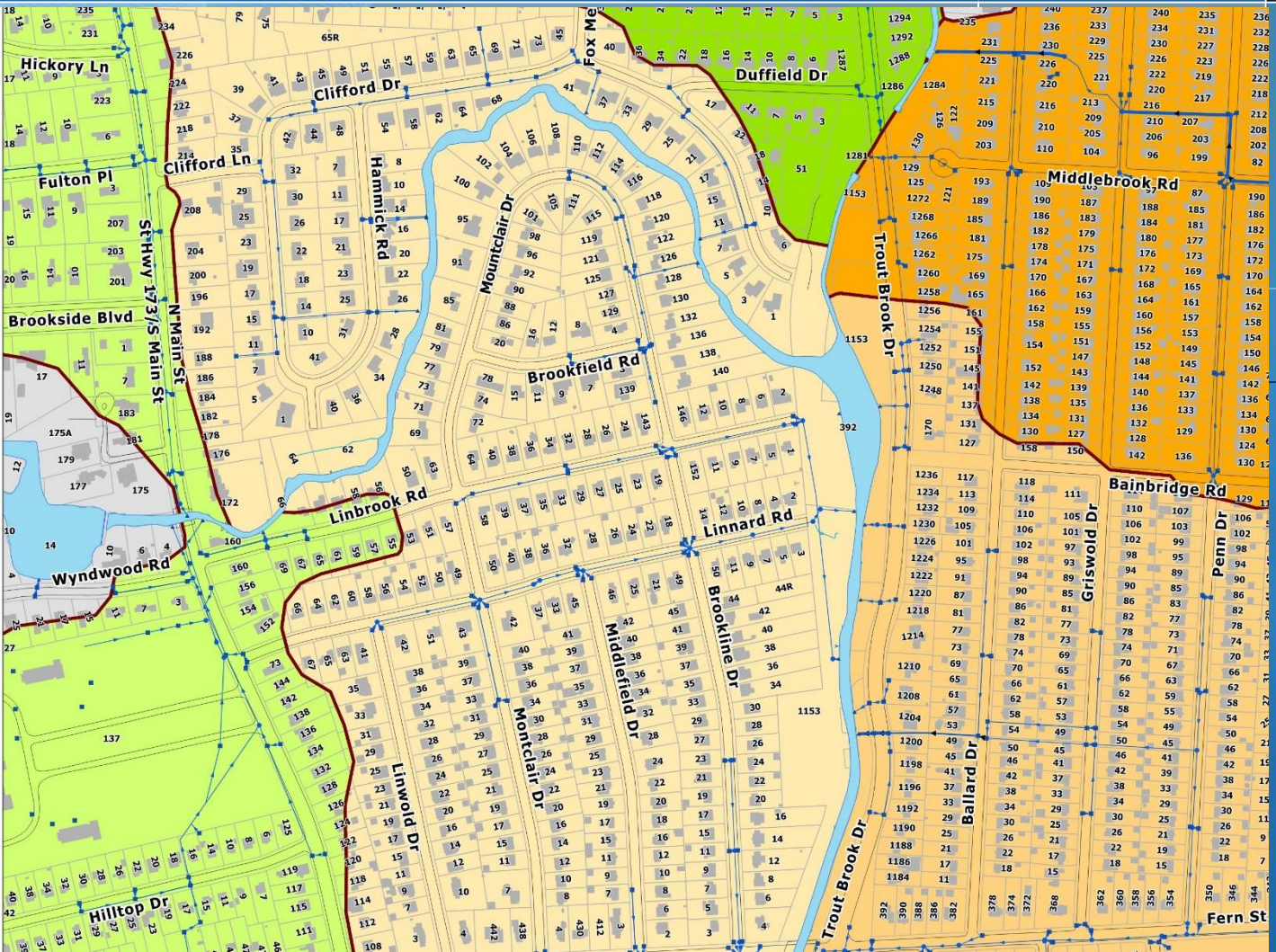
West Hartford Drainage Study – Phase 1



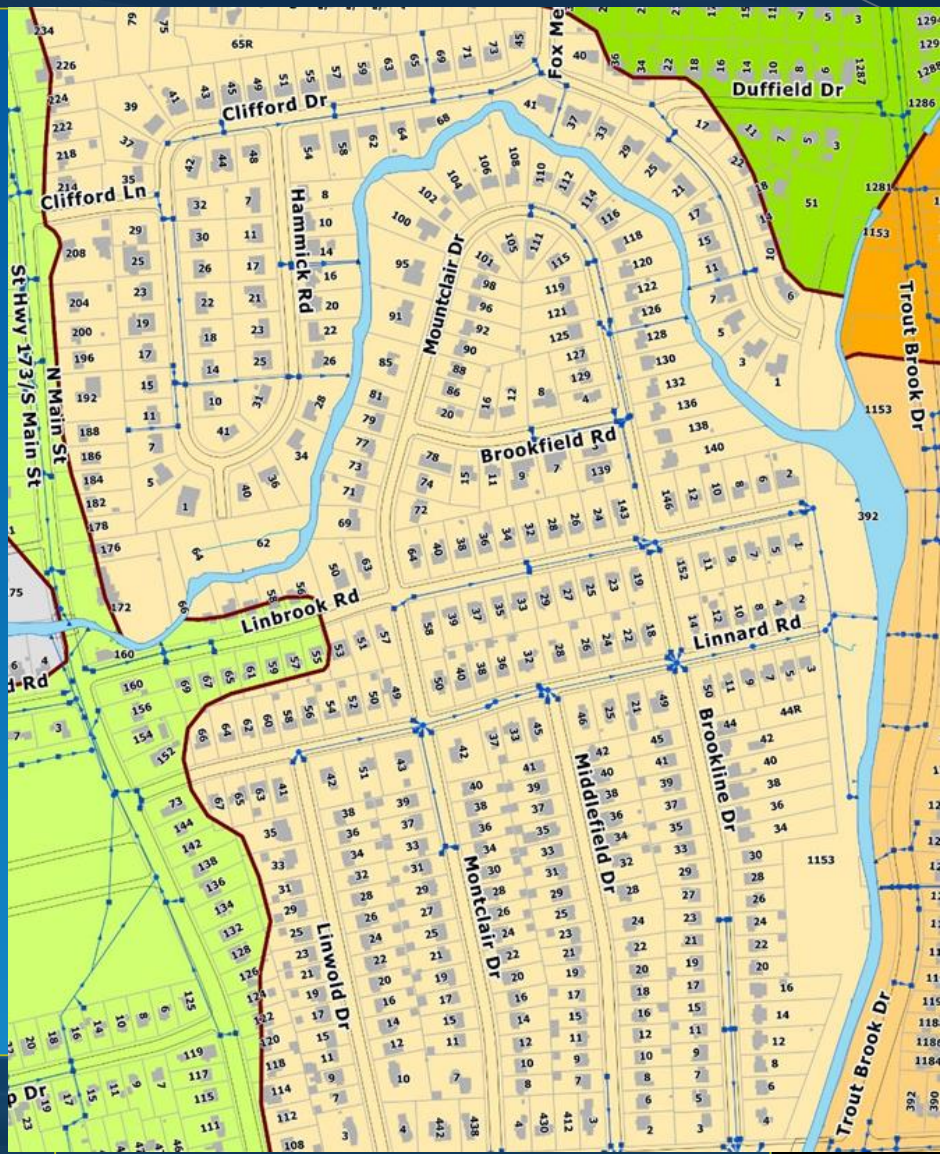
CDM Smith on behalf of West Hartford

June 6, 2019

CDM Smith

Meeting Agenda

- Introductions by Matt Hart, Town Manager
- Comments by Terry Conlon
- Neighborhood Questions and Answers
- Presentation by CDM Smith
- Questions and Answers



Presentation Outline

- Goals and Objectives
- Common Terms and Definitions
- Drainage Study – Project Scope
- Next Steps

