CITY OF NEWARK
STORMWATER UTILITY PROGRAM

POLICY: DEFINITION OF A SINGLE FAMILY RESIDENTIAL AND NON-RESIDENTIAL PROPERTY

OVERVIEW

The Project Team of Jobes Henderson and Associates, Inc. (JHA), Environmental Rate Consultants, Inc. (ERC) and Malcolm Pirnie, Inc. (MP) has been retained by the City of Newark to develop and implement a ***Stormwater Billing System Master File***. This involves a process of evaluating and matching the City of Newark water and wastewater utility billing system database, GIS parcel database with the Licking County Auditor's property tax billing data file. It also includes developing a master/sub relationship within the billing system database, measuring the impervious area for all non-residential properties, and calculating the stormwater user fee charge for all master accounts within the billing system. This process will enable the City to effectively incorporate the stormwater billing information into the current billing system database and begin billing customers under a legally defensible stormwater utility program in the most cost effective manner possible.

DISCUSSION:

Because single-family residential properties are the basis for defining the Equivalent Residential Unit (ERU), the definition of a single-family residential property is fundamental to the development of the entire rate system[1]. The Equivalent Residential Unit (ERU) is the common denominator in the algorithm(s) used to develop service charges for all classes of customers served by a stormwater utility. 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 residential and non-residential classes.

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

3. The charge for all non-residential properties (not single-family as determined by the single-family residential property definition) is determined by first measuring the total impervious area for a particular property. The measured impervious area is then divided by the ERU (determined in Step 1 above) to determine the total

1 The concept of the Equivalent Residential Unit was challenged in litigation in the States of Washington and Kentucky. In both cases, use of the Equivalent Residential Unit was upheld by the Courts.

number of ERUs for that particular property (rounded). The total number of ERUs for that property is then multiplied by the SFR flat rate (to be determined in the Rate Study Analysis) to determine the charge for that non-residential property.

In establishing the ERU, the most important issue is to define which property types are to be considered as "single-family residential" properties, and are to be included and measured as part of the "single-family residential" statistical sample. There are two questions that need to be answered as part of this definition process:

1. Which single-family residential property type(s) should be included in the definition of a single-family residential property? Single-family? Duplex? Condominium? Triplex? Quadraplex? Other?

A single-family residential property represents a class of property that reflects great commonality in terms of impervious area and potential to discharge runoff to a stormwater system. Moreover, single-family residential properties are the largest class of properties and the individual properties within the class are typically the smallest properties in the land record system. As the result of these features, single-family residential properties serve usefully as the lowest common denominator within the billing system.

When the number of single-family residential units exceeds two units, the impervious area increases beyond quantities typically measured for a single-family residential unit. Consequently, the definition of an SFR is normally limited to single-family residential and may include attached two-family dwellings. However, separate issues arise with respect to two-family dwellings and these are presented in Billing Policy Paper #5 – Duplexes.

2. Should a single flat rate be applied to all single-family residential properties or should there be a graduated rate to reflect variations in lot sizes, house sizes and/or impervious areas for a single-family property?

The most easily understood and administered Single-family residential Unit (RU) is derived from a simple flat rate system covering all properties defined as single-family residential. If a graduated rate is applied to single-family residential properties, a subset of the "other" single-family residential class will have to be identified and measured to establish the ERU. Thereafter, one of the following two procedures will have to be applied to the "other" single-family residential properties:

a. All "other" single-family residential properties will have to be measured and handled as a non-residential property when calculating bills.

b. Classes can be established within the "other" single-family residential properties on the basis of lot size. For each class, a sample of properties would be measured to determine the average impervious area of the class and then calculate a flat rate based on the ERU for that class. All properties within the same class would be assigned the same flat rate. This

procedure requires an analysis of the lot sizes of all single-family residential properties in order to assign each property to the appropriate class.

The following issues must be understood in the context of the foregoing procedures:

1. The graduated rate for single-family residential properties requires that every property be measured or analyzed. The single flat rate system involves measuring only a sample of the overall single-family residential class.

2. If lot size is used to classify single-family residential properties, equity becomes an issue as the result of two situations:

    a. When oversized dwellings are constructed on small lots; and,

    b. When it can be shown that a large lot single-family residential property detains a higher proportion and absolute amount of runoff than a small home on a small lot.

RECOMMENDATIONS:

1. The Project Team recommends that a single-family residential property (SFR) be defined as follows:

    - All single-family residential and two-family (duplex) and/or town home residential properties within the service area.

2. The Project Team recommends that non-residential properties be defined in the following manner:
    - All properties not encompassed by the definition of single-family residential, including:

        - Apartments property;
        - Condominium property;
        - Commercial property;
        - Industrial property;
        - Institutional property;
        - Governmental property;
        - Churches;
        - Schools;
        - Federal, State and Locals property; and
        - Any other property not mentioned in this or the above single-family list.

3. A flat rate system for all single-family residential properties has already been decided through Policy Paper #1 - Rate Structure.

ACTION:

The Technical Advisory Committee reviewed, discussed and approved this Billing Policy Paper on April 20, 2005.

Approved: _____ Date: _____