The Detroit Green Infrastructure Program

Managing Stormwater in a Social Context

Carol Hufnagel, Tetra Tech
November 10, 2016

CITY OF DETROIT
DETROIT Water & Sewerage Department

TETRA TECH

The Permit Driver for the Green Infrastructure Program

- The permittee shall develop and implement a Green Infrastructure ("GI") Plan for this area consistent with the "Evaluation of CSO Control Alternatives" report dated December 15, 2009. The Plan shall describe a process for Locating, designing, constructing, operating, and evaluating GI in these sewersheds. GI implementation shall be planned to capture wet weather flows that would otherwise flow into the sewer system and contribute to CSOs. The Plan shall include the following elements:
- The permittee shall continue to implement GI in these sewersheds. The investment in GI in these sewersheds will be an average of 3 million dollars per fiscal year for the ten-year period ending 2019 (for a total of $30 million), and an average of 2 million dollars per year for the following 10 years (for a total of $20 million). GI implementation will be in accordance with the GI Plan after the Plan has been approved.
- In addition, the performance goal is that by June 30, 2017, the permittee have in place in these sewersheds GI practices that cumulatively have the capacity to reduce flows into the sewer system in a 2-year — 24-hour storm event by at least 2,800,000 gallons, as determined by using modeling and quantification methods and data sources mutually agreed to in writing between the permittee and the Department..

THE HUMAN SIDE

Blight

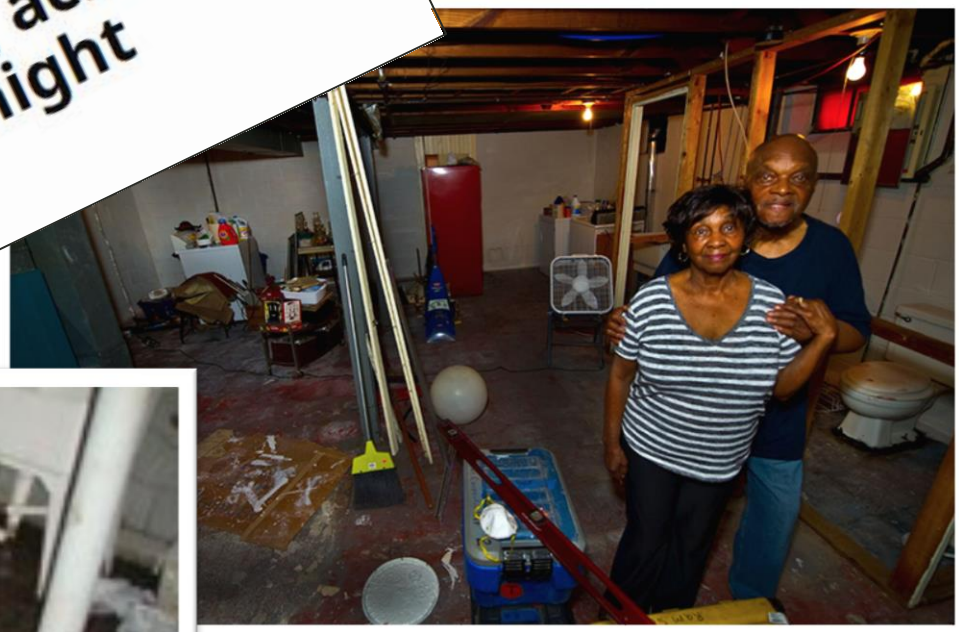
Detroit flood nightmare: Relief for residents, questions remain