Goals and Objectives

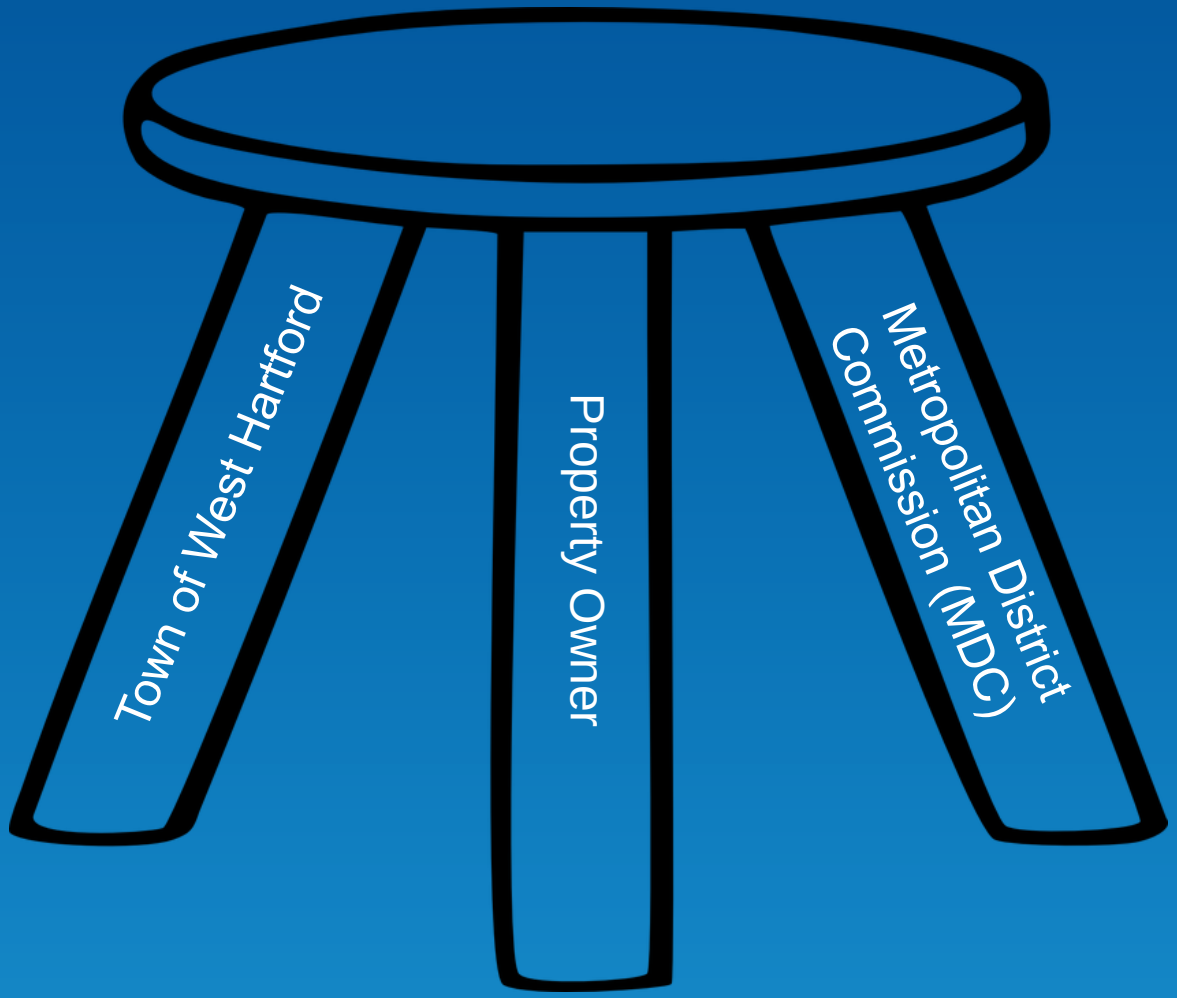
Presentation:

- Provide an opportunity for public involvement
- Obtain input on the goals and objectives of the residents
- Present the scope and schedule for the Drainage Study

Project:

- Study the drainage characteristics of the area
- Obtain input from the public on existing conditions and proposed solutions
- Evaluate alternatives to address flooding
- Develop drainage system improvements for the Town's capital improvements program

