



# STORMWATER UTILITY RATE STUDY

## CITY OF WESTFIELD, INDIANA

Prepared for:

City of Westfield, Indiana
Public Works Department
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CBBEL Project Number 13-0570

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# CHAPTER 1 PROJECT OVERVIEW & SCOPE

Like many Indiana cities, the City of Westfield is faced with the challenge of paying for increased costs to comply with state and federal stormwater quality mandates as well as ongoing maintenance of and improvement to the existing drainage system. Since 2007, Westfield collected stormwater utility fees through their water utility using a flat rate based on the water meter size. Following the sale of the city's water utility to Citizens Energy Group in 2013, the city continued to collect stormwater fees using the same flat rate. While this method generates some revenue, it is not adequate to meet the city's drainage and regulated stormwater program requirements nor does it reflect the demands that stormwater runoff places on the public infrastructure. As such, the city is updating their stormwater utility based on impervious cover.

Recognizing the need to maintain a separate and stable funding source, the city retained Christopher B. Burke Engineering, LLC (CBBEL) to review their existing stormwater program and budget and recommend an assessment rate and structure to meet current and future stormwater needs.

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# CHAPTER 2 STORMWATER UTILITIES

## 2.1 STORMWATER UTILITY AS A FUNDING MECHANISM

The stormwater utility is a proven method of providing a reliable funding source for the management of stormwater programs. This funding source is provided through a user fee similar to the fees collected for public water and wastewater services. The stormwater utility is unique (when compared with water and wastewater utilities) in that the service cannot be disconnected for nonpayment, service is provided to all citizens without choice, and the actual service to a particular property is difficult to quantify. Consequently, the successful implementation of a stormwater utility requires a good stormwater management program with well-defined deliverables as well as public support through education and outreach.

This type of funding mechanism has been coined Stable, Adequate, Flexible, and Equitable (SAFE).

- **Stable** – a stormwater utility is stable because it is separated from the annual budget process and does not compete with other public services and programs such as roads, schools, public safety, and solid waste. This stable revenue source allows stormwater managers to effectively implement their stormwater program and complete drainage projects.
- **Adequate** – a stormwater utility is adequate because the user fee is calculated based on a detailed evaluation of program needs and the capital improvement plan.
- **Flexible** – a stormwater utility is flexible because the rate structure can include any number of modifiers such as caps, economic incentives to reduce user fees, variables for land use types (vacant land, special use or tax exempt properties), and secondary funding methods to meet the stormwater management program objectives.
- **Equitable** – a stormwater utility is equitable because the user fee is proportional to the rate of stormwater runoff from each parcel and demand put on the city-owned and maintained drainage system.

## 2.2 BENEFITS OF A STORMWATER UTILITY

Although the City of Westfield already has an established stormwater utility in place, it may be beneficial to revisit and review the benefits of maintaining a stormwater utility for the city to reassure every one of the appropriateness of the city's approach for funding its stormwater needs. The following summarizes these into benefits for the elected official and senior city staff responsible for annual funding of the stormwater program, the benefits from the perspective of

staff responsible for the daily operations of the stormwater program, and the benefits to the public.

1. Benefits from the perspective of the elected officials and seniors staff responsible for annual funding of the stormwater program:
    - **Dedicated Funding Source** – revenues generated by stormwater utilities can be used as a dedicated source of funding.
    - **Supplemental Funding Source** – stormwater utility revenues can be used to replace current general fund/ad valorem tax funding which enables the tax based funding to be used for other community needs.
    - **Sustainable Revenues** – revenues generated by stormwater utilities are constant and tend to gradually increase with the community's growth.
    - **Bondable Revenue Stream** – bonds for capital improvements can be issued to facilitate constructing stormwater management facilities because the revenues generated by stormwater utilities can be used to pay back bonds.

2. Benefits from the perspective of staff responsible for the daily operations of the stormwater program:
    - **Programmatic Stability** – the community's stormwater management program will tend to operate on a stable basis which supports staff stability, continued levels of maintenance operations, and continuity in Capital Improvement Project (CIP) programs since stormwater utilities have stable revenues.
    - **Long-Term View** – stormwater managers are allowed to adopt a longer view in planning for capital investments, undertaking maintenance enhancement, and developing staff since they are not operating in a year-to-year funding environment with no certainty of follow-on funding in successive years.
    - **Facilitation of NPDES Compliance** – communities that are regulated under the Federal NPDES Stormwater Permitting Program, such as City of Westfield, are more readily able to comply with the specific permit conditions requiring the development of funding for annual operation of the Stormwater Management Program that is contained in their MS4 Permits.

3. Benefits from the perspective of the public:
    - **Improvements to the Drainage System** - everybody benefits from the maintenance and improvements provided by the stormwater utility, through reduced flooding and improved public safety.

- **Improved Water Quality for Recreation** – activities that involve direct human interaction with water such as swimming, boating, and sport-fishing.
- **Improved Livability and Quality of Life** – national surveys conducted about the factors that are most important in choosing a place to live consistently include "clean water". Clean rivers, streams, and lakes benefit the livability of a community and the standard of living for current and future generations.

## 2.3 ITEMS TYPICALLY FUNDED BY A STORMWATER UTILITY

A stormwater utility can generate revenue to fund a variety of structural and non-structural activities as long as they specifically relate to or support the community's stormwater management program. The following summarizes the stormwater activities that are typically funded through a utility:

- **NPDES MS4 Compliance** – including annual reports, illicit connections, construction inspections, public information, and dry weather screening to meet permit requirements
- **Planning** – including stormwater master plans, watershed hydrologic analysis and stream studies, stormwater ordinances and technical standards, floodplain management plans, and land use planning
- **Operation and Maintenance** – including street sweeping, inlet/pipe cleaning, ditch maintenance, mowing and litter control, stormwater pond maintenance, and minor repair and construction of stormwater infrastructure
- **Capital Improvement Projects** – including major construction projects and/or rehabilitative maintenance of flood control structures or stormwater infrastructure
- **Vehicles and Equipment** – purchase and/or maintenance of vehicles and equipment (street sweepers, vacuum trucks, etc.), and program supplies and software
- **Training** – including erosion and sediment control, good housekeeping and pollution prevention, illicit discharge detection and elimination, and developer and contractor training
- **Administration –** including staff necessary for the coordination and implementation of the stormwater program

## 2.4 STATE AUTHORITY FOR MUNICIPALITIES TO COLLECT STORMWATER FEES

Indiana law allows municipalities to collect user fees necessary to manage the capital improvement and operational expenses associated with stormwater management. This can be done by either creating a new Department of Stormwater Management or expanding the scope of services of the existing Municipal Sewage Works.

**Department of Stormwater Management (IC 8-1.5-5)**
IC 8-1.5-5 was established in 1988 as a specific tool for cities and town to improve their ability to manage stormwater. Under this law, municipalities must, by ordinance:

1. Establish a Department of Stormwater Management. The Department is governed by 3 member board appointed by the executive of the municipality
2. Define the district that is considered to receive a special benefit from the collection and disposal of stormwater, identify the method for determining the fee, how the stormwater funds may be used, and collection method
3. Establish the rate structure and user fee for rate payers of the stormwater utility

**Municipal Sewage Works (IC 36-9-23)**
Stormwater user fees may be collected under the 1981 statute IC 36-9-23 that authorizes municipalities to operate sewage works. While the focus of this statute is sewage, the language includes storm sewers and storm drainage as part of that system. A municipal Board of Public Works is responsible for the construction, acquisition, improvement, operation, and maintenance of sewage works.

Under this option, the stormwater utility may be administered under the existing municipal Utility Board or Board of Public Works. Expanding the existing Board's responsibility requires an amendment to the ordinance that establishes their authority.

Westfield's current water meter based stormwater utility was established in 2007 (Ordinance 07-23) through the provision allowed under the Municipal Sewage Works. However, with the 2013 sale of the water and wastewater utilities to Citizens Energy Group, the city will need to repeal the current ordinance and adopt a new ordinance for the stormwater utility to continue to function under the authority of the Board of Public Works and Safety.

# CHAPTER 3 STORMWATER MANAGEMENT PROGRAM

## 3.1 REGULATORY MANDATE & PENALTIES FOR NONCOMPLIANCE

As part of the 1987 amendments to the Federal Clean Water Act (CWA), the United States Congress added Chapter 402(p) to the CWA to address the water quality impacts of stormwater discharges from industrial facilities and large to medium municipal separate storm sewer systems (MS4s). Large to medium MS4s were defined as communities serving populations of 100,000 or more and are regulated by the Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System's (NPDES) Storm Water Phase I Program.

In addition to these amendments, Congress directed the EPA to issue further regulations to identify and regulate additional stormwater discharges that were considered to be contributing to national water quality impairments. On December 8, 1999, the EPA issued regulations that expanded the existing NPDES Storm Water Program to include discharges from small MS4s in "urbanized areas" serving populations of less than 100,000 and stormwater discharges from construction activities that disturb more than one acre of land. These regulations are referred to as the NPDES Phase II Storm Water Program.

In the State of Indiana, the Indiana Department of Environmental Management (IDEM) is responsible for the development and oversight of the NPDES Phase II Program. The IDEM initiated adoption of the Phase II Rules that were ultimately codified as 327 IAC 15-13 (Rule 13). Rule 13 became effective on August 6, 2003 and requires designated MS4 entities to apply for permit coverage by submitting a Notice of Intent (NOI) and developing Storm Water Quality Management Plans (SWQMPs) through a phased submittal process. The IDEM's phased submittal requirements for the SWQMP include the following 3 components:

1. Part A: Initial Application
2. Part B: Baseline Characterization Report
3. Part C: Program Implementation Plan

To deal with potential violations, EPA has 3 types of enforcement actions. These include Administrative Orders, Civil Penalties, and Criminal Prosecutions. Depending on the severity of the violation, monetary fines may range from $2,500/day/violation not to exceed as much as $157,500/day/violation. The most severe individual penalty is imprisonment for not more than 15 years and/or a fine of $250,000. Organizations, including governmental entities subject to Phase I and Phase II Programs, may be subject to fines of not more than $1,000,000. In addition to federal enforcement and penalties, Indiana may issue a civil fine not to exceed $25,000/day/violation. The City of Westfield became a designated MS4 entity in 2003.

## 3.2 CITY OF WESTFIELD STORMWATER PROGRAM

The city's plan for implementing Rule 13 requirements is contained in their SWQMP Part C: Program Implementation Report that includes a number of best management activities identified in each of the following 6 Minimum Control Measures (MCMs).

**MCMs #1 & #2: Public Education, Outreach, Participation, & Involvement**

- The City must implement and/or participate in the following activities to meet their Rule 13 requirements:
  - Hamilton County Phase II Public Education Steering Committee
  - Regional Collaboration and Partnering
  - Stormwater Assessments (to gauge outreach effectiveness)
  - Stormwater Webpage
  - Stormwater Educational Materials
  - Stormwater Messaging Packaging
  - Fair or Festival Booths
  - Clean-up Events
  - Household Hazardous Waste and Recycling Program Promotions (support)
  - "Report-A-Polluter" Program
  - Soil and Water Conservation District Activities (support)
  - Storm Drain Marking
  - Signage
  - Rule 13 Public Participation List (of those groups or individuals interested in participating)
  - Public Meetings and Public Notification

**MCM #3: Illicit Discharge Detection & Elimination (IDDE)**

- Defined by EPA as identifying and eliminating illicit discharges and spills from storm drain systems
- The city must implement the following activities to meet their Rule 13 permit requirements:
  - Stormwater System Map (maintain & update)
  - Illicit Discharge Detection and Elimination Ordinance (update & enforce)
  - Illicit Discharge Detection and Elimination Plan
  - IDDE Potential Desktop Analysis
  - IDDE Manual and Field Binder

**MCMs #4 & #5: Construction and Post-Construction Runoff Control**

- Defined by EPA as addressing stormwater runoff from active construction sites and after construction activities have ended
- The city must implement the following activities to meet their Rule 13 requirements:
  - Stormwater Management Ordinance
  - Stormwater Technical Standards
  - Plan Review, Site Inspection, and Enforcement
  - Training for Staff and Construction Professionals
  - Pre-Construction Meetings
  - Post-Construction BMP Operation and Maintenance (O&M) Plans
  - Erosion and Sediment Control and Post-construction BMP Tracking Database
  - Post-Construction Inspection and Enforcement Documentation
  - Construction BMP Performance Bond Requirements
  - Post-Construction BMP Performance Bond Requirements
  - Westfield Rule 5 Compliance (on city owned projects)

**MCM #6: Good Housekeeping & Pollution Prevention**

- Defined by EPA as addressing stormwater runoff from MS4 owned facilities and activities
- The city must implement the following activities to meet their Rule 13 requirements:
  - MS4 Conveyance System Maintenance Plan and Documentation
  - Stormwater Pollution Prevention Plans (covering Secondary Containment, Salt/Sand Management, Snow Disposal Areas, Spill Prevention and Clean Up, Fertilizer and Pesticide Management, Waste Disposal, & Washwater Management)
  - Oil and Water Separator Maintenance
  - Street Sweeping Program
  - IDDE, Good Housekeeping, & Pollution Prevention Staff Training
  - Flood Management Projects (review for incorporation of stormwater quality practices)

Although the city has attempted to partially implement some of these activities, they have not had the consistency, unity, coordination, or completeness needed for longevity and success.