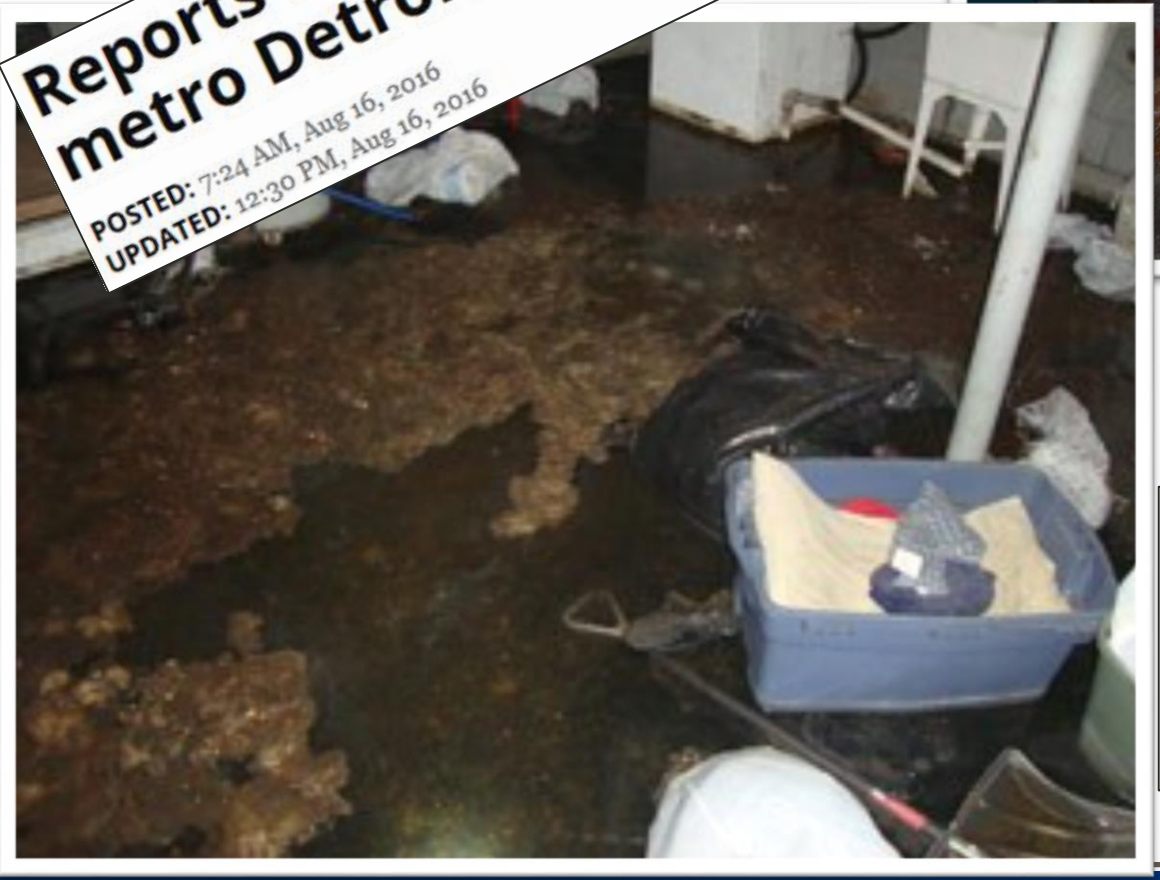
Angry residents question City Hall about floods

