

# Storm Water Billing Policies and Procedures

These storm water billing policies and procedures guide implementing the storm water service fee program.

## 1. Impervious Area Rate Methodology

Greenville County uses an impervious area rate methodology to assess storm water fees to property owners, as per Chapter 8, Article IV. of the Greenville, SC Code of Ordinances (adopted August 20, 2002). Impervious areas are surfaces that prohibit or significantly restrict the passage of water into the soils beneath. Impervious areas include such surfaces as roof tops, asphalt or concrete paving, driveways, parking lots, walkways, sidewalks, patio areas, storage areas, graveled areas, or other surfaces which affect the natural infiltration.

The impervious area methodology was chosen for determination of the storm water service fee. This method is commonly used in South Carolina, and nationally, and has been tested in South Carolina and adjacent states. The County recognized in the ordinance, that property owners and users of the storm drainage system should finance the County's Storm Water Management Program to the extent that they contribute runoff to the system. The impervious rate methodology satisfies this requirement because there is a direct correlation between the amount of impervious area within a parcel and the amount of runoff from the parcel. In this method, the impervious area on a typical residential parcel is used as the basis for the calculation. This is called the equivalent residential unit (ERU). The ERU was calculated from a statistically significant sample of residential parcels within the County by measuring the impervious area on each parcel from the available aerial mapping. The ERU was calculated to be 2477 square feet.

### 1a. Property Classifications

Ordinance 3617 establishes four (4) classifications that are used to determine the storm water service fee for each parcel in the respective classification:

- **Classification 1** – Developed Residential and Developed Agricultural parcels.
- **Classification 2** – Developed Non-Residential parcels.
- **Classification 3** – Undeveloped Residential and Undeveloped Agricultural parcels.
- **Classification 4** – Undeveloped Non-Residential parcels.

**Classification 1** is defined as developed residential properties, which includes single-family detached units and developed agricultural properties. These properties are identified using the Tax Assessor's database, specifically the land use code. Classification 1 properties will have the following land use codes:

0110	Duplex	1170	Residential Mobile Home with Land
1100	Residential Single Family	1171	Residential Mobile Home on Mobile Home File
1101	Residential Single Family - with Auxiliary Use	9171	Agricultural Improved

**Classification 2** is defined as developed non-residential properties, which include, but not limited to, multiplexes; apartment buildings and complexes; condominiums; boardinghouses; commercial properties; industrial properties; parking lots; recreation, institutional, and governmental facilities; hotels; offices; school and educational facilities; theaters and other facilities for performance; churches and other

religious institutions and facilities. These properties are identified using the Tax Assessor's database, specifically the land use code. Classification 2 properties will have the following land use codes:

0112	Multiplex	0424	Office/warehouse
0113	Group House Converted	0425	Office Retail Strip
0120	Apartment – Conventional (C , D)	0430	Bank Full - Service
0120	Apartment - High Rise(A, B)	0431	Bank Branch
0122	Apartment Subsidized	0510	Convenience Store
0130	Mobile Home Park	0511	Convenience Store/food service
0140	Nursing Home	0512	Mom / Pop Grocery
0141	Assisted Living	0513	Super Market
0142	Healthcare - Converted Residential	0520	Retail - General
0143	Healthcare - High - Rise Retirement with Dining	0521	Retail - Strip Center
0230	Apartment - Boarding / Bed & Breakfast	0522	Retail - Show Room
0240	Hotel - Luxury	0523	Retail - Drug Store
0240	Hotel -Full Service Upscale	0530	Retail - Discount
0250	Motel - Extended Stay	0531	Retail - Discount Warehouse
0270	Motel - Mid - Service	0532	Retail - Lumber - Showroom / Retail
0271	Motel Economy	0550	Shopping Center / Neighborhood
0272	Motel Budget	0560	Shopping Center / Mall
0273	Motel Low Cost	0561	Shopping Center Anchor Retail
0300	Car Wash Full Service	0570	Shopping Center Department Store
0301	Car Wash Self Service	0580	Barber / Beauty - Converted Residence
0301	Car Wash Automatic	0581	Barber / Beauty - Conventional
0310	Service Station - Gas	0590	Laundry / Cleaner Full Service
0320	Cashier Booth - Gas	0591	Laundry Mat - Self Service
0330	Service Garage - Body Shop	0610	Restaurant - Fast Food
0331	Mini Lube	0611	Restaurant - Truck Stop
0332	Auto Service Center	0620	Restaurant - Full Service
0350	Auto Dealership / Maintenance / Service	0620	Cafeteria
0360	Auto Dealership / Showroom	0630	Bar - Neighborhood
0370	Parking Garage	0631	Bar - Night Club
0370	Parking - Basement Level	0632	Bar - Restaurant / Lounge / Sports
0371	Parking Lot	0710	Recreation - Bowling Alley
0409	Medical Office - Dental	0720	Recreation - Gym / Athletic Club
0410	Medical Office	0721	Recreation - Health Club
0411	Vet Clinic	0730	Recreation - Skating Rink - Ice
0413	Rehab Center	0730	Recreation - Skating Rink - Roller
0414	Vet Clinic Converted / Residential	0740	Movie Theatre
0420	Office High Rise	0741	Theatre - Play / Dining
0421	Office - General	0750	Recreation - Golf - A
0423	Office - Converted / Residential	0750	Recreation - Golf - B
0750	Recreation - Golf - C	0872	Funeral Home Conventional
0750	Recreation - Golf - D	0873	Funeral Home Converted
0751	Recreation - Club House / Golf	0890	Broadcasting Facility
0752	Recreation - Golf - Putt Putt	0891	Utility
0753	Recreation - Golf - Par 3	0910	Mini-Warehouse
0754	Recreation - Country Club	0920	Golf Storage / Service
0755	Recreation - Horse Arena	0930	Truck Terminal
0770	Recreation - Community Recreation	0940	Warehouse General
0780	Recreation - Theme Park	0950	Warehouse Distribution
0790	Recreation - Tennis / Racquet	0960	Warehouse - Multi-Purpose

