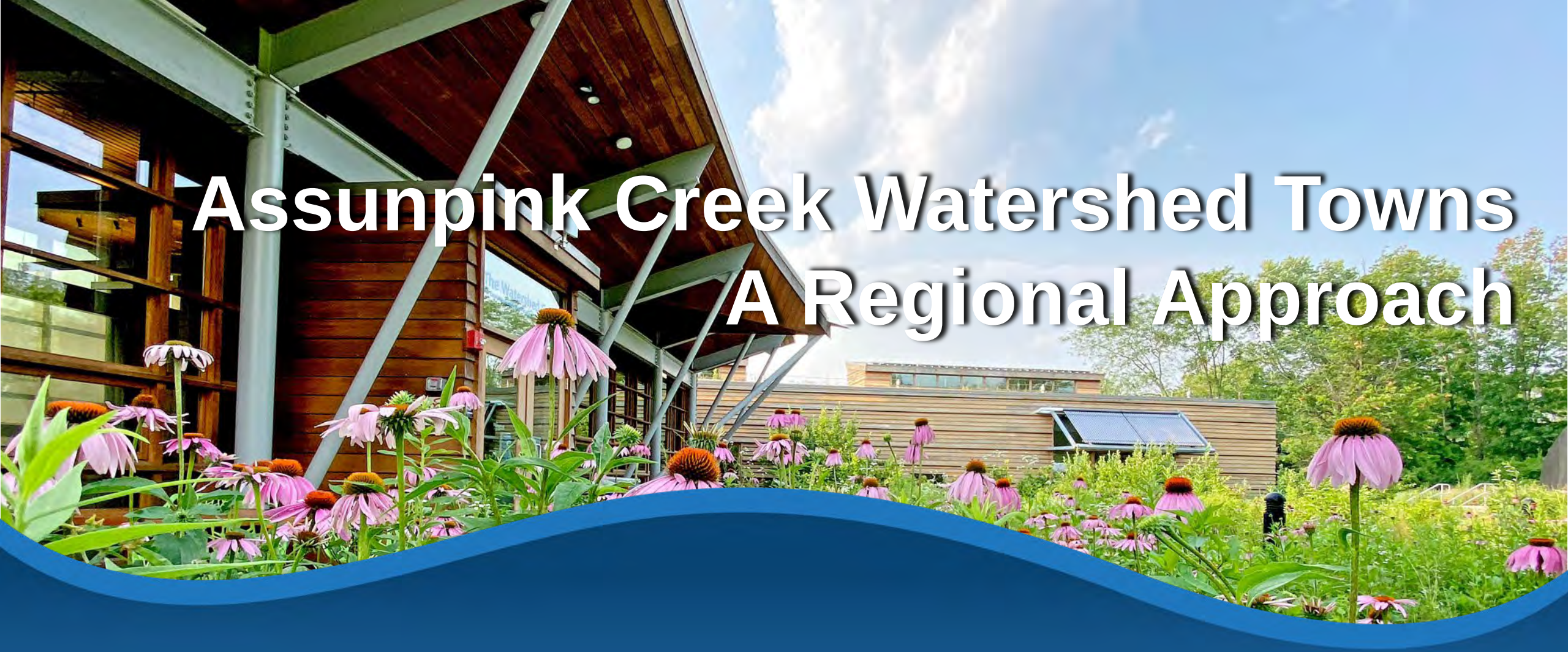

Assunpink Creek Watershed Towns
A Regional Approach

The Watershed Institute

Assunpink Working Group
September 11, 2024

AGENDA for the 09/11/24 Assunpink Working Group

1. The Assunpink Watershed Regional WMP
   - •Mike welcome & introductions
   - •Susan introductory presentation

2. The Watershed Management Plan Proposal
   - •Princeton Hydro presentation
   - •Susan w/municipal benefits and participation