Three Legged Approach



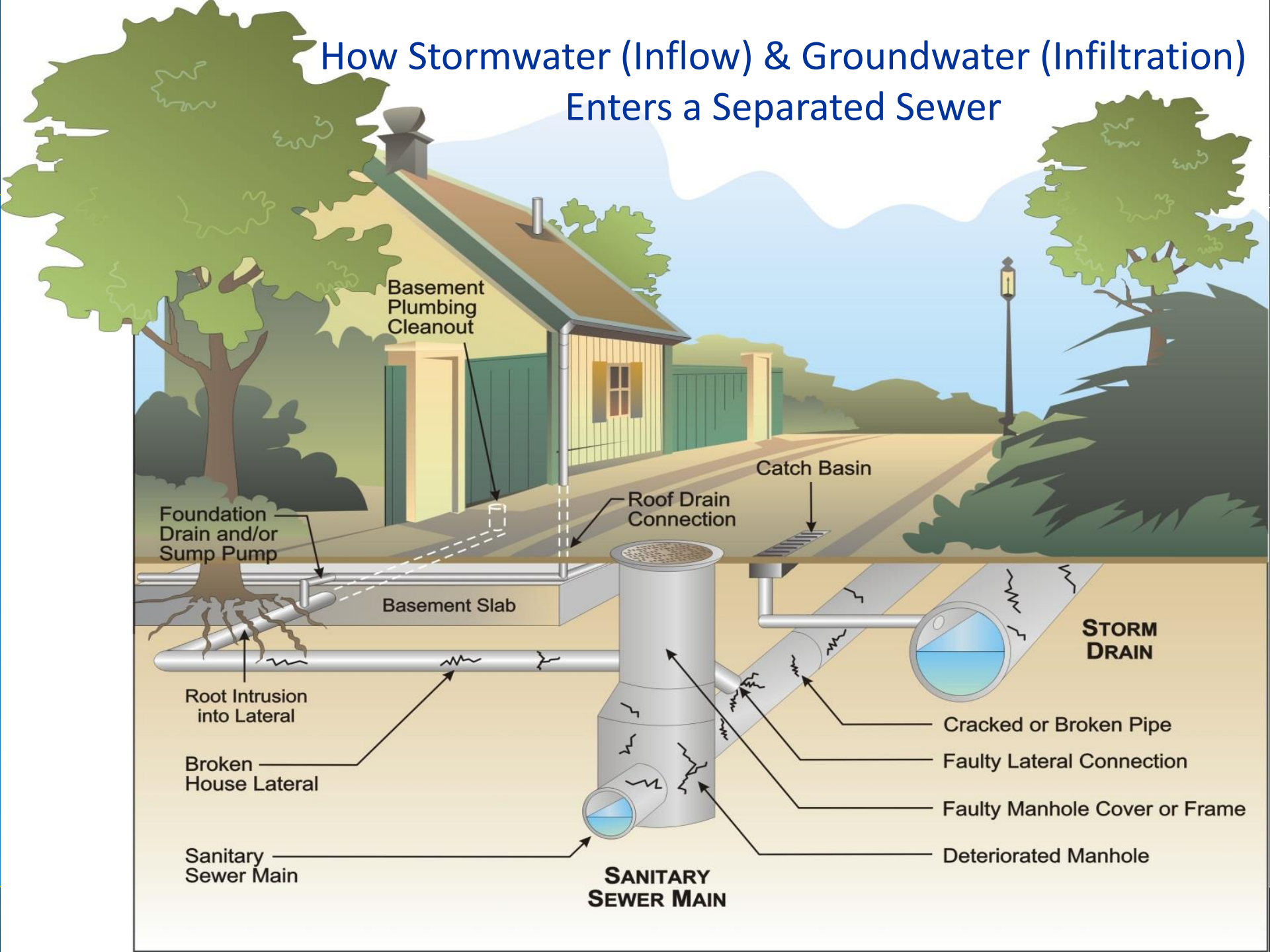
Common Terms and Definitions

Wastewater versus Clean Water

- ***Wastewater*** is water that has been used in the home, in a business, or as part of an industrial process

- Clean Water
  - ***Stormwater***: any precipitation that falls from the sky, including rain, snow, etc.
  - ***Groundwater***: water held underground in the soil or in pores and crevices in rock

How Stormwater (Inflow) & Groundwater (Infiltration) Enters a Separated Sewer



Common Terms & Definitions

Public I/I Sources

Leaky Main

Leaky MH

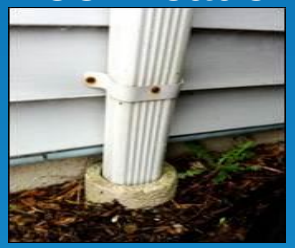
Cover w/ Holes

Typically 8” to 10” Local Pipe

Sump Pump

Foundation Drain

Roof Leader



Leaky Lateral

Private I/I Sources

Common Terms and Definitions

Sanitary sewer overflow (SSO) Discharge/Bypass:

- ***Wet Weather SSO*** – a condition that occurs during rainfall/snowmelt, when untreated sewage is discharged from the collection system before it reaches the treatment plant
- *Must report all SSOs to DEEP & EPA*

SSO discharged from Manhole

SSO discharged to property

Common Terms and Definitions

Rain:

- Maximum rainfall in any given year
- May have more storms in a given year
- Average annual rainfall in West Hartford is 46” (1980 – present)
- 2018 annual = 63”
- Last 12 months = 66”

