

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

*July 7, 2020*



**LEXINGTON**



## AGENDA

- Stormwater (SW) Priority Project List Overview
- 2019: Positive Efforts/Outcomes
- 2019: Challenges
- Near-term Opportunities
- Consent Decree Update
- Questions







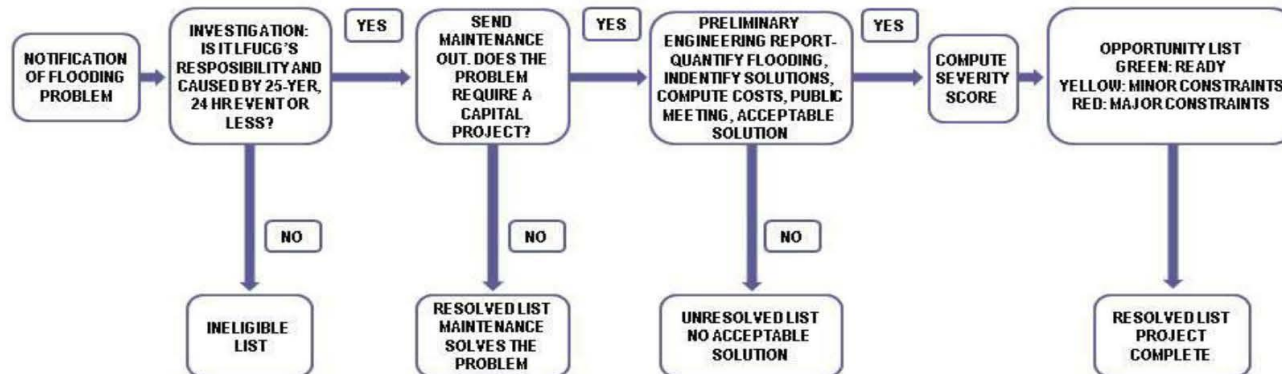
## **Stormwater (SW) Priority List**

- 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.



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.



**Stormwater Priority Projects**  
Remaining Projects with Drainage Basin Groups

**Legend:**

- Underground Waterways
- Major Storm Sewer Pipe
- Waterway
- Waterway
- Stormwater Priority Project Groups
- Project Drainage Area

**Project Callouts:**

- Project: #77 Viley Rd @ Old Frankfort Pike \$328,000
- Project: #79 Parkside Dr @ Shandon Dr \$2,434,000
- Project: #81 Lakeland \$1,516,000
- Project: #84 Elmwood Dr \$563,000
- Project: #57.5 Rogers Rd / 2000 Block \$555,000
- Project: #80 Eastland Park Tributary @ Cowley Dr \$1,600,000
- Project: #95 National Ave \$15,271,000
- Project: #96 N Limestone \$2,345,000
- Project: #90 Ashland Park \$5,689,000
- Project: #83 Idle Hour Dr \$750,000
- Project: #71.5 Peachtree Rd \$921,000
- Project: #72 Woodhill Park \$2,079,000
- Project: #93 Vernon/Hollywood \$10,700,000
- Project: #97 Ashland \$19,500,000
- Project: #85 Gainesway Dr \$1,719,000
- Project: #85.5 Longview Dr East \$11,506,000
- Project: #80.3 Barkley Dr/Southgate Dr
- Project: #66.6 Tucson Dr
- Project: #94 Stonewall Community \$1,500,000
- Project: #88 South Elkhorn \$650,000
- Project: #80.6 Longview West
- Project: #80.4 Lane Allen Rd/Darien Dr \$1,592,000
- Project: #92 West Gardenside \$2,868,000
- Project: #99 Aylesford Park \$6,600,000
- Project: #71 Picadome
- Project: #83.5 Lafayette Pkwy/Southbend Dr
- Project: #74 Arcadia Park/Roseberry Ln \$2,048,000
- Project: #82 Mentelle Park \$469,000
- Project: #80.4 Wolf Run/Southland Dr Project \$9,000,000

