WESSLER ENGINEERING

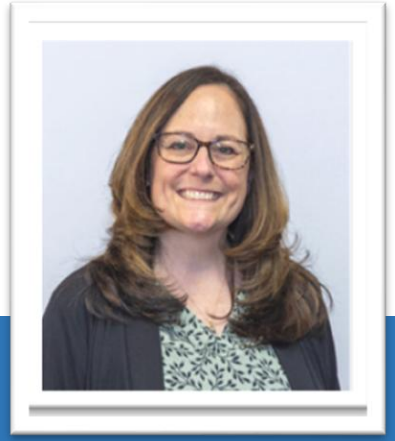
City of GREENFIELD Indiana

Greenfield Stormwater Utility

June 11, 2025

Mary Atkins, P.E., CPESC, LEED AP // Vice President

PRESENTER



MARY ATKINS

Wessler Engineering, Vice President

25 years experience

Professional Engineer
Certified Professional in Erosion & Sediment Control

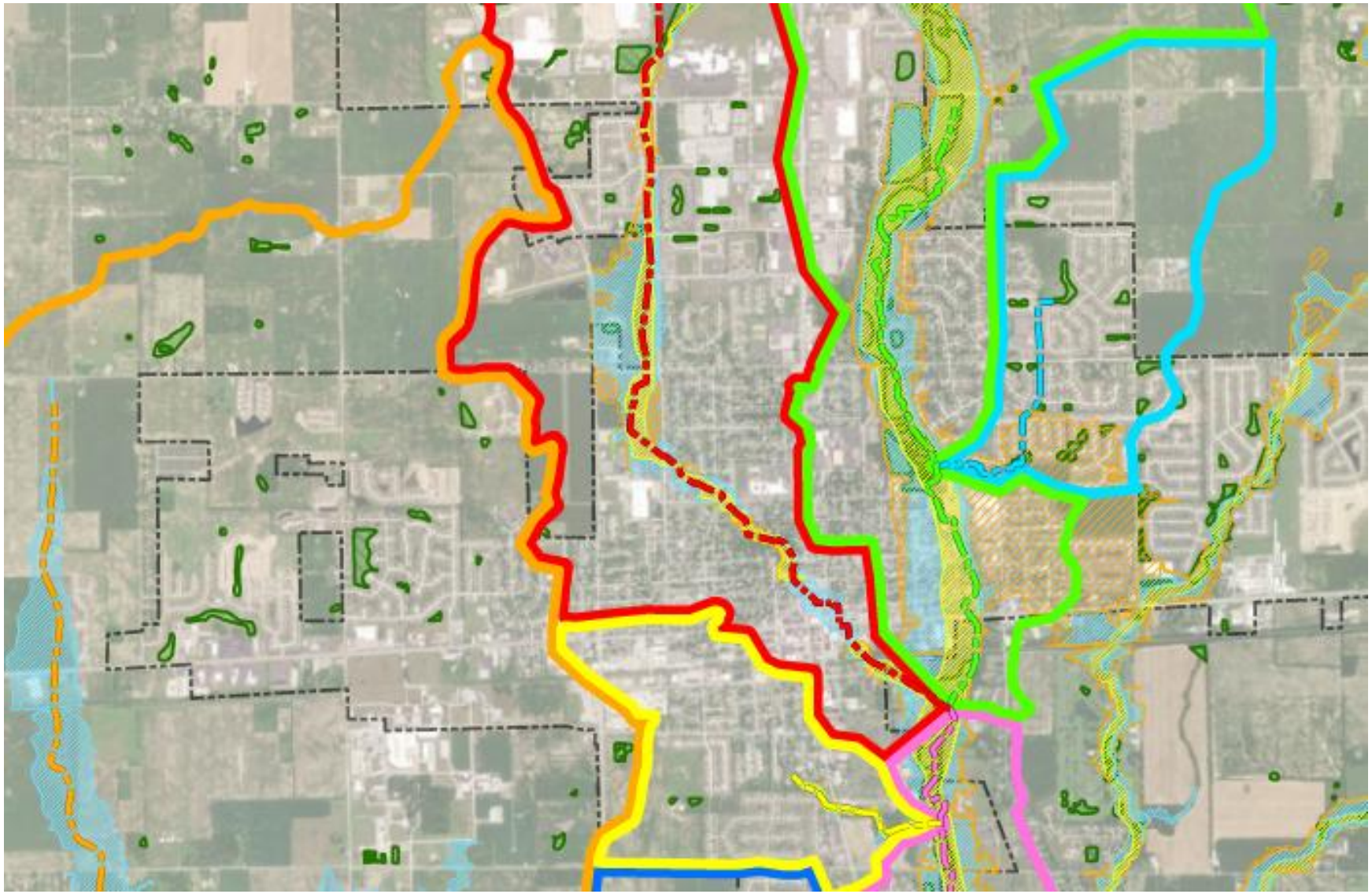
Stormwater and Environmental Engineering

30 MS4s in Indiana
19 Stormwater Utilities in Indiana

7 inches of rain in the first week of April

Andrew Vinard, 18, a senior at Eastern Hancock High School, kayaked near the intersection of Broadway and South streets in downtown Greenfield just before midnight Friday, April 4, after an onslaught of rain flooded city streets. The Daily Reporter frequently features photos of the local community, taken by members of our community. Take your best shot and email a picture to dr-editorial@greenfieldreporter.com with information about the photo.