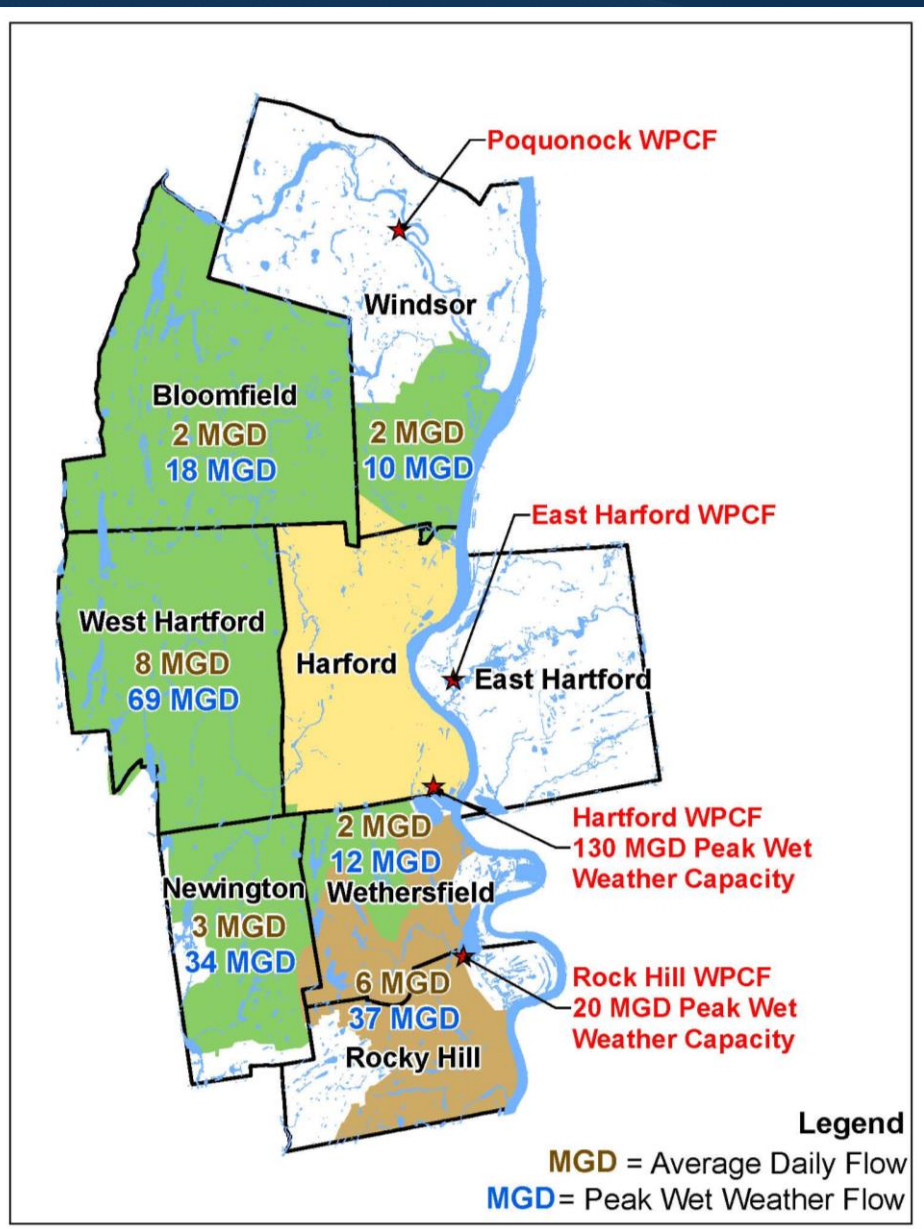
Runoff:

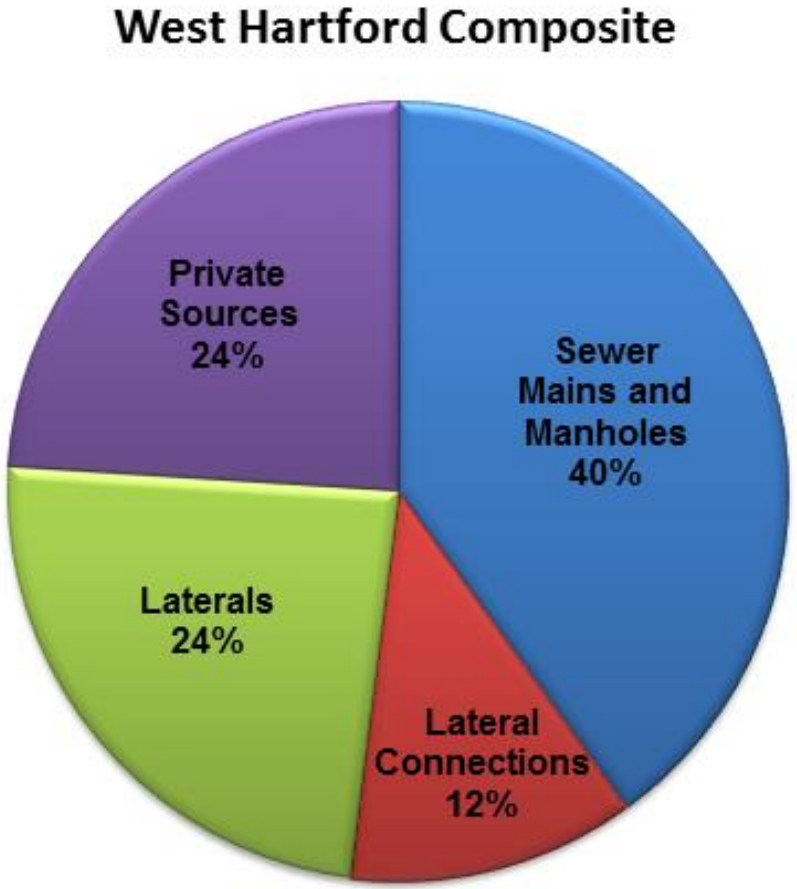
- Rainfall that does not infiltrate and flows overland
- The big problem as a result of development

Rainfall at Bradley Airport

MONTH	YEAR	Rainfall (Inches)
JAN	2018	3.86
FEB	2018	5.13
MAR	2018	2.65
APR	2018	5.55
MAY	2018	2.48
JUN	2018	4.03
JUL	2018	6.39
AUG	2018	9.10
SEP	2018	6.33
OCT	2018	4.02
NOV	2018	8.25
DEC	2018	4.96
JAN	2019	5.78
FEB	2019	3.27
MAR	2019	3.07
APR	2019	8.06
2018 Totals		62.75
Last 12 Months		65.74

