

ENVIRONMENTAL QUALITY & PUBLIC WORKS COMMITTEE: Stormwater Drainage & Flooding Program Update

September 13, 2022



LEXINGTON

AGENDA

- Stormwater (SW) Priority Project List Overview
- 2022: Positive Efforts/Outcomes
- 2022: Challenges
- Near-term Opportunities
- Questions

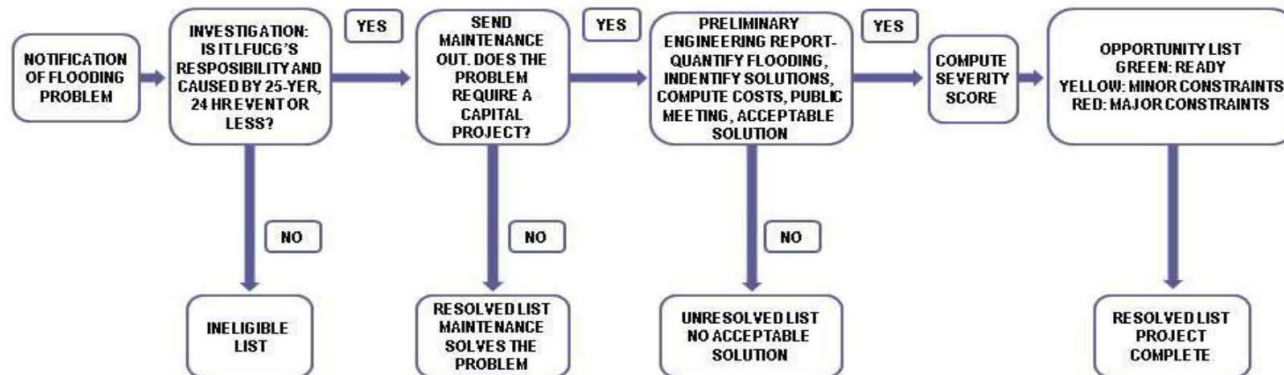


Stormwater (SW) Priority List

- 1996 – SW Priority List concept developed at request of the Urban County Council.
- 2012 – SW Priority List approach modified by a Consent Decree deliverable. Modification was “endorsed” by this committee.
- List updated annually with link posted on LFUCG Division of Water Quality webpage.



Severity Score Process



HOW DOES A PROPERTY GET CONSIDERED FOR INCLUSION ON THE STORMWATER PRIORITY LIST?

For storm events less than the 25-year, 24-hour event (5.23 inches) – at least one of the following conditions must be met:

- Structure flooding (surface water entering a structure through an opening such as a door, window, or vent); or
- Street/road flooding with either greater than 1 foot of water in the driving lane or the crown of the road is not visible.



NEW PROJECTS POLICY

Since 2001, the policy has been that new projects added to the Stormwater Priority List must “waitlist” for two (2) years before any action is taken.

Shaping Our Community

ENGINEERING

MEMORANDUM

To: Mayor Pam Miller
Urban County Council

From: Darryl G. Bennett, P.E.
Engineering Section Manager

Date: December 20, 2001

Subject: December 2001 Stormwater Update for Council

Procedure requires that the Division of Engineering report to Council every December about its stormwater activity. Following is the latest status for the entire stormwater priority list. Included are specific pages describing status and activity of bond issue projects and those paid for by the general fund. You will also find a list of projects that we are recommending for removal from the priority list per the criteria submitted to the Planning Committee in August.

The final eleven pages are the updated master list of stormwater priority projects. This list was originally presented to Council in 1996 and had a total of 165 projects listed. Of that number one hundred were known or were suspected to include home flooding or serious street flooding and were placed in a higher priority group. We have concentrated on sixty-one projects in that group: 13 have been completed; 10 are under construction or have been bid; 17 are in design phase; 5 are in the property acquisition stage; and 16 have been recommended for removal from the list.