**Table 4: Project Data**

Project #	Project Name	Project Location	Project Status
77	Viley Rd @ Old Frankfort Pike	Old Frankfort Pike	Completed
79	Parkside Dr @ Shandon Dr	Shandon Dr	Completed
81	Lakeland	Lakeland	Completed
84	Elmwood Dr	Elmwood Dr	Completed
57.5	Rogers Rd / 2000 Block	Rogers Rd	Completed
80	Eastland Park Tributary @ Cowley Dr	Cowley Dr	Completed
95	National Ave	National Ave	Completed
96	N Limestone	N Limestone	Completed
90	Ashland Park	Ashland Park	Completed
83	Idle Hour Dr	Idle Hour Dr	Completed
71.5	Peachtree Rd	Peachtree Rd	Completed
72	Woodhill Park	Woodhill Park	Completed
93	Vernon/Hollywood	Vernon/Hollywood	Completed
97	Ashland	Ashland	Completed
85	Gainesway Dr	Gainesway Dr	Completed
85.5	Longview Dr East	Longview Dr East	Completed
80.3	Barkley Dr/Southgate Dr	Barkley Dr/Southgate Dr	Completed
66.6	Tucson Dr	Tucson Dr	Completed
94	Stonewall Community	Stonewall Community	Completed
88	South Elkhorn	South Elkhorn	Completed
80.6	Longview West	Longview West	Completed
80.4	Lane Allen Rd/Darien Dr	Lane Allen Rd/Darien Dr	Completed
92	West Gardenside	West Gardenside	Completed
99	Aylesford Park	Aylesford Park	Completed
71	Picadome	Picadome	Completed
83.5	Lafayette Pkwy/Southbend Dr	Lafayette Pkwy/Southbend Dr	Completed
74	Arcadia Park/Roseberry Ln	Arcadia Park/Roseberry Ln	Completed
82	Mentelle Park	Mentelle Park	Completed
80.4	Wolf Run/Southland Dr Project	Wolf Run/Southland Dr Project	Completed





## **CONSENT DECREE OBLIGATION- SW CAPITAL**

- Amount **spent** (2011-present) on completed Stormwater Priority Capital Projects- **\$19,450,000**
- Amount **budgeted** for currently active Stormwater Priority Capital Projects- **\$5,250,000 (Southland Park/Yuma/Tucson, Woodhill/Peachtree, Joyland, Silverleaf Ct.)**
- Amount **needed** to meet the 1/3/21 Stormwater Priority Capital Project deadline- **\$5,300,000.**



# **2018 - 2019 Outcomes “The Good”**





## **SOUTHLAND/WOLF RUN PROJECTS**

- Southland/Wolf Run Project (consolidation of projects #66.6, #71, #80.3, #80.6 and #85.5). Total estimated cost \$10 M.
- Phase 1
  - New stormsewer system to relieve street flooding.
  - Over 80 sump pump discharges being removed from the sanitary sewer and connected to the new stormsewers.
  - Water quality improvement on the vacant lots at the end of Goodrich Ave. constructed with native grasses and plants.





## **SILVERLEAF CT.**

- The Preliminary Engineering report - undersized and adverse (reverse) sloped infrastructure near the property.
- The solutions identified
  - 1)upsized the storm infrastructure,
  - 2) wet floodproofing the structure,
  - 3) acquire and demolish the structure.
- Acquisition and demolition was the most cost effective and reliable and preferred by owner.
- Acquisition has been approve by council (Res 237-2020).





## **ELIZABETH ST.**

- Continuation of priority project #60 to relieve flooding in the intersection of Elizabeth St. and Forest Park.
- Project is to construct new inlets in the intersection and new pipe to connect with existing system in the median.
- Construction is underway.





## **WILSON DOWNING & DARTMOUTH**

- Large scale maintenance project to rebuild part of the existing box culvert
- Old culvert has undergone two large repairs in 5 years.
- CCTV inspection revealed structural issues with the old culvert (constructed in the mid 1960's), resulting in the project to replace portions of it.
- Complete – spring 2020.





# **2019 Frustrating Outcomes**



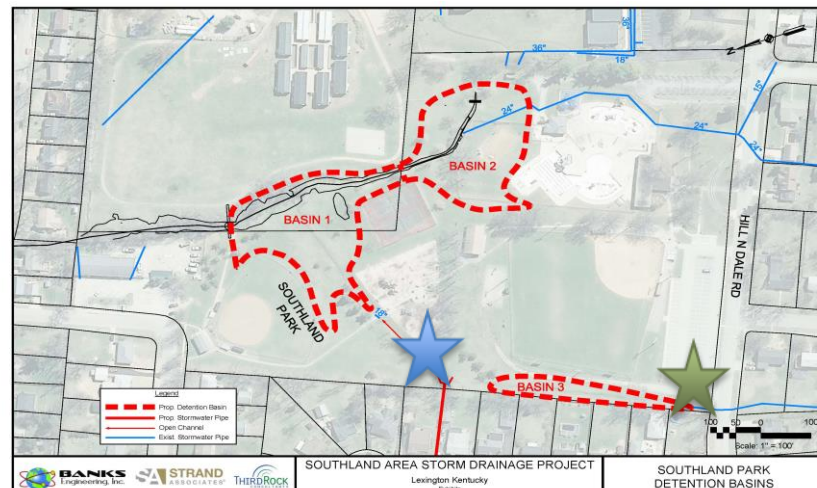
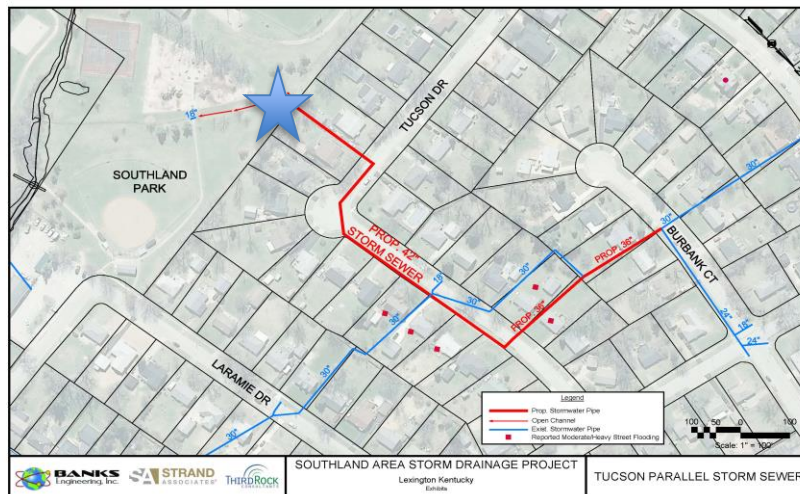