Where does the rain go



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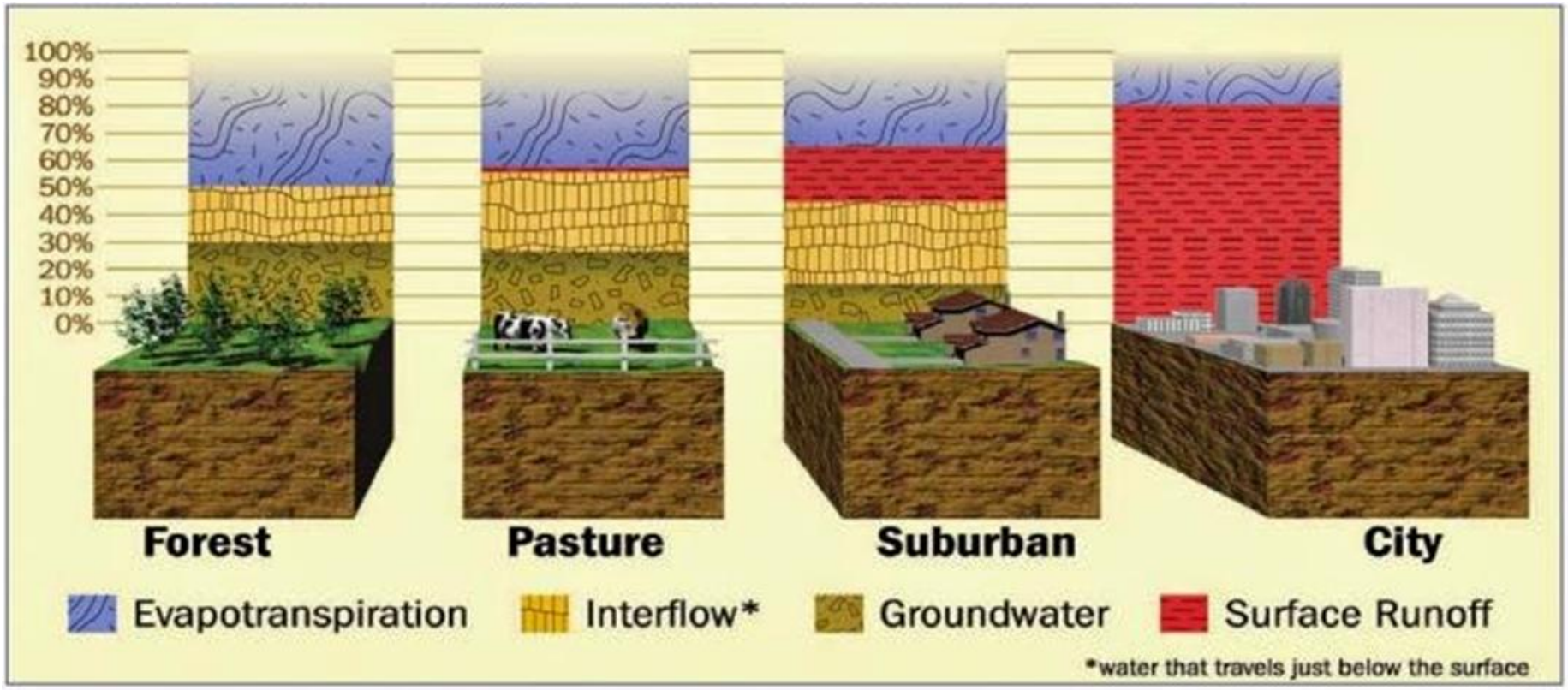
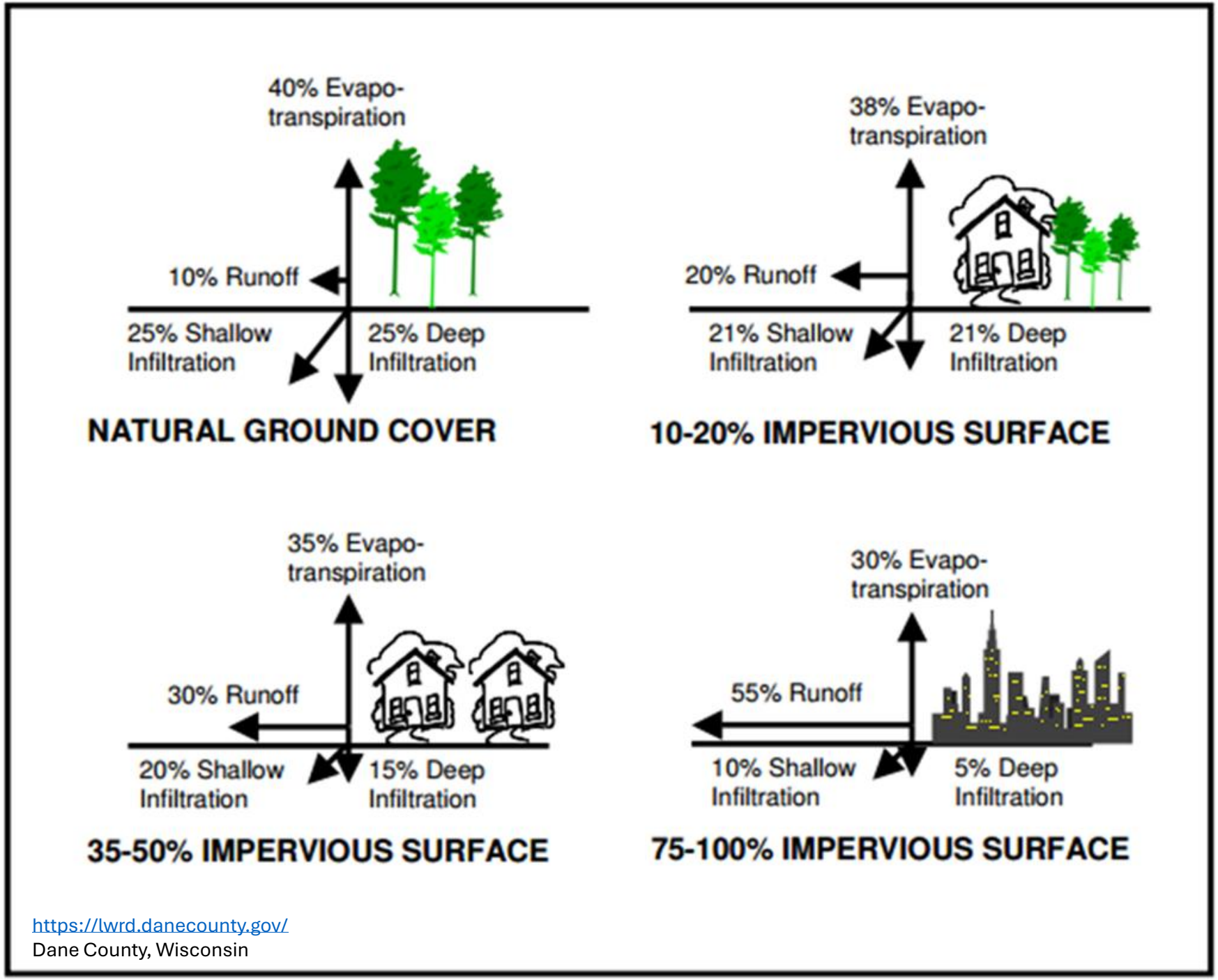