***RECOMMENDATION #1***
***It is recommended that the city continue to maintain a dedicated funding source, such as a stormwater utility fee, to effectively implement and meet the goals of their Rule 13 Program and to position the city to meet increasing expectations and requirements.***

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# CHAPTER 4 PROGRAM STAFFING NEEDS & ORGANIZATION

CBBEL met with key city staff and officials and researched similar MS4 organizational structures to recommend staffing for the stormwater program. This information was used to create the "Organizational Chart for City of Westfield Stormwater Utility" provided in **Appendix 1**.

## 4.1 ORGANIZATIONAL STRUCTURE

The Mayor is designated by law as the overall MS4 Operator. Rule 13 mandates that the highest ranking elected official is ultimately responsible for the development, implementation, or enforcement of the MCMs for the city. The noted Rule 13 program responsibilities have been delegated to the City Engineer who serves as the Mayor's duly authorized representative for the city.

The existing Board of Public Works would also serve as the Stormwater Utility Board as described in Section 2.4. This board would make decisions about the city's overall stormwater management program, and the City Council would approve the Stormwater Utility budgets. A Stormwater Management Division would be created within the Department of Public Works for the purpose of providing for and managing the collection, treatment, drainage, and disposal of city storm and surface water.

The Stormwater Coordinator is responsible for coordinating the 6 MCMs, the City Engineer provides CIP management and review, and the Staff Engineer reviews the stormwater drainage for private and residential projects. A seasonal Stormwater Intern assists with all of the 6 MCMs as needed and directed by the Stormwater Coordinator.

Revenue generated from the stormwater utility would be used to fund 100% of the Stormwater Coordinator, Stormwater Inspector, and Seasonal Stormwater Intern positions as well as 50% of the Development Construction Superintendent position.

**MCMs #1 & #2**: Public Education, Outreach, Participation, & Involvement are led by the Stormwater Coordinator with support from the Stormwater Inspector as well as the Upper White River Watershed Alliance (UWRWA). The city pays annual dues to the UWRWA for their services and this line item is included in the proposed stormwater utility budget. In addition, help to either directly or indirectly fulfill Rule 13 program requirements is provided by other surrounding MS4 entities that each have a representative on the Public Education Committee, through the Westfield Schools, and the City's Public Works Department. However, the city has decided that none of these entities would receive stormwater utility funds at this time.

**MCM #3**: Illicit Discharge Detection and Elimination tasks are led by the Stormwater Coordinator. In addition, help to either directly or indirectly fulfill Rule 13 program requirements is provided by the Indiana Association for Floodplain and Stormwater Management (INAFSM) IDDE Group, the City Fire Department, the Hamilton County Emergency Management Agency, and the City's Planning Department's GIS Coordinator. However, the city has decided that none of these entities would receive Stormwater Utility funds at this time.

**MCMs #4 & #5**: Construction and Post-Construction Runoff Control are led by the Stormwater Coordinator with support from the Stormwater Inspectors to handle permitting, review of Stormwater Pollution Prevention Plans and O&M Plans inspections, compliance, and enforcement. Tasks such as Ordinance and Technical Standards updates, training, and general procedural items are developed with the other surrounding MS4 entities that each has a representative or representatives on the Hamilton County Technical Committee. The INAFSM Inspectors' Group is a networking forum for all MS4 entities throughout the state to learn and share stormwater program knowledge. Applicable city staff pays annual dues to INAFSM.

**MCM #6**: Good Housekeeping & Pollution Prevention for City Operations is led by the Stormwater Coordinator with support from the Street Supervisor; however, this MCM includes items such as facility management at city-owned properties and on-going maintenance of the separate storm conveyance system. Therefore, several city departments are affected by these Rule 13 requirements so the Stormwater Coordinator works effectively with them to cooperatively implement the program. For example, the Street Department and Solid Waste provides Street Sweeping and Vacuum Truck services which help to maintain and keep pollutants out of the separate storm sewer system conveyance. Some items such as training are developed with the other surrounding MS4 entities that each have a representative or representatives on the Standards, Plan Review, and Enforcement Committee.

Since the city has successfully developed a good working relationship with the other surrounding MS4 entities, Noblesville, Fishers, Carmel, Cicero, Hamilton County, and Zionsville, this "partnership of the willing" has allowed each of these communities to realize resource savings, mainly labor and monetary.

Additional Stormwater Quality and Quantity issues would be completed by "Capital Improvement Project (CIP) Support" staff including the Stormwater Coordinator, City Engineer, Development Construction Superintendent, Street Department Supervisor, and GIS Coordinator.

***RECOMMENDATION #2***

***It is recommended that the city continues to utilize the existing staff organizational structure to implement their Rule 13 program. Further, the city should supplement their existing staff by hiring a Seasonal Stormwater Intern.***

# CHAPTER 5 PROGRAM COSTS

CBBEL reviewed the City's Storm Water Quality Management Plan (SWQMP) Part C and Annual Reports, conducted interviews with key city staff and officials, and researched costs from other similar Phase II MS4 regulated entities to determine program costs.

The current annual stormwater revenue generated from the water-meter based stormwater utility is $440,000 and is less than half of the $1,200,000 that the city needs to adequately meet their required stormwater program requirements.

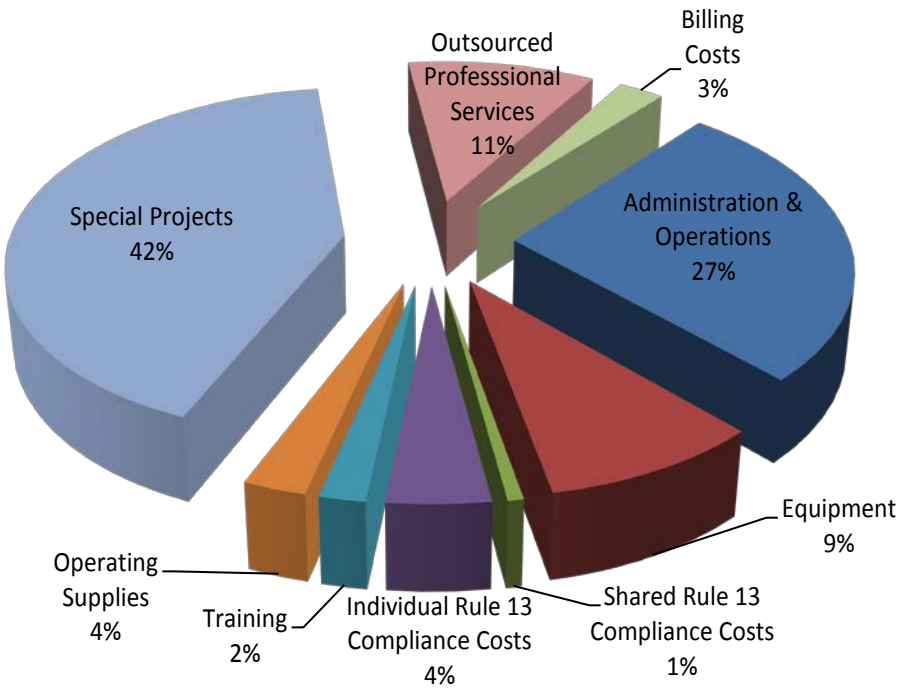


***Figure 5-1 Distribution of funds within the Stormwater Budget***

The stormwater budget prepared as part of this Rate Study includes a 5-year projection that allows for the successful implementation of the 6 MCMs required by Rule 13.

**Appendix 2** provides a tabulation of the noted 5-year budget and **Figure 5-1** graphically illustrates the distribution of the budget categories. The costs shown in the 5-year budget table in Appendix 2 are for the base year ("Year 1" is a representation of the first full year of implementation) and unless otherwise stated, a 3% annual inflation rate is assumed to derive costs for the subsequent years. Additional explanations are provided below for the following categories that make up the budget.

<u>Administration & Operations</u>

The stormwater program staff will consist of the:

- Existing Stormwater Coordinator (100%)
- Existing Erosion and Sediment Control Inspectors (100%)
- Existing Development Construction Superintendent (50%)
- New Seasonal Stormwater Intern (100%)

The estimated first-year cost is $316,400.

Equipment

This category includes ongoing costs of operating and maintaining:

- New vehicles for stormwater staff (2)
- New street sweeper (1)
- Existing vacuum truck (1)
- Existing and new vehicle operation and/or maintenance costs

The estimated first-year cost (including new equipment purchase) is $106,000.

Shared Rule 13 Compliance Costs

This category refers to compliance items that are outsourced to a community partner. The Utility provides sponsorship funding or shared labor to local groups who provide ongoing water quality education and outreach programs in Westfield. Examples include the following:

- Annual dues to the Upper White River Watershed Alliance (UWRWA) for education outreach and participation
- Regional MS4 sponsored video projects

The estimated first-year cost is $7,500.

City Individual Rule 13 Compliance Costs

This category includes items that Westfield pays for independently of other parties, including the following:

- Local public education and outreach materials including booth fees
- Storm drain marking supplies
- Illicit Discharge Detection and Elimination (IDDE) testing supplies
- Update IDDE/MS4 map with annexed areas
- GPS unit replacement and/or maintenance
- Land surveying equipment purchase and/or maintenance
- Separate storm sewer maintenance and/or repair
- Miscellaneous culvert repairs and/or installations
- Rule 5 inspection tools and supplies
- Spill kits and response equipment/stormwater controls

The estimated first-year cost is $74,100

Training

This category includes training and conferences to help staff be informed on regulatory and compliance issues, and provide professional development in stormwater regulations and utility management. Following are examples of training and conferences:

- Courses, classes, and/or conferences
- Office of the Indiana State Chemist (OISC) certified pesticide and/or herbicide applicator initial certifications and continuing education
- Stormwater or utility professional certifications and renewal fees.

The estimated first year cost is $22,000.

General Operating Supplies

This category includes administrative and miscellaneous office supplies including:

- Office supplies, equipment, and furniture
- Computer software, hardware, maintenance, annual upgrades, and training

The estimated first-year cost is $30,000.

Annual Maintenance and Repair

This category includes annual maintenance and repair to stormwater infrastructure including:

- Right-of-way drainage improvements
- Inspection and maintenance of stormwater Best Management Practices (BMPs)

The estimated first-year cost is $150,000

Special Projects

This category includes new projects, plans and studies to address stormwater problems including:

- Capital Improvement Projects (CIP)/on-going design and construction

The estimated first-year cost is $500,000

Outsourced Professional Services

With the increased workload from the stormwater utility and funds for projects, various outsourced, professional services will be needed. Items in this category include:

- Technical support for program implementation
- Legal fees
- Update and maintain stormwater master plans and/or watershed studies
- Review and re-evaluate utility rate fee and structure

The estimated first-year cost is $125,000.

Utility Billing Costs

Westfield will create a billing system to generate the stormwater utility bills. This cost will pay for:

- Maintenance of the stormwater billing portion of the utility bill
- Other related expenses, expenses associated with the addition of new stormwater accounts
- Frontline staff who will handle the billing

The estimated first-year cost is $30,000.

***RECOMMENDATION #3***

***It is recommended that the city adopt an average annual stormwater program budget of $1,200,000 to meet their Rule 13 Program requirements, maintain existing stormwater infrastructure, and implement identified special projects.***

# CHAPTER 6 STORMWATER UTILITY RATE & RATE STRUCTURE

Stormwater runoff carries with it pollutants to streams and lakes, and pollutant loads vary depending on land use. For example, nutrients (nitrogen and phosphorus) are higher in residential areas whereas metals (zinc, cadmium, and lead) are higher in runoff from highways and industrial areas. Impervious areas like rooftops, roads, and parking lots increase volume and velocity of stormwater runoff.

Stormwater fees are designed to share the costs in a community to cover stormwater expenses that may include program costs, infrastructure costs, and capital improvements cost. Those community shared costs include stormwater that comes from shared public infrastructure like roads and thoroughfares. Even though each parcel is billed an amount due to the characteristics of their specific parcel, a community's utility rate structure is designed to share the entire stormwater expense which includes expenses that are beyond individual properties. Billing is done per parcel to provide for user fees that are deemed overall fair and equitable to everyone within a user class, without preference to any one user or considering special characteristics of that user, knowing that all users must contribute and will benefit from the community's stormwater infrastructure and program.

There are predominantly two stormwater utility rate types, flat fee and variable fee.

1. Flat Fee – the fee is the same for each parcel regardless of land use, acreage, imperviousness, stormwater improvements, etc. This method is simple since everyone pays the same amount. Collection is tied to an existing database which reduces billing costs and duplication errors. However, this method can be difficult to justify and is not considered fair or equitable among rate payers since it does not consider differences of parcel size, land use, and stormwater runoff from impervious area.

