costs provided*)
- 152 South Mason Road (*No costs provided*)
- 495 Falaise Drive
- 5 South Tealwood Drive
- 6 Wedgewood Lane
- 12363 Topsfield Court
- 12351 Woodline Drive
- 815 Deaver Lane

**Homeowner Association Applications:**

- Mill Crossing