


## Jackson Stormwater Utility: Addressing Michigan Requirements

MWEA Annual Conference  
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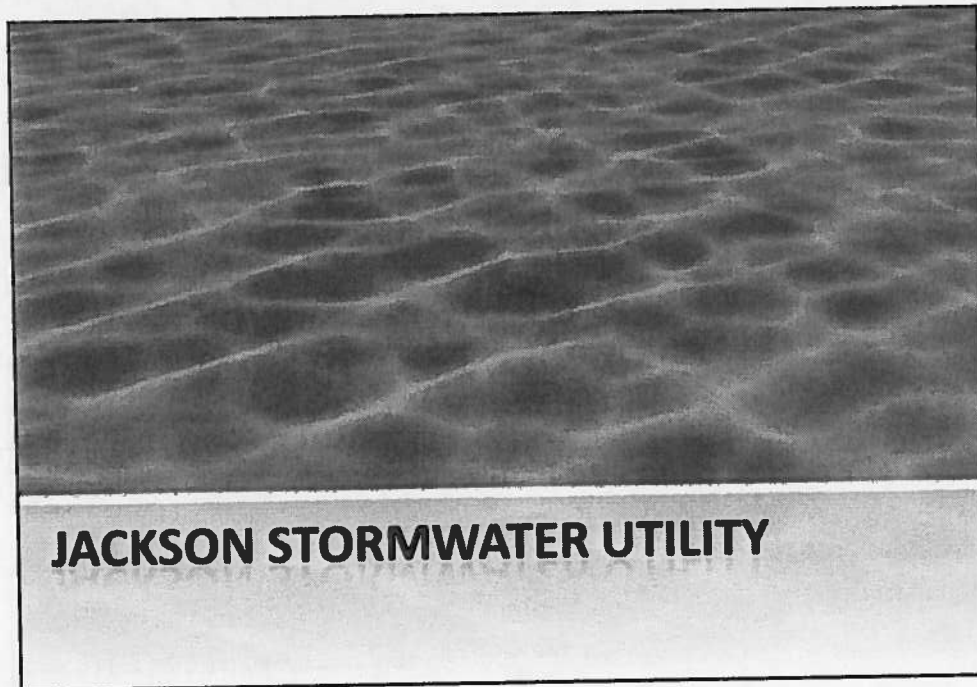


TETRA TECH

Boyne Mountain June 26, 2012

## Agenda

- ◆ Jackson Stormwater Utility
- ◆ Stormwater Utility Benefits
- ◆ Michigan Stormwater Utilities
- ◆ *Bolt* Opinion
- ◆ Creating a *Bolt* Compliant Stormwater Utility
- ◆ Lawsuits Challenging Jackson's Stormwater Utility

A rectangular slide with a dark, textured background of water ripples. At the top, the word "Why?" is written in a large, white, sans-serif font. Below this, on a light gray background, is a bulleted list. The slide number "4" is in the bottom right corner.

**Why?**

- Tough economic times
- Property tax revenues down
- Stormwater had been funded by:
  - Property taxes
  - Gas and vehicle registration fees
- Stormwater utility revenue would replace these funding sources thus making them available for other needed City services, such as street repair

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## Budget Development

- Engineering and public works staff reviewed stormwater-related spending accounts
- Consolidated these accounts into a stormwater budget
- Stormwater spending had gradually increased over the years to a significant amount, worthy of its own dedicated funding source

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## Jackson Stormwater Budget

Description	Current Fund	Budget
Phase II Implementation & Permit	General Fund	29,200
Drains At Large	General Fund	30,800
Storm Drain Construction	Public Improvement Fund	24,400
Major Street Machine Sweeping	Gas/Vehicle Reg Fees	87,000
Major Street Haul Sweepings	Gas/Vehicle Reg Fees	36,000
Major Street Leaf Pickup	Gas/Vehicle Reg Fees	39,000
Forestry Leaf Mulching	Gas/Vehicle Reg Fees	40,000
Major Street Catch Basin Work	Gas/Vehicle Reg Fees	60,000

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## Jackson Stormwater Budget