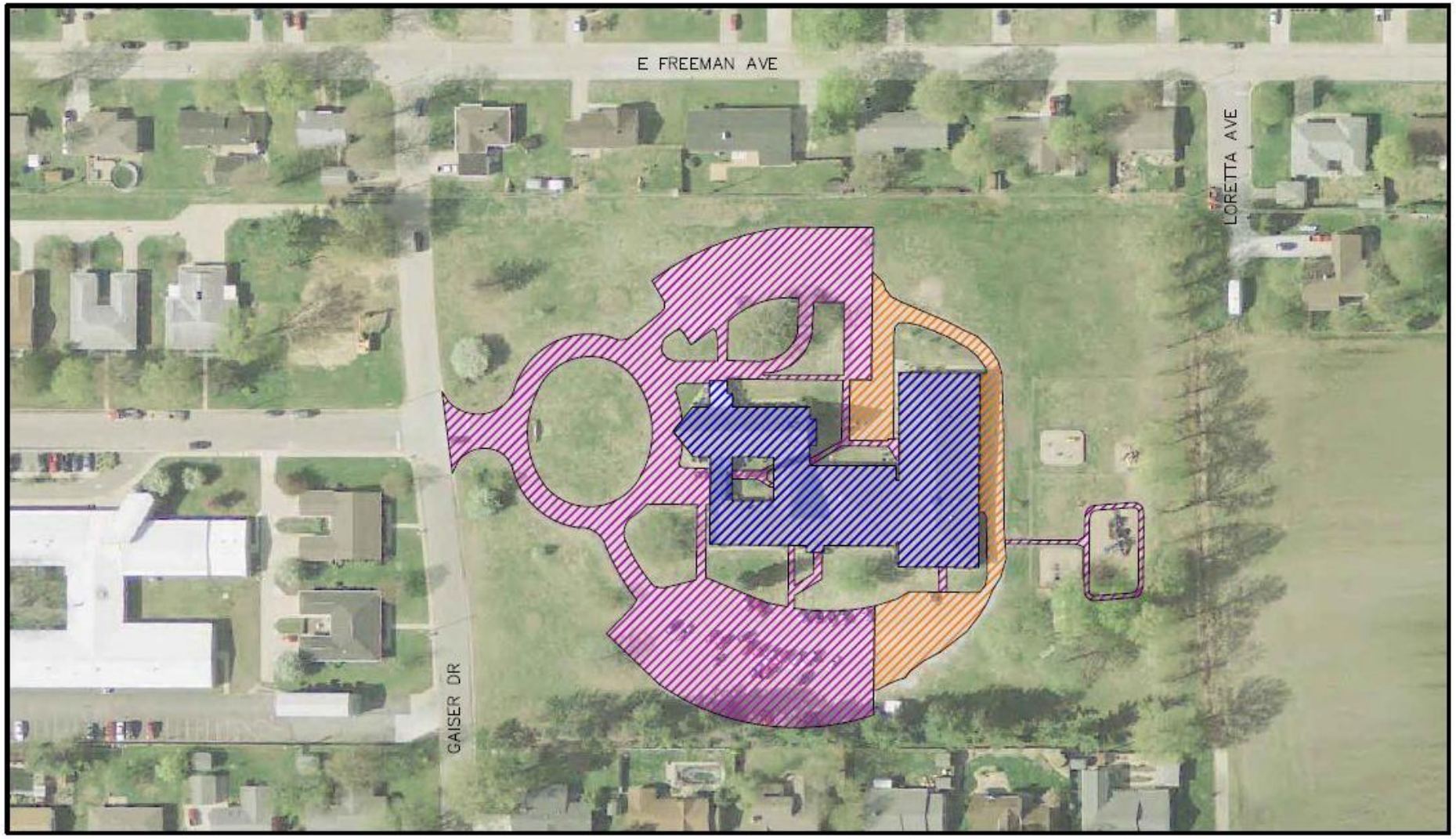
https://ecology.wa.gov/blog/april-2015/5-tips-for-homeowners-to-prevent-stormwater-pollut
Department of Ecology, State of Washington

- Impervious surfaces: hard surfaces such as rooftops, driveways, parking lots and patios (concrete, asphalt and compacted gravel)
- Increases in impervious surface = more stormwater runoff
- Equivalent residential unit (ERU) is based on impervious surface areas



https://lwrd.danecounty.gov/
Dane County, Wisconsin

Impervious Surface Area Measurements



User fees correlate to stormwater runoff

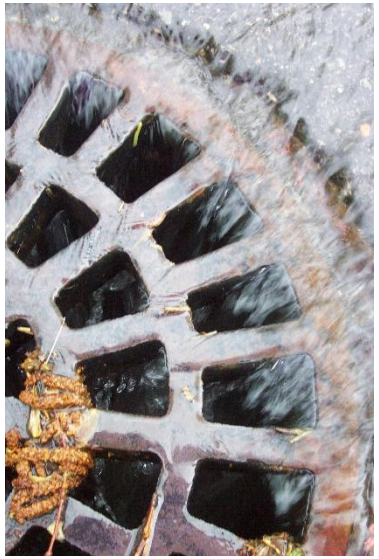
- Based upon “Equivalent Residential Unit”, or ERU
- 1 ERU = average impervious area of residential properties
- Increases in hard surface correlates to increased volume and rate of runoff
- User fees based on number of ERUs and cost of stormwater management

Current Greenfield Storm Water Utility?