2. Variable Fee – the fee varies depending on the parcel based on acreage, assessed value, land use, impervious area, or a combination of these.

    a. Acreage Based – a flat rate per acre. This method is simple since everyone pays something and it is based on readily available acreage data. However, it can be difficult to justify and is not considered fair or equitable among rate payers since it does not consider differences in land use and stormwater runoff.

b. Assessed Value – equivalent to a percent of assessed property value. This method is simple since everyone pays something and it is based on readily available assessment data. However, it can be difficult to justify and is not considered fair or equitable among rate payers since it does not consider differences in land use and there is no direct correlation between a property's assessed value and stormwater runoff.

c. Land Use – tiered flat rate or runoff coefficient. Both land use methods can be effective since they consider land use and its correlation to stormwater runoff. Although collection can be based on an existing database of land use codes, the rate assigned to each code is an average for typical land use and will not reflect actual imperviousness and its impact on stormwater runoff.

d. Impervious Area – average impervious area, actual impervious area for all land use types, or actual impervious area for only a particular land use type. Each of these methods takes into consideration either the average or actual impervious area for each land use. Since impervious area is directly correlated to the quantity and quality of stormwater runoff, the impervious methods are the most fair and equitable of all the rate types. However, since impervious area data may not be readily available, developing the initial database can be labor-intensive making it more expensive and time-consuming than methods based on land-use. Using a typical impervious area size for residential properties (known as "Equivalent Residential Unit" – ERU") that normally constitute a large percentage of parcels in a community, instead of determining actual imperviousness of each residential parcel, would greatly reduce the initial engineering fees and also future ongoing administrative costs of database maintenance and is therefore a very popular and common procedure for utilities that set the user fees based on imperviousness. Additionally, areas with no impervious areas still generate runoff and contribute stormwater volume and pollutants to some degree. These unimproved parcels also benefit from the overall stormwater program. Therefore, the impervious area method may be modified to collect a nominal flat fee from unimproved parcels (with no impervious area), typically set as a fraction of 1 ERU.

Assessing fees based on impervious area is the most common stormwater utility rate method throughout Indiana and the United States. Since it is the best indicator of amount and quality of stormwater runoff, it is considered the most defendable, fair, and equitable for rate payers. Once the initial impervious area database has been developed for non-residential units, new impervious areas may be easily added to ensure the database is accurate.

***RECOMMENDATION #4***
***It is recommended that the city implement a stormwater utility fee that is based on the impervious area on each improved parcel, with a nominal flat fee considered for unimproved parcels***

## 6.1 UTILITY RATE STRUCTURE ASSUMPTIONS

In order to estimate potential revenues needed to be generated to meet the program costs, a rate structure database was created. Aside from its main purpose, the database was created in a way to enable the user to change some parameters and instantly see its effects on the required fee per ERU and how a given scenario may change the share of revenue generated from each land use property type. The following assumptions were made when developing the different scenarios in the rate structure database.

1. The Study Area (**Figure 6-1**) was defined as the entire jurisdiction of the City of Westfield government.

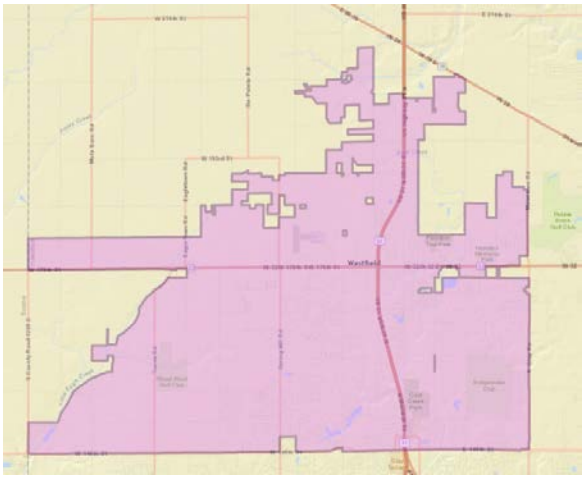

***Figure 6-1 City of Westfield Stormwater Utility Service Area***

2. The parcel data provided by City of Westfield included a field classifying each parcel into a property class. The entries in this field were the property class codes used by the State of Indiana's Property Tax Management System. Of the 15,097 parcels, there were 1,285 parcels that were not attributed with a property class code. For those parcels, CBBEL assigned property class codes based on a visual inspection of the 2015 aerial photography, property class of the surrounding parcels, and professional judgment.

3. Digitization for a representative sample of residential structures was undertaken for the purpose of establishing an ERU (see Section 6.3)

4. The impervious area of 797 non-residential parcels were digitized individually (see Section 6.4)

5. Public roads and railroad lines were neither digitized nor assessed.

## 6.2 PARCEL DATABASE SUMMARY AND STATISTICS

At the time of preparing this Rate Study there were 15,097 parcels within the study area in City of Westfield. **Figure 6-2** and **Figure 6-3** depict the percentages of parcels and their total acreage categorized by generalized property class. **Table 6-1** includes these percentages and the total number of parcels and land areas categories by detailed property class.

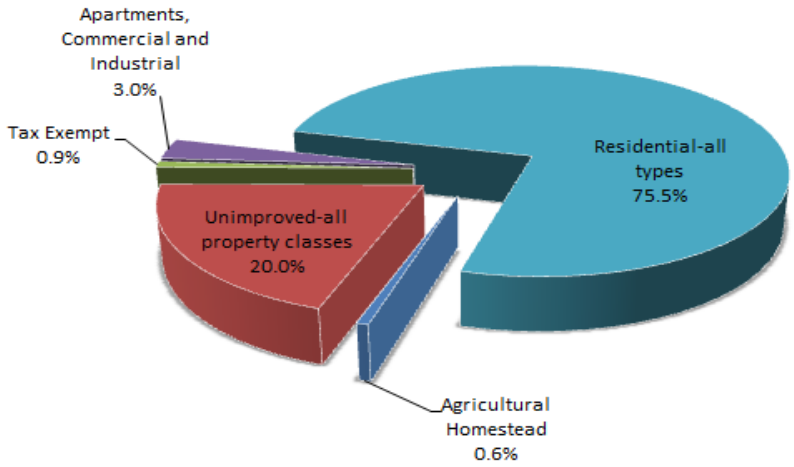


***Figure 6-2 Percentage of Parcels in Study Area***

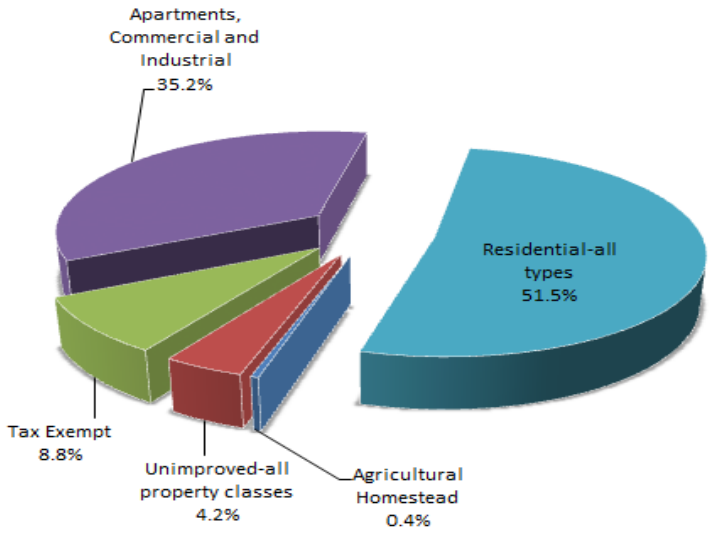


***Figure 6-3 Percent of Acres by Property Class***

***Table 6-1 Parcel Summary in Study Area***

| Property Class | No. of Parcels | Percentage of Parcels | No. of Acres | Percentage of Acres |
|---|---|---|---|---|
| Agricultural | 97 | 0.64% | 1,798 | 10.33% |
| Agricultural – Unimproved | 250 | 1.66% | 4,829 | 27.75% |
| Residential (Single-Family) | 10,260 | 67.96% | 4,544 | 26.11% |
| Residential - Unimproved | 1,796 | 11.90% | 935 | 5.37% |
| Residential (Apartment Building) | 17 | 0.11% | 164 | 0.94% |
| Residential (Duplex) | 22 | 0.15% | 10 | 0.05% |
| Residential (Triplex) | 2 | 0.01% | 1 | 0.00% |
| Residential (Mobile/MF Home) | 18 | 0.12% | 9 | 0.05% |
| Residential (Mobile Home Park) | 4 | 0.03% | 45 | 0.26% |
| Residential (CA) | 99 | 0.66% | 139 | 0.80% |
| Residential (CA-Unimproved) | 698 | 4.62% | 1,063 | 6.11% |
| Residential (Condominium) | 894 | 5.92% | 60 | 0.34% |
| Residential (Condominium-Unimproved) | 92 | 0.61% | 5 | 0.03% |
| Residential (Condominium CA) | 96 | 0.64% | 49 | 0.28% |
| Residential (Condominium-CA Unimproved) | 12 | 0.08% | 11 | 0.06% |
| Commercial | 358 | 2.37% | 1,375 | 7.90% |
| Commercial - Unimproved | 90 | 0.60% | 366 | 2.11% |
| Industrial | 69 | 0.46% | 384 | 2.21% |
| Industrial - Unimproved | 11 | 0.07% | 43 | 0.25% |
| Tax Exempt - Municipal | 70 | 0.46% | 823 | 4.73% |
| Tax Exempt - Municipal - Unimproved | 60 | 0.40% | 194 | 1.12% |
| Tax Exempt - Other | 65 | 0.43% | 519 | 2.98% |
| Tax Exempt - Other - Unimproved | 17 | 0.11% | 41 | 0.23% |
| TOTALS: | 13,269 | 100% | 16,930 | 100% |

## 6.3 ERU CALCULATION FOR RESIDENTIAL PARCELS

The Equivalent Residential Unit (ERU) is the average area of impervious cover on a single family residential (SFR) parcel. The direct impact to the public storm sewer system is undoubtedly different from one residence to the other, but due to the sheer number of residential units and their typical sizes, the impacts are assumed to be within a close range and each unit is charged a nominal rate. The greater value of the ERU is that it serves as a unit for determining non-residential rates.

The ERU was calculated as follows:

1. Rooftop surface area data for 9,132 SFR properties (larger than 400 square feet areas) were extracted from the most recent city's GIS building footprint layer (**Figure 6-5**) and the average rooftop surface area was determined to be 2,481 square feet.

2. The city's GIS layer did not include non-rooftop impervious area of each property. To determine the average total impervious area of SFR properties within the city, a representative SFR sample of 146 (or 1.6%) of the 9,132 SFR properties was selected (**Figure 6-4)**. For the sample, the rooftop area, non-rooftop impervious area, and the total impervious area of each parcel were digitized using the most recent aerial photography (2012). Based on this data, the ratio of total impervious area to rooftop area was determined for each parcel and the median value of this ratio for the representative sample was determined as 1.407.

3. Finally, the average rooftop area determined in step 1 (2, 481 square feet) was multiplied by the median ratio determined in step 2 (1.407) to result in 3, 491 square feet, which was rounded to 3,500 square feet and adopted as 1 ERU.

Each SFR property is typically assessed a minimum of 1 ERU, regardless of the size of impervious area on each property. Condominiums, duplexes, triplexes, mobile homes, and agricultural homesteads are also typically assessed a minimum of 1 ERU each.