0810	Religious / Church	0970	Industrial
0821	Government	0980	Hangars
0850	Schools	0990	Cold Storage
0851	Day Care - Conventional	1181	Homeowners Association Property
0852	Day Care - Converted Residential	1182	Residential Common Areas
0860	Fraternal Organizations		

**Classification 3** is defined as undeveloped residential properties and undeveloped agricultural properties. These properties are identified using the Tax Assessor’s database, specifically the land use code. Classification 3 properties will have the following land use codes:

1180	Residential Vacant	9170	Agricultural Vacant
------	--------------------	------	---------------------

**Classification 4** is defined as undeveloped non-residential properties. These properties are identified using the Tax Assessor’s database, specifically the land use code. Classification 4 properties will have the following land use codes:

6800	Commercial Vacant
------	-------------------

Each of these four classifications shall pay storm water service fees according to the fee schedule adopted by Greenville County Council.

The following fee schedule was adopted by Greenville County Council:

For **Classification 2** Parcels, the fee is \$27.00/year multiplied by the number of ERUs that were calculated as described in Section 1b. below.

For **Classification 1**, **Classification 3**, and **Classification 4** parcels, the fee is based on the following rates:

For Classification 3 and Classification 4 Parcels, and Classification 1 Parcels that have less than or equal to 1,000 square feet of first floor heated space:	\$22.80/year (\$24.00 Original Fee)
For Classification 1 Parcels with greater than or equal to 1,001 square feet of first floor heated space:	\$25.65/year (\$27.00 Original Fee)

The fee is set up so that non-residential properties that produce more runoff (because they have a greater impervious surface area) are billed a greater storm water service fee.

Note that Greenville County Council reduced the fees by five percent in the 2004-2005 budgets. This made the fee for residential properties with 1,000 square foot and less, undeveloped residential, developed and undeveloped agricultural and vacant commercial properties (Class 1, Class 3, and Class 4) \$22.80. The fee for residential properties with 1,001 square feet and greater is \$25.65. The base ERU

remained the same at \$27.00. The five percent reduction will remain in effect until County Council explicitly changes the fee.

## 1b. Determining the Impervious Surface Area for Non-Residential Properties

Aerial photography is used to measure the impervious surface area for each Classification 2 parcel. The total impervious area is measured for all of the impervious area surfaces within the parcel boundaries of that property. The impervious surface area value is divided by 2,477 square feet. This result then determines the number of total ERUs for each Classification 2 parcel and it becomes the basis of the storm water service fee for that property. ERUs are rounded up to the nearest whole integer.

*Example:* A property that has 10,000 square feet of impervious area would be billed for 5 ERUs.

$$10,000 \text{ sqft} / 2477 \text{ sqft} = 4.04 \text{ ERUs}; \text{ this is rounded up to } 5 \text{ ERUs.}$$
$$5 \text{ ERUs} * \$27.00 = \$135.00 \text{ fee}$$

## 2. Impervious Area Modification Request

If a non-residential property owner does not agree with the amount of total impervious area for which they are being billed, the property owner is responsible to initiate action to clarify the total impervious area. The customer must complete and submit an Impervious Area Modification Request Form to the Greenville County Assistant County Administrator for Public Works for consideration. The Land Development Division Manager will review the request, and make a decision on the total impervious area for the property in question. The Land Development Division Manager will send a letter to the property owner stating the total amount of impervious area. The property owner may appeal the decision per the County's appeal process. The request form is posted on the County website.

## 3. Billing Policies

### 3a. Properties receiving a storm water bill.

Most properties that are located within the County's storm water service area will receive a bill for the storm water service fee. More specifically:

- **Public properties.** All public properties with impervious areas will receive a storm water bill. The properties include buildings, maintenance facilities, and parks owned by the following, and any other governmental agency:
  - County
  - Municipal
  - State
  - Federal

The impervious areas of public streets and roads will be exempt from the storm water service fee.

