CITY OF ZANESVILLE
STORMWATER UTILITY PROGRAM

POLICY: SERVICE CHARGE CALCULATION IN WHOLE OR PARTIAL ERUs

I.   DISCUSSION:

This is the tenth billing policy paper in a series of billing policy papers that document the overall billing mechanism development process. The Equivalent Residential Unit (ERU) will be used as the common denominator in the algorithm for all non-residential classes of properties using the selected rate structure, except for assigning 1 ERU (flat rate) for all single-family class customers. The process can be summarized as follows:

1.   The impervious area of a randomly selected and representative sample of single-family residential (SFR) properties is measured to determine the average impervious area. The average impervious area of those measured SFR properties represents one (1) Equivalent Residential Unit (ERU). The ERU is then used to calculate bills for all single-family and non-residential customer classes.

2.   All SFR properties are charged a flat rate charge that is equal to one ERU.

3.   The charge for a non-residential property (not single-family as determined by the single-family property definition) is determined by first measuring the total impervious area for a property in square feet (to be completed later in the project). The measured impervious area is then divided by the square footage of the ERU (determined in Step 1 above) to determine the total number of ERUs for that property. The mathematical division process will generally yield a fractional number (versus a whole ERU total). The total number of ERUs for that property is then multiplied by the SFR flat rate to determine the charge for that non-residential property.

II.   ISSUE:

Should the product of the division be rounded to whole numbers? If so, what rounding protocol will be followed?

or

Should fractional products be utilized in the calculation of bills?
The first option simplifies the calculation and explanation of bills.

The second option will significantly complicate the administration of the program and process. The JHA/ERC Team believes the fractional ERU approach may also lend itself to a potential legal challenge. For example, a non-residential property (that is measured) has impervious area that calculates to be less than 1/2 of an ERU, may in fact, challenge that they should be assessed "0" or no charge simply on the grounds of rounding down the ERU calculation.

III. TAC RECOMMENDATIONS:

The JHA/ERC Team recommends that the City of Zanesville stormwater utility program implement an ERU and rate system that only recognizes complete or whole ERUs. Moreover, the following rounding protocol should be followed in rounding to whole numbers:

- Below 0.50 is rounded down to the nearest whole ERU; and

- 0.50 and above is rounded up to the next higher whole ERU.

- The minimum charge for all developed properties is 1 ERU.

Examples of rounding situations (using the ERU value of 2,300 ft² **):

Impervious Area	ERU (before rounding)	ERU (rounded)
1,000 ft²	0.43	1.0
1,650 ft²	0.71	1.0
3,634 ft²	1.58	2.0
10,005 ft²	4.35	4.0
28,543 ft²	12.41	12.0
84,571 ft²	36.77	37.0

IV. TAC ACTION:

The TAC reviewed, discussed and approved this billing policy paper during the May 17, 2017 TAC meeting.
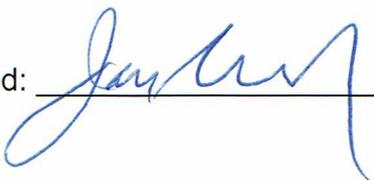
Approved: _____   Date: ___5/17/17___

** See Billing Policy Paper #4 – ERU Determination