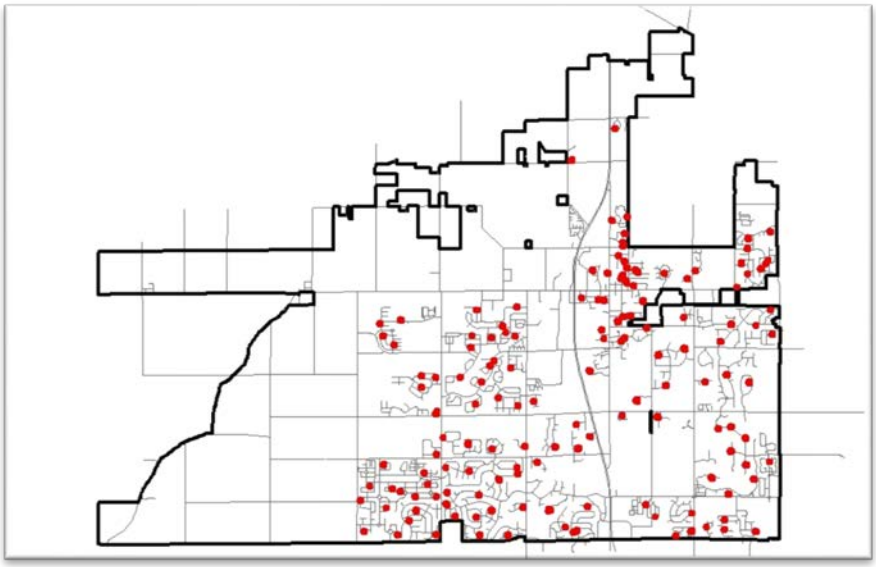

***Figure 6-4 Location of Representative SFR Samples to Determine Non-rooftop Ratios***

*Figure 6-5 Example of Rooftop versus Non-rooftop Impervious Area on a SFR Parcel*

***RECOMMENDATION #5***
***It is recommended that the city use an ERU value set at 3,500 square feet.***

## 6.4 IMPERVIOUS AREA CALCULATION FOR NON-RESIDENTIAL PROPERTIES

The actual impervious area was digitized for all non-residential parcels. These include commercial, industrial, tax exempt, residential common areas, and apartment property classes as coded in the Hamilton County GIS data. In the instances where no property class information was available, property classes

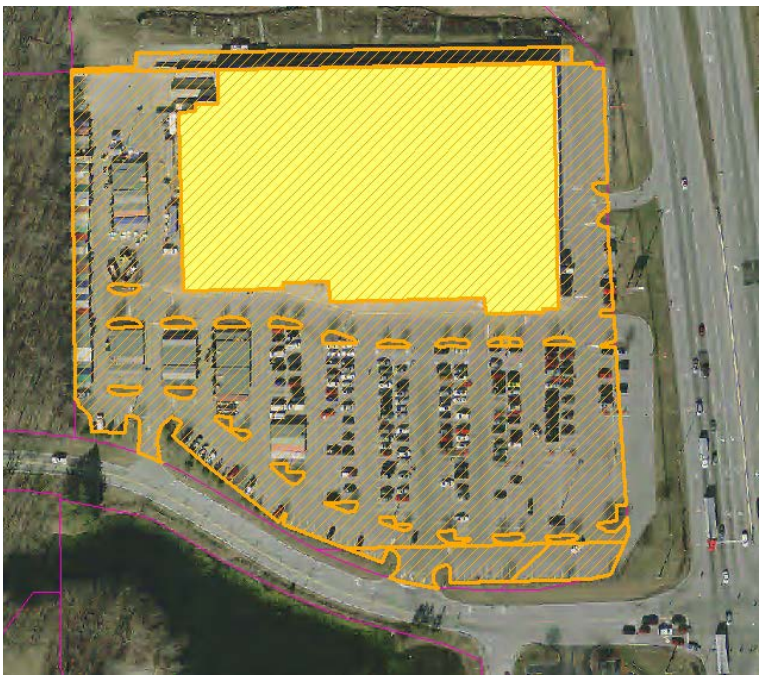

*Figure 6-6 Example of Impervious Area Digitized from a Non-residential Parcel*

were assigned based on visual inspection of 2015 aerial photography and professional judgment.

**Figure 6-6** is an example of the impervious area that was digitized for non-residential parcels and the reasonable care that was taken when tracing around edges of impervious areas. The resolution of the provided aerial photography limits the accuracy in these efforts.

The status of properties with property class codes that included "vacant" were scrutinized in more detail. Residential properties with a class code that included "Vacant" were assumed to be unimproved (no impervious area). However, the aerial photography for all non-residential properties were visually examined and parcels with any impervious area (such as a private access road) were digitized, with those parcels having no impervious area classified as "unimproved".

## 6.5 UTILITY RATE STRUCTURE

Multiple scenarios were explored in an effort to determine the most appropriate stormwater rate structure for the city. This was accomplished by performing "what-if" scenarios in the database, and adjusting ERU Multipliers for specific property classes. **Table 6-2** illustrates what the city determined to be the most fair and equitable scenario for the stormwater utility rate structure.

***Table 6-2 Proposed Stormwater Utility Rate Structure***

| General Property Class | Proposed Rate |
|---|---|
| Residential (SFR, Duplex, Triplex, Condominiums, Mobile/MF Homes) | 1.0 ERU (Flat Fee) |
| Agricultural Homestead | 1.0 ERU (Flat Fee) |
| Commercial, Industrial, Tax Exempt (excluding Municipal), Residential Common Areas, Apartments | Multiples of 1.0 ERU based on the actual amount of impervious area, but subject to 1.0 ERU minimum |
| Tax Exempt (Municipal) | Multiples of 0.5 ERU based on the actual amount of impervious area, but subject to 0.5 ERU minimum |
| Unimproved Properties (all property classes) | 0.33 ERU (Flat Fee) |

This rate structure attempts to focus the assessment of utility fees (based on anticipated stormwater impacts) to those properties that have impervious areas, with a nominal flat fee charged to unimproved parcel to recognize that all parcels contribute to stormwater to some degree. Based on this proposed utility rate structure and impervious area calculations described earlier, there are a total of 24,048 stormwater ERUs within Westfield.

To determine the appropriate fee for each ERU, the needed revenue from the stormwater utility source ($1,200,000) was divided by the total number of ERUs (24,048), resulting in an ERU value of $4.16.

Based on these results, the monthly flat fee for a Residential unit (equal to 1 ERU) would be $4.16 per month or $49.90 annually. Properties that are being charged based on amount of impervious areas would be charged accordingly (multiples of ERU, with a minimum ERU set at 1). **Figure 6-7** shows the percentage of total revenue that would be collected from each property class.

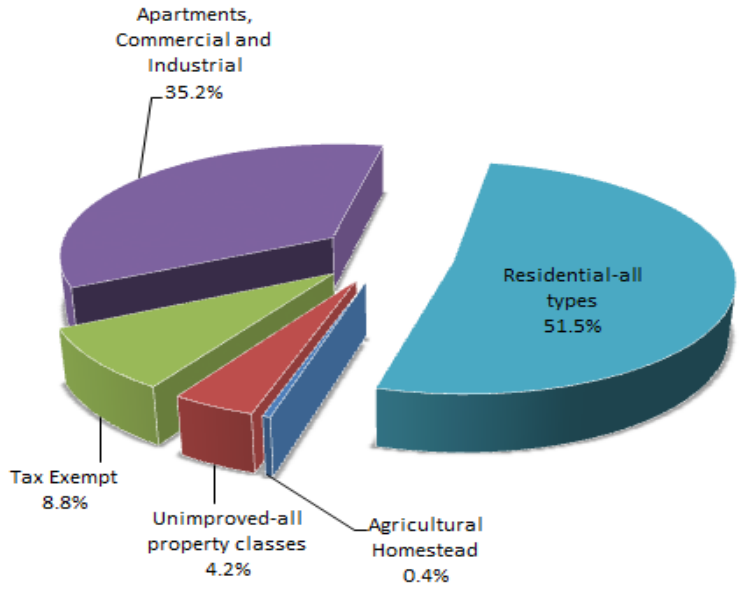


***Figure 6-7 Percentage of Revenue by Property Class***

A more detailed summary is included in **Appendix 3**. The summary sheet provides:

- Parcel breakdown by generalized land use, showing number of parcels, number of ERUs, annual and monthly revenues, and percent of the total revenue.
- Charts to provide a quick view of the number of parcels and total revenue by generalized land use.

Interactive fields (highlighted in yellow in the exhibit in Appendix 3) were used by the city to explore the impacts of "what-if" scenarios.

***RECOMMENDATION #6***

***It is recommended that the city adopt a stormwater utility rate structure based on charging residential properties a flat fee of $4.16 for 1 ERU and charging non-residential properties multiples of ERU based on their actual impervious area.***

## 6.6 FACTORS AFFECTING THE REVENUE

As discussed earlier in the report, the estimated revenue for the City of Westfield stormwater utility is calculated at $846,450. However, several factors may influence the overall generation of revenue which may include, but not be limited to, the following:

- Rate of Non-Payment – Based on conversations with other Indiana Stormwater Utilities, it can be expected that as much as 10% of those receiving a utility bill will be delinquent in their payment or may not pay at all, at least in the first few years. The current budget and scenarios considered do not include an allowance for the noted potential loss of revenue.

- Administrative/Enforcement – The Stormwater Management Board should expect to receive several inquiries from residents, once the residents receive their initial stormwater bills. Responding to these inquiries via telephone calls or emails will require paid administrative staff. Administrative or enforcement costs that are associated with the actual collection of unpaid or delinquent utility bills may further reduce the revenue. These have not been included in the current rate calculations.

- Parcel Database Cleanup – There may be errors in the city's parcel database that affect the accuracy of billings. Upon taking the time to correct errors in the parcel database, one may discover that contiguous parcels which were once being charged multiple fees, have now been consolidated into one parcel, and therefore, one fee. Additionally, any other inaccuracies discovered during this cleanup process may result in changing revenues.

- Razed Structures – Non-residential property owners who remove structures after the creation of the Rate Study may bring this to the administrator's attention. If the impervious area is reduced (building slab/foundation removed along with the structure), their fee should be recalculated to reflect the new, reduced impervious area.

- New Structures – New residential on previously unimproved parcels should be added to the rate structure and billing database. Non-residential properties with structures built or impervious areas added after the creation of the Rate Study should have their fee recalculated to reflect the new or larger impervious area.

- Credits – The economic incentives the city is offering to reduce non-residential user fees will reduce the overall revenue generated. The cost associated with administering a system of credits must also be considered.

## 6.7 UTILITY RATE COMPARISON WITH OTHER JURISDICTIONS

Based on a national survey conducted by the EPA; the typical rate payer fee for a stormwater utility is between $3 and $7 per household per month. This range is below the normal customer willingness to pay for a moderate stormwater management program according to the survey. For this reason, a stormwater utility is considered adequate to fund a stormwater program.

Based on the detailed rate study performed as part of this study, a utility rate per ERU per month for City of Westfield is determined to be $4.16. Compared to several other communities in Indiana (**Appendix 4**), this utility rate value is in the lower half of the scale.

## 6.8 USING THE RATE STUDY DATABASE TO DEVELOP A BILLING DATABASE

Using the data provided in the Rate Study Database to develop an actual Billing Database should be exercised with caution. The Rate Study Database is typically based on the best available data at the time of the study, without much correction or validation, and serves only as a tool to develop a fair and equitable method for calculating stormwater user fees for the general population. The parcel data provided by the staff of City of Westfield GIS Department may have inherent errors that must be addressed before proceeding with the creation of an updated billing database. While many of these issues may be minor, the issues may raise points of contention among the Rate Payers. The points listed below may provide additional insight regarding the potential discrepancies that were discovered during the creation of the Rate Study Database.

- New Development - Impervious areas were digitized based on the property classes attributed to each parcel in the supplied parcel data. There exist cases where development has occurred on parcels, but the property classes were not updated to reflect this development. Therefore, digitization of new impervious areas would not have occurred on these parcels.

- Duplicate Parcel Numbers - More than 1 parcel may share the same parcel number. In some cases, the duplicate parcels are contiguous and have the same owner. The parcel numbers should be resolved as the parcel number serves as the unique identifier when constructing the Billing Database.

- Municipal Boundary – There are a few parcels that are on the edge of the boundary of unincorporated City of Westfield. To avoid incorrectly charging these parcels, one must determine which jurisdiction is responsible for these parcels.

- Structures Occupying More than One Parcel – There are instances where a property owner, who owns 2 or more contiguous parcels, has built a structure spanning across 2 or more of these parcels. Because fees are

determined by parcel, the property owner will be charged separately for each parcel of land upon which the structure spans.

- Exclusion of Parcels – There are a number of parcels (mostly classified as exempt) that were excluded from the analysis because they appeared to be within a road right-of-way or railroad. It is unlikely that resolving and adding these parcels back into the Rate Study Database would affect the overall ERUs and consequently, the calculated fee. These parcels can be placed back into the analysis, if desired.

**Appendix 6** includes procedures to update and maintain the stormwater utility billing database.

## 6.9 CAPS AND CREDITS

Caps are used to set a maximum amount that any one rate payer would pay per parcel. This is often viewed by the general population as an unfair distribution of the stormwater fee. There are few communities in Indiana that have included caps in their stormwater utility. Credits (sometimes called economic incentives) are more common than caps in stormwater utilities.

**Appendix 5** includes a Credit Manual that details the practices allowed by the City of Westfield for non-residential properties owners to reduce their stormwater utility fee.

***RECOMMENDATION #7***
***It is recommended that the city not establish caps but establish a basis for credits.***

# CHAPTER 7 SUMMARY OF RECOMMENDATIONS & NEXT STEPS

The following is a summary listing of CBBEL recommendations as part of this Stormwater Program and Capital Improvement Budget Study and suggested next steps toward establishing a stormwater utility.

## 7.1 SUMMARY OF RECOMMENDATIONS

**Recommendation #1**
It is recommended that the city continue to maintain a dedicated funding source, such as a stormwater utility fee, to more effectively implement and meet the goals of their Rule 13 Program and to position the city to meet increasing expectations and requirements.

**Recommendation #2**
It is recommended that the city continue to utilize the existing staff organizational structure to implement their Rule 13 program. Further, the city should supplement their existing staff by hiring a Seasonal Stormwater Intern.

**Recommendation #3**
It is recommended that the city adopt an average annual stormwater program budget of $1,200,000 to meet their Rule 13 Program requirements and implement the identified Special Projects.

**Recommendation #4**
It is recommended that the city implement a stormwater utility fee that is based on the impervious surface on each improved parcel, with a nominal flat fee considered for unimproved parcels.

**Recommendation #5**
It is recommended that the city use an ERU value set at 3,500 square feet.

**Recommendation #6**
It is recommended that the city adopt a stormwater utility rate structure based on charging residential properties a flat fee of $4.16 for 1 ERU and charging non-residential properties multiples of ERU based on their actual impervious area.