- **Abandoned properties and properties with closed businesses.** Owners of these properties will continue to receive storm water bills as long as there is impervious area on these properties.
- **Condominiums.** Individual condominium units are assigned a billing classification of 1 and assessed a storm water fee based on the rate applicable to developed residential property (1 ERU X RATE = FEE). The bill is sent to the owner of each unit. Condominium Common Areas are assigned a billing classification of 2 and assessed a fee determined by multiplying the number of ERUs by the rate applicable to developed non-residential property (Number of ERUs X RATE = FEE). The bill is sent to the owner of the Common Area parcel, generally a condominium association. Condominium Common Areas in a horizontal property regime are not assessed a storm water fee.
- **Mobile homes.** If a single mobile home is located on a parcel (land use 1170 & 1171), the owner of the parcel will be billed as a Classification 1 parcel. If more than one mobile home (land use 0130) is on a single parcel, the property will be considered non-residential and all impervious area on the parcel will be determined and billed to the owner of the parcel.

### 3b. Properties that are exempt from receiving storm water bills.

Below is a summary of those properties exempt from receiving a storm water service fee:

- **Public Streets and Roads.** The impervious area of public streets and roads will be exempt from the storm water service fee.
- **Exempt Parcels.** The storm water service fee does not apply to and are not collected from properties listed in S.C. Code, § 12-37-220(A)(2), (3), (4) and § 12-37-220(B)(5), (6), (7), (8), (12), (16)(a), (20), (22), (24) (31). Also, these fees do not apply to and are not collected from the primary residence of persons permanently and totally disabled as identified in S.C. Code § 12-37-220(A)(9).
  - § 12-37-220(A)(2) all property of all schools, colleges, and other institutions of learning and all charitable institutions in the nature of hospitals and institutions caring for the infirmed, the handicapped, the aged, children and indigent persons, except where the profits of such institutions are applied to private use;
  - § 12-37-220(A)(3) all property of all public libraries, churches, parsonages, and burying grounds, but this exemption for real property does not extend beyond the buildings and premises actually occupied by the owners of the real property;
  - § 12-37-220(A)(4) all property of all charitable trusts and foundations used exclusively for charitable and public purposes, but this exemption for real property does not extend beyond the buildings and premises actually occupied by the owners of the real property;
  - § 12-37-220(A)(9) a homestead exemption for persons sixty-five years of age and older, for persons permanently and totally disabled and for blind persons in an amount to be determined by the General Assembly of the fair market value of the homestead under conditions prescribed by the General Assembly by general law;

- § **12-37-220(B)(5)** All property of the American Legion, the Veterans of Foreign Wars, the Disabled American Veterans, Fleet Reserve Association, and the Marine Corps League or any similar Veterans Organization chartered by the Congress of the United States, whether belonging to the department or to any of the posts in this State when used exclusively for the purpose of such organization and not used for any purpose other than club rooms, offices, meeting places, or other activities directly in keeping with the policy stated in the National Constitution of such organization, and such property is devoted entirely to its own uses and not held for “pecuniary profit”. For the purposes of this item “pecuniary profit” refers to income received from the sale of alcoholic beverages to persons other than bona fide members and their bona fide guests, or any income, any part of which inures to the benefit of any private individual. Where any structure or parcel of land is used partly for the purposes of such organization and partly for such pecuniary profits, the area for pecuniary profits shall be assessed separately and that portion shall be taxed.
  
- § **12-37-220(B)(6)** All property owned and used or occupied by any Young Women’s Christian Association, Young Men’s Christian Association or the Salvation Army in this State and used for the purpose of or in support of such organizations but the exemption herein provided shall not apply to such portions of any such property rented for purposes not related to the functions of the organization.
  
- § **12-37-220(B)(7)** All property owned and used or occupied by The Boy Scouts of America or The Girl Scouts of America and used exclusively for the purposes of these organizations. The exemption allowed by this item also extends to property not owned by these organizations but which is used exclusively by them for scouting purposes.
  
- § **12-37-220(B)(8)** Properties of whatever nature or kind owned within the State and used or occupied by the South Carolina Association of Future Farmers of America so long as such properties are used exclusively to promote vocational education or agriculture, better business methods and more effective organization for farming or to encourage thrift or provide recreation for persons studying agriculture or home economics in the public schools.
  
- § **12-37-220(B)(12)** The property of any fraternal society, corporation or association, when the property is used primarily for the holding of its meetings and the conduct of its business and no profit or benefit there from shall inure to the benefit of any private stockholders or individuals.
  
- § **12-37-220(B)(16)(a)** The property of any religious, charitable, eleemosynary, educational, or literary society, corporation, or other association, when the property is used by it primarily for the holding of its meetings and the conduct of the business of the society, corporation, or association and no profit or benefit there from inures to the benefit of any private stockholder or individual.
  