- Utility that provides storm water management
- Revenues to be spent within rights-of-way or easements
- Generates revenues by charging user fees on monthly utility bills
- 1 ERU equals 2,250 square feet for the City of Greenfield

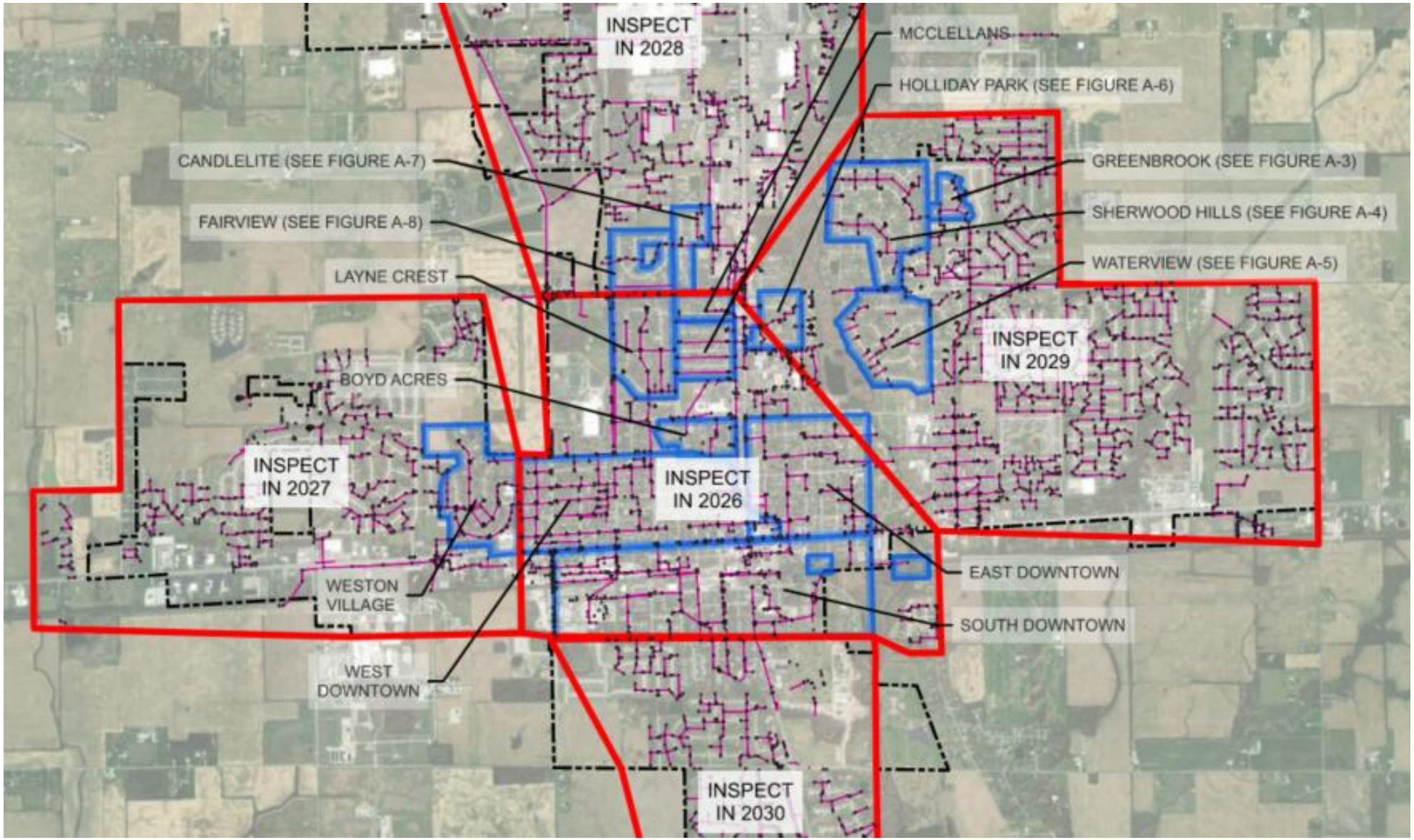
Category	*Fee*
Base Fee per month	$4.00
Residential properties	$2.00 per ERU
Non-residential properties	$2.00 per ERU $450.00 max fee (at 225 ERUs)

Stormwater management needs



- Maintenance and inspection of the existing storm system (pipes, inlets, ditches, culverts, manholes etc.)
- Labor, equipment, materials and administrative costs
- Failing and deteriorating stormwater infrastructure
- Priority stormwater capital projects
- MS4 programming

