CITY OF BURLINGTON

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CITY OF BURLINGTON
STORM WATER UTILITY
FEASIBILITY STUDY

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Storm Water Utility Feasibility Study

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Section 1 – Introduction

The City of Burlington operates and maintains over 30 miles of storm sewer, 867 manholes, 1330 catch basins, and over 250,000 linear feet of curb and gutter, multiple storm water ponds, drainage swales, and additional storm water infrastructure. The Cities intent is to preserve and protect our natural resource areas including Echo Lake, Fox River, White River, Spring Brook Creek, nearby Browns lake, and the many wetlands and environmental corridors.

The management of stormwater and other surface water discharges is a matter that affects the health, safety and welfare of the city, its citizens and businesses. Surface water runoff causes erosion of lands, damage to businesses and residences, sedimentation, as well as environmental damage. Failure to effectively manage stormwater also affects utility operations increasing infiltration to the sanitary sewer.

Along with 245, other municipalities around the state, the City of Burlington, is required to have a Municipal Separate Storm Sewer System (MS4) permit. This permit requires the city to increase storm water runoff quality by implementing storm water management programs with best management practices and have established public education and outreach programs about stormwater management. Storm water related costs are currently funded by the Tax Levy. State imposed Levy Limits do not allow increases to occur to compensate for the costs mandated by the MS4 permitting. Redirecting levy dollars to pay for increased storm water costs would also move dollars away from other current services provided by the city.

The costs of managing, maintaining, and operating the municipal storm sewer system, as well as meeting regulatory compliance are incurred due to the discharge of stormwater and surface water from properties within the City. It is appropriate for these costs to be reasonably allocated to those properties which result in stormwater and surface water discharges.

The cost to maintain, operate, meet regulatory compliance, and expand the storm water infrastructure comes the City's General Fund. The General Funds are also used to maintain streets, sidewalks, bike paths, pay government staff, provide health and human services, and provide conservation programs. Storm water management has a limited budget within the General Fund, and with increasing storm water regulation and more frequent and larger storm events, there is a need to have a designated revenue source to operate, maintain and improve the storm water system.

To address this issue, the City will create a Storm Water Utility. State Statute 66.0821 allows the City to create a public utility to fund costs to maintain and operate the City's utility infrastructure. The storm water utility user fees are based on each property's contribution of storm water runoff to the storm water system. This is an equitable method to fund a storm water utility. A Storm Water Utility also allows user fees to pay for mandated MS4 increases in services/expenses and not be dependent on the tax levy.

The City will develop a budget each year for all storm water related projects, administrative fees, operating expenses, equipment, and regulatory requirements associated with managing the utility. The budget will be used to determine the user fee for funding the storm water utility.

The user fee is calculated through the Equivalent Runoff Unit (ERU) method. This is the quantitative impact each property has on the storm sewer system. It is based off the average impervious surface area of a single-family property in the City. An impervious surface is any surface that does not allow water to flow freely through it (i.e. pavement, asphalt, rooftops, gravel, etc.). The average impervious surface area of a single-family residential property in the City is 3,669 square feet. The areas were established using the most currently available 2020 aerial imagery and the City's GIS database. The ERU is then used as a baseline to determine the user fee for all properties in the City.

As part of the utility creation a storm water utility ordinance will also need to be adopted. The ordinance includes the authority, management, operations, definitions, rates, classifications, adjustments, credit policy, appeals policy, and additional detail.

Section 2 – Storm Water Utility Benefits

2.1 Overview

A storm water utility is a mechanism to fund the costs of municipal services directly related to the control and treatment of storm water. It ensures a dedicated revenue source for the expense of storm water management.

2.2 Economic Benefits

A storm water utility has many economic benefits. In addition to funding the utility, a primary benefit is that it creates additional opportunities for the City to qualify for grants and loans for major storm water improvement projects as it is seen as a cooperative investment for the lender. Large improvement projects will mitigate flooding and improve water quality benefiting the community. Other benefits include, ensuring property compliance with stormwater runoff that flows into the city's utilities, effecting the MS4 permit.

