
To: Mr. Chris Moore, Stormwater Coordinator Floyd County Stormwater Dept. 2524 Corydon Pike, Suite 201 New Albany, IN 47150 File: 175568500	From: Kristen Hewes Michelle Bough, GISP Stantec Consulting Services, Inc. 9200 Shelbyville Road, Suite 800 Louisville, KY 40222 Date: March 3, 2023
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Reference: Draft 2023 Stormwater Billing System Updates and Projected Revenues

Stantec Consulting Services Inc. (Stantec) recently assisted Floyd County with updates to the County's Stormwater Billing System. Stantec has worked closely with representatives from the Floyd County Assessor's Office, Auditor's Office, and Stormwater Department to complete this work. Coordination efforts have included meetings, conference calls, and emails with Floyd County staff.

Stantec's task involves assisting Floyd County with developing the stormwater billing system file, which is used by Floyd County to assemble stormwater user fee information onto the property tax file. In order to complete this effort, Stantec utilized digital files from Floyd County's geographic information system (GIS) and Floyd County's 2021 aerial photography to spatially analyze data. Final deliverables, including updates to the impervious surface layer and the development of the stormwater billing file, were delivered to Floyd County on February 13, 2023 and February 27, 2023.

The estimated revenue for the 2023 stormwater billing is \$805,205.70, as detailed in the following table. Projected revenues from previous years are shown in the second table.

Property Classification	No. of Bills**	ERUs	Avg. ERU	Avg. Bill	Projected Revenues
Agricultural	1,053	2,191	2.1	\$81.90	\$85,441
Commercial/Industrial/etc.	1,183	4,423	3.7	\$144	\$172,509
Residential*	14,003	14,032	1.0	\$39	\$547,256
2023 Totals	16,239	20,646			\$ 805,206

*Note: Residential includes all 500-level classified properties (single family residential, multi-family residential, etc.).

**Vacant property class codes are not included in the number of bills (for example, property classes 100, 300, 500, etc.).

Billing Year	Total Revenue	Difference
2015 Stormwater Billing File	\$724,530	
2016 Prelim. Analysis Billing File	\$728,992	\$4,462
2017 Billing File	\$740,220	\$11,228
2018 Billing File	\$746,004	\$5,784
2019 Billing File	\$756,737	\$10,733
2020 Billing File	\$771,112	\$14,375
2021 Billing File	\$773,366	\$2,254
2022 Billing File	\$781,552	\$8,186
2023 Billing File	*805,206	\$23,654

*Note: The updated revenue estimate from Floyd County data integration may be slightly different due to changes made to the parcel data after January 1, 2023.



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Stantec appreciates the opportunity to work with Floyd County on this important effort. Should you have any additional questions or comments regarding this correspondence or Floyd County's stormwater program management efforts, please feel free to contact us at your convenience.

Stantec Consulting Services Inc.

A handwritten signature in blue ink that reads "Kristen Hewes".

Kristen Hewes
Project Manager

A handwritten signature in blue ink that reads "Michelle Bough".

Michelle Bough, GISP
Senior GIS Analyst

Appendix A: Stormwater Billing Process Overview

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Overview of Stormwater Billing Process:

The Floyd County Assessor's Office maintains the property classification codes (i.e. 511 single-family residential), for more than 45,000 properties in the County. Floyd County's stormwater billing process is based on the property classifications completed by the Assessor's Office.

After receiving the primary GIS data from the Floyd County offices, the data is compiled and utilized within ESRI® ArcGIS Desktop software for the geospatial and database analyses. As part of the process associated with generating the stormwater billing file, a series of queries, filters, and comparisons were applied to the various data sets. For a basic example, properties inside the incorporated areas of Georgetown, Greenville, and New Albany (Master Parcel numbers ending in 03, 05, 08) were removed from the analysis, as these parcels are not located inside Floyd County's stormwater service area. Topology rules were applied to determine overlap of impervious surfaces and parcel boundaries. Parcels with matching Master Parcel IDs were grouped together to simplify billing and help improve billing accuracy. Analyses were also performed to help identify potential anomalies or discrepancies among the data sets. Examples may include parcels with no property classification, or impervious surfaces that have been inventoried on a property classified as vacant or single family residential (SFR). Because vacant properties receive no bill and single-family residential properties are a flat rate of \$39 per equivalent residential unit (ERU) per year, impervious surfaces should not be inventoried for these parcels. There are some instances in which impervious areas exist on properties classified as vacant in the current aerial photography. In those cases, the Stormwater Director has instructed that the impervious area for those parcels be tied to the adjacent billable property with same owner.