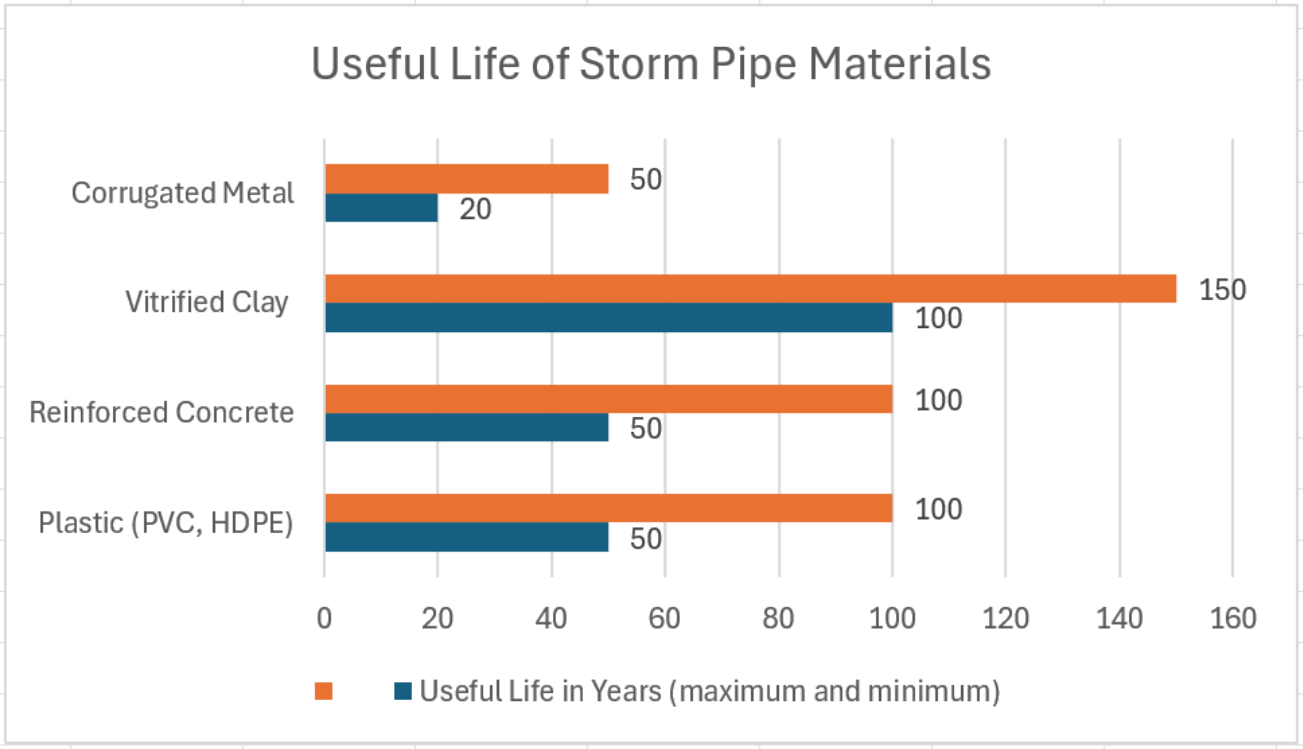
Infrastructure Inspection Plan



Infrastructure Inspection Plan

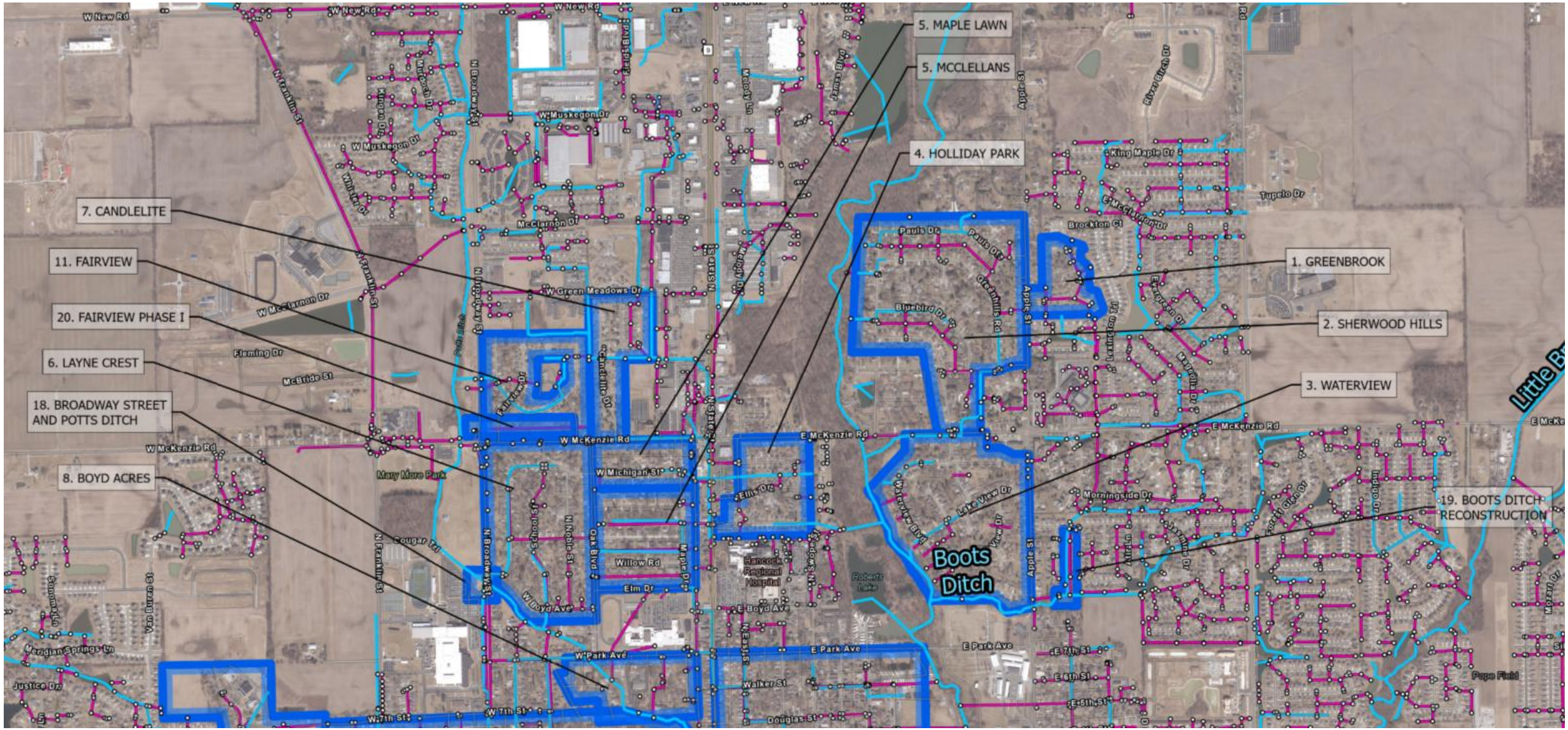
Year	*LF of Pipe Inspection*	*No. of Structure Inspections*	*Total Manhours per Year*	*Consulting Cost Estimate*
2026	137,410	1,366	2,000	$320,000
2027	67,450	721	930	$155,000
2028	103,685	1,108	1,400	$238,000
2029	166,837	1,710	2,200	$383,000
2030	60,087	563	870	$158,000