The storm water utility user fee is an equitable fee that is solely based on a property's contribution to storm water runoff. The fee is collected from all parcel owners within the city including tax-exempt users (i.e. churches, government, hospitals, etc.).

2.3 Environmental Benefits

The utility provides resources to maintain and improve the existing storm water infrastructure allowing the City to meet Municipal Separate Storm Sewer System (MS4) and Total Maximum Daily Load (TMDL) requirements. These requirements improve water quality, keeping our lakes, rivers, wetlands, and natural resources clean.

Storm water management practices are encouraged through the implementation of the credit system. Property owners are incentivized to maintain existing storm water ponds and infrastructure.

Section 3 – Storm Water Utility Budget

3.1 General

The storm water utility budget is based on the Cities annual capital improvement plan, developed by City staff, and adopted by the Common Council. The budget includes all associated administrative, project, inspection, and regulatory compliance costs. The stormwater projects may include new construction, maintenance or repair projects, drainage projects, flood mitigation projects, erosion projects, maintenance of ditches and ponds, shoreland mitigation, green space restoration, and all projects pertaining to storm water.

3.2 Storm Water Utility Services

The storm water utility budget includes planning, staffing, storm sewer system maintenance, best management practices maintenance, capital improvement projects related to storm water, equipment replacement, management, regulatory compliance, and other expenditures.

Storm water best management practice maintenance activities include, but are not limited to, street sweeping, manhole, pipe and catch basin cleaning, storm water basin management activities, leaf and brush collection, grass clipping management, and televising of existing storm sewer system.

3.3 Storm Water Utility Proposed Budget

The annual storm water utility budget will be established by the common council through their annual budget workshops and adoption schedule.

Section 4 – Impervious Area Analysis

4.1 Purpose

To determine the amount of storm water runoff each property contributes, the impervious surface area of each is established. As previously stated, an impervious surface is any surface that does not allow water to flow freely through it, for example: asphalt or concrete pavement, rooftops, sidewalks, gravel driveways, etc. The water instead flows and gathers over the impervious surface, picking up debris, dirt, metals, pollutants and flows into the storm sewer system. The larger impervious surface area a property has the more volume of storm water and pollutants it contributes to the storm sewer system.

Impervious surface area is considered the most equitable way to determine the proportional storm water utility user fee. The most recent and available aerial imagery is used to calculate the impervious surface areas.

The impervious area analysis does not include railroad corridors, utility corridors, public transportation systems, road networks, public sidewalks, pedestrian pathways, or impervious surfaces within the public right-of-way.

4.2 Data Sources and Impervious Area Measurement Method

The City of Burlington GIS database along with the most recent (2020) aerial imagery available was used to find the impervious surface areas. The impervious surface areas were measured to establish the City's Equivalent Runoff Unit (ERU).

Impervious surface area measurements do not include public transportation systems or areas within the public right-of-way. These include roads, sidewalks, alleys, railroad, bike paths, etc.

4.3 Single-Family Parcels

The City currently has 2,230 developed single-family residential properties. A cross section sample size of approximately 223 properties were measured to determine the average surface area of a single-family parcel within the City. This measurement yielded a result of 3,669 square feet on average for a single-family parcel (See Appendix A for single-family parcels used in sample size). Impervious areas included pavement, roofs, pools, patios, etc. **Figure 1** is an example of the impervious surface area for single-family residential properties. A single-family parcel will be charged a rate of 1 ERU.

Figure 1: Single-Family Residential Properties Impervious Areas

4.4 Duplex and Two Family

Duplex properties and two-family properties will not be charged based on the exact impervious surface area, rather a constant rate based on the number of units in the building. The established rate is .5 ERU/Unit.

4.5 Multi-Family

Multi-family properties (three or more units) will not be charged based on the exact impervious surface area, rather a constant rate based on the number of units in the building. The established rate is .5 ERU/Unit.