**Recommendation #7**
It is recommended that the city not establish caps but consider establishing a basis for credits.

## 7.2 NEXT STEPS

This Stormwater Utility Rate Study is a critical step for City of Westfield to maintain an appropriate funding mechanism to meet the stormwater regulatory requirements and manage stormwater. The following are the recommended steps to successfully establish a stormwater utility:

**Pass Ordinance** – to repeal the existing stormwater utility rate and adopt the rate structure recommended in this study

**Update the Billing Database** – update the solid waste billing database to include the rate structure recommended in this study to collect stormwater fees

**Create Project Fact Sheets** – a summary of the new items that could be funded with the stormwater utility including special projects such as Capital Improvement Projects (CIP). Each fact sheet would include background on the problem, description of the solution, estimated cost, and benefits.

**Public Information and Stakeholder Engagement** – the continued support of the public and key stakeholders is essential to the successful of the stormwater utility. This includes:

- Raise awareness of the cost to manage stormwater and regulatory requirements,
- Illustrate the benefits of a dedicated funding source,
- Establish a method to disseminate information and answer questions
- Meet with key stakeholders, organized groups, and the media to diffuse opposition and dispel myths

# APPENDIX 1

# STAFFING ORGANIZATION CHART

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# Organizational Chart for the City of Westfield Stormwater Utility

**Board of Public Works**
*(Managing Board)*

**MS4 Operator**
**Andy Cook, Mayor**
*City of Westfield*

**City Council**
*(Legislative Body)*

**Utility Department**
**Jeremy Lollar**
*Director of Public Works*

**MS4 Coordinator**
**Wesley Rood**
*Stormwater Coordinator*

**City Engineer/Consultant**
*Neil Vautress*

## *Minimum Control Measure (MCM) Support Staff*

**MCM 1: Public Education and Outreach**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 1 Support**
  - Stormwater Inspectors*
  - Westfield Schools
  - UWRWA
  - Public Works Department

**MCM 2: Public Involvement and Participation**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 2 Support**
  - Westfield Schools
  - UWRWA
  - Public Works Department

**MCM 3: Illicit Discharge Detection and Elimination**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 3 Support**
  - INAFSM IDDE Group
  - Fire Department
  - Hamilton County EMA
  - Leanne Kunetz, *GIS Coordinator – Planning Dept.*

**MCM 4: Construction Site Stormwater Run-Off Control**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 4 Support**
  - Stormwater Inspectors*
  - INAFSM Inspector's Group

- **Stormwater Intern**
  - (Seasonal Staff Position)

**MCM 5: Post-Construction Stormwater Management**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 5 Support**
  - HAMCO Technical Committee
  - INAFSM Inspector's Group

**MCM 6: Poll. Prev. & Good Housekeeping (City Depts.)**
**Wesley Rood**
*Stormwater Coordinator**

- **MCM 6 Support**
  - Travis Stetnish, *Street Department Supervisor*
  - Stormwater Management at City Facilities, *Facilities' Staff*

- **Vac Truck Operator**
  - *Solid Waste Services*
- **Camera Truck Operator**
  - *Solid Waste Services*
- **Street Sweeper Operator**
  - *Street Department*

## *Capital Improvement Project (CIP) Support Staff*

**Project Management**
**Wesley Rood**
*Stormwater Coordinator**

**City Engineer/Consultant**
**Neil Vautress**
*City Engineer/Consultant*

- **Construction Projects**
  - *Development Construction Superintendent*
- **Minor Projects**
  - **Travis Stetnish**
    *Street Department Supervisor*
- **GIS Support**
  - **Leanne Kunetz**
    *GIS Coordinator * – Planning Dept.*

**** Asterisk identifies staff with multiple responsibilities:***

1. ***Stormwater Coordinator*** has responsibility to manage all MCM's and provide Project Management for CIP support; position funded 100% by Stormwater Utility.
2. ***Stormwater Inspector*** has responsibilities related to MCM 1 and MCM 4; position funded 100% by Stormwater Utility.
3. ***GIS Coordinator*** has responsibilities for MCM 3 and CIP support. This position is not funded by the Stormwater Utility.

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# APPENDIX 2

# STORMWATER PROGRAM COSTS

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**CITY OF WESTFIELD STORMWATER UTILITY EXISTING & EXPECTED COSTS**

updated 3-2-16

| Item | MCM[1] | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total 5 Year Cost | *Notes* [2] |
|---|---|---|---|---|---|---|---|---|
| ***ADMINISTRATION & OPERATIONS*** | | | | | | | | |
| MS4 Coordinator (100%) | ALL | $78,900 | $81,267.00 | $83,705.01 | $86,216.16 | $88,802.65 | $418,891 | *Existing Position; includes annual salary, SS, PERF, Insurance, & W. Comp;* ***Additional Stipend for License/Certification*** |
| Erosion & Sediment Control Inspector (2 @ 100%) | 4 & 5 | $168,200 | $173,246.00 | $178,443.38 | $183,796.68 | $189,310.58 | $892,997 | *Existing Positions; includes annual salary, SS, PERF, Insurance, & W. Comp;* ***Additional Stipend for License/Certification*** |
| Development Construction Superintendent (50%) | 4 & 5 | $61,500 | $63,345.00 | $65,245.35 | $67,202.71 | $69,218.79 | $326,512 | *Existing Position; includes annual salary, SS, PERF, Insurance, & W. Comp* |
| Seasonal Stormwater Intern (100%) | ALL | $7,800 | $8,034.00 | $8,275.02 | $8,523.27 | $8,778.97 | $41,411 | *New position; no benefits; assumes range of $8 per hour to $22 per hour; $15 per hour and 520 hours per year used for budgeting purposes* |
| **SUB TOTAL** | | **$316,400** | **$325,892** | **$335,669** | **$345,739** | **$356,111** | **$1,679,811** | |
| ***EQUIPMENT*** | | | | | | | | |
| New Vehicles (2) | 3, 4 & 5 | $16,000 | $16,480 | $16,974 | $17,484 | $18,008 | $84,946 | *Assumes 2 vehicles for stormwater staff* |
| Vehicles Operation and/or Maintenance Costs | 3, 4 & 5 | $10,000 | $10,300 | $10,609 | $10,927 | $11,255 | $53,091 | *Costs associated with operation and maintenance of 2 new vehicles or could be used for existing vehicles* |
| Street Sweeper Purchase & Usage for Stormwater | 6 | $75,000 | $77,250 | $79,568 | $81,955 | $84,413 | $398,185 | *Costs associated with purchase ($300,000 each), operation, fuel, and maintenance (new brooms) of existing street sweeper; based on staff estimate* |
| Vac Truck Usage for Stormwater | 6 | $5,000 | $5,150 | $5,305 | $5,464 | $5,628 | $26,546 | *Costs associated with operation and cleaning of existing vac truck; based on staff estimate* |
| **SUB TOTAL** | | **$106,000** | **$109,180** | **$112,455** | **$115,829** | **$119,304** | **$562,768** | |
| ***SHARED RULE 13 COMPLIANCE COSTS*** | | | | | | | | |
| UWRWA Dues | ALL | $7,000 | $7,210 | $7,426 | $7,649 | $7,879 | $37,164 | *Assumes Westfield's portion of costs to participate this joint regional watershed effort* |
| Multiple MS4 Sponsored Video Projects | ALL | $500 | $515 | $530 | $546 | $563 | $2,655 | *Assumes Westfield's portion of cost shared efforts to produce MS4 educational videos on various topics/issues* |
| **SUB TOTAL** | | **$7,500** | **$7,725** | **$7,957** | **$8,195** | **$8,441** | **$39,819** | |
| ***CITY INDIVIDUAL RULE 13 COMPLIANCE COSTS*** | | | | | | | | |
| Local Public Education & Outreach Materials including misc. boo | ALL | $4,000 | $4,120 | $4,244 | $4,371 | $4,502 | $21,237 | *Includes in classroom demos, Project WET materials, volunteer and/or event supplies, booth fees, etc.* |
| Storm Drain Marking Supplies | 3 | $1,000 | $1,030 | $1,061 | $1,093 | $1,126 | $5,309 | *DAS Curb Markers and adhesive* |
| Illicit Discharge misc. supplies; Field Kit, monitoring equipment | 3 | $5,000 | $5,150 | $5,305 | $5,464 | $5,628 | $26,546 | *Cost of Field Kit, monitoring equipment, etc. including new purchases, maintenance &/or repair costs; E coli testing costs from WWTP lab* |
| GPS Unit Replacement and/or Maintenance | ALL | $2,600 | $2,678 | $2,758 | $2,841 | $2,926 | $13,804 | *Cost of 2 each IPad/Toughbooks @ $6500 each (based on estimate provided by IT) which includes GPS plus potential software and maintenance upgrades each year divided over 5 years* |
| Land Surveying Equipment Purchase and/or Maintenance | ALL | $2,500 | $2,575 | $2,652 | $2,732 | $2,814 | $13,273 | *Cost of purchase of transit rod, tri-pod, transit level, etc. for drainage complaints & problems/investigations* |
| Separate Storm Sewer Maintenance - may also include Repair, etc. | 6 | $10,000 | $10,300 | $10,609 | $10,927 | $11,255 | $53,091 | *Based on curb, ditch, & storm structure repair costs from Street Department staff averaged over 5 years* |
| Misc. Culvert Repairs and/or Installations | 6 | $16,000 | $16,480 | $16,974 | $17,484 | $18,008 | $84,946 | *Assumes 3 each culvert repairs each year @ $2K each plus 1 sinkhole repair each year @ $10K each. Assumes City completes work and prices includes materials only (not man hours).* |
| Update IDDE/MS4 map with newly annexed areas | 3 | $25,000 | $25,750 | $26,523 | $27,318 | $28,138 | $132,728 | *Assumes mapping project needed for newly annexed areas* |
| Inspection Tools & supplies | 3, 4, 5, & 6 | $4,000 | $4,120 | $4,244 | $4,371 | $4,502 | $21,237 | *Waders, protective/seasonal work clothing, etc.; depth finder, sludge judge, manhole remover, push camera (for subsurface installations), shovel, rake, contract costs for Fluid Waste Service (Video Truck Vendor), etc.* |
| Spill Kits & Response Equipment/Stormwater Controls | 6 | $4,000 | $4,120 | $4,244 | $4,371 | $4,502 | $21,237 | *Assumes purchase of items (stationary & portable spill kits containing booms, socks, oil absorbents, inlet protection, etc.) needed to control spills at mainly Street Department facilities or on City-owned projects; as needed for other facilities* |
| **SUB TOTAL** | | **$74,100** | **$76,323** | **$78,613** | **$80,971** | **$83,400** | **$393,407** | |
| ***TRAINING*** | | | | | | | | |
| MS4 Coordinator Offsite Training | ALL | $8,000 | $8,240 | $8,487 | $8,742 | $9,004 | $42,473 | *Assumes MS4 Coordinator attending courses, classes, and/or conferences* |
| Staff Offsite Training | ALL | $8,000 | $8,240 | $8,487 | $8,742 | $9,004 | $42,473 | *Assumes staff attending courses, classes, and/or conferences* |
| Professional Certifications and Renewal Fees | ALL | $6,000 | $6,180 | $6,365 | $3,000 | $3,090 | $24,635 | *Assumes professional certification application, class, and/or renewal fees; assumes higher initial costs to obtain and then lower renewal, continuing education, and maintenance costs* |
| **SUB TOTAL** | | **$22,000** | **$22,660** | **$23,340** | **$20,484** | **$21,098** | **$109,582** | |
| ***GENERAL OPERATING SUPPLIES*** | | | | | | | | |
| General Office Operating and/or Maintenance | ALL | $10,000 | $10,300 | $10,609 | $10,927 | $11,255 | $53,091 | *Misc. office operating needs such as supplies, equipment, furniture, etc.* |
| Software & Hardware Operating and/or Maintenance | ALL | $20,000 | $20,600 | $21,218 | $21,855 | $22,510 | $106,183 | *Assumes new computer purchases and/or annual software upgrades and training (if necessary); includes GIS ESRI ArcView @ $10K* |
| **SUB TOTAL** | | **$30,000** | **$30,900** | **$31,827** | **$32,782** | **$33,765** | **$159,274** | |
| ***ANNUAL MAINTENANCE AND REPAIR*** | | | | | | | | |
| ROW Drainage Improvements | ALL | $130,000 | $133,900 | $137,917 | $142,055 | $146,316 | $690,188 | *Ongoing annual maintenance and repair of ROW drainage issues* |
| Inspection & Maintenance of Stormwater BMPs | 5 | $20,000 | $20,600 | $21,218 | $21,855 | $22,510 | $106,183 | *Assumes development of long-term O&M program for City-owned BMPs (porous pavement, bioswales, rain gardens, hydrodynamic separator, etc.)* |
| **SUB TOTAL** | | **$150,000** | **$154,500** | **$159,135** | **$163,909** | **$168,826** | **$796,370** | |
| ***SPECIAL PROJECTS*** | | | | | | | | |
| CIP/ Ongoing Design and Construction | 6 + | $500,000 | $515,000 | $530,450 | $546,364 | $562,754 | $2,654,568 | *Implementation of projects identified in Master Plan and/or pond retrofit reports; also based on City's "Storm Pricing 5 Year Plan" project costs* |
| | | | | | | | | |
| **SUB TOTAL** | | **$500,000** | **$515,000** | **$530,450** | **$546,364** | **$562,754** | **$2,654,568** | |
| ***OUTSOURCED PROFESSIONAL SERVICES*** | | | | | | | | |
| Provide MS4 Engineering On Call | ALL | $40,000 | $42,000 | $44,100 | $46,305 | $48,620 | $221,025 | *Provide technical support for Rule 13 program implementation; assumes 5% annual fee increase* |
| Update & Maintain Stormwater Master Plan/Watershed Studies | ALL | $75,000 | $78,750 | $82,688 | $86,822 | $91,163 | $414,422 | *Assumes a compreshensive citywide Master Plan, update existing detailed Watershed Studies as needed, and develop Watershed Studies in watersheds where this has not been completed; assumes cost share with Hamilton County and 5% annual fee increase* |
| Review & Re-evaluate Utility Fee & Structure | ALL | $10,000 | $10,500 | $11,025 | $11,576 | $12,155 | $55,256 | *Costs associated with utility rate fee & structure assessment to determine potential rate increases or decreases such as legal fees, Public Education & Outreach, digitization of commercial properties, etc.; assumes 5% annual fee increase* |
| **SUB TOTAL** | | **$125,000** | **$131,250** | **$137,813** | **$144,703** | **$151,938** | **$690,704** | |
| ***BILLING COSTS*** | | | | | | | | |
| Billing Costs | ALL | $30,000 | $30,900 | $31,827 | $32,782 | $33,765 | $159,274 | *Associated utility billing costs* |
| **SUB TOTAL** | | **$30,000** | **$30,900** | **$31,827** | **$32,782** | **$33,765** | **$159,274** | |
| **TOTAL** | | **$1,211,000** | **$1,249,830** | **$1,289,950** | **$1,327,848** | **$1,370,578** | **$6,449,206** | |
| | | | | | | **Total Program Costs for 5-year Permit Term** | **$6,449,206** | |
| | | | | | | Estimated Annual Program Cost | $1,289,841 | |
| | | | | | | Permit, Plan Review, & Inspection Fees | $105,000 | *Based on "City Fees" Worksheet* |
| | | | | | | **Estimated Annual Program Cost** | **$1,184,841** | |
| | | | | | | **Rounded** | **$1,200,000** | |
| | | | | | | **ERU** | **$4.16** | |