Useful Life of Storm Infrastructure

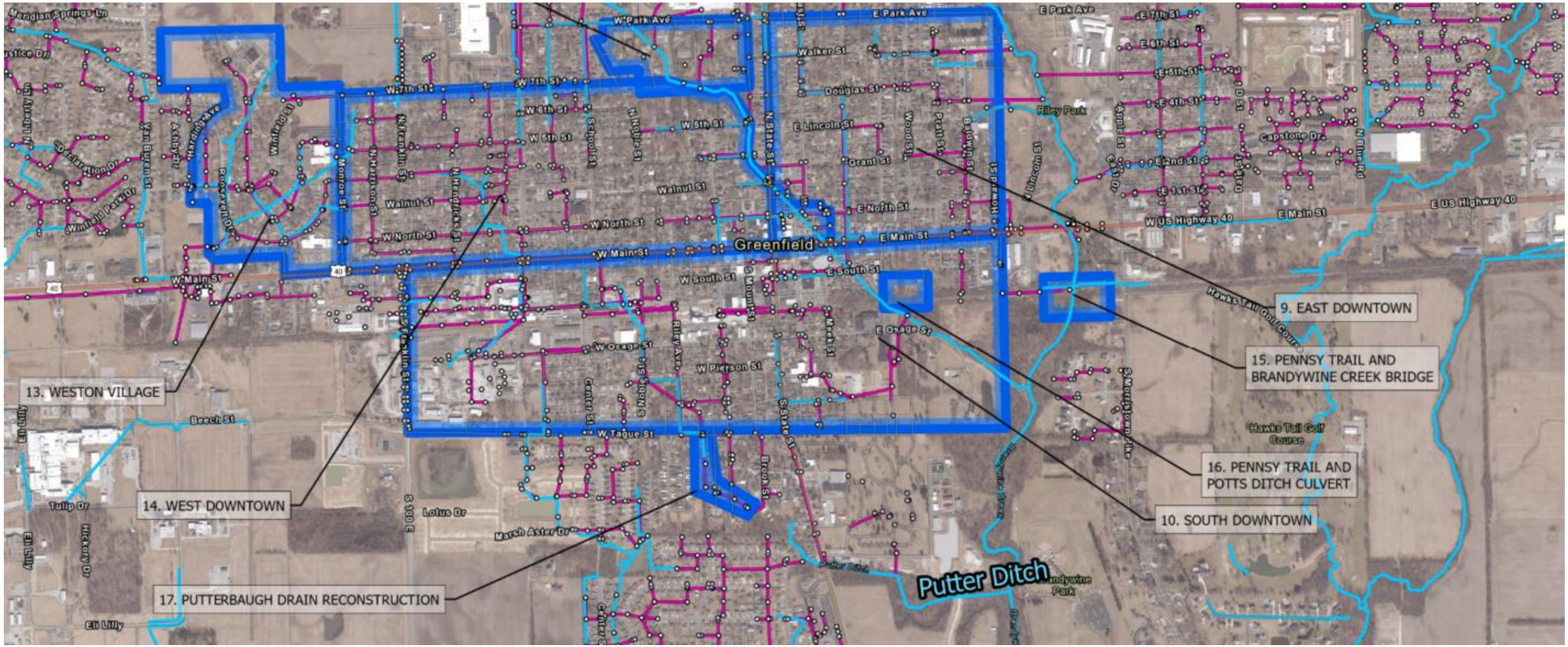


Project Location	*Neighborhood Built*	*Replacement Year (75-Yr Useful Life)*
West Downtown	1840	1915
East Downtown	1900	1975
South Downtown	1900	1975
Holliday Park	1950	2025
Fairview	1960	2035
Bowman Acres	1960	2035
Greenbrook	1970	2045
Candlelite	1970	2045
Waterview	1970	2045
Sherwood Hills	1970	2045
Weston Village	1950	2025

Stormwater Capital Improvement Projects (North)



Stormwater Capital Improvement Projects (South)