- § **12-37-220(B)(20)** All property of nonprofit museums which is used exclusively for such purpose.

- § 12-37-220(B)(22) All community owned recreation facilities opened to the general public and operated on a nonprofit basis.
- § 12-37-220(B)(24) All property of nonprofit or eleemosynary community theater companies, symphony orchestras, county and community arts councils and commissions and other such companies, which is used exclusively for the promotion of the arts.
- § 12-37-220(B)(31) All real property of churches which extends beyond the buildings and premises actually occupied by the churches which own the real property if no profit or benefit from any operation on the churches' real property inures to the benefit of any private stockholder or individual and no income producing ventures are located on the churches' real property. This exemption does not change any exemption provided for churches or other entities in item (3) of subsection A of this section and item (c), Section 3 of Article X of the Constitution of this State but is an additional exemption for churches as provided in this item.

### 3c. Billing Parameters

The following list presents the basic operating parameters to bill for storm water services:

- **Billing Per Parcel.** The County will prepare and send storm water service fee bills based on tax parcel ID numbers. The County will not combine parcels for billing if they do not share the same tax parcel ID.
- **Partial Payments or Designation of Payments.** A property owner cannot designate if County property taxes, other fees, or storm water service fees will be paid with a partial payment. The property will be considered delinquent if partial payment is made.
- **Application of Partial Payments.** Partial payments will be distributed on a percentage basis between County property taxes, other fees, and storm water service fees. The property will be considered delinquent if partial payment is made.
- **Non-Payment of Bill.** Non-payment of storm water service fees will be handled in the same manner as non-payment of County tax bills.
- **Status of Property Billing.** The storm water service fee bill for a property for a given tax year will reflect the status of impervious surface areas in the database at the time of billing.
- **Storm Water Bills Sent to Owners.** Storm water service fees will be sent to the property owners, not the tenants.
- **Late Payment Penalties.** The late payment penalties for storm water service fees will be 5% of the current charges.
- **Impervious Area Corrections.** If it is determined that a customer's impervious area is less than the total on record within the County's database, the County will credit the overpayment to the customer's account provided the customer (1) completes an Impervious Area Modification Request Form, (2) requests that an overpayment credit be applied to their account or reimbursed in the form of a check, (3) certifies that the impervious area has not changed over the period in

which the overpayment credit has been requested. In no event shall overpayment credits be given for a period extending more than one year in arrears.

If the customer's impervious area is larger than the total on record within the County's database, the customer will be required to pay for the revised value starting from the date the correction is made; however, the County will not back bill for impervious area corrections.

### 3d. Billing triggers

- **Trigger for Setting Up New Accounts.** A storm water bill will be sent when the parcel data is incorporated into the County's master billing file. If the impervious area of a Classification 2 property has not been determined, the property will be billed for 1 ERU. A determination of the impervious area for the Classification 2 property will be made as soon as practical and reflected on future bills. Classification 1, Classification 3, and Classification 4 properties will be billed for 1 ERU.

## 4. Credit Policy

The Greenville County approved credit policy for eligible non-residential property owners to receive a credit on their storm water service fees bill is described in Appendix K of the Greenville County Design Manual. A copy of both the approved credit policy and the Credit Application Form are posted on the County's website.

### 4a. Credit policy administration

The following list provides a summary of how the credit policy will be administered.

- **Credit Policy for Non-Residential Properties.** Non-residential properties may qualify for a credit to the storm water service fee.
- **Regional Detention/Retention Credit.** If a credit is given to a property for a detention/retention facility that was designed to provide regional detention/retention, the credit will also be applied to the properties that were included in the basis of the regional design, provided the properties are eligible and apply for a credit.
- **Date Credit takes Effect.** A credit will be applied on the approval date of the credit application, as determined by the Land Development Division Manager. Full credit will be given for the entire billing period that the approval date falls within.
- **Back Credit.** A credit may be retroactively applied for up to one year if the current owner can show that the property met the requirements of the credit policy during that period and the current owner owned the property during that period. A credit will be applied to the storm water account until County storm water bills exhaust the amount unless a check for the amount is requested by the customer.
- **Applying the Storm Water Credit in the Billing File.** The credit will be applied by reducing the number of billable ERUs.

- **Transfer of a Credit with a Property Transfer.** A credit will carry over to a new property owner, and the new property owner will not need to submit a credit application. However, to maintain a credit, the new property owner will be required to sign a new agreement if an agreement was needed for the original credit, as well as provide continuing maintenance or administration of the circumstances that gave rise to the credit.

## 5. Appeals Process

Although Greenville County has an official appeals process in place, County staff shall strive to resolve customer complaints promptly through open dialog with the customer. In the event that customer complaints cannot be resolved through open dialog, customers will be instructed by County staff to comply with the County's official appeals process as described in section 8-172 of the ordinance.

