

Appendix D: Additional Stormwater Concerns and Opportunities

In addition to the capital improvement projects, HR Green noted several other stormwater concerns that were moderately severe or occur less frequently. These concerns should be noted and tracked over time so that they can be addressed as funding becomes available.

- **Crestwick Drive – 9700 Block.** Residents have reported high groundwater intrusion into basements, causing sump pumps to run constantly. High groundwater is unexpected in this area because the ground is relatively high with drainageways available. Testing by Missouri American Water could not confirm that the nearby large water mains caused the groundwater. Residents also report yard flooding.

MSD constructed stormwater improvements in this area in 2018, which included new storm sewer and inlets in the back and side yards of 9733 and 9741 Crestwick Drive. The project reduced but did not eliminate flooding concerns.

- **Doverhill Drive – 11600 Block.** Two homes sit on large lots with low walkout basements near a creek. Structural measures to mitigate flood risk are not practical since the basement openings are so close to the creek. Floodplain mapping does not include the creek adjacent to these lots, so they are currently located outside the mapped floodplain. The current floodplain mapping likely underestimates flood risk. It may be possible that a detailed mapping study of the tributary creek could place the homes in the floodplain, and if so, could make the homes eligible for FEMA grants for buyouts.
- **Doverhill Drive – 11700 Block.** The creek downstream of Doverhill Drive is slowly eroding. In places, the bank is up to 8 feet tall. The erosion threatens yards but not homes. The channel should be monitored in case erosion accelerates.
- **Mentz Hill Road.** Mentz Hill Road is lined by roadside ditches. The north portion of the road has a steep longitudinal slope. The south portion of the road flattens out about 320 feet east of Forest Path Drive. At this point, water in the ditch often overtops onto the street, causing flooding and debris build-up. The ditch should be adjusted to keep water and debris off the street.
- **Meppen Drive Ditch.** There are minor erosion issues along the ditch that parallels the north side of the private portion of Meppen Drive, near 9919 Meppen Drive. The homeowner at 9919 Meppen Drive recently constructed a garage addition very close to (within 10 feet of) this channel with erosion issues. This issue seems confined to one particular property and could be best addressed privately.
- **Roanna Lane.** A 15-inch-diameter MSD storm sewer outlets near the back property line of 10642 Leebur Drive. A swale was previously constructed which was intended to carry the pipe's flow west along the back property lines of 10687 and 10693 Roanna Lane, and then south towards Roanna Lane. The swale is not functioning, allowing water to instead flow southeast through the yards of 10671 and 10683 Roanna Lane.
- **Roosevelt Drive Sinkhole.** A low-lying area exists on the side yard of 6 Roosevelt Drive. MSD's basemap shows this area as a potential sinkhole, which appears to be the only outlet out. Yard flooding occurs when runoff to the area exceeds the capacity of the sinkhole. It is our understanding that no houses or other structures are currently threatened by the ponded water. MSD has identified a project called Roosevelt Drive Storm Sewer (14143) which addresses the concern.
- **Rott Road Creek Erosion.** A creek channel flows south between 9262 and 9268 Rott Road. HR Green engineers observed erosion in the channel. In particular, erosion was observed near the pool at 9262 Rott Road. The top of bank is about 15-feet from a fence and pool deck. The bank is about

5.5' tall. MSD identified a streambank stabilization project in this area called Rott Rd #9262 Bank Stabilization (11028), which has a benefit-to-cost ratio of 0.65. Since this area is already on MSD's project list and the main structures in the area are not threatened, it was not included as a capital improvements project.

- **Southgate Lane to Meppen Drive Channel.** The storm channel between Southgate Lane and Meppen Drive is deeply entrenched, with banks about 10-feet-high. Tree litter and downed timber obstruct the flow of water. No serious threat to homes was observed at this time, but the channel should be monitored in case further deterioration occurs.
- **W Watson and Robyn Road Channel.** A resident on W Watson Road near Robyn Road is concerned with flooding and erosion due to the channel in the backyard. The resident has lived there for nearly 40 years, and flooding and erosion have accelerated in the last 20 years. The flooding and erosion currently threaten the yards and sheds for 12729-12782 W Watson Road. The flooding erosion should be monitored.
- **Watson Woods Court.** Runoff from Lynn Lane to the north flows south to the backyards of 8857 and 8851 Watson Woods Court, which have flat backyards. The drainage area to the backyards is about 1.7 acres, so directing water to the front yard from the backyard should be feasible for a private homeowner. This could be done by grading a swale or installing a private drain and pipe. Note that 8851 Watson Woods Court is just outside of the Sunset Hills boundary.