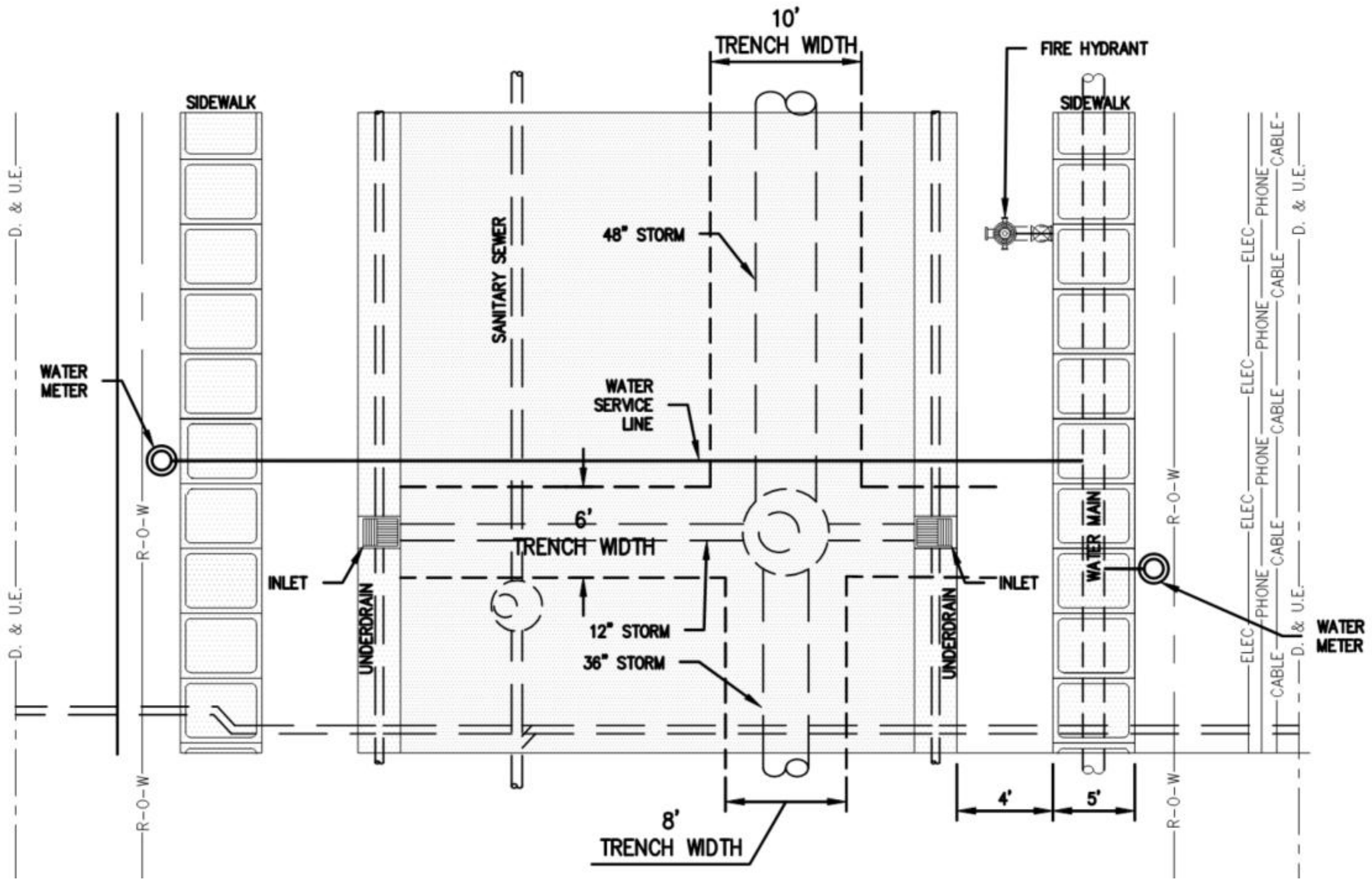
Stormwater Capital Improvement Projects

ID	Project Area	Project Costs Current	2035 Projection	2045 Projection
1	Greenbrook	$5,935,000	$7,974,875	$10,717,625
2	Sherwood Hills	$31,561,500	$42,197,849	$56,712,101
3	Waterview	$25,632,700	$34,446,049	$46,292,951
4	Holliday Park	$12,511,950	$16,815,369	$22,601,031
5	Maplelawn and McClellans*	$3,000 (Mapping)		
6	Layne Crest*	$6,000 (Mapping)		
7	Candlelite	$10,677,950	$14,350,749	$19,285,651
8	Boyd Acres*	$2,000 (Mapping)		
9	East Downtown*	$90,000 (PER)		
10	South Downtown*	$90,000 (PER)		
11	Fairview	$12,669,150	$17,024,073	$22,879,227
12	Bowman Acres	$10,488,200	$14,094,543	$18,942,307
13	Weston Village*	Previous Report		
14	West Downtown**	$23,939,177	$32,171,860	$43,236,547
15	Pennsy Trail and Potts Ditch	$2,732,500	$3,671,974	$4,935,776
16	Pennsy Trail and Brandywine Creek	$3,935,000	$5,288,577	$7,107,173
17	Putterbaugh Drain Reconstruction	$1,152,500	$1,505,965	$2,022,935
18	Broadway Street and Potts Ditch	$1,971,250	$2,648,834	$3,560,166
19	Boots Ditch Reconstruction	$931,250	$1,218,209	$1,636,291
20	Fairview Phase I	$1,713,750	$2,236,033	$3,005,267
	Overall Total	**~$145,851,877**	**~$195,644,959**	**~$261,935,048**