By Tony Statz - Producer

Reports of basements flooding across metro Detroit after rain overnight

POSTED: 7:24 AM, Aug 16, 2016
UPDATED: 12:30 PM, Aug 16, 2016





Basement Backup

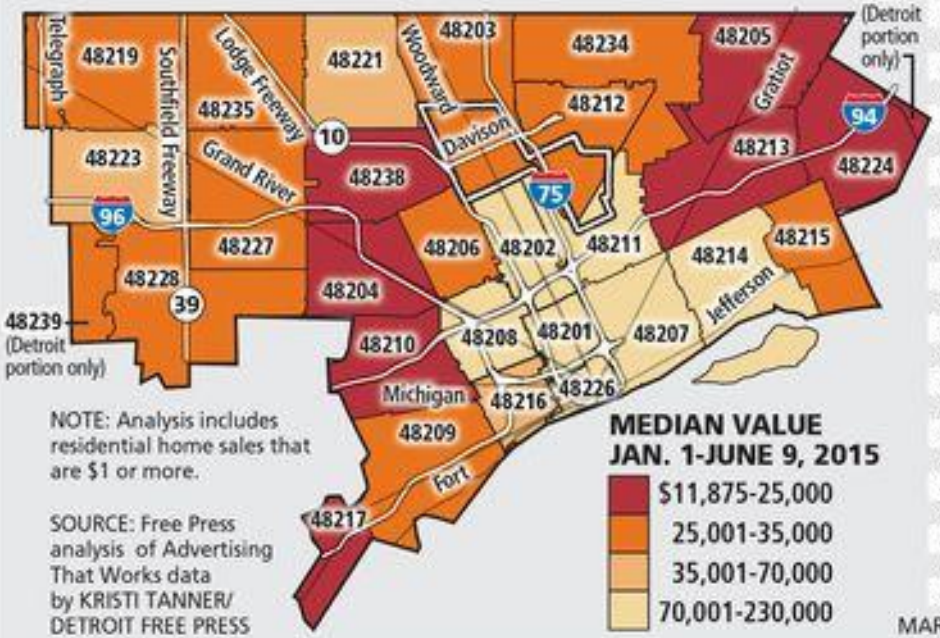
Poor Drainage

Property Values

In 2009 median home price in Detroit was $9,000
In 2015 it was $31,000

DETROIT HOME SALE PRICES INCHING BACK FROM ROCK BOTTOM

The median home sale price has increased more than 300% in Detroit since 2009 when it was $7,000. By June 2015, it was $30,000.



NOTE: Analysis includes residential home sales that are $1 or more.

SOURCE: Free Press analysis of Advertising That Works data by KRISTI TANNER/ DETROIT FREE PRESS

DETROIT MEDIAN HOME SALE PRICES

	2009	2015 (As of June 9)
48201	$132,000	$230,000
48202	$19,000	$80,000
48203	$5,500	$34,900
48204	$6,000	$15,500
48205	$1	$18,500
48206	$5,725	$35,000
48207	$32,500	$73,000
48208	$11,000	$130,000
48209	$11,250	$26,500
48210	$9,600	$23,000
48211	$12,000	$85,000
48212	$7,500	$32,137
48213	$3,200	$14,950
48214	$15,500	$74,750
48215	$8,000	$35,000
48216	$15,000	$70,000
48217	$41,264	$11,875
48219	$4,850	$30,000
48221	$17,500	$45,000
48223	$3,500	$36,500
48224	$9,050	$22,000
48226	$135,250	$183,500
48227	$5,025	$32,000
48228	$7,000	$28,000
48234	$2,500	$26,750
48235	$8,500	$26,143
48236	$11,000	$24,000
48238	$2,975	$17,500
48239	$15,250	$32,750