HR Green also identified the following opportunities:

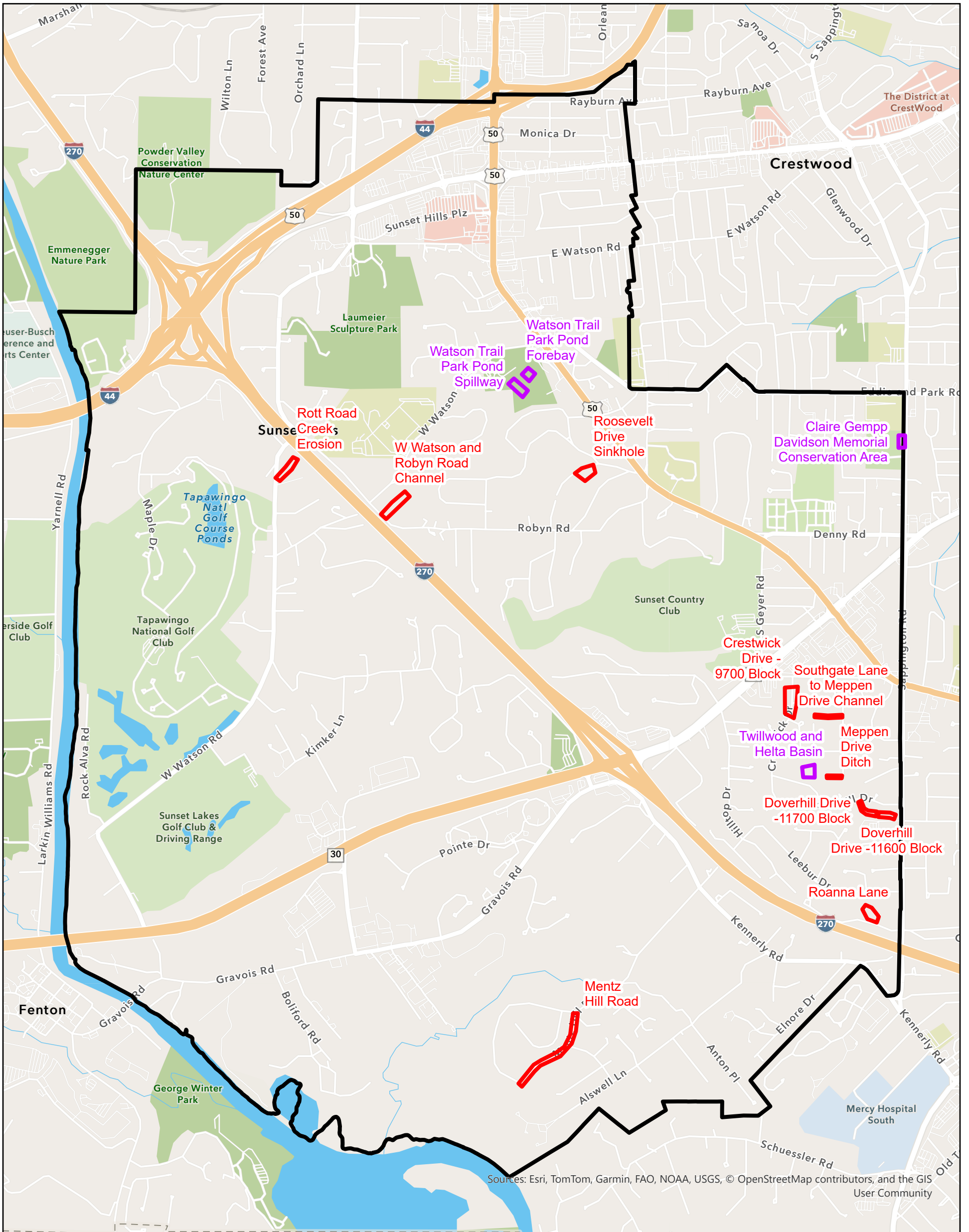
- **Claire Gempp Davidson Memorial Conservation Area.** City staff noted that there is often standing water behind the restrooms and near the parking lot at the Claire Gempp Davidson Memorial Conservation Area. Since the drainage area is small and the standing water does not appear to cause significant damage or safety concerns, this concern did not make the list of capital improvements projects. However, this concern could become an opportunity if the City wanted to address the issue with green infrastructure such as a rain garden. The Conservation Area already showcases native plantings, so it would be a good fit for native plants which help soak in runoff.
- **Watson Trail Park Pond Forebay.** The pond located in Watson Trail Park collects approximately 53 acres of drainage. The pond has a forebay (or smaller pond) at the entry point of most of the contributing drainage area. Between the forebay and the main pond is a weir which encourages water to be held in the forebay momentarily before continuing into the main pond. When runoff enters the forebay, the water slows down and drops out sediment. The City dredges the forebay about every 5 years. The bottom of the forebay is bedrock, which makes dredging easier than if the bottom was soil. This maintenance is an effective way to protect the main pond and the downstream system from sediment and should be continued as needed.
- **Watson Trail Park Pond Spillway.** On the south end of the pond is a spillway and 12" diameter low-flow pipe. The spillway is only about 6" higher than the crown of the low-flow pipe, so the pond provides little detention in storms that exceed the low-flow pipe capacity. This was confirmed anecdotally by City staff, who noted that the spillway is engaged more than once a year. The spillway could be raised to provide more detention. Impacts to the park should be considered when evaluating adjustments to the pond's spillway.

A map showing the location of the additional concerns and opportunities is in Appendix E1.






Appendix D1: Map of Additional Stormwater Concerns and Opportunities

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0 900 1,800
Feet
1 inch = 1,800 feet

-  Sunset Hills Boundary
-  Additional Concerns Not Included as a Capital Project
-  Stormwater Opportunity