Description	Current Fund	Budget
Major Street Clean Catch Basins	Gas/Vehicle Reg Fees	40,000
Local Street Machine Sweeping	Gas/Vehicle Reg Fees	131,000
Local Street Haul Sweepings	Gas/Vehicle Reg Fees	65,000
Local Street Catch Basin Work	Gas/Vehicle Reg Fees	30,200
Local Street Clean Catch Basins	Gas/Vehicle Reg Fees	39,000
Local Street Leaf Pickup	Gas/Vehicle Reg Fees	79,000
Storm Water Billing	New	42,300
<b>TOTAL (rounded)</b>		<b>\$773,000</b>

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## Jackson Stormwater Billing Method

- Computes parcel's relative stormwater runoff
- Can be estimated by measuring the impervious and pervious areas of the parcel
- Establishes an enterprise fund dedicated to funding storm water management on a fair and equitable basis
- Residential rates are flat rate (identical) for all detached residences up to four units, billed quarterly
- Others are billed monthly based on individual property impervious and pervious area.

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## Equivalent Hydraulic Area (EHA) Stormwater Billing Method

Based on the **combined impact** of  
the measured impervious and  
pervious areas of the parcel

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## Jackson Stormwater Rates

- Residential Flat Rate:  
**\$7.50 per Quarter**
- Others based on parcel area  
measurement, billed monthly:  
**\$2.50 x number of EHA units**

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## EHA Units

$$\text{EHA} = (\text{Impervious Area in sq. ft.} \times 0.95) + (\text{Pervious Area in sq. ft.} \times 0.15)$$

$$\text{EHA Units} = \text{EHA SF} / 2,125 \text{ SF}$$

(2,125 SF is the EHA of a typical residential home)

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## Home Depot Monthly Bill Calculation

$$\text{Impervious Area} = 322,738 \text{ SF}$$

$$\text{Pervious Area} = 173,846 \text{ SF}$$

$$\text{EHA} = (322,738 \times 0.95) + (173,846 \times 0.15)$$

$$\text{EHA} = 332,678 \text{ SF}$$

$$\text{EHA Units} = 332,678 \text{ SF} / 2,125 \text{ SF}$$

$$\text{EHA Units} = 156.55 \text{ (i.e. Home Depot is equivalent to 156 single family residential homes)}$$

$$\text{Monthly Bill} = 156.55 \times \$2.50$$

$$\text{Monthly Bill} = \$391.37$$

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## Jackson Green Infrastructure Stormwater User Fee Credits

Owners may apply for stormwater user fee credits:

- Residential Property: Flat Rate 50 % Credit
- Others:
  - Stormwater Quantity: 37.5 to 75% Credit
  - Education: 25%
  - Direct Discharge: Maximum of 75%

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## Jackson Residential Property 50% Credit

- Rain Gardens
- OR
- On-site Stormwater Storage:
  - Rain barrel
  - Cistern
- OR
- Vegetated Filter Strips

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## Jackson Stormwater Quantity Credit

Post development is equal to or less than pre-development peak flow for one-year storm: 37.5% credit

- Two-, 10- or 25-year storm: 52.5%
- Two-, 10, 25-, 50- or 100-year storm: 67.5%
- 20% more than need for 100-year storm: 75%

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## Jackson Stormwater Education Credit

- Available to elementary, middle and high school (public and private): 25%
- Can be combined with a stormwater quantity credit
- Maximum total credit is 75%

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## Jackson Stormwater Direct Discharge Credit

- Available to properties contiguous to the Grand River
- Credit is based on the area that discharges directly to the Grand River
- Maximum credit is 75% (if 100% of the area discharges directly to the Grand River)

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## Jackson Residential Taxpayer Benefit

The cost to a typical Jackson residential taxpayer to pay for stormwater management using a stormwater utility is **20% less** than using the traditional property tax approach

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## Jackson Schedule: 9 Months

- Council initiated Feasibility Study Aug 17, 2010
- Feasibility Study presented to Council Sept 28
- Council initiated Implementation Sept 28
- Ordinance:
  - First reading Dec 14
  - Second reading (Adoption) Jan 11
- Credit manual complete Jan 26
- Parcel measurements complete Feb 11
- Public meeting with Chamber of Commerce April 13
- Initiate billing April 26, 2011

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## STORMWATER UTILITY BENEFITS