MARTHA THIERRY/DETROIT FREE PRESS

NEWS

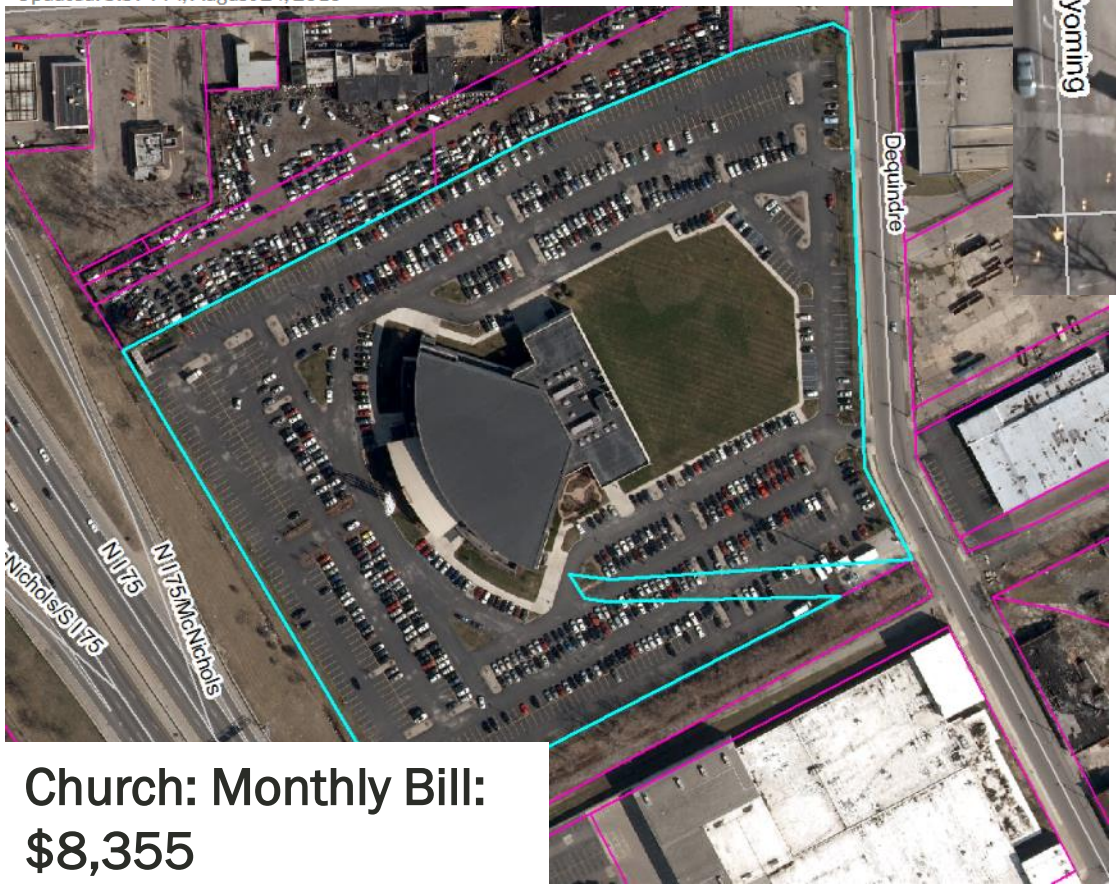
Storm drainage bills hit Detroit businesses hard

Runoff into storm drain costs $125 million per year

By Rod Meloni - Reporter, CFP ® , Derick Hutchinson

Posted: 5:57 PM, August 24, 2016
Updated: 5:57 PM, August 24, 2016

Gas Station: Monthly Bill: $375



Church: Monthly Bill: $8,355

Residence: Monthly Bill: $30

City a leader in childhood asthma

Detroit leads the country's largest cities for children from birth to 11 who have asthma. It ranks third nationally for all children who have the breathing condition.

Asthma in all children

From birth to age 17		From birth to age 5		Ages 6-11	
1. Phoenix	14%	**1. Detroit**	**12.5%**	**1. Detroit**	**16.8%**
2. Philadelphia	12.9	2. Jacksonville	8.9	2. Philadelphia	14
3. Detroit	**12.4**	3. Columbus	8.7	3. Jacksonville	13.2
4. Jacksonville	12.3	4. Indianapolis	8.5	4. New York	13.1
5. Indianapolis	12.3	5. Philadelphia	8	5. Indianapolis	12.4
6. Chicago	11.7	6. New York	7.6	6. Columbus	12.1
7. New York	11.4	7. Phoenix	7.5	7. Chicago	11.5
8. Dallas	10.4	8. Chicago	6.3	8. Charlotte, NC	11.4
9. Houston	10.1	9. Dallas	6.2	9. Phoenix	11.4
10. Charlotte, NC	10	10. Houston	6	10. San Francisco	9.5
National	**8.8**	**National**	**5.8**	**National**	**10**

Source: 2011-12 National Health Survey and John Hopkins Bloomberg School of Public Health

The Detroit News

Health

MAKING CONNECTIONS

How we make it happen

- Intentional coordination with other City departments
  - don’t wait for a project – just do it – keep lines of communication open
- Ongoing collaboration with NGO’s
- Identify neighborhood groups and work with them