3. Where we are today
   - •MS4 Timeline
   - •Budgeting

3. Where do we go from here…
   - Mike w/regulatory updates (REAL)
   - Questions?

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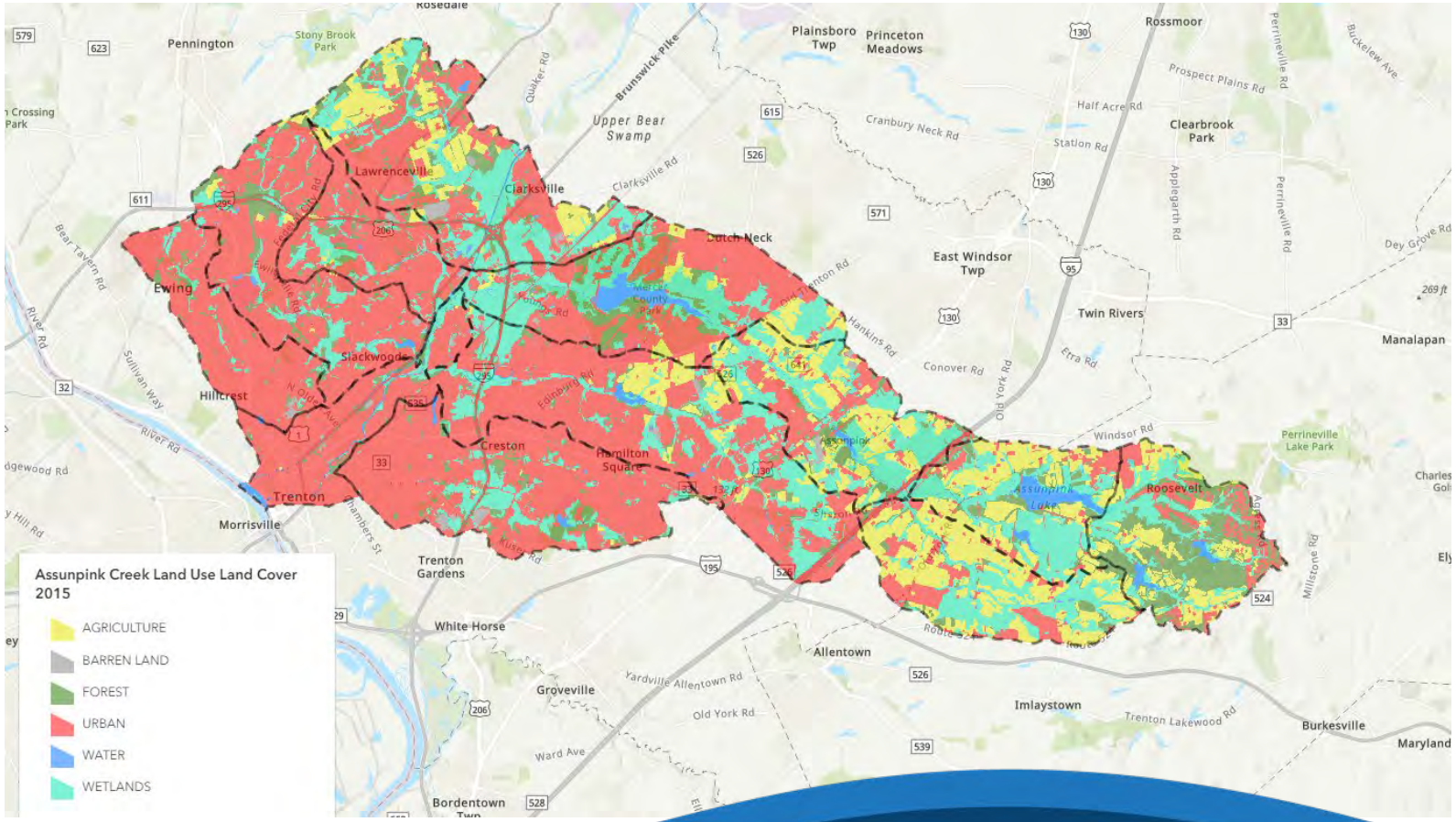
Our Assunpink Towns

11 Municipalities & 2 Counties (Mercer/Monmouth)



- Trenton
- Hamilton
- Ewing
- Robbinsville
- Hopewell Twp.
- Lawrence Twp
- West Windsor
- Upper Freehold
- East Windsor
- Roosevelt
- Millstone Twp.