## Stormwater Utility Benefits

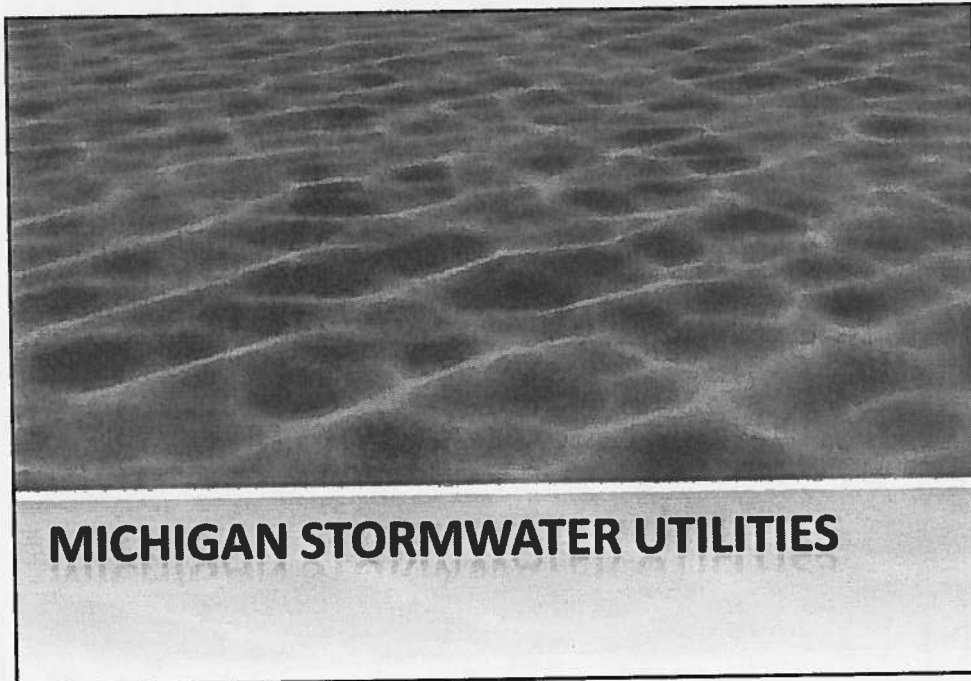
- Dedicated funding source
- Broaden billing base
- Fee is proportional to cost of service
- Lower residential cost

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## Stormwater Utility Benefits

- Provides dedicated funding to comply with stormwater regulatory requirements
- More money available for street improvements
- Stormwater capital improvement funding
- Charge all parcels equitably (including tax-exempt) based on parcel area

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### Michigan Stormwater Utilities

- 1984: Ann Arbor
- 1992: Harper Woods
- 1993:
  - Adrian
  - Saint Clair Shores
- 1994:
  - Berkley
  - Marquette
- 1995: Lansing (Rescinded)
- 1996: Brighton (On hold since 2004)
- 1997:
  - Chelsea
  - New Baltimore
- 2011: Jackson

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## Equivalent Quarterly Rates

Adrian	\$4.80
Ann Arbor (2,187 to 4,175 impervious area)	\$30.71
Berkley	\$61.46
Chelsea	\$4.50
Harper Woods	\$47.50
Jackson	\$7.50
Marquette (0.2 to 1 acre lot)	\$16.77
New Baltimore	\$6.00
St. Clair Shores	\$10.41

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**BOLT OPINION (PARTIALLY BASED ON INPUT  
FROM MILLER CANFIELD ATTORNEYS)**

## December 1998 Bolt Opinion

- Bolt v. City of Lansing, Michigan
- Were the Lansing Stormwater Utility fees valid?
- Or, did they constitute a tax?
- *"A 'fee' is 'exchanged for a service rendered or a benefit conferred, and some reasonable relationship exists between the amount of the fee and the value of the service or benefit'"*
- *"A 'tax', on the other hand, is designed to raise revenue."*

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## December 1998 Bolt Opinion

Ten judges heard precisely the same case.