Since the original list was published there have been several requests for additional projects. In 2000 five new projects were recommended for addition to the list, and this year three new projects are recommended. Home flooding was the primary criteria for adding these projects. **These eight projects are specifically noted on the master list. Per procedure, a new project may not be addressed until it has been on the list for two years, regardless of its hierarchy.**

The Division of Engineering has continued with other programs directly related to stormwater and flooding issues. Of note is the Cooperative Floodproofing Program, which continues to assist individuals who have home flooding problems. Since the program's inception in 1992, financial aid has been given to homeowners at 291 different locations, with a total government expenditure of \$1,039,290.

The Stormwater Manual was adopted by Council and became effective this year. This manual controls usage in and around the waterways of Fayette County. Its use will reduce future problems with both quantity and quality issues.

(CURRENT LIST)

The map displays the Wolf Run/Southland Dr Project area in Harrodsburg, KY. The project area is highlighted in pink and includes Harrodsburg Rd, Nicholasville Rd, and the intersection of Harrodsburg Rd and Southland Dr. The map shows various project locations marked with blue dots and circles, indicating their status: Under Construction (blue dot), Pending Evaluation (blue circle), and Under Design (blue circle with a dot). The map also shows major roads such as Frankfort Pike, Leestown Rd, Georgetown Rd, Harrodsburg Rd, Nicholasville Rd, Clays Mill Rd, Richmond Rd, Alumni Dr, and Man O War Blvd. A legend in the bottom right corner defines the symbols used for project status.

Project	Project Name
66.35	E Third St & Ohio Ave
66.4	Lyon Dr
66.6	Tucson Dr
71	Picadome
71.5	Peachtree Rd
74	Arcadia Park/Barberry Ln
76	Rosemary Ave/Bermuda
77	Viley Rd @ Old Frankfort Pike
80	Eastland Park Trib @ Gayle Dr
80.3	Barkeley Dr/Southgate Dr
80.4	Lane Allen Rd/Darien Dr
80.6	Longview West
81	Joyland
82	Mentelle Park
82.5	Cooper Dr
83	Idle Hour Dr
83.5	Lafayette Pkwy/Southbend Dr
84	Elmwood Dr
85	Gainesway Dr
85.5	Longview Dr East
86	Hume Rd
88	South Elkhorn
92	West Gardenside
93	Mt Vernon/Hollywood
94	Stonewall Community
95	National Ave
96	N Limestone
97	Ashland Park
97	Ashland
99	Aylesford Park

7



2021 - 2022 Outcomes “The Good”

STORMWATER SECTION STAFFING CHANGES

- New Municipal Engineer, Senior- Craig Morgan, PE
- New Infrastructure Program Manager – Jason Martin

The section is at full strength.

SOUTHLAND/WOLF RUN PROJECTS

- Southland/Wolf Run Project
- Phase 1- WGPL
 - The WGPL (Goodrich/Pensacola area) Stormwater Improvement Project was completed June 1, 2020.
- Phase 2- Southland Park/Tucson/Yuma
 - New stormsewer system to relieve street flooding in the Tucson Dr. and Burbank Dr. area and structure flooding on Yuma Ct.
 - DWQ coordinated with the Division of Parks & Recreation to relocate the playground and construct a new, modern playground. Construction of Stormwater improvements in the park are complete.