Properties assessed as non-vacant, non-single family residential (commercial, industrial, etc. properties that have structures or other improvements) that do not contain impervious surface are identified. These situations can arise for new developments, or when the Assessor identifies a non-single-family residential property as improved that was previously assessed as vacant.

Stormwater billing reductions, referred to as credits, were applied based on Floyd County's Credits Policy, adopted December 21, 2021. Credit applications and approvals are maintained by the Floyd County Stormwater Department. Floyd County provided a list of inventoried credit-eligible properties, and the credits were applied to the applicable property. The low impact parcel credit was automatically applied based on comparing the total property area versus the square footage of impervious surface (i.e. impervious surface divided by parcel area: less than 5%, credit is 30%; between 5% and 6%, credit is 20%; between 6% and 7%, credit is 10%).

Based on instruction from the Floyd County Stormwater Department, impervious surfaces located on single family residential properties are removed from the GIS impervious data. These properties are assessed as a flat rate; therefore, no impervious surfaces should be included on these parcels. Any impervious surfaces on these properties were likely performed due to historic property classifications. Removal of impervious surfaces from single family residential properties has no impact on the overall bill and should help avoid confusion for future management of stormwater billing system data.

After performing the necessary steps for calculating the stormwater fee for each property in Floyd County's stormwater jurisdiction, Stantec exports the results from ArcGIS to the file format necessary for Floyd County to assemble the information into the annual tax billing database. A draft stormwater billing file (10 records) was sent to Floyd County on February 2, 2023 to evaluate overall compatibility. The final billing file was sent to Floyd County for incorporation into the billing system on February 13, 2023. A file for the manual input of six parcels was sent on February 23, 2023.

A general overview of the billing update workflow is provided below as an outlined summary.

1. Review data for overlaps in Floyd County impervious dataset (ESRI topology rule).
2. Determine if Parcel will be included in Analysis.

- If the last two digits of IN_Master identifier is not equal to 03, 05, 08 (Incorporated Areas), parcel is included in analysis. If last two digits of IN_Master identifier are equal to 03, 05, 08, parcel is excluded from analysis.
- 3. Determine which parcels are considered the “Master” parcel (master parcel is where IN_Master identifier & IN_Parcel identifier are equal).
- 4. Compare the impervious surface identifiers to Floyd County parcel data – the IN_Master identifier and IN_Parcel identifier number should spatially match between the datasets. Exceptions to this rule are obtained from Floyd County.
- 5. Review data for anomalies.
- 6. Based on the IN_Master identifier and property class the ERU is established.
 - a. Calculate the base ERU
 - i. If SFR – 1 ERU
 - ii. If no property class is listed in parcel data or is a vacant property class – ERU 0
 - iii. If improved (Non-SFR, Non-Vacant) – sum of total square footage of impervious area based on IN_Master identifier/3700
 - b. Low Impact Credit Established (where applicable for Non-SFR) – based on percentage of parcel that is impervious. If the total impervious square footage based on master identifier is less than 7% of the total parcel square footage based on master identifier, a low impact credit is applied.
 - Low impact value = total impervious square footage/total parcel square footage
 - i. If low impact value < 0.05 (5%) then reduction of 30%
 - ii. If low impact value > 0.05 (5%) and < 0.06 (6%) then reduction of 20%
 - iii. If low impact value > 0.06 (6%) and < 0.07 (7%) then reduction of 10%
 - c. Stormwater credits are applied based on information from Floyd County Stormwater Dept.
 - d. Total credit reductions established = (low impact credit reductions + stormwater credits)
 - e. Final ERU established based on equation (base ERU – (base ERU * total credit reductions))
 - f. Review data for ERUs that result in a value <1. If an ERU is established (SFR or Non-SFR) the minimum ERU is 1
 - g. Bill Amount = final ERU * 39