### § 8-172 Appeals.

(a) Any person aggrieved by the amount of the Storm Water Fee imposed with respect to property in which he has an interest may appeal the amount of the Storm Water Fee by filing a written notice of appeal with the Assistant County Administrator for Public Works within 30 days of mailing or delivery of the notification of the Storm Water Fee. The Assistant County Administrator for Public Works will send the decision and notice of appeal to a hearing officer to be appointed by the County Administrator or their designee. The notice of appeal shall state the specific reasons why the amount of the Storm Water Fee is alleged to be in error. The hearing officer shall hear the appeal within 30 days after receipt of the written appeal, or within such time as may be practicable. The hearing officer shall render a decision on the appeal in writing within 10 working days after the appeal has been heard. The decision of the hearing officer shall be final with respect to the Storm Water Fees.

(b) Any person aggrieved by the decision of the Assistant County Administrator for Public Works with respect to a civil penalty imposed may appeal in writing within 30 days of the mailing or delivery of the notification of the imposition of such penalty to the Assistant County Administrator for Public Works according to the procedure set forth in subsection (a) above. The penalty shall be stayed during the pendency of such appeal. The decision of the hearing officer shall be final with respect to penalties.

(c) The hearing officer shall conduct a *de novo* review of the fee or civil penalty, provide the appellant with notice of the review, and allow the appellant an opportunity to be heard orally or in writing upon request.

# APPENDIX A

## Procedure for Calculating Storm Water Service Fees

### Procedure for Calculating Storm Water Service Fees.

#### A) Create Impervious Area feature class

- Create an impervious area layer using all data that has impervious areas. These include buildings, parking lots, athletic courts, and pools. Using the new 2006 photography, capture all impervious areas that were built since the last capture of planimetric data.
- The following methodology removes all parcels that are not included in the Storm Water Service Fee except exempt parcels. This methodology also takes into account split parcel, or parcels that lie in both the County and Municipality (DIST = B or C).
- Using ArcCatalog create a File Geodatabase.
  - ❶ Name the Geodatabase IMP\_AREA\_GEO stored under *k:/amproj/Stormwater Utility*.
  - ❷ Import feature classes WAREHOUSE.GTZ.CAD\_PARCEL\_MP, WAREHOSUE.GTZ.BND\_MUNICIPAL, and PROD.GTZ.PLN\_IMP\_SURFACE.

Feature Class:	Number of Records:
CAD_PARCEL_MP	
BND_MUNICIPAL	
PLN_IMP_SURFACE	

- Delete all Municipal Boundary polygon except the City of Greenville and Greer
  - ❶ In ArcMap add BND\_MUNICIPAL feature class, and start editing
  - ❷ Select all polygons in BND\_MUNICIPAL where NAME <> GREENVILLE AND NAME <> GREER.
  - ❸ Delete the selected polygons and stop editing.
- Erase Greenville and Greer Parcels form CAD\_PARCEL\_MP and PLN\_IMP\_SURFACE.
  - ❶ Using the erase geoprocessing tool, erase CAD\_PARCEL\_MP by BND\_MUNICIPAL to produce PARCEL\_ERASE.
  - ❷ *Number of records:*
  - ❸ Using the erase geoprocessing tool, erase PLN\_IMP\_SURFACE by BND\_MUNICIPAL to produce IMP\_SURFACE\_ERASE.

- ④ *Number of records:*
- Intersect Parcels and Impervious Surfaces
  - ① Using the intersect geoprocessing tool, intersect PARCEL\_ERASE AND IMP\_SURFACE\_ERASE to produce IMP\_SURFACE\_INTERSECT.
  - ② *Number of records:*
- Dissolve impervious surface to combine duplicate map numbers.
  - ① Using the dissolve geoprocessing tool, dissolve IMP\_SURFACE\_INTERSECT to produce IMP\_SURFACE DISSOLVE. This is the final impervious surface layer used to calculate impervious surface area.
  - ② *Number of records:*

## B) Create Master Working Tables.

- Create a MS Access database, name it Impervious\_Surface\_Table\_2007.
- Import tables PRMF2007, PRCM2007 from the Tax Assessor CAMA database and GISRPTX from gtz@warehouse.sde.
- Create a make table query to create FIRST\_LIVING table.
  - ① Join PRMF2007 to PRCM2007

Join Properties:	
Left Table Name:	PRMF2007
Left Column Name:	RPID
Right Table Name:	PRCM2007
Right Column Name:	RPID
Join Option:	Option 3: Include all records from PRCM2007 and only records from PRMF2007 where joined fields are equal.