- Five said it was a "tax":
  - Markman, Weaver, Brickley, Kelly, Taylor
- Five said it was a "fee":
  - Saad, Wahls, Mallett, Boyle, Cavanagh

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## December 1998 Michigan Supreme Court Decided

- Lansing's stormwater utility fee was decided to be a tax, not a valid user fee
- The *Bolt* Opinion did not say that stormwater utilities are "illegal" in that it agreed with the following:
  - "This is not to say that a city can never implement a storm water or sewer charge"
  - "Where the charge for either storm or sanitary sewers reflects the actual costs of use...sewerage may properly be viewed as a utility service for which usage-based charges are permissible..."
- Created a three-part test to determine if a charge is a tax or a valid user fee

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## Three-Part Test

- Three-part test for valid user fee:
  1. Serve a *regulatory purpose* rather than a revenue raising one
  2. Be *proportional* to the necessary cost of service
  3. Be *voluntary* – users must be able to refuse or limit use of the service
- Test 1 is met because of need to comply with stormwater regulations and because the fees generated are deposited into a restricted, dedicated stormwater enterprise fund
- Need to document compliance with tests 2 and 3

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## Three-Part Test

- Three part test applied to any user fee, such as:
  - Water
  - Sewer
  - Stormwater
  - System development charges (“connection” fees)

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## Legal Challenges

Subsequent *“Bolt” legal* challenges  
focused on *water and sewer* rates

and

*system development charges*  
*(“connection fees”).*

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## Bolt Legal Challenges

- 1999: Graham v. Kochville Twp: **Connection Fees**
- 2000: Fraser v. City of Berkley: **Rates**
- 2002:
  - Grunow v. Frankenmuth Township: **Connection Fees**
  - Tobin v. Genesee County: **Connection Fees**
- 2003: Maplevue Estates v. Brown City: **Connection Fees**
- 2005: Grand Blanc Schools v. Genesee County: **Connection Fees**

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## Impact of *Bolt*

- Lansing rescinded its stormwater utility
- No new Michigan stormwater utilities from 1997 to 2011
- Michigan municipalities:
  - Wanted “bright line” process that complied with Bolt
  - Waited for a municipality to go first
- Jackson proceeded and implemented its stormwater utility on April 26, 2011

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## Bright Line Process

- Senate Bill No. 256, February 2009
- Introduced by (former) Senator Patti Birkholz (currently Director of the Office of the Great Lakes)
- ☹️ Bad news: The bill died
- 😊 Good news: Bright line process for a “*Bolt* compliant” stormwater utility.

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## Bright Line Process

**To serve a regulatory purpose  
rather than a revenue raising one:**

- Contains a “findings” section identifying the need for local units of government to manage stormwater for water quality protection for public health, safety, and welfare
- Restricts fee use to specific situations – cannot transfer funds for other applications or uses

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## Bright Line Process

### **Be proportional to the necessary cost of service:**

- Several established calculation methods allow communities to calculate fees equitably
- Fees must be proportional to the service provided to the individual property
- No property is subject to the fee unless the community proves that a property is served by the stormwater management system.

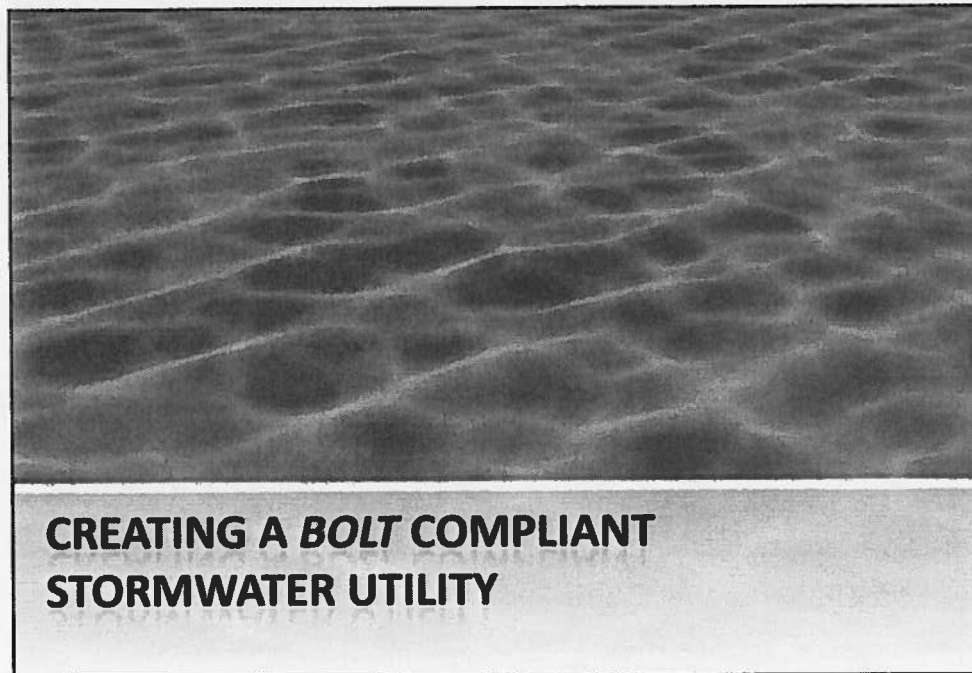
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## Bright Line Process