DWSD GROUPS/ FUNCTIONS

CITY DEPARTMENTS AND AUTHORITIES

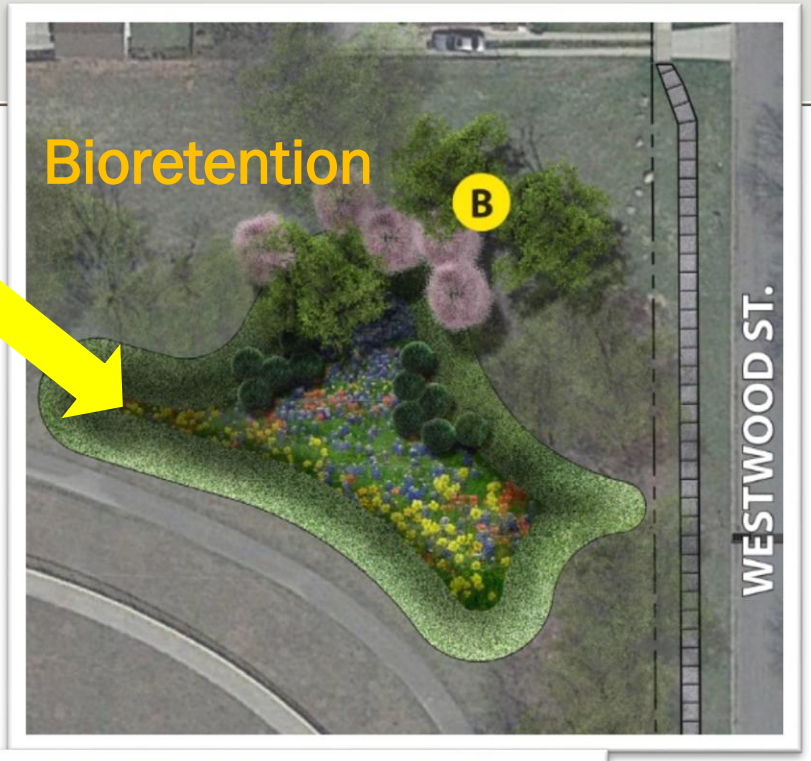
- Detroit Land Bank Authority
- Detroit Building Authority

BRIGHTMOOR ALLIANCE
CITY OF DETROIT PLANNING & DEVELOPMENT DEPARTMENT
dba THE DETROIT LAND BANK AUTHORITY
MSHDA Michigan State Housing Development Authority
DEGC
LAWRENCE TECHNOLOGICAL UNIVERSITY THEORY AND PRACTICE 1932 SOUTHFIELD, MICHIGAN
SEMCOG
green space blue water
the greening of detroit
SIERRA CLUB GREAT LAKES PROGRAM
SEAL OF THE CHARTER COUNTY OF WAYNE, MICHIGAN 1796
DHC DETROIT HOUSING COMMISSION
The Nature Conservancy
CITY OF DETROIT DETROIT Water & Sewerage Department
Michigan Land Bank Fast Track Authority
I'm in.
CITY of DETROIT
DEQ
Erb Family Foundation
DETROIT-WAYNE JOINT BUILDING AUTHORITY
GRANDMONT ROSEDALE DEVELOPMENT CORPORATION
DTE Energy
DETROIT PUBLIC SCHOOLS
Department of Public Works
DETROIT GREENWAYS COALITION
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
THE JOY-SOUTHFIELD COMMUNITY DEVELOPMENT CORPORATION J-SCDC, Inc.
DETROIT FUTURE CITY
THE UNIVERSITY OF MICHIGAN 1817
MDOT Michigan Department of Transportation
WAYNE STATE

PROJECTS IN REAL LIFE

Stoepel Park No. 1

Green Infrastructure Concepts



Project Partners

- Detroit Water and Sewerage Department
- Detroit Parks and Recreation
- Grandmont Rosedale Development Corporation
- Rosedale Grandmont Little League

CITY OF DETROIT

DETROIT Water & Sewerage Department

Rosedale Grandmont Baseball Little League

GRANDMONT ROSEDALE DEVELOPMENT CORPORATION

Vacant Lot Bioretention Sites

CITY OF DETROIT

DETROIT Water & Sewerage Department

dlba THE DETROIT LAND BANK AUTHORITY

M WATER CENTER UNIVERSITY OF MICHIGAN

TETRA TECH

Fred A. and Barbara M. Erb Family Foundation

WAYNE STATE

TOOLES CONTRACTING GROUP LLC

DETROIT'S
green
space
our
blue
water
A beautiful
garden designed
to soak up
storm water
and keep it out
of the sewer system
To help this green space soak
up water, please enjoy it from
the sidewalk or the street.