- ② Create a table called FIRST\_LIVING with the fields PARCEL and FIRST\_LIVING\_AREA.
- ③ *Number of records:*
- Create a make table query to create MASTERTABLE table.
  - ① Join GISRPTX to PRMF2007

Join Properties:	
Left Table Name:	GISRPTX
Left Column Name:	MAP
Right Table Name:	PRMF2007
Right Column Name:	PARCEL

Join Option:	Option 1: Only include rows where joined fields from both tables are equal.
--------------	---

- ② Create a table called MASTERTABLE with the fields MAP, DIST, OWNAM1, JURIS, LANDUSE, and CWATER.
- ③ *Number of records:*

### C) Create Personal Geodatabase.

- Using ArcCatalog create a personal Geodatabase.
  - ① Name the geodatabase IMPERVIOUS\_SURFACE\_2007 stored under *k:/amproj/Stormwater Utility*.
  - ② Import tables MASTERTALBE and FIRST\_LIVING and feature classes PARCEL\_ERASE, and IMP\_SURFACE DISSOLVE from the file Geodatabase.

Table / Feature Class:	Number of Records:
MASTERTABLE	
FIRST_LIVING	
CAD_PARCEL_MP	
IMPERVIOUS DISSOLVE	

### D) Calculate Total Amount of First Living Area by Parcel.

- Summarize the First Floor Square Footage.
  - ① In ArcMap add the FIRST\_LIVING table and summarize by PARCEL to remove duplicate map numbers. Include in the summarize the sum of the FIRST\_LIVING\_AREA. This provides the total amount of first floor living area by parcel. Save this table under the geodatabase as FISRTLIVE.
  - ② *Number of records:*
- Calculate first floor living in MASTERTABLE
  - ① In ArcMap add MASTERTABLE and FIRRTLIVE from the Geodatabase.
  - ② Add a field to MASTERTABLE called FIRST\_LIVING (long integer field type).
  - ③ Join FIRRTLIVE to MASTERTABLE by MAP and PARCEL with the option to keep all records.
  - ④ Calculate FIRST\_LIVING = SUM\_FIRST\_
  - ⑤ In ArcMap, select where FISRT\_LIVING is null and calculate those records to 0.

⑥ Number of records:

### E) Calculate Classifications

- In ArcMap add a field called SU\_CLASS (short integer field type). When field is added all values will be null. Calculate all values = 0.
- Select parcel by land use code and calculate class. Use the expressions save under *k:/amproj/Stormwater Utility/amexpression/class<number>.exp*. These expressions have all the land use code by class.

Class:	Number of Records:
CLASS 1	
CLASS2	
CLASS 3	
CLASS 4	
NO CLASSIFICATION (SU_CLASS = 0)	

### F) Calculate Areas

- In ArcMap add fields PARCEL\_AREA (double field type), IMP\_AREA (double field type), and IMP\_AREA\_PER (double field type).
- Calculate PARCEL\_AREA
  - ① In MS Access create an update query and join CAD\_PARCEL\_MP to MASTERTABLE

Join Properties:	
Left Table Name:	CAD_PARCEL_MP
Left Column Name:	PIN
Right Table Name:	MASTERTABLE
Right Column Name:	MAP
Join Option:	Option 1: Only include rows where joined fields from both tables are equal.

- ② Calculate PARCEL\_AREA = SHAPE\_AREA.
- Calculate IMP\_AREA
  - ① In MS Access create an update query and join IMPERVIOUS DISSOLVE to MASTERTABLE

Join Properties:	
Left Table Name:	IMPERVIOUS DISSOLVE
Left Column Name:	PIN
Right Table Name:	MASTERTABLE

Right Column Name:	MAP
Join Option:	Option 1: Only include rows where joined fields from both tables are equal.

- ② Calculate  $IMP\_AREA = SHAPE\_AREA$ .
- Calculate  $IMP\_AREA\_PER$ 
  - ① In MS Access create an update query and calculate  $IMP\_AREA\_PER = IMP\_AREA / PARCEL\_AREA * 100$ .

### G) Calculate ERUs.

- In MS Access add fields ERU (double field type), and ERU\_ROUND (Integer field type, no decimal place).
- In ArcMap calculate  $ERU = 0$  and  $ERU\_ROUND = 0$ .
- In ArcMap select  $SU\_CLASS = 1$  OR  $SU\_CLASS = 3$  OR  $SU\_CLASS = 4$ , and calculate  $ERU = 1$ .
  - ① Number of records:
- In ArcMap select  $SU\_CLASS = 2$ 
  - ① Calculate  $ERU = IMP\_AREA / 2477$
  - ② Number of records:
- In ArcMap select  $ERU = 0$  AND  $SU\_CLASS = 2$ 
  - ① Calculate  $ERU = 1$
  - ② Number of records:
- In ArcMap select  $SU\_CLASS = 1$  OR  $SU\_CLASS = 3$  OR  $SU\_CLASS = 4$ , and calculate  $ERU\_ROUND = 1$ .
  - ① Number of records:
- In ArcMap select  $ERU = 1$  AND  $SU\_CLASS = 2$ 
  - ① Calculate  $ERU\_ROUND = 1$
  - ② Number of records:
- In ArcMap select  $SU\_CLASS = 2$  AND  $ERU <> 1$ 
  - ① Calculate  $ERU\_ROUND = ROUND ( ERU + 0.5)$

② *Number of records:* \_\_\_\_\_

- In ArcMap Select ERU\_ROUND = 0

① *Number of records:* \_\_\_\_\_

- ② This will be the number of records that cannot have a fee calculated on them, because of incomplete / inaccurate data.