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The MS4 Goals for the Assunpink Creek Towns

IMPROVE WATER QUALITY
TREAT AND REDUCE STORMWATER RUNOFF
REDUCE FLOODING

The Tier A Municipal Stormwater General Permit authorizes the discharge of stormwater from small municipal separate storm sewers. The permit was issued in response to USEPA's phase II rules. The MS4 permit addresses stormwater quality issues related to both new and existing development. (NJ DEP website).

Image credit: BRS Inc. https://brsinc.com/projects/trenton-assunpink-greenway/

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The MS4 Permit Phases

PHASE 1: Watershed Inventory Report: MAPPING

Due: End of 2025

PHASE 2: Watershed Assessment Report: PLANNING

Due: End of 2026

PHASE 3: Watershed Improvement Plan (WIP): PROJECTS

Due: 2027

PHASE 3: The WIP Goals

A plan describing what projects municipalities will do to:

1. Improve water quality of water bodies that have TMDLs.
2. Improve water quality of water bodies that are listed as impaired.
3. Reduce or eliminate flooding

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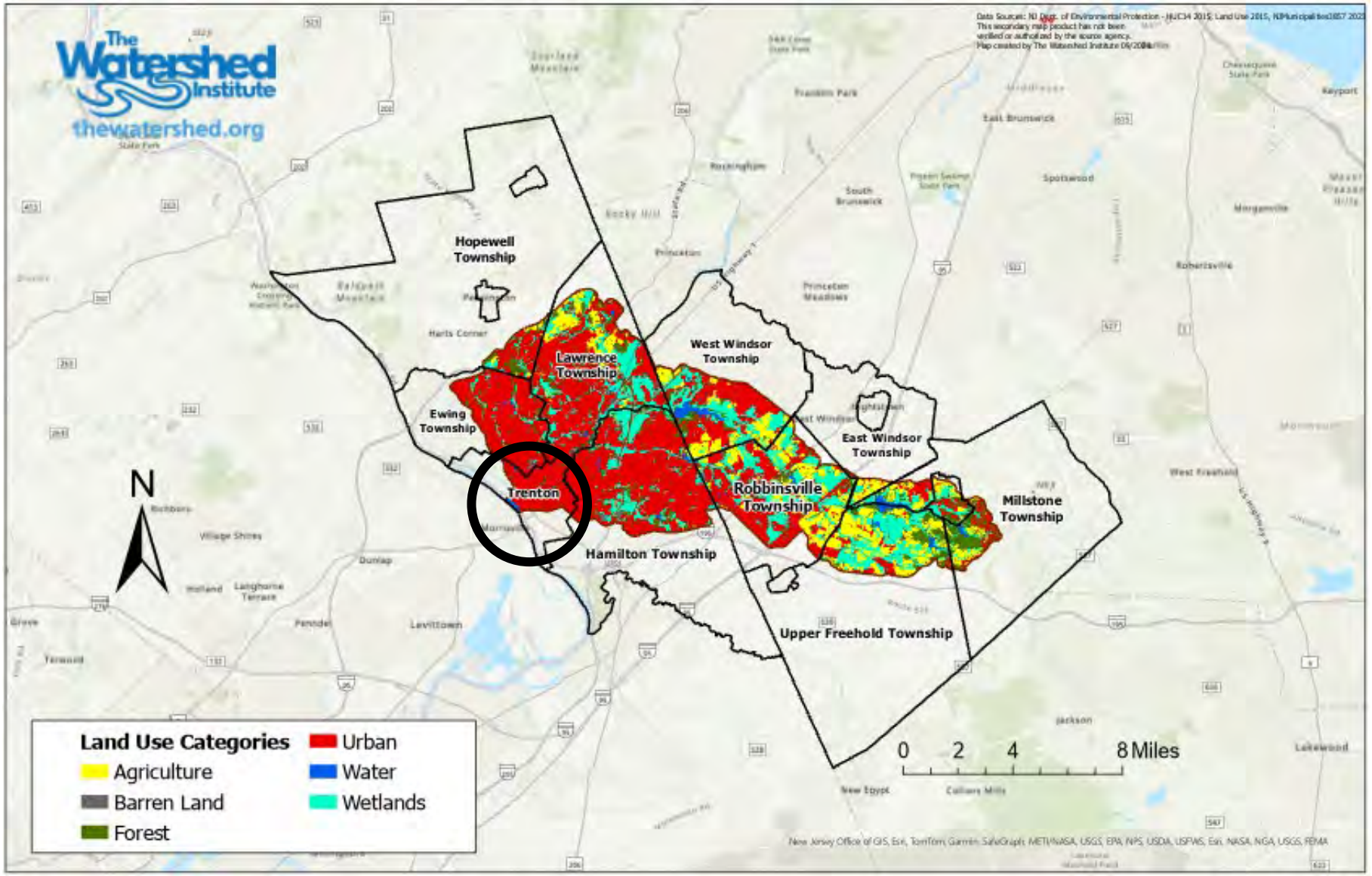
Mapping the Assunpink Creek Watershed over Municipal Boundaries