## **SOUTHLAND/WOLF RUN PROJECTS**

- Southland/Wolf Run Project (next phases)
- 2019 efforts focused on the Southland Park / Yuma / Tucson portion. DWQ proposed:
  - New detention on Southland Park and Yuma Ct.
  - New storm sewers in the Tucson Dr. area.
- The Yuma Ct detention option was rejected by property owners. Effort now is construct more piping in streets (Tucson, Pasadena, Burbank, and Topeka). Estimated construction cost- \$1,900,000).



# Southland Park/Yuma/Tucson Project Area







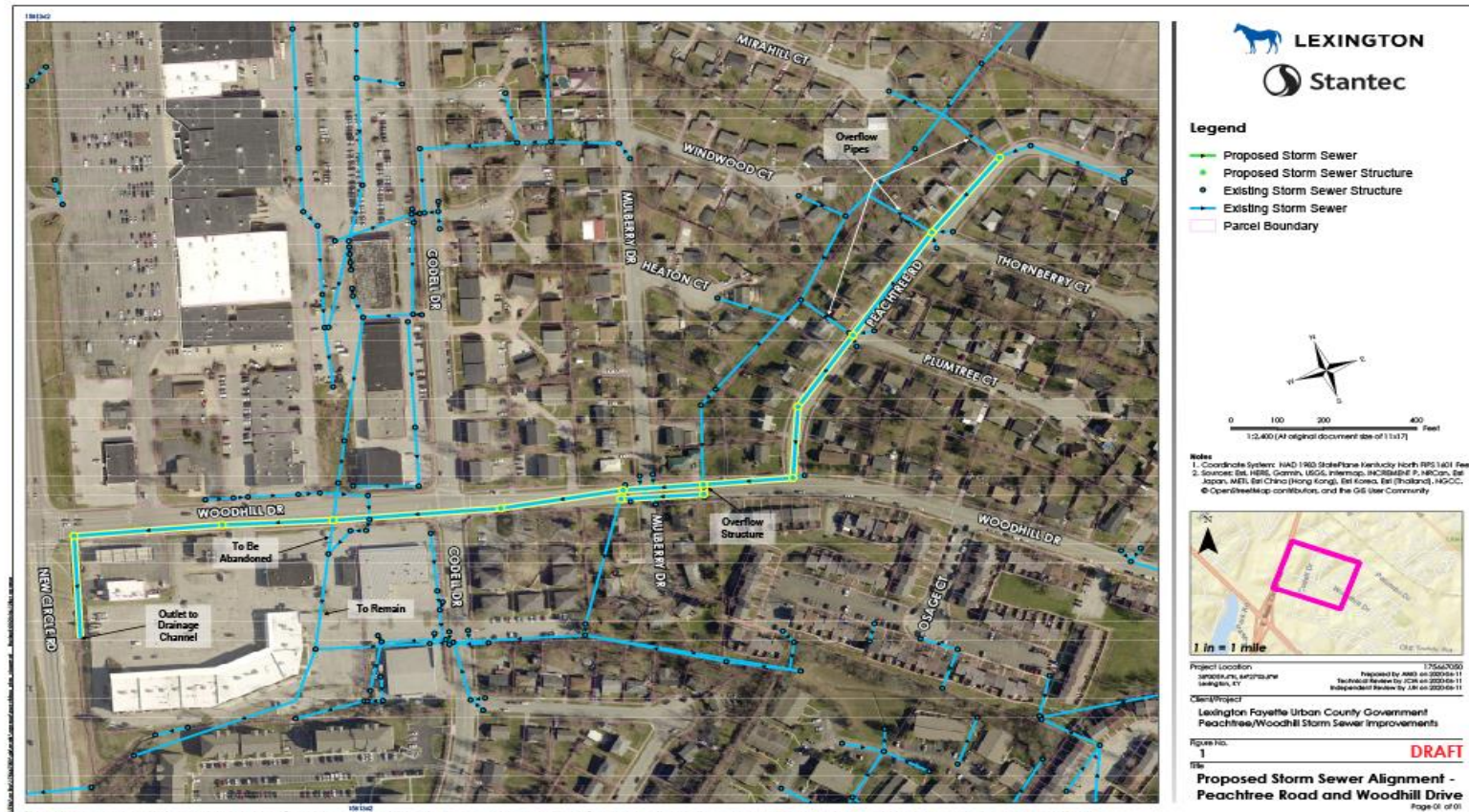
## **ACTIVE SW PRIORITY PROJECTS**

- Woodhill/Peachtree Project (consolidation of projects #71 and #72). Total estimated cost - \$1.6 M
  - Project objective-construct a parallel relief storm sewer system from Palumbo Drive to near the intersection of New Circle Road and Woodhill Drive.
  - 2019 setback- proposed alignment rejected by downstream property owners.





# Woodhill/Peachtree Project







## **COVID-19 PANDEMIC PROJECT MANAGEMENT IMPACT**

- Derailed project management momentum. operations.
- Public meetings to present projects to stakeholders have been compromised.
- Right of Way /Easement acquisition is always difficult, post-pandemic world has many uncertainties.





## **NEAR TERM OPPORTUNITIES**







## **JOYLAND AREA PROJECT**

- The Joyland Area project is a combination of projects #79 & 81
  - The Joyland Area project has an estimated cost of \$2,400,000. \$1M has been requested in the FY 2021 Budget for early action sub-projects.
  - Preliminary Project components include: detention basins on vacant land between Shandon Dr. & Cabot Dr. and Lisa Dr., culvert improvements on Allen Dr., stormsewer improvements along Irene Dr. and Freeman Dr., stormsewer improvements at Biskoff Dr. and Pierson Dr.



## **JOYLAND AREA PROJECT**





# E 3<sup>rd</sup> St. and Ohio St.



- Discussed in the August 2019 update presentation
- Bell Engineering has completed a preliminary evaluation of the existing system and developed alternates to relieve the flooding.





## **POTENTIAL PROJECTS TO BE ADDED TO SW PRIORITY PROJECT LIST**

**East 3<sup>rd</sup> & Ohio – The two preliminary alternates developed are:**

- 1. Replace the existing dual pipe system and construct additional inlets in Ohio St. from Fourth St. to Third St., and upsize the stormsewer in Third St. and connect to an existing manhole in the median of Elm Tree Ln. Preliminary OPC \$446,000.**