Southland Park/Yuma/Tucson Project Area- CD10



Southland Park/Yuma/Tucson Project Area



North Middle Basin

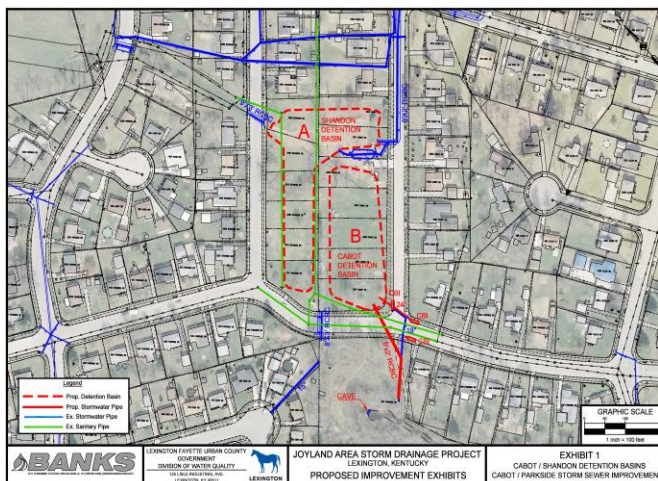
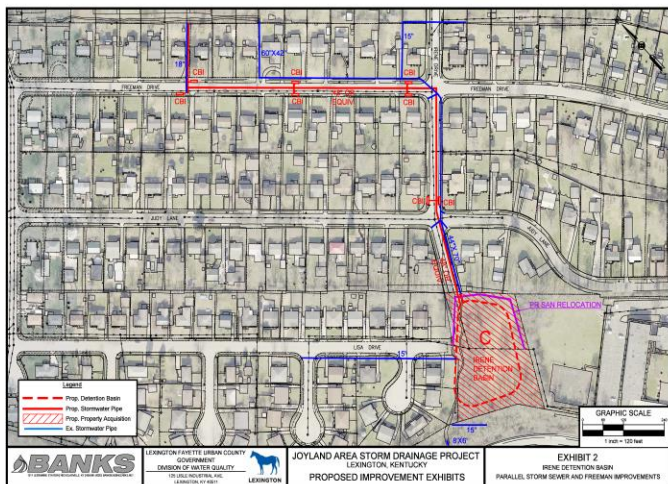


Downstream End

JOYLAND- CD 6

- The Preliminary Engineering report - undersized infrastructure in the project area.
- The solutions identified
 - 1) Reduce property/yard flooding along stream by creating additional detention within the project area at Lisa Drive, Cabot Drive, and Shandon Drive.
 - 2) Reduce street flooding along Freeman Drive with a new storm line and curb inlets.
- Construction anticipated to begin in late 2022
 - Two Phase Approach
 - Basins (2022)
 - Line Work (2023)

Joyland Project Area



WOODHILL/PEACHTREE- CD 7

- Project is to mitigate street flooding at Codell/Peachtree and yard flooding behind Peachtree Rd. residences
- Construction complete- \$2,900,000
- Challenge- Maintenance of Traffic on Woodhill Dr. required extensive coordination with the Division of Traffic Engineering.



Woodhill/Peachtree Project



LYON DRIVE- CD 10

- Project is to mitigate street flooding on Lyon Dr. between Ft. Harrod Dr. and Snaffle Rd.
- Undersized infrastructure.
- Project is to construct upsized stormsewer and expand an existing detention basin on Ft. Harrods Dr.
- New project identified and added to the priority list in 2020. Design work underway.
- Construction anticipated in 2022.



E 3rd St. and Ohio St.- CD 1

- **Added to Priority List in 2020**
- **Project design to start in 2022**
- **Current Opinion of Probable Cost- \$900,000**