## H) Calculate Fees

- In MS Access add field FEE (currency field type), FEE\_WCREDIT (currency field type), and CREDIT (currency field type).

- Calculate Class 1 Fees

- ① Calculate Fees – Class 1 and first floor living  $\leq 1000$

- ① In MS Access create an update query and select SU\_CLASS = 1 and FIRST\_LIVING  $\leq 1000$
- ② Calculate FEE = \$22.80
- ③ Calculate FEE\_WCREDIT = \$17.10
- ④ Calculate CREDIT = \$5.70

⑤ *Number of records:* \_\_\_\_\_

- ② Calculate Fees – Class 1 and first floor living  $\geq 1001$

- ① In MS Access create an update query and select SU\_CLASS = 1 and FIRST\_LIVING  $\geq 1001$
- ② Calculate FEE = \$25.65
- ③ Calculate FEE\_WCREDIT = \$19.24
- ④ Calculate CREDIT = \$6.41

⑤ *Number of records:* \_\_\_\_\_

- Calculate Class 2 Fees.

- ① In MS Access create an update query and select SU\_CLASS = 2

- ② Calculate FEE = \$27.00 \* ERU\_ROUND

③ *Number of records:* \_\_\_\_\_

- ④ In MS Access create an update query and select SU\_CLASS = 2

- ⑤ Calculate FEE\_WCREDIT = \$20.25 \* ERU\_ROUND

- ⑥ *Number of records:*
- ⑦ In MS Access create an update query and select SU\_CLASS = 2
- ⑧ Calculate CREDIT = FEE – FEE\_WCREDIT
- ⑨ *Number of records:*
- Calculate Class 3 and Class 4 Fees.
  - ① In MS Access create an update query and select SU\_CLASS = 3 and SU\_CLASS = 4
  - ② Calculate FEE = \$22.80
  - ③ Calculate FEE\_WCREDIT = \$17.10
  - ④ Calculate CREDIT = \$5.70
  - ⑤ *Number of records:*
- Calculate Fees for parcels that do not receive tax bills.
  - ① In MS Access create an update query and select JURIS = C
  - ② Calculate FEE = \$0.00
  - ③ Calculate FEE\_WCREDIT = \$0.00
  - ④ Calculate CREDIT = \$0.00
  - ⑤ *Number of records:*

## I) Exclude Greenville and Greer parcels

- In ArcMap add a field called MUN\_EXCLUDE (field type text length = 1)
- Use the expressions save under *k:/amproj/Stormwater Utility/amexpression/mun\_exclude.exp*. This expression includes all the tax districts that comprise the cities of Greenville and Greer.
- With records selected, calculate MUN\_EXCLUDE = ‘Y’
- *Number of records:*
- Select records where MUN\_EXCLUDE <> ‘Y’
- With records selected, calculate MUN\_EXCLUDE = ‘N’
- *Number of records:*

## J) Export data to text files

- Create a text file for properties that receive a storm water service fee.
  - ❶ In MS Access create a make table query to create a table called STORMFEE2007.
  - ❷ Include only the fields MAP and FEE.
  - ❸ Query out all records that do not receive a storm water service fee.  
CWATER <> 999999999.99 and JURIS <> C and MUN\_EXCLUDE <> Y
  - ❹ Export this table to a .CSV file called STORMFEE2007.CSV
  
- Create a text file for properties that do not receive a storm water service fee.
  - ❶ In MS Access create a make table query to create a table called STORMFEE2007\_EXCLUDE.
  - ❷ Include the fields MAP, FEE, JURIS, and CWATER
  - ❸ Query out all records that receive a storm water service fee.  
CWATER = 999999999.99 or JURIS = C and MUN\_EXCLUDE <> Y
  - ❹ Export this table to a .CSV file called STORMFEE2007\_EXCLUDE.CSV

## K) Totals

- Number of Records by Billing Classification (Excluding Exempt Parcels)

	Number of Parcels	2007 Amount (\$)	2006 Amount (\$)
Class 1			
Class 1 <= 1000			
Class 1 >= 1001			
Class 2			
Class 3			
Class 4			
All Records			

- Number of Records by Billing Classification (Including Exempt Parcels)

	Number of Parcels	2007 Amount (\$)	2006 Amount (\$)
Class 1			
Class 1 <= 1000			
Class 1 >= 1001			
Class 2			
Class 3			
Class 4			
All Records			