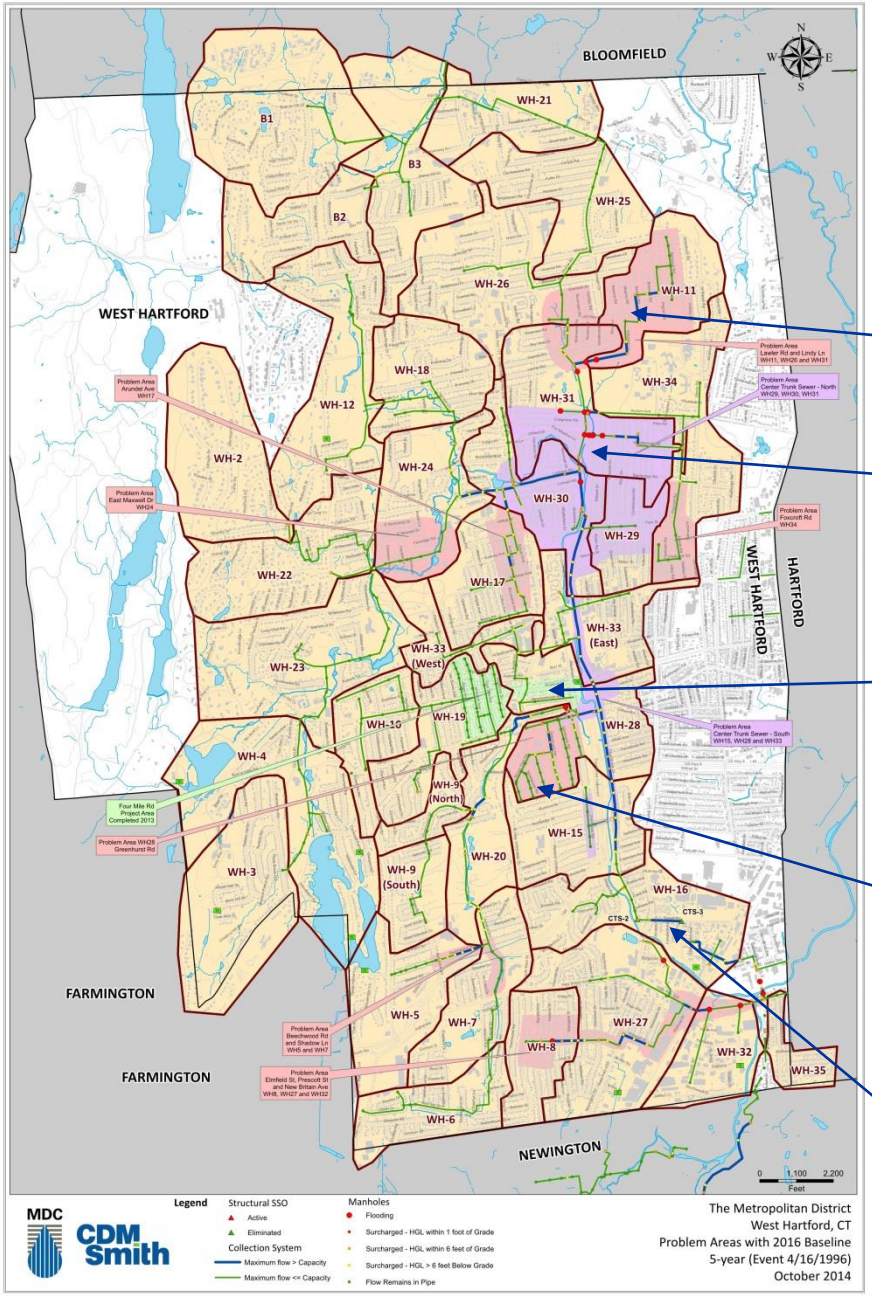
West Hartford Dry and Wet Weather Flow





% Private = 60%
% Public = 40%

West Hartford Sewershed Recommendations - 2015



SSES Implementation (Mainline Sewer and Manholes Lining & Repairs) – Various Locations

50% I/I Reduction (private I/I and capacity improvements) WH29, WH30 and WH31

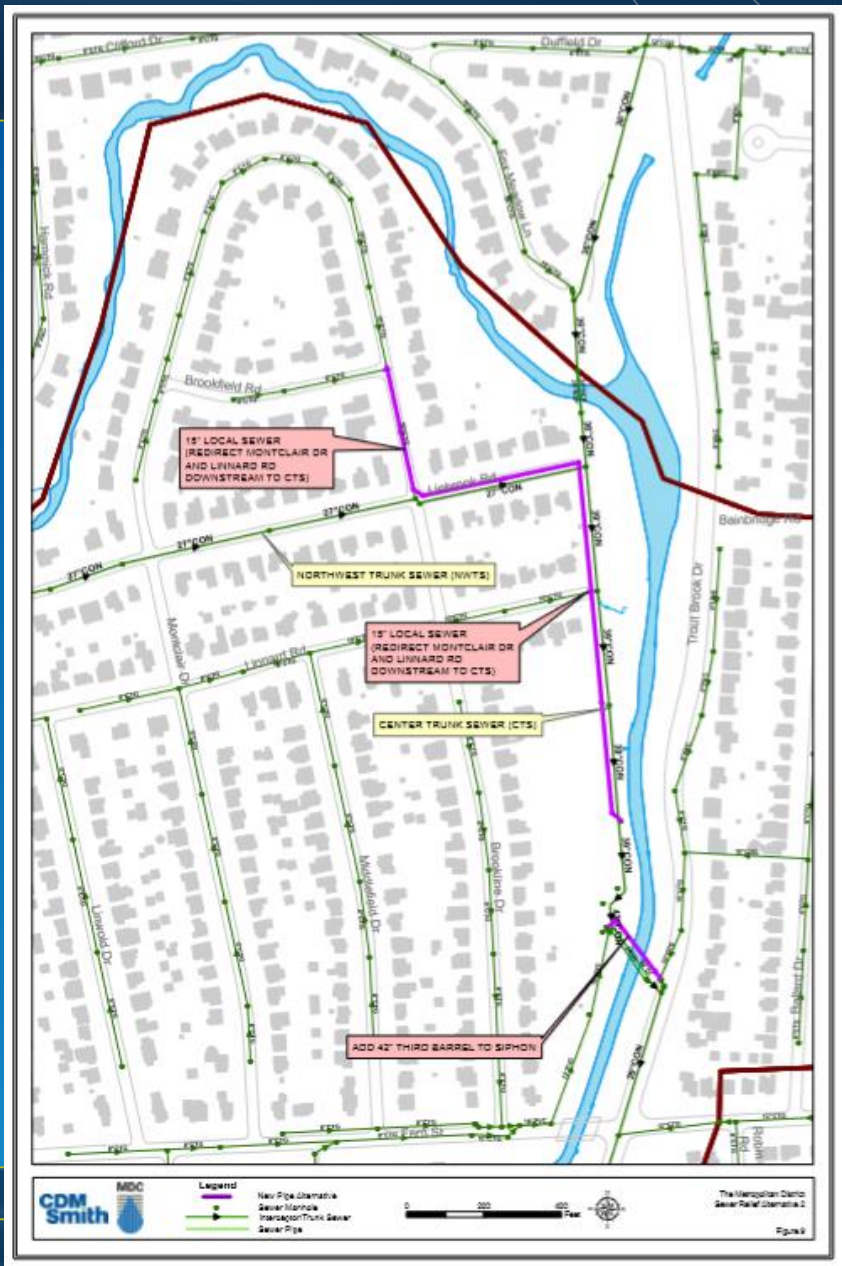
Four Mile Road Area Sewer Improvements (SSES, private I/I and capacity improvements) – Completed