4.6 Non-Residential Parcels

All non-residential parcel impervious surface areas were calculated individually using the City of Burlington's GIS database and the best available 2020 aerial imagery. Impervious areas include parking lots, roofs, sidewalks, etc. This also includes City, railroad, and utility owned properties. **Figure 2** is an example of the impervious surface area for a non-residential property. Non-residential parcels will be charged based on their total impervious surface area calculated which is divided by 3,669 to come to the parcels total ERUs.

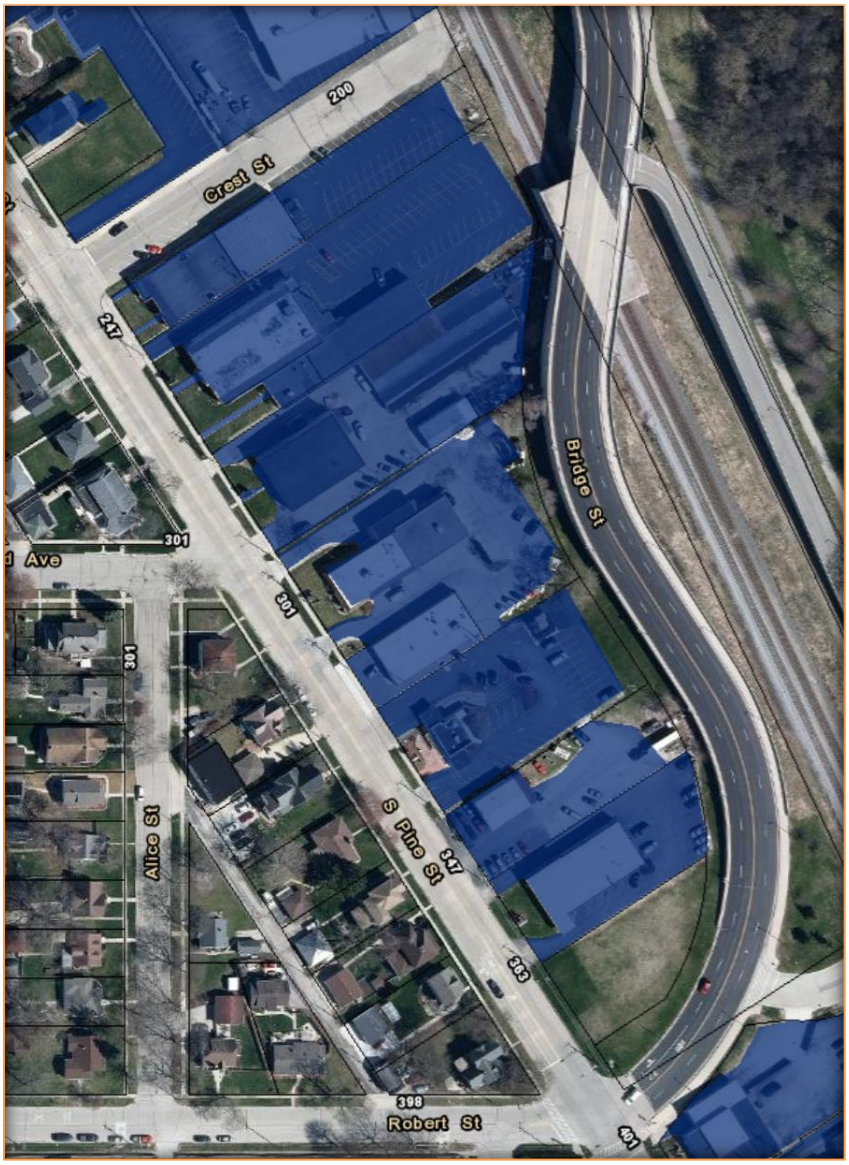

Figure 2: Non-Residential Properties Impervious Areas

4.7 Vacant and/or Undeveloped Properties

A vacant and/or undeveloped property per city ordinance is defined as a parcel that contains no impervious surface area within the property boundary.