### **Be voluntary – users must be able to refuse or limit use of the service:**

- Numerous fee-reducing credits for voluntary user actions that reduce the stormwater management system costs, including:
  - Volume reduction
  - Public education
  - Pollutant loading reduction

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### Specialists Required

- Engineering:
  - Stormwater requirements
  - Area assessment (GIS)
  - Cost of service rate study
- Legal: Ordinance
- Public Relations:
  - Brochure
  - Public education

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## Creating a *Bolt* Compliant Stormwater Utility

- A. Feasibility Study
- B. Implementation
- C. Administration

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## A. Feasibility Study

1. Project annual O&M and capital expenses
2. Preliminary parcel area assessment (Parcels are considered out until they can be shown to be in the service area)
3. Select a stormwater utility rate method
4. Hold public hearing

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### 3. Select a Stormwater Utility Rate Method

- Equivalent Residential Unit (ERU)
- Intensity of Development (ID)
- Equivalent Hydraulic Area (EHA)

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### Factors Affecting Rate Method Selection

- Fair and equitable
- Easy to understand
- Affordable
- Residential customer rate options:
  - Single flat rate
  - Multiple flat rates
  - Individually measured
- “Green infrastructure” credits
- Exemptions
- SDCs for new construction

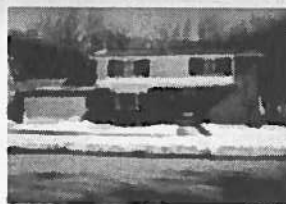
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## Multiple Residential Flat Rates



600 SF on 0.1 Acre



1,000 SF on 0.2 Acre



4,000 SF on 2 Acres

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Each Requires  
Measurement of  
Impervious Area of  
Property

## Impervious Area

- High hydrologic response factors
- Buildings, roofs, driveways, parking lots and sidewalks
- Significantly inhibits stormwater from penetrating soil

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## Pervious Area

- Low hydrologic response factors
- Lawns, fields, and forests
- Does not significantly inhibit stormwater from penetrating soil

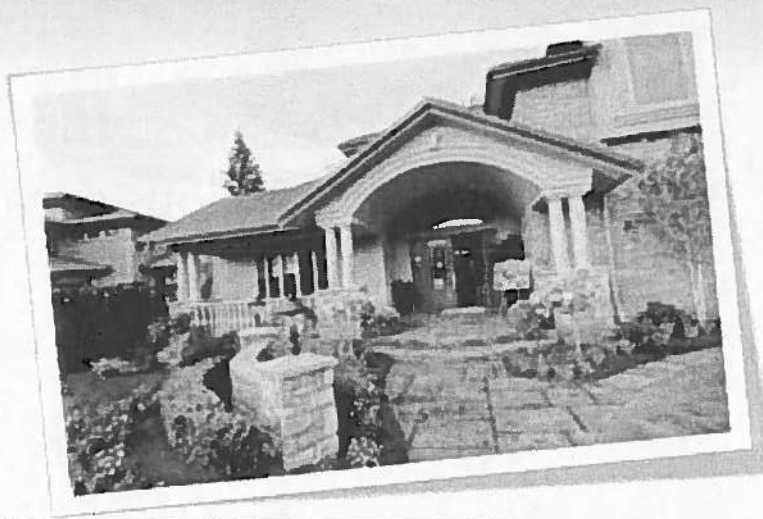
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## Equivalent Residential Unit (ERU)

Allocates costs based on the  
impervious area  
of a typical  
single family residence

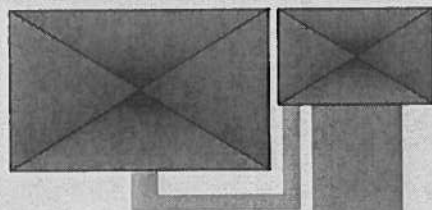
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## Single Family Residence - Basis for ERU Method



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## ERU Method



**Example:**

1 ERU =  
2,500 square feet  
of impervious area

The Impervious Area of a typical single family residential home is the basis for billing all customers.