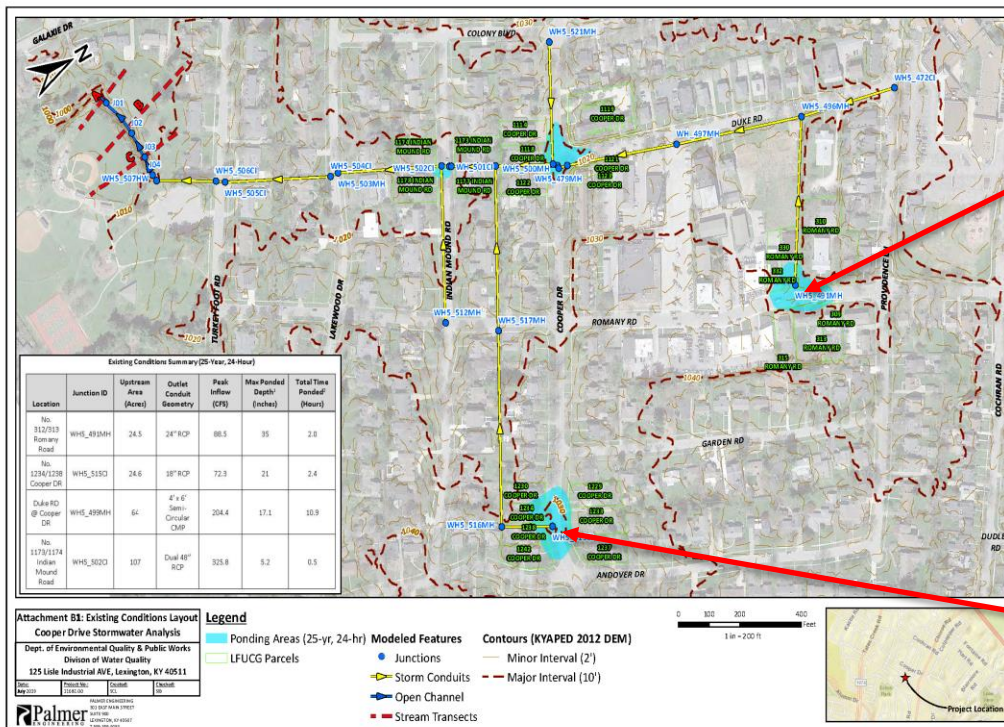


East Third St. & Ohio Project Area



Cooper Dr. Stormwater Improvements- CD 5

Design to start in 2022. Current Opinion of Probable Cost- \$2,500,000



3/4/2018 28 Shared on Twitter: "NEVER EVER drive through flood waters!" @LEX18News viewer Nathan Moore captured a flooded Romany Road in Lexington's Chevy Chase neighborhood. #18StormTracker





“MINOR” STORMWATER PROJECTS

- Smaller projects to mitigate nuisance flooding or;
- Larger repair projects (>\$50,000), which require engineering design and are openly bid for construction. These would not likely meet the criteria for Priority Capital projects.



“MINOR” STORMWATER PROJECTS

- Pending Construction Projects
 - Barnard Dr. (CD 6)
 - Bob O Link Dr. (CD 11)
 - Campbell Ln. (CD6)
- Current Design Projects:
 - Viley Rd (CD 11)
 - Savannah/ Guilford (CD 10)
 - Meadowthorpe (CD 11, after redistricting)
 - Masterson Station (CD 2)

“MINOR” STORMWATER PROJECTS



Masterson Station



Meadowthorpe



Viley

STORMWATER INFRASTRUCTURE MANAGEMENT

- 3 FTEs manage a contractor to clean and repair Stormwater infrastructure with an annual budget of \$900,000.



Patchen Wilkes & Winchester Road

STORMWATER INFRASTRUCTURE MANAGEMENT



Centre Parkway Basin
Maintenance

Point Repair- Courtney
Ave.