4.8 Property Classification Distribution

Figure 3. shows a graphical breakdown of the property classifications within the city. Residential parcels make up approximately 81.9% of the total parcels within the City.

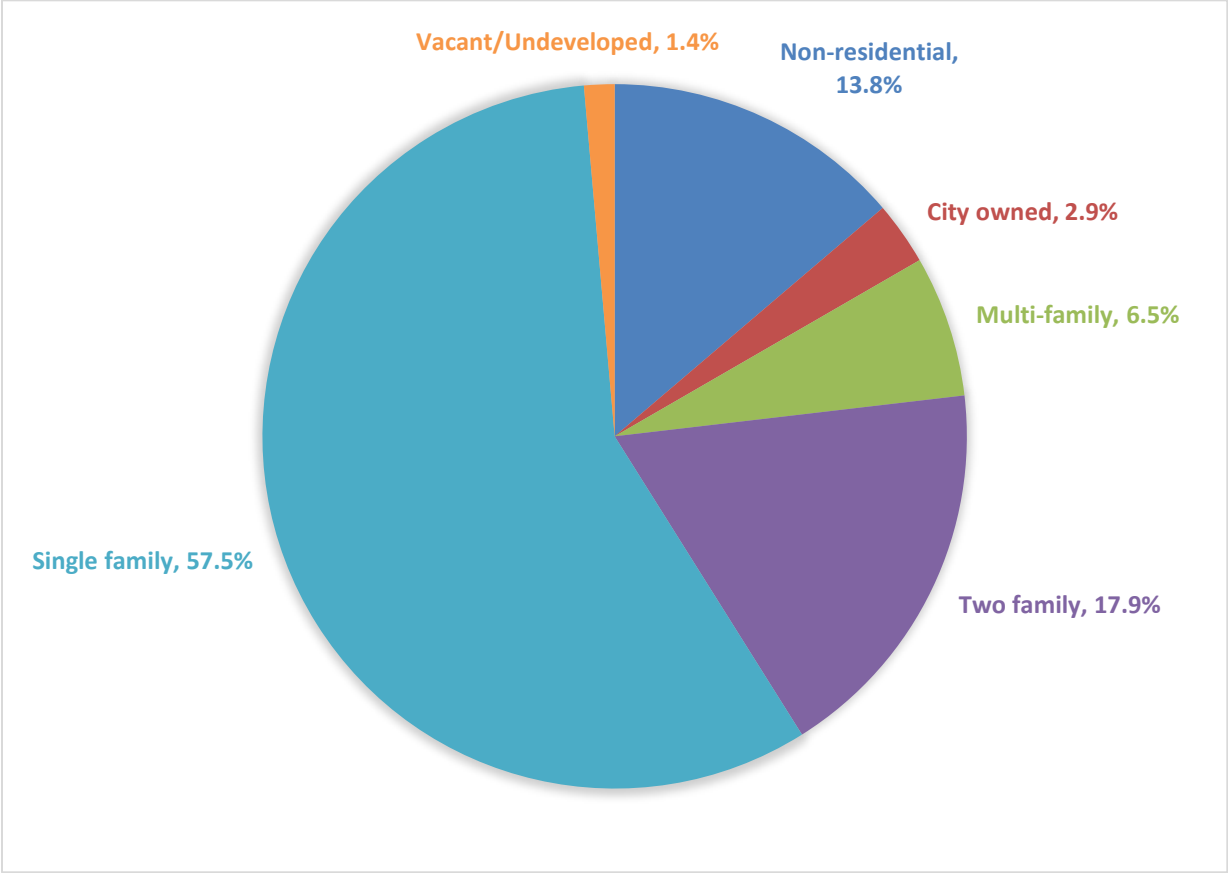

Figure 3: City of Burlington Parcel Breakdown

Section 5 – User Fee Structure

5.1 Purpose

Parcels will be charged based on their classification determined by the City's Director of Public Works. Total ERU's a property must pay will be rounded up to the nearest 0.5 ERU.