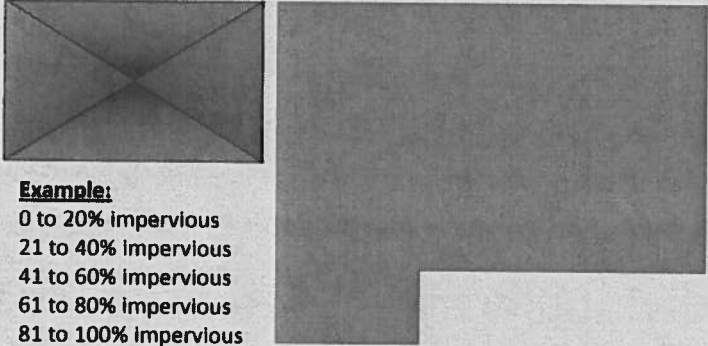
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## Intensity of Development (ID)

Allocates costs based on the  
percentage of impervious area  
relative to the  
property's total area

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## ID Method



**Example:**  
0 to 20% Impervious  
21 to 40% Impervious  
41 to 60% Impervious  
61 to 80% Impervious  
81 to 100% Impervious

Parcels are placed into broad categories of "Intensity of Development," from 0 to 100% with categories in between.

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## Intensity of Development (ID Method)

- Property is billed on a rate per square foot basis applied to the total property area
- Several rate per square foot categories
- Rate per square foot increases as intensity of development increases

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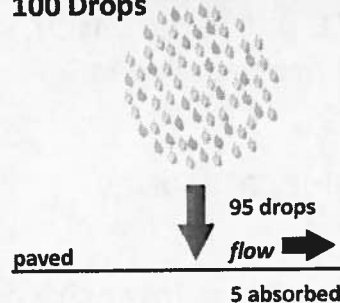
## Equivalent Hydraulic Area (EHA)

Allocates cost based on combined impact of measured impervious and pervious property areas (for individually measured properties)

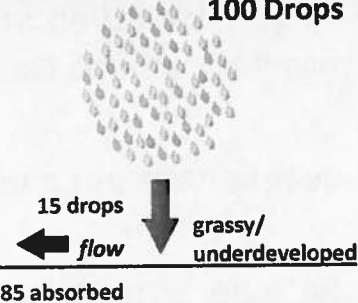
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## Equivalent Hydraulic Area Method

**IMPERVIOUS AREA**  
100 Drops



**PERVIOUS AREA**  
100 Drops



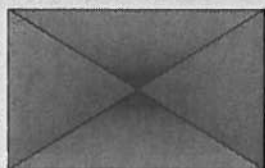
$$\text{Relative Runoff} = \text{Paved Area} \times \frac{95}{100} + \text{Pervious Area} \times \frac{15}{100}$$

$$\text{Equivalent Hydraulic Area (EHA)} = 0.95 \times \text{Impervious Area} + 0.15 \times \text{Pervious Area}$$

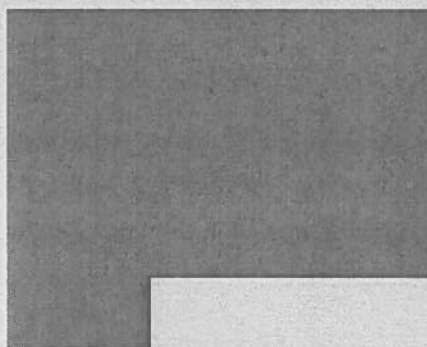
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## EHA Method



0.95 x impervious area  
PLUS  
0.15 x pervious area  
= EHA of property



Impervious and pervious areas are measured to develop a number that represents the combined impact of the total area of the parcel. (Certain measured parcels may have lower bills compared to the ERU method because the EHA billing base is greater)