[1] MCMs 1=Public Education & Outreach; 2=Public Participation/Involvement; 3=Illicit Discharge Detection & Elimination; 4=Construction Site Runoff Control; 5=Post-Construction Runoff Control; 6=Pollution Prevention/Good Housekeeping

[2] Unless otherwise stated, fee assumes 3% annual inflation/cost of living increase

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# APPENDIX 3

# STORMWATER UTILITY RATE STRUCTURE SUMMARY

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# Stormwater Utility Rate Structure for the City of Westfield, IN

**Updated: 03/02/2016**

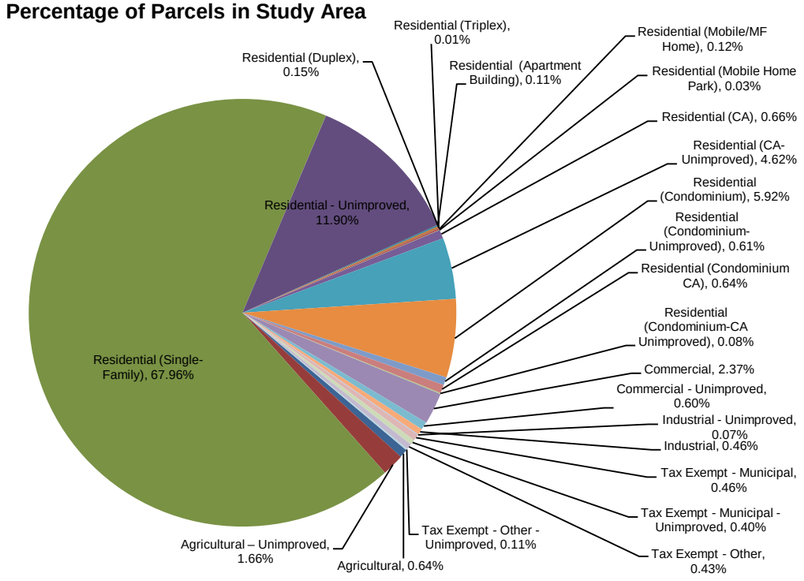
**ONLY CHANGE VALUES COLORED IN YELLOW**

| | |
|---|---|
| 1 ERU | 3,500 |
| Annual Budget | $ 1,200,000 |
| Total ERUs | 24,048 |
| No. of parcels | 15,097 |
| Annual SFR Fee | $ 49.90 |
| Monthly SFR Fee | $ 4.16 |

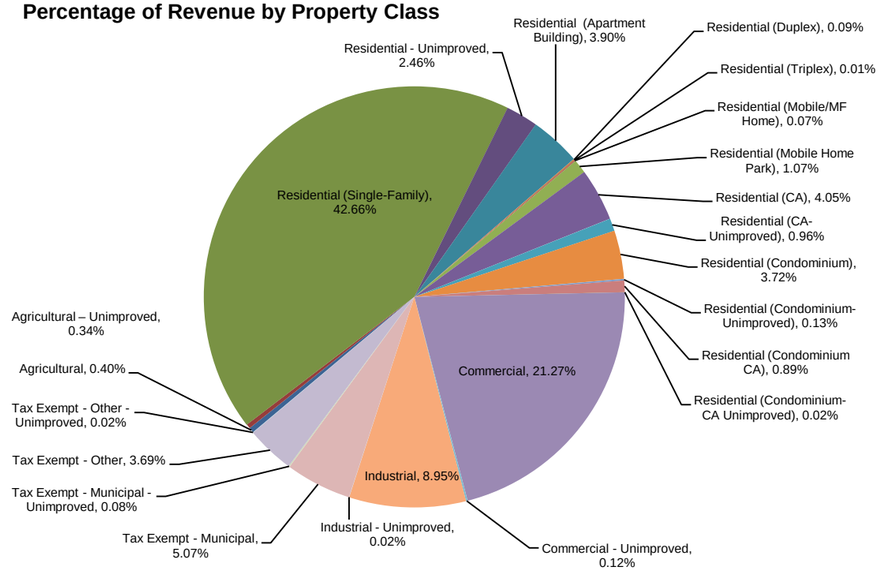
| Property Class | ERU Multiplier |
|---|---|
| Agricultural | 1.00 |
| Agricultural – Unimproved | 0.33 |
| Residential (Single-Family) | 1.00 |
| Residential - Unimproved | 0.33 |
| Residential (Apartment Building) | 1.00 |
| Residential (Duplex) | 1.00 |
| Residential (Triplex) | 1.00 |
| Residential (Mobile/MF Home) | 1.00 |
| Residential (Mobile Home Park) | 1.00 |
| Residential (CA) | 1.00 |
| Residential (CA-Unimproved) | 0.33 |
| Residential (Condominium) | 1.00 |
| Residential (Condominium-Unimproved) | 0.33 |
| Residential (Condominium CA) | 1.00 |
| Residential (Condominium CA-Unimproved) | 0.33 |
| Commercial | 1.00 |
| Commercial - Unimproved | 0.33 |
| Industrial | 1.00 |
| Industrial - Unimproved | 0.33 |
| Tax Exempt - Municipal | 0.50 |
| Tax Exempt - Municipal - Unimproved | 0.33 |
| Tax Exempt - Other | 1.00 |
| Tax Exempt - Other - Unimproved | 0.33 |

| Property Class | No. of Parcels | Percentage of Parcels | Acres (parcels) | Percentage of Acres (parcels) | No. of ERUs | Minimum ERU | Maximum ERU | Average ERU | Median ERU | Annual Revenue | Monthly Revenue | % of Total Annual Revenue |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Agricultural | 97 | 0.64% | 1,798 | 10.33% | 97 | 1.00 | 1.00 | 1.00 | 1.00 | $ 4,840.23 | $ 403.35 | 0.40% |
| Agricultural – Unimproved | 250 | 1.66% | 4,829 | 27.75% | 82 | 0.33 | 0.33 | 0.33 | 0.33 | $ 4,116.69 | $ 343.06 | 0.34% |
| Residential (Single-Family) | 10,260 | 67.96% | 4,544 | 26.11% | 10,260 | 1.00 | 1.00 | 1.00 | 1.00 | $ 511,966.44 | $ 42,663.87 | 42.66% |
| Residential - Unimproved | 1,796 | 11.90% | 935 | 5.37% | 593 | 0.33 | 0.33 | 0.33 | 0.33 | $ 29,574.30 | $ 2,464.52 | 2.46% |
| Residential (Apartment Building) | 17 | 0.11% | 164 | 0.94% | 938 | 1.60 | 143.75 | 55.15 | 40.88 | $ 46,781.41 | $ 3,898.45 | 3.90% |
| Residential (Duplex) | 22 | 0.15% | 10 | 0.05% | 22 | 1.00 | 1.00 | 1.00 | 1.00 | $ 1,097.78 | $ 91.48 | 0.09% |
| Residential (Triplex) | 2 | 0.01% | 1 | 0.00% | 2 | 1.00 | 1.00 | 1.00 | 1.00 | $ 99.80 | $ 8.32 | 0.01% |
| Residential (Mobile/MF Home) | 18 | 0.12% | 9 | 0.05% | 18 | 1.00 | 1.00 | 1.00 | 1.00 | $ 898.19 | $ 74.85 | 0.07% |
| Residential (Mobile Home Park) | 4 | 0.03% | 45 | 0.26% | 258 | 2.81 | 216.59 | 64.50 | 19.30 | $ 12,874.24 | $ 1,072.85 | 1.07% |
| Residential (CA) | 99 | 0.66% | 139 | 0.80% | 973 | 1.00 | 76.12 | 9.83 | 4.10 | $ 48,574.19 | $ 4,047.85 | 4.05% |
| Residential (CA-Unimproved) | 698 | 4.62% | 1,063 | 6.11% | 230 | 0.33 | 0.33 | 0.33 | 0.33 | $ 11,493.80 | $ 957.82 | 0.96% |
| Residential (Condominium) | 894 | 5.92% | 60 | 0.34% | 894 | 1.00 | 1.00 | 1.00 | 1.00 | $ 44,609.94 | $ 3,717.50 | 3.72% |
| Residential (Condominium-Unimproved) | 92 | 0.61% | 5 | 0.03% | 30 | 0.33 | 0.33 | 0.33 | 0.33 | $ 1,514.94 | $ 126.25 | 0.13% |
| Residential (Condominium CA) | 96 | 0.64% | 49 | 0.28% | 213 | 1.00 | 25.67 | 2.22 | 1.00 | $ 10,629.91 | $ 885.83 | 0.89% |
| Residential (Condominium-CA Unimproved) | 12 | 0.08% | 11 | 0.06% | 4 | 0.33 | 0.33 | 0.33 | 0.33 | $ 197.60 | $ 16.47 | 0.02% |
| Commercial | 358 | 2.37% | 1,375 | 7.90% | 5,115 | 1.00 | 265.05 | 14.29 | 6.50 | $ 255,248.74 | $ 21,270.73 | 21.27% |
| Commercial - Unimproved | 90 | 0.60% | 366 | 2.11% | 30 | 0.33 | 0.33 | 0.33 | 0.33 | $ 1,482.01 | $ 123.50 | 0.12% |
| Industrial | 69 | 0.46% | 384 | 2.21% | 2,153 | 1.00 | 206.74 | 31.21 | 15.33 | $ 107,443.04 | $ 8,953.59 | 8.95% |
| Industrial - Unimproved | 11 | 0.07% | 43 | 0.25% | 4 | 0.33 | 0.33 | 0.33 | 0.33 | $ 181.13 | $ 15.09 | 0.02% |
| Tax Exempt - Municipal | 70 | 0.46% | 823 | 4.73% | 1,218 | 0.50 | 188.05 | 17.40 | 1.90 | $ 60,793.46 | $ 5,066.12 | 5.07% |
| Tax Exempt - Municipal - Unimproved | 60 | 0.40% | 194 | 1.12% | 20 | 0.33 | 0.33 | 0.33 | 0.33 | $ 988.01 | $ 82.33 | 0.08% |
| Tax Exempt - Other | 65 | 0.43% | 519 | 2.98% | 888 | 1.00 | 158.24 | 13.66 | 4.16 | $ 44,314.23 | $ 3,692.85 | 3.69% |
| Tax Exempt - Other - Unimproved | 17 | 0.11% | 41 | 0.23% | 6 | 0.33 | 0.33 | 0.33 | 0.33 | $ 279.93 | $ 23.33 | 0.02% |
| **Totals** | **15,097** | **100.00%** | **17,404** | **100.00%** | **24,048** | | | | | **$ 1,200,000.00** | **$ 100,000.00** | **100.00%** |