STORMWATER INFRASTRUCTURE MANAGEMENT

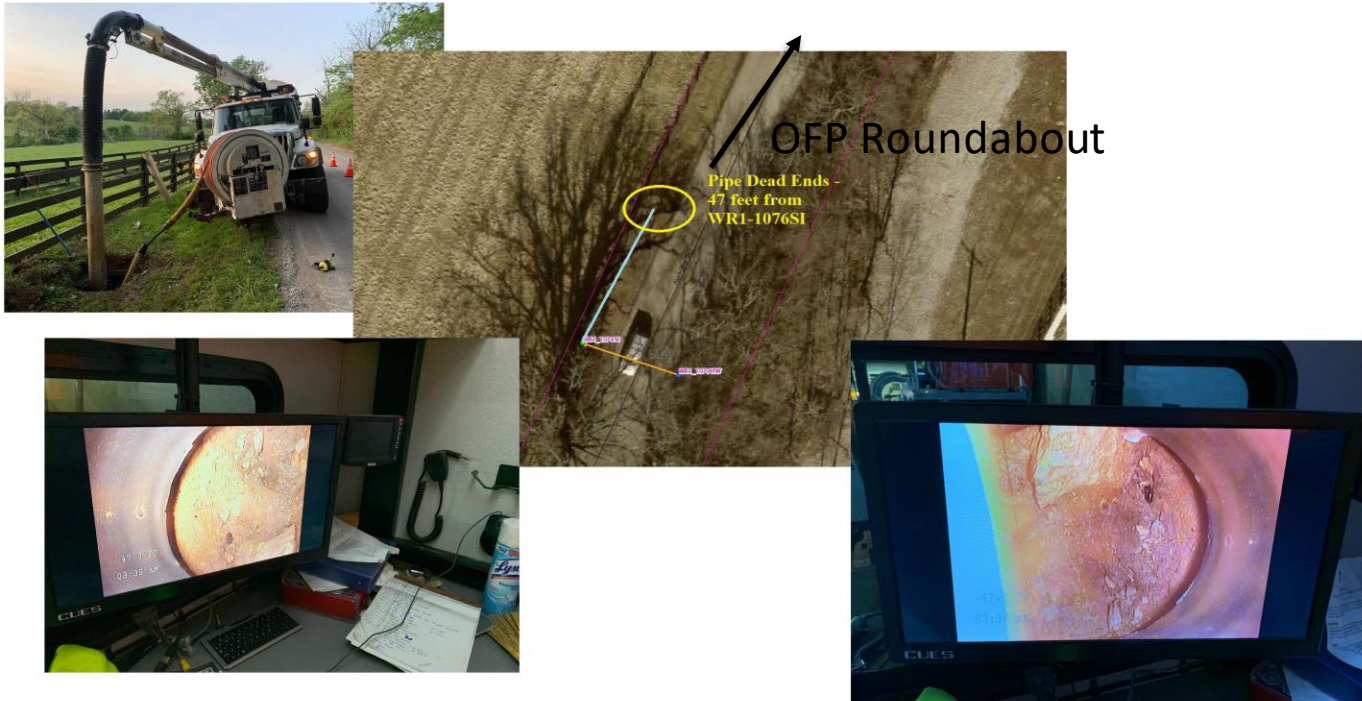
Completed Work Orders

Year	CCTV	Point Repair	Clean/Repair Basin	Totals
2018	16	25	46	87
2019	17	56	69	142
2020	15	21	25	61
2021	30	108	50	218



Frustrating Outcomes

May 2022



Street Flooding- Alexandria Dr. south of the roundabout



SUPPLY CHAIN/ ECONOMY PROJECT MANAGEMENT IMPACT

- Supply chain issues are creating delays in obtaining construction material
- Bid prices are higher than in 2020-2021
- Potential shortages of concrete and concrete building materials.

NEAR TERM OPPORTUNITIES



PRIORITY LIST EVALUATION

- Strand Associates completed an evaluation of projects 82 - 85 for viability.
- Recommendations;
 - Further evaluation of the following projects:
 - Mentelle Park (#82), CD3
 - Idle Hour Dr. (#83), CD5
 - Gainesway Dr. (#85), CD8
 - No further evaluation of Elmwood Dr (#84), CD12. Maintenance has resolved a minor issue.
 - Consultants to be selected to start on 82 and 83 in 2022.



CHALLENGES FOR 2022

- Completing projects currently under design to clear up a project backlog.
- Maintaining the Stormwater Infrastructure Management Group's level of effort.
- Assist with the creation, deployment, and updating of a project web-based map. <https://lfucg.maps.arcgis.com/apps/webappviewer/index.html?id=357a688c5cf046b29c0756dd7ffb65cf>



QUESTIONS?