# APPENDIX B

## Impervious Surface Class by Land Use Code

<b>CLASS 1</b>	
<b>CLASS 2</b>	
<b>CLASS 3</b>	
<b>CLASS 4</b>	
<b>0110</b>	<b>Duplex</b>
<b>0112</b>	<b>Multiplex</b>
<b>0113</b>	<b>Group House Converted</b>
<b>0120</b>	<b>Apartment – Conventional (C , D)</b>
<b>0120</b>	<b>Apartment - High Rise(A, B)</b>
<b>0122</b>	<b>Apartment Subsidized</b>
<b>0130</b>	<b>Mobile Home Park</b>
<b>0140</b>	<b>Nursing Home</b>
<b>0141</b>	<b>Assisted Living</b>
<b>0142</b>	<b>Healthcare - Converted Residential</b>
<b>0143</b>	<b>Healthcare - High - Rise Retirement with Dining</b>
<b>0230</b>	<b>Apartment - Boarding / Bed &amp; Breakfast</b>
<b>0240</b>	<b>Hotel - Luxury</b>
<b>0240</b>	<b>Hotel -Full Service Upscale</b>
<b>0250</b>	<b>Motel - Extended Stay</b>
<b>0270</b>	<b>Motel - Mid - Service</b>
<b>0271</b>	<b>Motel Economy</b>
<b>0272</b>	<b>Motel Budget</b>
<b>0273</b>	<b>Motel Low Cost</b>
<b>0300</b>	<b>Car Wash Full Service</b>
<b>0301</b>	<b>Car Wash Self Service</b>
<b>0301</b>	<b>Car Wash Automatic</b>
<b>0310</b>	<b>Service Station - Gas</b>
<b>0320</b>	<b>Cashier Booth - Gas</b>
<b>0330</b>	<b>Service Garage - Body Shop</b>
<b>0331</b>	<b>Mini Lube</b>
<b>0332</b>	<b>Auto Service Center</b>
<b>0350</b>	<b>Auto Dealership / Maintenance / Service</b>

0360	Auto Dealership / Showroom
0370	Parking Garage
0370	Parking - Basement Level
0371	Parking Lot
0409	Medical Office - Dental
0410	Medical Office
0411	Vet Clinic
0413	Rehab Center
0414	Vet Clinic Converted / Residential
0420	Office High Rise
0421	Office - General
0423	Office - Converted / Residential
0424	Office/warehouse
0425	Office Retail Strip
0430	Bank Full - Service
0431	Bank Branch
0510	Convenience Store
0511	Convenience Store/food service
0512	Mom / Pop Grocery
0513	Super Market
0520	Retail - General
0521	Retail - Strip Center
0522	Retail - Show Room
0523	Retail - Drug Store
0530	Retail - Discount
0531	Retail - Discount Warehouse
0532	Retail - Lumber - Showroom / Retail
0550	Shopping Center / Neighborhood
0560	Shopping Center / Mall
0561	Shopping Center Anchor Retail
0570	Shopping Center Department Store
0580	Barber / Beauty - Converted Residence
0581	Barber / Beauty - Conventional
0590	Laundry / Cleaner Full Service
0591	Laundry Mat - Self Service
0610	Restaurant - Fast Food
0611	Restaurant - Truck Stop
0620	Restaurant - Full Service
0620	Cafeteria
0630	Bar - Neighborhood
0631	Bar - Night Club
0632	Bar - Restaurant / Lounge / Sports
0710	Recreation - Bowling Alley
0720	Recreation - Gym / Athletic Club

0721	Recreation - Health Club
0730	Recreation - Skating Rink - Ice
0730	Recreation - Skating Rink - Roller
0740	Movie Theatre
0741	Theatre - Play / Dining
0750	Recreation - Golf - A
0750	Recreation - Golf - B
0750	Recreation - Golf - C
0750	Recreation - Golf - D
0751	Recreation - Club House / Golf
0752	Recreation - Golf - Putt Putt
0753	Recreation - Golf - Par 3
0754	Recreation - Country Club
0755	Recreation - Horse Arena
0770	Recreation - Community Recreation
0780	Recreation - Theme Park
0790	Recreation - Tennis / Racquet
0810	Religious / Church
0821	Government
0850	Schools
0851	Day Care - Conventional
0852	Day Care - Converted Residential
0860	Fraternal Organizations
0872	Funeral Home Conventional
0873	Funeral Home Converted
0890	Broadcasting Facility
0891	Utility
0910	Mini-Warehouse
0920	Golf Storage / Service
0930	Truck Terminal
0940	Warehouse General
0950	Warehouse Distribution
0960	Warehouse - Multi-Purpose
0970	Industrial
0980	Hangars
0990	Cold Storage
1100	Residential Single Family
1101	Residential Single Family - with Auxiliary Use
1170	Residential Mobile Home with Land
1171	Residential Mobile Home on Mobile Home File
1180	Residential Vacant
1181	Homeowners Association Property
1182	Common Areas

<b>6800</b>	<b>Commercial Vacant</b>
<b>9170</b>	<b>Agricultural Vacant</b>
<b>9171</b>	<b>Agricultural Improved</b>

## APPENDIX C

## Ordinance

## APPENDIX D

# Storm Water Fee Credit Procedure