Greenhurst Road Area Sewer Improvements (SSES, private I/I and capacity improvements) - Completed

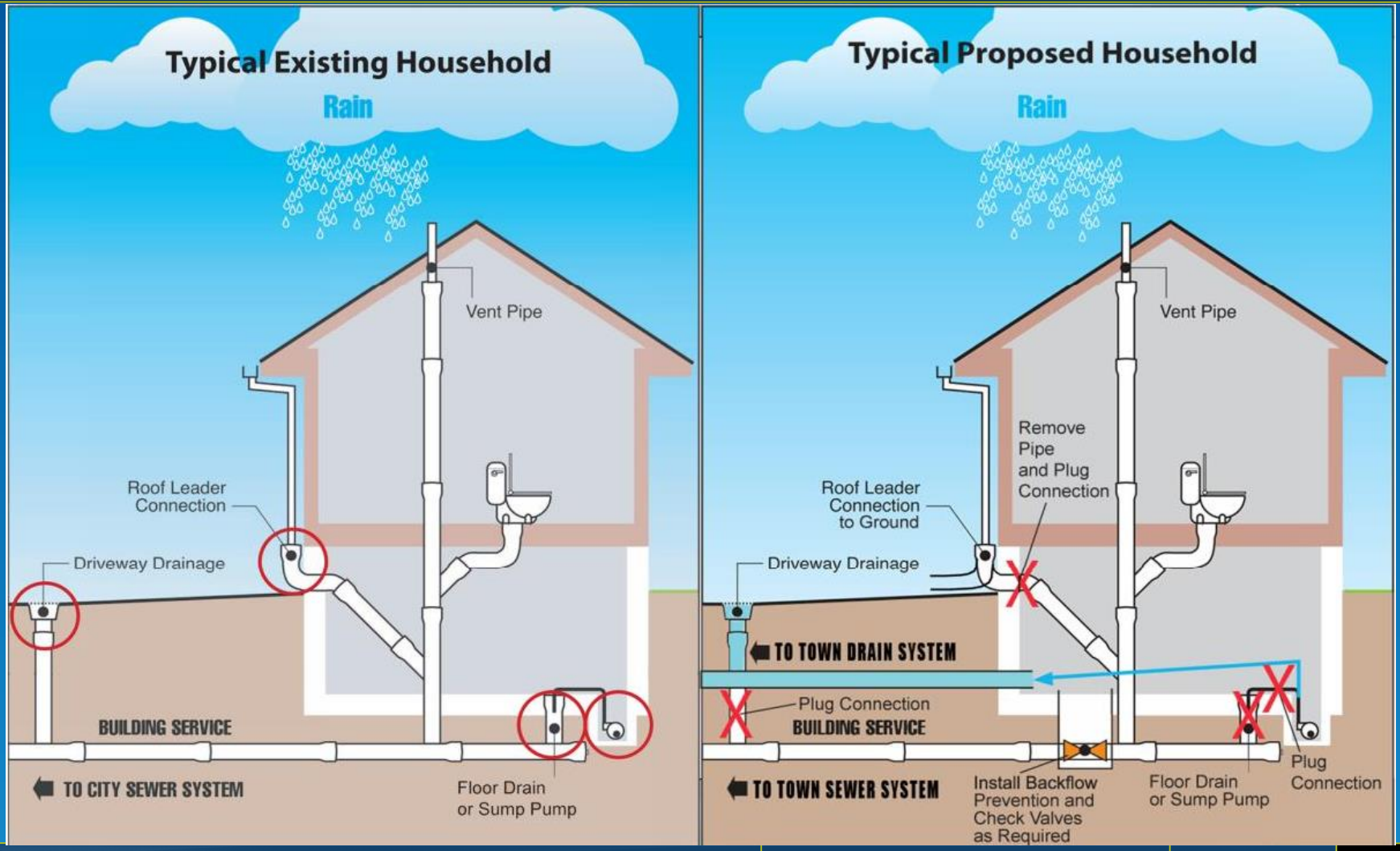
Center Trunk Sewer SSO Consolidation to South Hartford Conveyance & Storage Tunnel (tunnel relief)

Linbrook Area - Proposed Sewer Improvements from MDC SSO Master Plan

- Prior building inspections
  - Attempted 1,780
  - 335 confirmed homes with sources
  - 493 suspected homes with sources
  - 554 not completed
  - 398 homes with no sources
- Recommended Plan ($52.2M)
  - Scheduling TBD pending CT DEEP Integrated Plan review
  - Disconnection of private inflow sources (typically foundation drains)
  - Installation of drainage infrastructure
    - In coordination with, and assistance from Town of West Hartford in accordance with MOU
  - Lining and/or replacement of laterals
  - Downstream Capacity Improvements