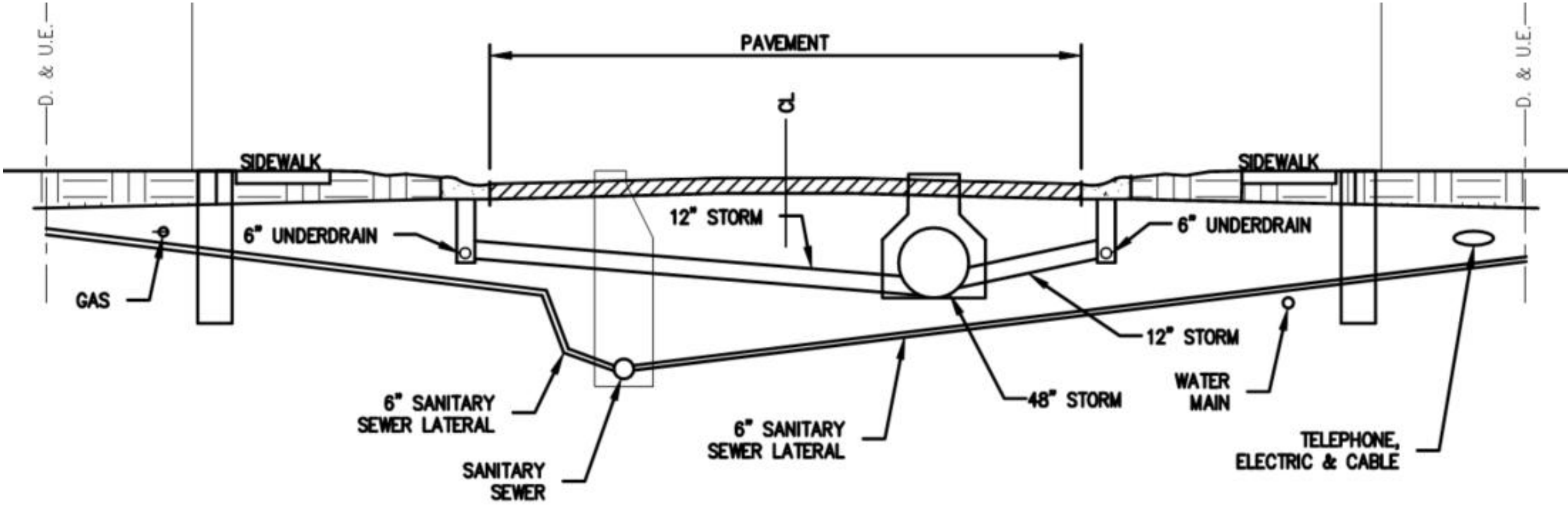
Cost Estimates

- Stormwater Infrastructure Cost
- Pavement replacement, sidewalks, ADA ramps
- Sanitary sewer replacement
- Drinking water system replacement
- Utility relocation (gas, electric, fiber, etc.)
- Engineering fees (survey, design, permits, construction observation)

Storm project impact on other utilities



Utility Profile



Stormwater Pollution

Stormwater picks up pollution and carries it to waterways.

Once pollution reaches waterways, it can poison fish, damage ecosystems, and flow to water used for drinking or recreation.

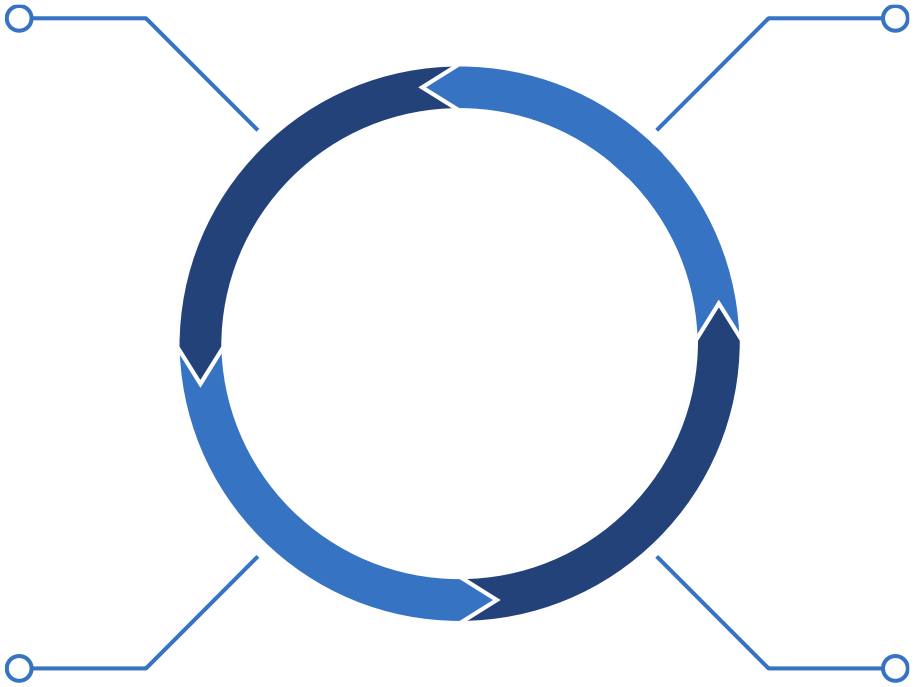
MS4 Program

Permit Compliance

- NOI
- Water Quality Characterization
- Stormwater Quality Management Plan
- Facility SWPPPs

Stakeholders

- Department Managers
- Stormwater/Engineering
- Elected officials
- Public education and involvement



Local enforcement

- Illicit Discharge Ordinance
- Stormwater Management Ordinance and design Standards

Implementation

- BMP schedule and responsibility for all MCMs
- Staff Training
- Inspections
- Annual Reporting data

Minimum Control Measures

MCM 1 and 2	• Public Education and Involvement
MCM 3	• Illicit Discharge Detection and Elimination
MCM 4	• Construction Runoff Control
MCM 5	• Post-Construction Runoff Control
MCM 6	• Pollution Prevention and Good Housekeeping

MS4 Labor Hours

118.28% of a full-time employee needed to complete MS4 requirements

	Estimated Labor hrs/yr	*% Full Time Staff (1,575 hrs/yr)*
Totals for MCM 1 & 2	227	14.41%
Totals for MCM 3	434	27.56%
Totals for MCM 4	638	40.51%
Totals for MCM 5	372	23.62%
Totals for MCM 6	70	4.44 %
Total Additional Program Requirements	122	7.75%
MS4 Total Hours and % Full Time Staff	**1863**	**118.29%**

Implementation

☑Assessment of Stormwater Management needs and associated costs

☑Rate study (began in March 2025, Krohn and Assoc.)

☑Educational Information to the Council (June)

☐Educational information to citizens and businesses

☐Public Hearing

☐1st reading

☐2nd reading

☐3rd reading and ordinance adoption

☐Stormwater Utility billing

QUESTIONS

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