## Percentage of Parcels in Study Area




## Percentage of Revenue by Property Class



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# APPENDIX 4

# COMPARISON OF EXISTING INDIANA STORMWATER UTILITIES

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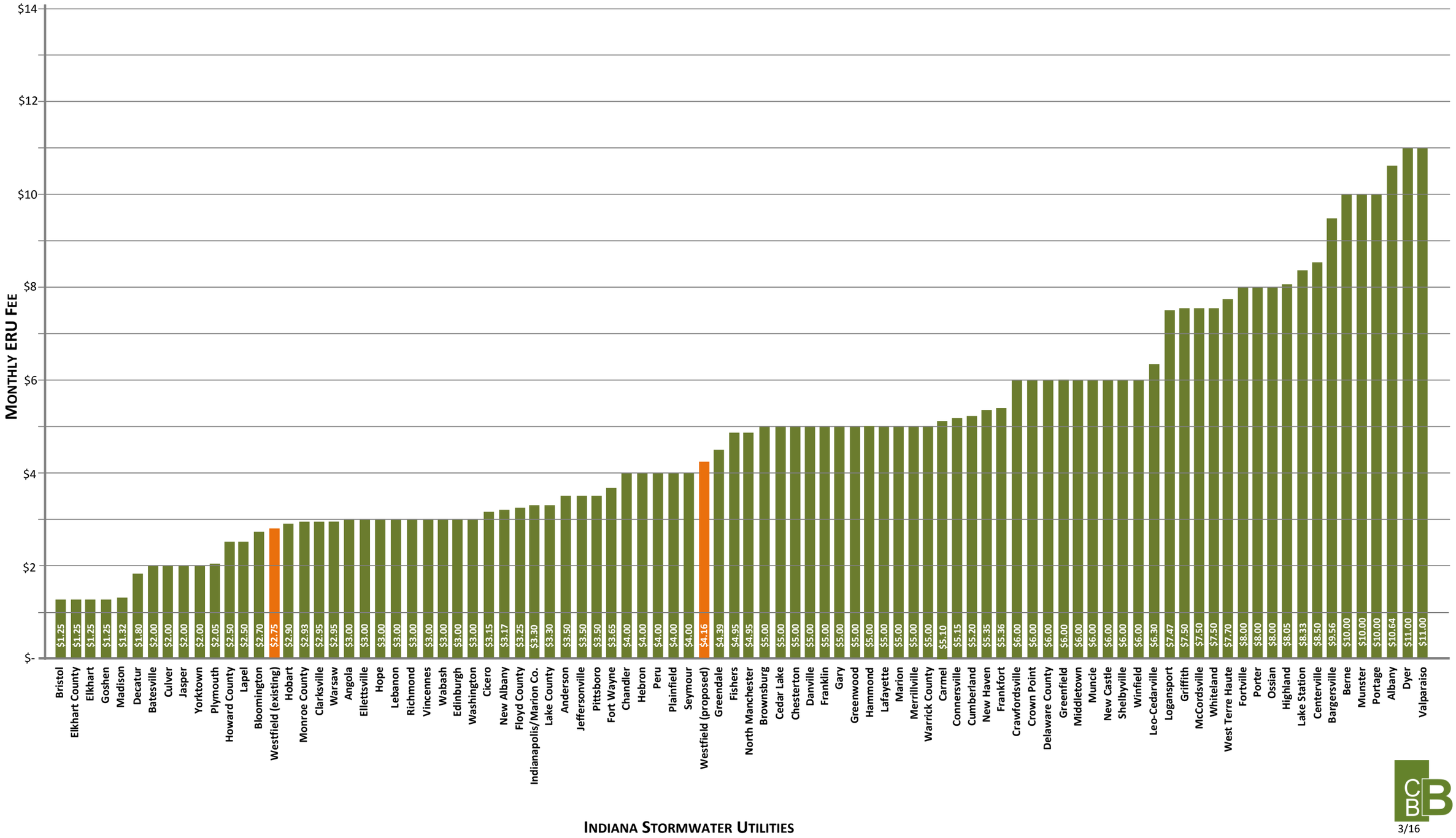
# Summary of Monthly ERU (or similar) Fee for Indiana Stormwater Utilities

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# APPENDIX 5

# STORMWATER UTILITY
# USER FEE CREDIT MANUAL

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# STORMWATER UTILITY
# NON-RESIDENTIAL USER FEE
# CREDIT MANUAL

## CITY OF WESTFIELD, INDIANA

**March 3, 2016**

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# TABLE OF CONTENTS

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# CHAPTER 1 INTRODUCTION

The City of Westfield is updating their stormwater utility rate structure and rate fees from a water meter based system to impervious area. The methodology is explained in the Stormwater Utility Rate Study.

The purpose of the utility is to provide for and manage the collection, treatment, drainage, and disposal of City storm and surface water. A stormwater utility is a reliable and dedicated funding source to address the increasing stormwater regulatory requirements and ongoing stormwater infrastructure maintenance and improvements.

This credit manual, prepared with the assistance from Christopher B. Burke Engineering, LLC, provides the necessary information for non-residential property owners to take advantage of fee credits in recognition of efforts that would reduce the impacts on stormwater quality and quantity.

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# CHAPTER 2 DEFINITIONS

As used in this manual, the following terms shall have the meaning attributed to them as follows:

**As-Built Plans** – the final set of drawings produced at the completion of a construction project. They include all the changes that have been made to the original construction drawings, including notes, modifications, and any other information that the builder decides should be included

**Best Management Practice (BMP)** – structural or nonstructural practices, or a combination of practices, designed to act as effective, practicable means of minimizing the impacts of development and human activities on water quality

Channel Protection Volume – practices that protect the receiving channel by retaining or the extended detention of the 1-year, 24-hour storm event on the entire site (disturbed and undisturbed) tributary to each outlet

**Credit** – a reduction in the stormwater user fee through the construction, operation, and maintenance of BMPs that reduces property owner's contribution to stormwater runoff. Credits are available to non-residential property owners only and the percent reduction is based on the criteria specified in this manual

**Current Stormwater Standards** – refers to the 2014 City of Westfield Stormwater Technical Standards Manual Chapter 03700 (http://www.westfield.in.gov/egov/apps/document/center.egov?view=item;id=50&fDD=-0) and any future updates

**Easement** – a grant by the property owner of the use of part of the owner's land by another for a specified purpose

**Green Infrastructure** – use of vegetation and soil to treat and store stormwater runoff on-site

**Gray Infrastructure** – use of pipes to dispose of stormwater off-site

**Low Impact Development (LID)** – the management of stormwater runoff at the site through the use of conservation, planning, or engineered methods that mimic natural systems to reduce drainage problems and treat polluted runoff

**Non-Residential Property** – includes commercial, industrial, tax exempt properties, residential common areas, and apartments property classes
Operations and Maintenance (O&M) - a written manual, prepared by a professional engineer, that provides a description of operation and maintenance procedures for specific stormwater control facilities for use by operation and maintenance personnel

**Residential Property** – includes single-family residential, duplex, triplex, condominiums, mobile, multi-family home property classes

**Stormwater Management Division** – consist of the City Engineer and designated staff for the purpose of providing for and managing the collection, treatment, drainage, and disposal of the City storm and surface water

**Stormwater Retrofit** – practice of adding new green infrastructure stormwater management features to an existing site to reduce and treat stormwater runoff

**Stormwater User Fee** – a charged to each property based on the potential runoff that would result from that property in a storm event

**Stormwater Utility** – as a reliable and dedicated funding source to address the increasing stormwater regulatory requirements and ongoing stormwater infrastructure maintenance and improvements

# CHAPTER 3 STORMWATER USER FEE CREDITS

In the City of Westfield, only non-residential properties (properties categorized as commercial, industrial, tax exempt, residential common areas, and apartment property classes) are eligible to earn a maximum 30% credit towards reducing their stormwater user fee. This credit program is intended to encourage Low Impact Development (LID) and best management practices (BMPs) to reduce water quantity and improve water quality, as well as promote public education on the importance of stormwater. The following practices, or combination of practices, are eligible for the maximum total of 30% credit:

1. Low Impact Development Credit
2. Stormwater Quantity Reduction Credit
3. Stormwater Quality Improvement Credit
4. Established Development Credit
5. Accredited Green Building Program Credit
6. Stormwater Education Credit
7. Open Space Credit

Where noted, stormwater retrofit projects will be weighted by the percent of the site treated. For example, if a commercial site retrofits the landscaped islands in the parking lot to bioretention then only the area of the parking lot where the runoff that is stored and treated will be considered for credit.

**Chapter 4** includes a list of approved BMPs for stormwater credit.

## 3.1 LOW IMPACT DEVELOPMENT CREDIT

| | |
|---|---|
| Eligible Users: | Non-residential, developed at current stormwater standards |
| Duration of Credit: | 5 years |
| Maximum Credit: | 30% |
| Application Fee: | $100 non-refundable, due with application |
| Renewal Fee: | $100 non-refundable, due July 1st within final year |

A. 10% credit for incorporating site planning practices to minimize disturbed areas and practices to restore disturbed areas (Steps 1 and 2 under “LID Stormwater Management Approach” in the City of Westfield Stormwater Technical Standards Chapter 03700)

B. 20% credit for incorporating green infrastructure practices that minimize imperviousness and provide distributed volume reduction

and/or infiltration (Steps 3 through 5 under "LID Stormwater Management Approach" in the City of Westfield Stormwater Technical Standards Chapter 03700)

## 3.2 STORMWATER QUANTITY REDUCTION CREDIT

| | |
|---|---|
| Eligible Users: | Non-residential, developed at current stormwater standards |
| Duration of Credit: | 5 years |
| Maximum Credit: | 20% |
| Application Fee: | $100 non-refundable, due with application |
| Renewal Fee: | $100 non-refundable, due July 1st within final year |

20% credit for over detention of peak discharge through:

A. Reduction of the 10-year post-development to near zero discharge or extended detention of the 2-year pre-development peak flow rate, or

B. Reduction of the 100-year post-development to 0.2 cfs/acre (approximately representing the 5-year pre-development peak flow rate). Storm water retrofit projects will be weighted by the percent of the site treated.

## 3.3 STORMWATER QUALITY IMPROVEMENT CREDIT

| | |
|---|---|
| Eligible Users: | Non-residential, developed at current stormwater standards |
| Duration of Credit: | 5 years |
| Maximum Credit: | 20% |
| Application Fee: | $100 non-refundable, due with application |
| Renewal Fee: | $100 non-refundable, due July 1st within final year |

A. 20% credit for including a 3rd green infrastructure BMP, designed to treat the channel protection volume. Storm water retrofit projects will be weighted by the percent of the site treated.

B. 10% credit for incorporating green infrastructure vs gray infrastructure for the 2 required BMPs, with one of the two BMPs designed to treat the channel protection volume.

## 3.4 ESTABLISHED DEVELOPMENT CREDIT

| | |
|---|---|
| Eligible Users: | Non-residential, not at current stormwater standards |
| Duration of Credit: | 5 years |
| Maximum Credit: | 20% |
| Application Fee: | $100 non-refundable, due with application |
| Renewal Fee: | $100 non-refundable, due July 1st within final year |

1. Development with detention and water quality BMPs but not meeting current stormwater standards

    A. 20% credit for retrofitting with at least 1 additional green infrastructure BMP meeting the current stormwater standards. Storm water retrofit projects will be weighted by the percent of the site treated.

2. Development with detention but no water quality BMPs

    A. 20% credit for compliance with current stormwater standards in terms of required water quality BMPs. Storm water retrofit projects will be weighted by the percent of the site treated.

3. Development with no detention and no water quality BMPs

    A. 20% credit for compliance with current stormwater ordinance in terms of detention requirements and an additional 10% credit for compliance with current stormwater standards in terms of water quality BMPs. Storm water retrofit projects will be weighted by the percent of the site treated.

Storm water quantity and quality retrofit improvement credits will not be awarded to projects associated with a site improvement that is required to provide detention and water quality to meet existing development requirements.

## 3.5 CERTIFIED GREEN BUILDING CREDIT

| | |
|---|---|
| Eligible Users: | Non-residential, developed at current stormwater standards |
| Duration of Credit: | 5 years |
| Maximum Credit: | 5% |
| Application Fee: | $25 non-refundable, due with application |

Renewal Fee: $25 non-refundable, due July 1st within final year

A. 5% credit for having met the site requirements of a certified green building through LEED, BOMA Go Green/Go Green Plus, Green Globes, The Living Challenge, or equivalent green building rating systems.

## 3.6 STORMWATER EDUCATION CREDIT

Eligible Users: Public or private school properties
Duration of Credit: 1 year
Maximum Credit: 30%
Application Fee: $25 non-refundable, due with application
Renewal Fee: $25 non-refundable, due July 1st each year

A. 30% credit for an approved educational program that educates 75% to 100% of the grade levels about stormwater management.

B. 15% credit for an approved educational program that educates 50% to 74% of the grade levels about stormwater management.