Social Research Presentation on Wednesday AM Session 8-1

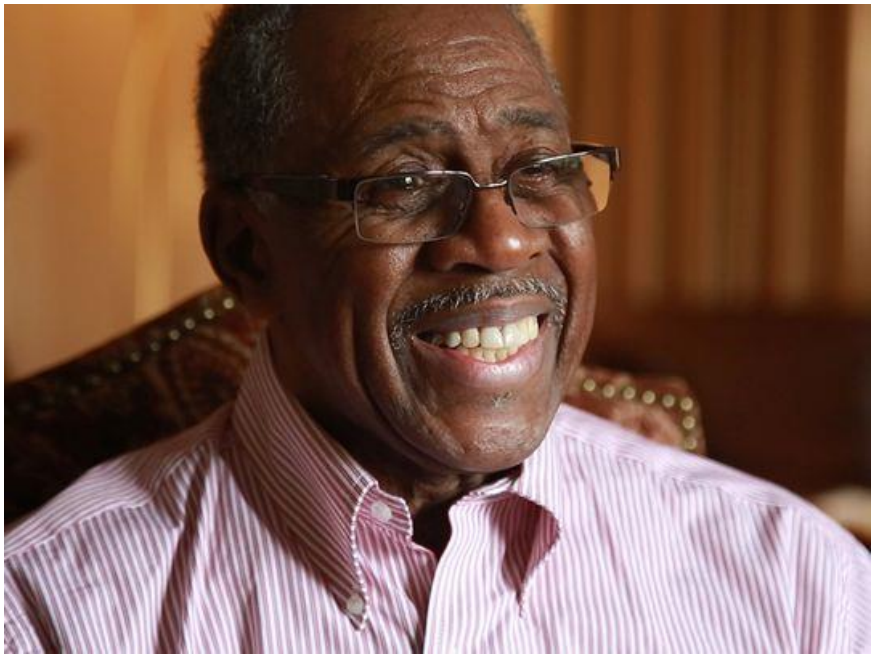
Liuzzo Park

About Viola Liuzzo

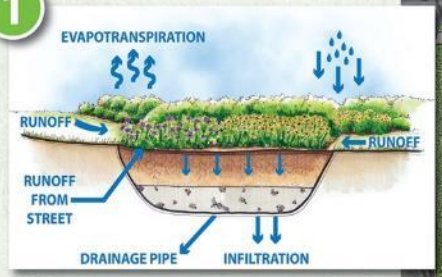
- Helper of the poor
- Civil rights activist
- Active in NAACP in the 1950's and 1960's
- Mother of five children
- Participated in the Selma March
- Killed by the Klu Klux Klan at Selma in 1965

About Artis Johnson

- Long time neighborhood resident
- Cut grass in the Viola Liuzzo Park when City did not have funds
- Keeps an eye on the neighborhood



Changes Coming to Viola Liuzzo Park



Bioretention Areas:
- Designed to soak up storm water before it enters the sewer system
- Beautifies the park while improving drainage and water quality

Playground Equipment:
- Selected with input from local families and children
- Safe and durable for years of enjoyment

Fitness Equipment:
- Selected to provide free, public outdoor workout space
- Promotes improved community health and well-being

Photo Credit: FARKAS Realty Group and Atlanta Dream Living.com

Pickleball Court:
- First of its kind in a Detroit park
- Introduces community residents to a unique sport with growing popularity

Walking Path:
- Included in park redesign based on community input
- Provides a safe, beautiful space for walking and running

CITY OF DETROIT

Viola Liuzzo Park Association

DETROIT'S GREEN space blue water

Project Partners: City of Detroit; Michigan Department of Natural Resources; Viola Liuzzo Park Association; KEO & Associates; Tetra Tech; WCI Contractors

A SPARK OF HOPE

QUESTIONS

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