- 2. Construct a new stormsewer in Coleman Aly. to divert flow from north of Fourth St. to Third St. This pipe would connect to an upsized pipe in Third St. to Elm Tree Ln. Preliminary OPC \$525,000.**





# East Third St. & Ohio Project Area





# East Third St. & Ohio Project Area







## **Nuisance/Maintenance Issues**

- Since inception of the Water Quality Management Fee, we've expanded focus beyond priority capital projects and begun addressing smaller, “nuisance” type projects.
- Small nuisance relief/repair projects completed include East 6<sup>th</sup> St., Liberty Rd., Mentelle Park, and Bahama Rd. (Winchester Rd. entrance), Gainesway Dr.
- May 18, 2020 storm has presented some new challenges to solve.





**CONSENT DECREE  
STORMWATER FLOODING  
COMMONWEALTH ENVIRONMENTAL  
PROJECT (CEP) STATUS**





## **CEP REQUIREMENTS**

<b>1</b>	Complete an analysis of flood prone areas in the Urban Services Area.	✓
<b>2</b>	Create a methodology for identifying future flood abatement capital projects	✓
<b>3</b>	Establish a component of the Water Quality Management Fee to accommodate funding of flood abatement capital projects. Fee should be sufficient to generate a minimum of \$30 million over 10 years.	✓
<b>4</b>	Spend at least \$200,000 on the investigation, analysis, and report.	✓





## CONSENT DECREE STORMWATER FLOODING CEP

- The CEP **did not require** LFUCG to spend \$30M on priority flooding projects in 10 years, that was the **goal** established in 2008 and adopted in 2011.
- Water Quality aggressively pursued that goal and;
  - Completed projects totaling \$19.45M between 1/3/2011 and present.
  - Budgeted and positioned projects valued at \$5.25M.





## **CONSENT DECREE STORMWATER FLOODING CEP**

- The duration of the 10 year goal expires 1/3/21.
- Water Quality is drafting the final report to close out the CEP.
- Water Quality acknowledges that despite the closeout of the CEP, capital construction for priority flooding projects must continue until the Priority List ceases to exist.



# **QUESTIONS?**