## 3.7 OPEN SPACE CREDIT

Eligible Users: Non-residential with significant open space (includes Residential Common Areas)
Duration of Credit: 5 years
Maximum Credit: 20%
Application Fee: $100 non-refundable, due with application
Renewal Fee: $100 non-refundable, due July 1st within final year

A. 10% credit for managing stormwater without connection to a piped stormwater conveyance system. These may include golf courses, parks, sports fields, etc. The property must have less than 30% impervious cover as compared to the entire parcel (or adjacent parcels with the same property owner).

# CHAPTER 4 BEST MANAGEMENT PRACTICES

The following includes a list the BMPs that are approved by the City for installation, maintenance requirements of the installed BMPs, and list of suggested educational resources for credit.

## 4.1 LIST OF APPROVED BMPS

The following BMPs have been approved by the City for stormwater credit:

**Site Planning & Restoration BMPs**

1. Minimize Disturbed Areas
    a. Protect Sensitive Areas
    b. Protect Riparian Buffers
    c. Minimize Total Disturbed Area
    d. Protect Natural Flow Pathways
    e. Reduce Impervious Surfaces
    f. Cluster-type Development
2. Restore Disturbed Areas
    a. Minimize soil compaction
    b. Protection of Existing Trees within Disturbed Areas
    c. Soil Amendments
    d. Native Revegetation
    e. Riparian Buffer Restoration

**Green Infrastructure BMPs**

1. Minimize Imperviousness
    a. Porous Pavement (permeable asphalt, porous concrete, or pavers)
    b. Vegetated Roof
2. Provide Distributed Volume Reduction/Infiltration Practices
    a. Bioretention (rain garden)
    b. Infiltration Practices (infiltration basin, subsurface infiltration bed, infiltration trench, or dry well)
    c. Vegetated Swale

BMPs must be designed and installed according to the City of Westfield's Stormwater Technical Standards Manual Chapter 03700 (http://www.westfield.in.gov/egov/apps/document/center.egov?view=item;id=50&fDD=-0)

## 4.2 BMP MAINTENANCE

To receive credit throughout the credit period, applicants must maintain each installed BMP(s) in accordance with the City of Westfield's Storm water Technical Standards Manual Chapter 03700 (http://www.westfield.in.gov/egov/apps/document/center.egov?view=item;id=50&fDD=-0)

Additionally, the applicant should practice the following:

1. Submit annual reports for multi-year credits prior to July 1st of each year
2. Provide notification to the City Stormwater Management Division of any changes to the BMP(s)
3. Receive approval of any alterations to BMP(s) from the City Stormwater Management Division, in order to continue receiving credit
4. Be aware that failure to follow the requirements of the City Stormwater Management Ordinance and Technical Standards or conditions of this credit manual will result in loss of credit.

## 4.3 LIST OF EDUCATIONAL RESOURCES

The following includes a list of readily available educational resources that could be implemented in order to receive the Stormwater Educational Credit. Other resources, or modifications to these resources, may be used if they are approved by the City Stormwater Management Division.

IDEM Classroom Resources (http://www.in.gov/idem/nps/3459.htm)

IDNR Project WET (http://www.in.gov/dnr/fishwild/7546.htm)

EPA NPDES Stormwater Outreach Materials and Reference Documents (http://cfpub.epa.gov/npdes/stormwatermonth.cfm#materials)

EPA Teacher Resources and Lesson Plans (http://www.epa.gov/students/teachers.html)

EPA Water science and Technology for Students and Educators (http://water.epa.gov/learn/resources/)

USGS Education Resources (http://education.usgs.gov/)

# CHAPTER 5 CREDIT RESTRICTIONS

**Maximum Available Credit:** The maximum credit available to any individual property is a total of 30% of their stormwater utility bill, even if their total credit exceeds 30%. Credits will not be applied to the stormwater utility bill until the application is approved and the BMP(s) has been constructed and inspected by the City

**Application Process:** The applicant should receive written notification of their award or denial of a stormwater utility user fee credit within 60 days of submitting their completed application. The application process does not relieve the property owner from payment of stormwater user fees in full during the review process. The credit will be applied within the next two billing cycles after approval. The credit period will begin when the credit is applied to the billing cycle.

**Transferring Credits:** Credits do not transfer with a change in property ownership; for the property to continue to receive the credit, the new owner must submit an application. This policy does not apply to projects that meet the requirements of the Permanent BMP Section below.

**City Requirements:** All BMPs must be designed and installed according to the City of Westfield's Stormwater Technical Standards Manual Chapter 03700 (http://www.westfield.in.gov/egov/apps/document/center.egov?view=item;id=50&fDD=-0). Approval of an application does not absolve the applicant from obtaining all other approval/permits from the engineering department and any other city departments necessary to complete the project.

**Credit Duration:** All credits are 5 years in length with the exception of the Storm water Education Credit which must be renewed annually. Credit renewals are due July 1st within the final year. Credits expire when a property changes ownership or the renewal application is not submitted. Credit period begins when the credit is applied to the bill.

**City's Right to Inspect:** The City has the right to inspect BMP(s) at any time while the credit is valid. If the BMP(s) has not been installed or maintained properly, the City Board of Public Works reserves the right to cancel the credit until the issue is solved.

**City's Right to Terminate a Credit**: The City Board of Public Works may revoke a stormwater credit for reasons such as inaccuracy or missing application/re-application information, or failure to meet BMP

maintenance requirements. The City will notify the applicant in writing and allow 30 days to correct the deficiency. Within the 30 day period, the applicant must submit written documentation that the deficiency has been corrected. Upon review and site inspection (if warranted), the City Board of Public Works will, in writing, award or deny the credit.

**Applicant's Right to Appeal:** The applicant may appeal the award or denial of a credit to the City Board of Public Works within 60 days of the receipt of the credit notice per City Code.

**Installation of Permanent BMPs:** If the BMPs are installed per an approved construction plan, protected by BMP easements, and an operation and maintenance manual is recorded with the property, the credit will be applied permanently to the property and 5 year renewal applications requirement will be waived.

# CHAPTER 6 CREDIT APPLICATION & PROCESS

The stormwater utility user fee credit application for all non-residential credits listed in this manual is included below. Completed applications, supporting documentation, and non-refundable fee (non-residential only) should be sent to:

City of Westfield
Public Works Department
Attn: Stormwater Management Division
2706 East 171st Street
Westfield, IN 46074

Prior to submitting the stormwater user fee application, all applicants are encouraged to discuss their BMP(s) and anticipated credit/cost-share reimbursement with the City Stormwater Management Division.

Email: stormwater@westfield.in.gov
Phone: 317-804-3100
Fax: 317-804-3190

Completed applications will be reviewed by the City Stormwater Management Division and forwarded to the City Board of Public Works for consideration. Upon 60 days of receiving the complete credit application package, the applicant will be notified, in writing, of their award or denial of a stormwater user fee credit. Incomplete applications will be returned to the applicant with deficiencies identified in writing.

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# CITY OF WESTFIELD STORMWATER USER FEE
# NON-RESIDENTIAL CREDIT APPLICATION

| | |
|---|---|
| **APPLICATION TYPE: ___ Initial Application ___ Installation Verification ___ Renewal Application** | |
| **APPLICANT NAME:** | **APPLICANT PHONE NUMBER:** |
| **APPLICANT EMAIL ADDRESS:** | **APPLICANT MAILING ADDRESS:** |
| **PROPERTY ADDRESS:** | |
| **PROPERTY UTILITY ACCOUNT NUMBER:** | **PROPERTY PARCEL NUMBER:** |
| **CREDIT(S) APPLYING FOR:** | **___ Established Development Credit** |
| **___Low Impact Development Credit** | **___ Accredited Green Building Program Credit** |
| **___ Stormwater Quantity Reduction Credit** | **___ Stormwater Education Credit** |
| **___ Stormwater Quality Improvement Credit** | **___Open Space Credit** |
| **APPLICANT SIGNATURE:** | **DATE:** |

**Submit application and attachments to:**

**City of Westfield**
**Public Works Department**
**Attn: Stormwater Management Division**
**2706 East 171st Street**
**Westfield, IN 46074**

***stormwater@westfield.in.gov***
***(317) 804-3190 Fax***

**Required attachments for the non-residential Low Impact Development Credit, Stormwater Quality Reduction Credit, Stormwater Quality Improvement Credit, Established Development Credit Accredited Green Building Program Credit, and Open Space Credit**

| INITIAL APPLICATION ATTACHMENTS | INSTALLATION VERIFICATION ATTACHMENTS | RENEWAL APPLICATION ATTACHMENTS |
|---|---|---|
| ___ Description | ___ BMP(s) Easement Recorded *(for permanent BMPs)* | ___ Annual Reports |
| ___ Site Plan | ___ As-Built Plans | ___ Changes to Site Plan |
| ___ Calculations for Credit | ___ Right-of-Entry Agreement | ___ Changes to BMP(s) |
| ___ Application Fee | ___ O&M Agreement | ___ Photos of BMP(s) |
| | ___ Sample Annual Report | ___ Calculation of Credit |
| | | ___ Application Fee |

**Required attachments for the non-residential Stormwater Education Credit**

| INITIAL APPLICATION ATTACHMENTS | INSTALLATION VERIFICATION ATTACHMENTS | RENEWAL APPLICATION ATTACHMENTS |
|---|---|---|
| ___ Description of Program | ___ Implementation Plan | ___ Previous Year Successes |
| ___ Calculations for Credit | | ___ Description of Program |
| ___ Application Fee | | ___ Calculation of Credit |
| | | ___ Application Fee |

**For Stormwater Management Division Use**

| | | |
|---|---|---|
| **APPLICANT NAME:** | **PROPERTY ADDRESS:** | |
| **DATE RECEIVED:** | **RECEIVED BY:** | |
| **APPLICATION FEE:**<br>**___ $100**<br>**___ $25** (Green Building & Education) | | **___ APPROVED**<br>**___ CREDIT PERCENT**<br>**___ NOTICE TO BILLING** |
| **___ DENIED** (Reason) | | |
| **STAFF SIGNATURE:** | | **DATE:** |
| **RENEWAL DATE:** | | |

**NON-RESIDENTIAL CREDIT APPLICATION**

**APPLICATION TYPE:** Indicate whether the application is an:

> **Initial Application –** this application is to be submitted to indicate the applicant's interest in installing or instituting one or more BMPs. This also applies to applicants who wish to reapply if the credit to their property had been terminated or canceled. All required attachments must be submitted to be considered. Applicants are advised not to proceed until the Initial Application has been approved by the City.
>
> **Installation Verification** – once the BMP(s) have been installed or an implementation plan prepared (Education Stormwater Credit only), the applicant must submit this application and all required attachments to be considered for credit.
>
> **Renewal Application** – with the exception of the permanent BMP installation, applications must be renewed every 5 years or for the Education Stormwater Credit, annually. Renewal applications are due July 1st. In order to continue to receive the credit, the applicant must submit this application and all required attachments.

**APPLICANT NAME:** Name of person applying for the credit. This can be the property owner or person acting on behalf of the property owner.

**APPLICANT PHONE NUMBER:** Phone number where applicant can be reached.

**APPLICANT EMAIL ADDRESS:** Email address where applicant can be reached.

**APPLICANT MAILING ADDRESS:** Address where applicant can be reached.

**PROPERTY ADDRESS:** Address of the property where the BMPs will be installed or instituted.

**PROPERTY UTILITY ACCOUNT NUMBER:** The utility billing number associated with the property. This number can be found on the property's utility bill or by calling Westfield Utilities at 317-804-3100.

**PROPERTY PARCEL NUMBER:** The parcel identification number associated with the property. This number can be found on property tax records or from the Hamilton County Recorder's Office at 317-776-9618 or online at http://gis.hamiltoncounty.in.gov/FlexViewer/Index.html

**CREDIT APPLYING FOR:** Indicate the credit(s) for consideration. See Section 3 of this Credit Manual for an explanation of each credit.

**APPLICANT SIGNATURE:** Signature of applicant.

**DATE:** Date application is submitted. Initial applications are accepted year round however, renewal applications must be submitted by July 1st of the year the credit expires.

# APPENDIX 6

# PROCEDURES FOR
# UPDATING BILLING DATABASE

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# BILLING DATABASE MAINTENANCE PROCEDURES

The following maintenance procedures for non-residential property classes (including residential common areas) should be completed to ensure accurate billing of parcels in the City of Westfield. The existing solid waste billing database should capture all residential development assigned a value of 1 ERU.

**ANNUALLY**

1. Compare the most recent aerial photography (flown annually by Hamilton County) with the non-residential impervious GIS shapefile originally used to develop the Stormwater Utility Rate Study.
2. Using the same protocol to establish the rate structure (see Section 6.4 of the Rate Study), digitize new impervious areas, calculate the square footage of impervious area, and determine the number of ERUs.
3. Update the billing database for each parcel where there is a change in impervious area or land use.
4. In the billing database, update location addresses, and identify accounts that are no longer active so that they can be removed from the billing database.

**AS-BUILT/LAND IMPROVEMENT PERMIT IMPERVIOUS AREA**

1. When occupancy is established for new development or redevelopment projects, the square footage of impervious areas should be calculated and ERUs determined.
2. Update the billing database for each parcel where there is a change in impervious area or land use.