5.2 Equivalent Runoff Unit (ERU)

The City of Burlington's ERU based on the average impervious surface area of only single-family residential properties is 3,669 SF.

$$1\ ERU = 3{,}669\ SF$$

5.2 Single-Family Parcels

All developed single-family properties will be charged one (1) ERU.

5.3 Duplex

Duplex parcels will be charged based on how many living units there are in the building at a rate of 0.5 ERU per unit. This charge will be made to the property owner to be paid for and distributed at their discretion.

5.3 Multi-Family Parcels

Multi-family parcels will be charged based on how many living units there are in the building at a rate of 0.5 ERU per unit. This charge will be made to the property owner to be paid for and distributed at their discretion.

$$Multi - Family\ Property\ with\ 6\ units = 3\ ERUs$$

5.4 Non-Residential Parcels

Non-residential properties will be charged based on the impervious surface area of each parcel divided by the established ERU Unit (3,669).

$$\frac{Total\ Impervious\ Surface\ Area}{ERU\ Unit} = Total\ ERUs$$

$$\frac{46{,}380\ SF}{3{,}669\ SF} = 13\ ERUs$$

5.5 Vacant Lots

A vacant lot is defined as a parcel with no impervious surfaces. Parcels that are not occupied by a resident or business are not considered vacant under this definition. Vacant parcels will not be charged.

5.6 ERU Summary

Based on these formulas, the City of Burlington has a total of 13,093 ERUs. **Figure 4** is the break down based on classification.

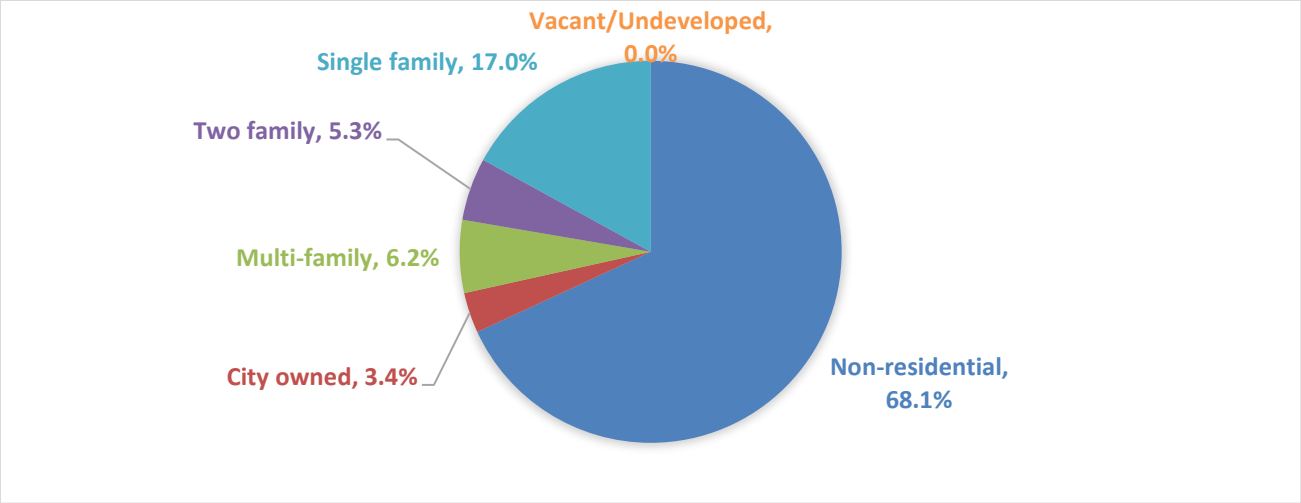

Figure 3: ERU Summary

Non-Residential and government parcels make up 16.7% of the total parcels within the city (See **Figure 3**) but account for 71.5% of the total ERU's – which means 71.5% of the budget will be allocated to non-residential properties with residential accounting for 28.5% of the budget

Section 6 – Ordinance

6.1 Purpose

The City is creating a stormwater utility allowed under State Statute 66.0821 by creating a Stormwater Utility Ordinance which is enacted within 60 days of being passed by City Council and publish (66.0815(c)). This ordinance details the parameters of the stormwater utility, establishes the baseline ERU, establishes parcel classifications, user fee structure, and details the credit and adjustment policies.