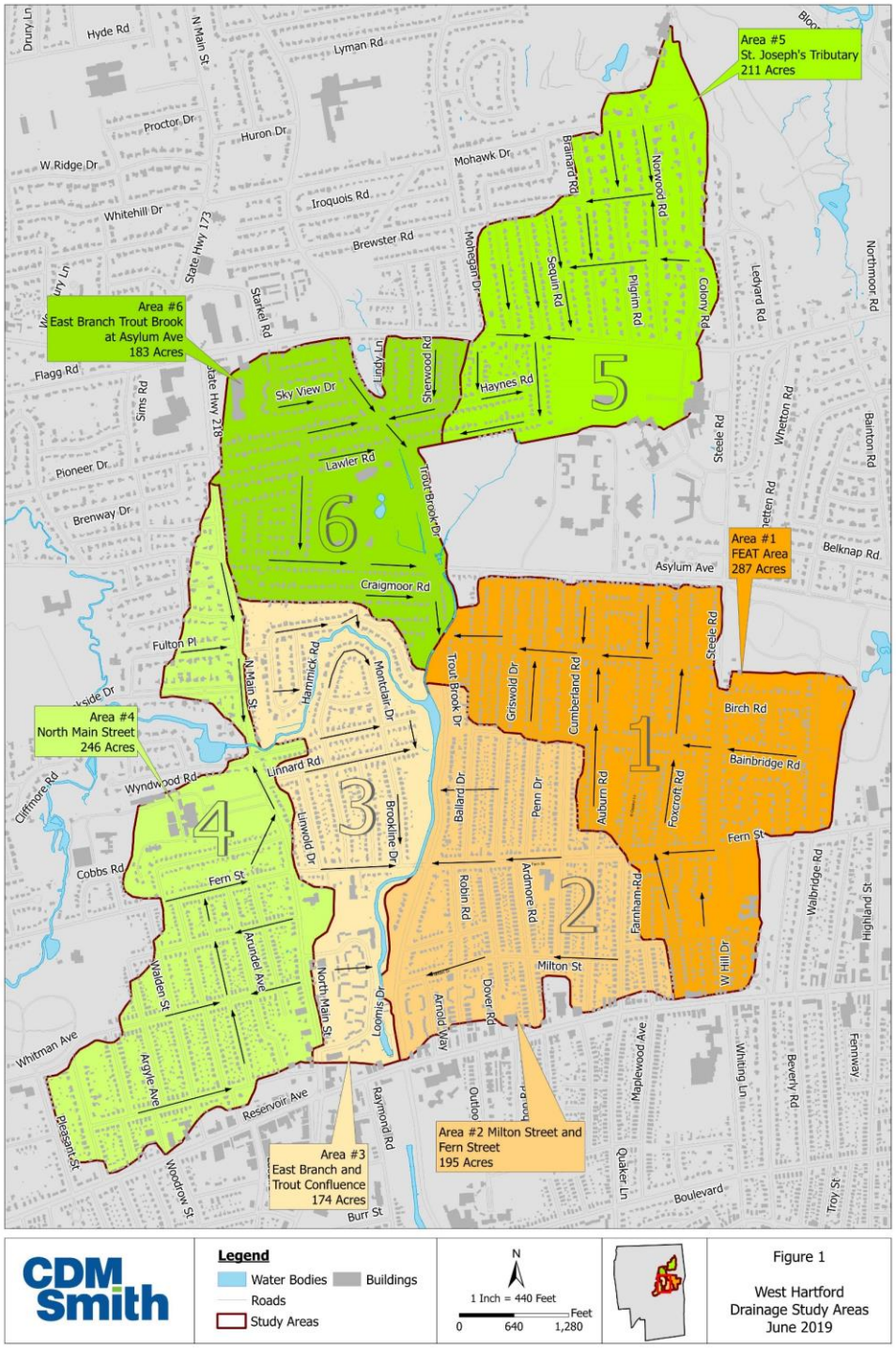
Typical Household I/I Connections



Drainage Project Scope

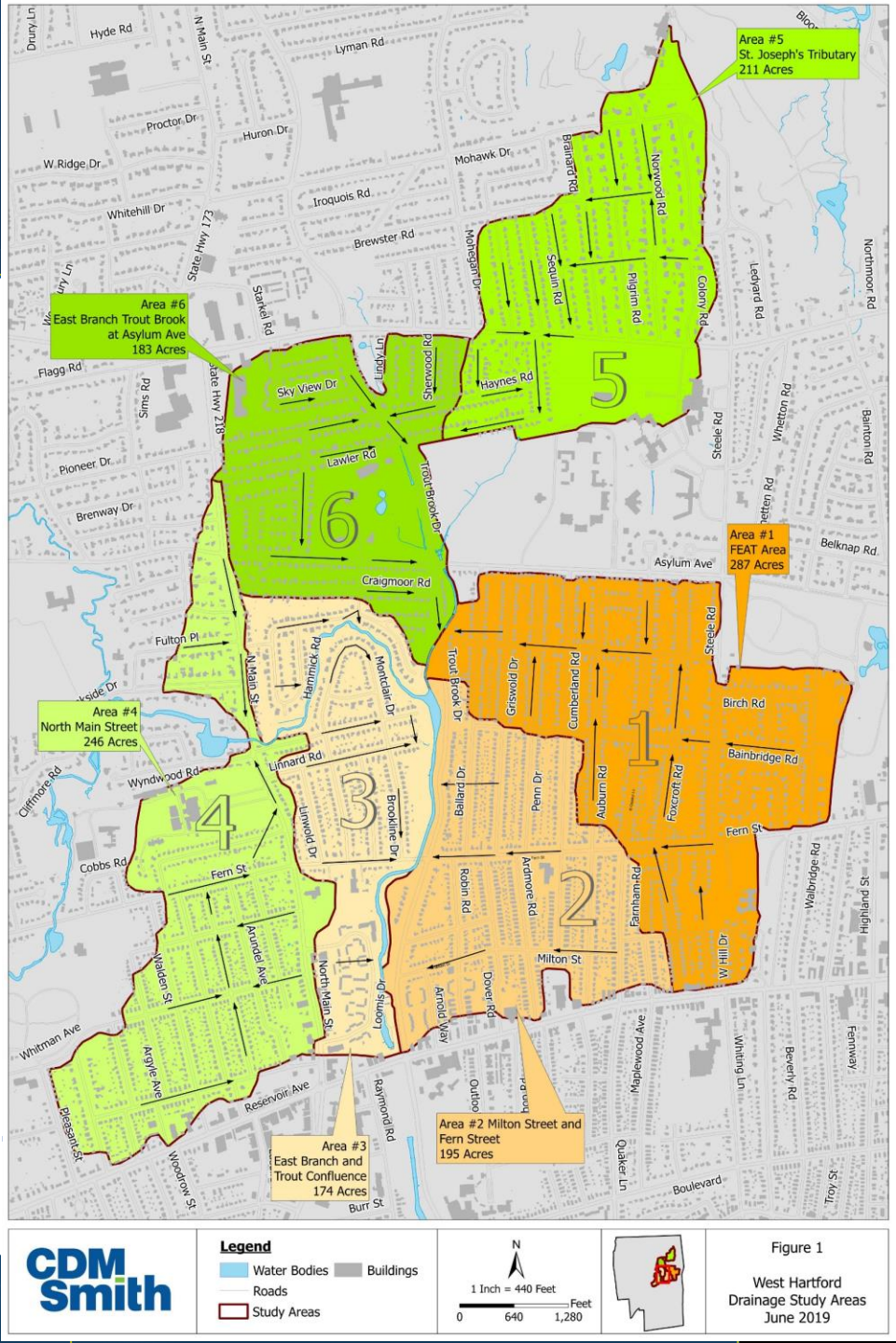
Town will be studying six drainage areas