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## Select Rate Method (ERU, ID or EHA)

	Implementation	Impervious Area Impact Analyzed?	Pervious Area Impact Analyzed?
ERU	Easy	Yes	No
ID	Moderate	Yes	Yes (broadly)
EHA	Moderate	Yes	Yes (in detail)

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## **B. Implementation**

1. Determine “green infrastructure” credits
2. Create billing system
3. Roll out public information program
4. Adopt ordinance

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## **1. “Green Infrastructure” Credits**

- On-site retention/detention
- Increased landscaping/vegetation
- Direct drainage to water of the state
- Use of permeable materials
- Filtering systems, such as filter strips
- Storm system maintenance
- Maintenance
- Educational programs
- Other items that result in a measurable reduction in stormwater runoff or pollutant loadings

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## 2. Billing System

- Select bill delivery method:
  - With water/sewer bills (approximately 75% do this)
  - Add to property tax bills (a separate "Non-Ad Valorem Charge")
  - Stand alone
- Collect financial and user data from city departments
- Align water/sewer billing account numbers with tax assessor parcel numbers
- Enter data into billing system
- Calculate stormwater rate for each customer

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## 3. Public Information Program

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Identify key users and groups:               <ul style="list-style-type: none"> <li>– Properties that generate the most storm water</li> <li>– Tax-exempt properties</li> </ul> </li> <li>• Establish advisory committee</li> </ul> | <ul style="list-style-type: none"> <li>• Create web site</li> <li>• Prepare brochure and presentations</li> <li>• Meet with key user groups and media</li> <li>• Send each customer the <u>actual bill he/she will receive</u></li> </ul> |
|--|---|

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## 4. Ordinance

- Use SB No. 256 guidance
- Legal opinion
- Adopt stormwater utility feasibility study, including rate methodology
- Green infrastructure credits
- Appeals process
- Adoption

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## C. Administration

1. Initiate billing and train billing staff
2. Establish customer hot line
3. Address legal challenges
4. Maintain master account file
5. Manage stormwater utility billing (often no additional billing staff are required)

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## Stormwater Utility Administration

- Often same staff currently administering water and sewer:
  - City Manager
  - Engineering
  - Public Works/Utilities
  - Finance
  - Billing
- Plus:
  - Assessing
  - GIS

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## Bill Format

- Add line on water/sewer bill (typical)
- Add to property tax bill (called a “Non ad valorem charge”)
- Send stand alone bill

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**JACKSON WATER COLLECTION**  
161 W. Michigan Ave.  
Jackson, MI 49201  
517-788-4082

RETURN THIS PORTION WITH PAYMENT

PRESORTED  
FIRST CLASS MAIL  
U.S. POSTAGE PAID  
JACKSON, MI 49201  
PERMIT NO. 418

**TEMP RETURN SERVICE REQUESTED**

CUSTOMER NAME & ADDRESS  
813 3RD  
ACCOUNT NO. 3RD1-000813-0000-02  
PROPERTY ADDRESS  
813 3RD

ACCOUNT NO.  
3RD1-000813-0000-02

PREV READ DATE 04/01/11    CURRENT READ DATE 07/05/11    USAGE 96

DATE	AMOUNT	DATE	AMOUNT
PB	\$0.00		
SW	\$36.88		
WA	\$66.89		
SF	\$8.00		

LAST PAYMENT DATE 07/12/2011    LAST PAYMT. AMOUNT \$127.60

AFTER 08/20/11    PAY THIS LATE AMT \$122.15

DUPLICATE DATE 08/20/2011    TOTAL AMOUNT DUE \$111.77

MAIL TO: 813 3RD  
JACKSON, MI 49203

## LAWSUITS CHALLENGING JACKSON'S STORMWATER UTILITY

## **County of Jackson v. City of Jackson**

- Jackson County filed on December 16, 2011
- Claimed Jackson Stormwater Utility fee is a tax and not a valid user fee

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## **Additional Lawsuits**

- December 28, 2011: Two Jackson businessmen also filed lawsuits against the City of Jackson
- These lawsuits are similar to the Jackson County lawsuit

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## Questions?

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