6.2 Adjustments

An adjustment is a change to the number of ERU's assigned to the parcel based on the availability of more accurate measurements of the amount of impervious surface area on a parcel. There are two types of adjustments.

1. Adjustment Based on Change in Condition: If a parcel experiences a change in development condition through demolition, addition, or new construction of impervious area, an adjustment will be made to appropriately revise the number of ERUs for the property. Changes will be implemented by the City as part of the building permit process. Upon completion of the demolition, addition or construction process, the City will make the fee adjustment for subsequent billings.

2. Adjustment Based on Other Reasons: If a property owner believes their property is eligible for an adjustment or believes the number of ERU's allocated to such a property are incorrect, the owner can apply for an adjustment.

a. This type of adjustment requires the resident to fill out an application form provided by the City, which includes a fee, to the Department of Public Works.

b. Goes through Department of Public Works Director and/or a designee and typically a decision is issued within 30 days.

c. Owner may appeal decision within 30 days.

6.3 Credit Policy

The credit policy is offered to incentivize property owners to install, maintain and provide stormwater management. Credits go towards the overall stormwater utility charge when stormwater management facilities are in place and maintained that reduce the property's stormwater impacts to the Community. Non-residential or property owners which are part of a common development plan (Ownership Entity) are eligible to apply.

An Ownership Entity is comprised of a group of single family or multi-family properties that have a common stormwater facility whose maintenance responsibilities are shared by all parties. The Ownership entity is eligible to apply for credits. It is the responsibility of the homeowner's association, property owner's association, condominium association, etc. to submit a single credit application to the City.

Single Family residential properties are excluded for credit. The expense to a individual property owner to engineer, design, install, and maintain a stormwater facilities, as well as the application fee costs make individual storm water solution prohibitive. In addition, the administrative time to ensure compliance with the utility would require additional resources. The City Council is allowed to make exceptions, on a case by case basis.

At the formation of the utility credits are not automatically applied for properties with existing storm water best management practices. The owner of the individual facility is required to submit an application for credit, along with the fee, and all required supporting documentation including maintenance records. This ensures all existing facilities are current, maintained and have the appropriate maintenance agreements on file.

New non-residential developments, with stormwater facilities that meet the City's stormwater management ordinance as approved by the development process, will receive credit after the creation of the Stormwater Utility. The credit application will be included a part of the development process. The credit will go into effect after the storm water facility is constructed and a recorded maintenance agreement is complete.

The utility has three types of credits:

1. Riparian Credit: If storm water runoff from a parcel discharges directly into Echo Lake, the White River, the Fox River, Spring Brook Creek, or a tributary to the waterways without crossing another parcel under different ownership or entering any portion of the City's municipal separate storm sewer system (MS4); and the discharge does not result in exceeding federal, state or local water quality standards. (50%)

2. Peak Discharge Credit: Considered for properties for owners who maintain private storm water management facilities that reduce peak discharge. (25%)

3. Water Quality Credit: Considered for properties for owner who maintain private storm water management facilities that improve water quality of runoff from their property that improve water quality. (25%)

A credit application, which includes a fee, is available through the City. The application fee is to cover administrative costs associated with the application. To maintain the credit, a property owner is required to fill out a resubmittal application every 5 years. Additional costs may be incurred during the credit application/resubmission process to complete site visits, engineering reviews and approval, and inspection.

A property owner can apply for any combination of credit type for a maximum credit of 50%. All necessary information is gathered at the properties owner's expense and there must be an approved maintenance agreement through the City. The application is then submitted to the Department of Public Works Director and/or a designee and typically a decision is issued within 30 days. The applicant can appeal within 30 days of a decision.

Appendix A: Single Family Parcels Impervious Area Sample Data