- Collect and review data
- Survey
- Field work
- Modeling of stormwater system
- Alternatives analysis
- Recommended solution



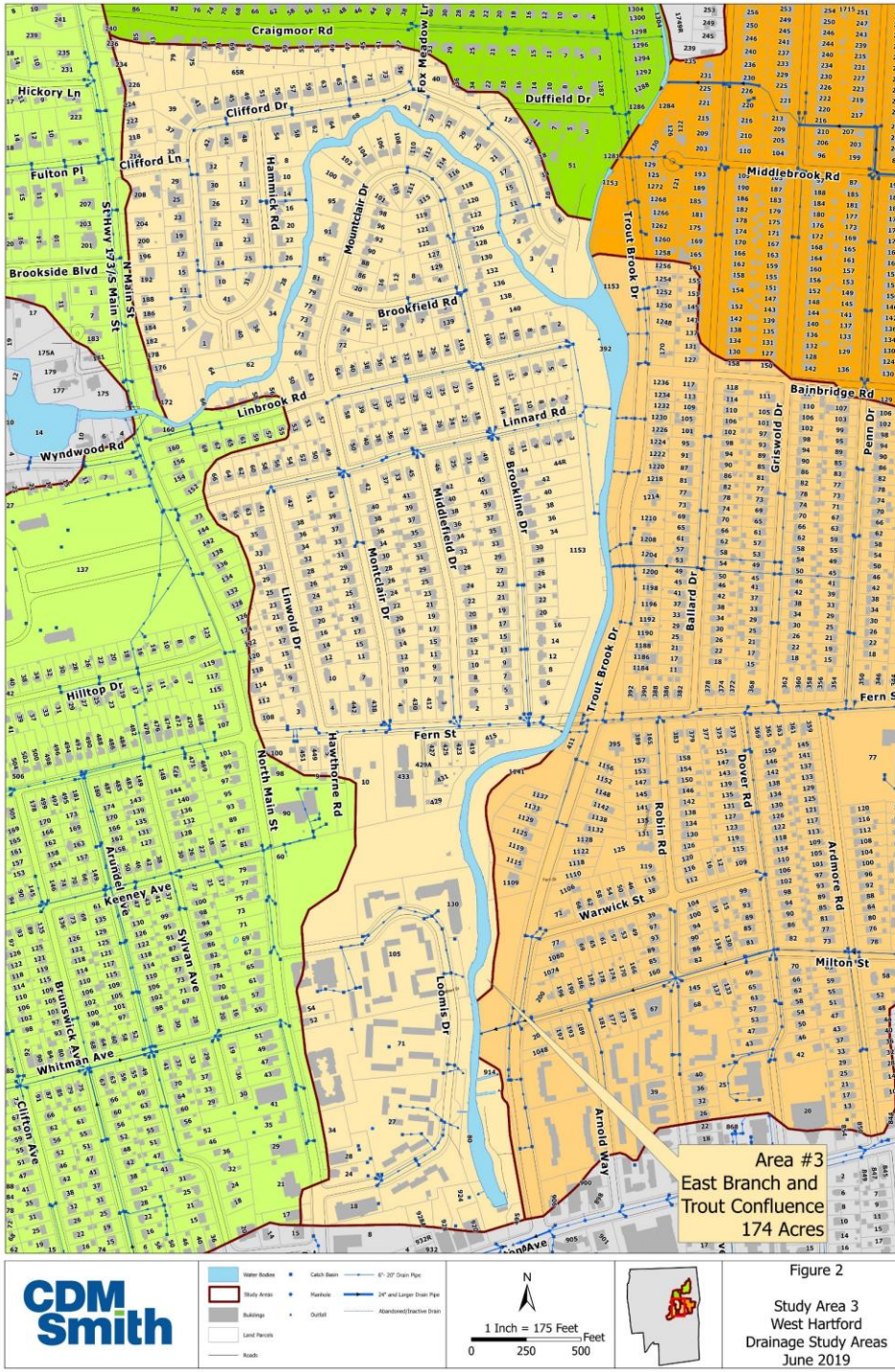
Drainage Project Scope

	Acre (acres)	Number of Properties	% Area of Town
Area 1 FEAT	270	785	1.9%
Area 2 Milton St	232	510	1.6%
Area 3 Linbrook	174	400	1.2%
Area 4 North Main	246	680	1.7%
Area 5 St Joseph's	211	365	1.5%
Area 6 Asylum Ave	183	405	1.3%
Total Study Area	**1,316**	**3,145**	**9.3%**



Drainage Project – Area 3

- 1,000+ properties
- Expect incremental improvements
- Will take time and patience



Communication Plan

Public Involvement is the key to a successful project

- Project website
- Public meetings
- Public review

West Hartford Stormwater Management Website:
https://www.westhartfordct.gov/gov/departments/engineering/stormwater_management.asp

Schedule

- June: Data Collection & Survey
- July & August: Existing Modeling & Confirmation of Results
- September: Alternatives Evaluation & Public Informational Meeting
- October: Preliminary Recommendations
- December: Draft Report
- December/January: Public Information Meeting

- Next Year: Drainage Study of Areas 4 – 6

Next Steps

- Now: Questions, comments and concerns

- Next 6 months: Drainage Study of Areas 1 – 3
- Next Year: Drainage Study of Areas 4 – 6

- At this time **we do not know**:
  - Engineering solution
  - Project costs
  - Construction timeframe
  - Project completion date

Questions

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CDM Smith
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MDC Sewer Ordinance(S2l)

Except as specifically provided with reference to some particular sewer, sanitary sewers shall be used only for the conveyance and disposal of sanitary sewage as defined in Section S1b(2) of this ordinance and for diluted, water-carried industrial wastes which are not objectionable as provided hereinafter. Except as specifically provided for some particular sewer or location, **no sanitary sewer shall be used to receive and convey or dispose of any storm or surface water, subsoil drainage,** any large continuous flow of water seeping into buildings or excavations from soils or other underground sources, flows of natural springs, or ground waters, surplus from flowing wells, the discharge from roofs, roof conductors, yard drains, street or highway drains.