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Municipal Impervious Cover within the AW

MUNI	TOTAL MUNI ACRES	ACRES of MUNI within Assunpink Watershed	IC ACRES of MUNI within Assunpink Watershed	% of IC ACRES of MUNI within Assunpink Watershed
EAST WINDSOR TWP	10019.22	513.56	33.30	0.23%
EWING TWP	9956.73	5096.68	2209.68	15.54%
HAMILTON TWP	25753.48	11490.63	4344.21	30.54%
HOPEWELL TWP	37716.23	1581.01	351.75	2.47%
LAWRENCE TWP	14063.22	11680.64	2969.26	20.88%
MILLSTONE TWP	23800.22	3050.05	162.28	1.14%
ROBBINSVILLE TWP	13167.99	10043.85	1521.29	10.70%
ROOSEVELT BORO	1246.51	1046.69	72.23	0.51%
TRENTON CITY	5272.96	2313.09	1619.52	11.39%
UPPER FREEHOLD TWP	30311.22	6100.83	230.34	1.62%
WEST WINDSOR TWP	16800.67	6281.47	709.45	4.99%
Grand Total	**188108.45**	**59198.51**	**14223.32**	**100%**

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Proposed Watershed Framework:
Create a 'Regional Watershed Management Plan'

MUNICIPAL TASKS

- Regional participants
- Consultant Proposal for Watershed Management Plan (WMP)
- Municipal portion % of work/cost
- WMP is used in your Muni WIP
- Public Education Outreach Points

CONSULTANT TASKS

- Evaluate TMDL and Impairments
- Develop BMP Alternative Matrix = Proposed Projects
- Complete Subwatershed Assessment
- Prepare Watershed Management Plan Report

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MS4 Timeline :

Since January 2023

Time to Budget for the WORK

1 year/Phase 1

Watershed Inventory Report:
MAPPING

DUE DATE: End of 2025

3 years/Phase 2

Watershed Assessment Report:
PLANNING

DUE DATE: End of 2026

5 years/Phase 3

Watershed Improvement Plan:
PROJECTS

DUE DATE: 2027

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Benefits of a Regional Watershed-Based Approach

- Automatically identifying/addressing issues across municipal boundaries
- More efficient to study entire watershed (less $, less time, better solutions)
- More effectively address EJ issues
- Coordinated efforts = **less repeated work**

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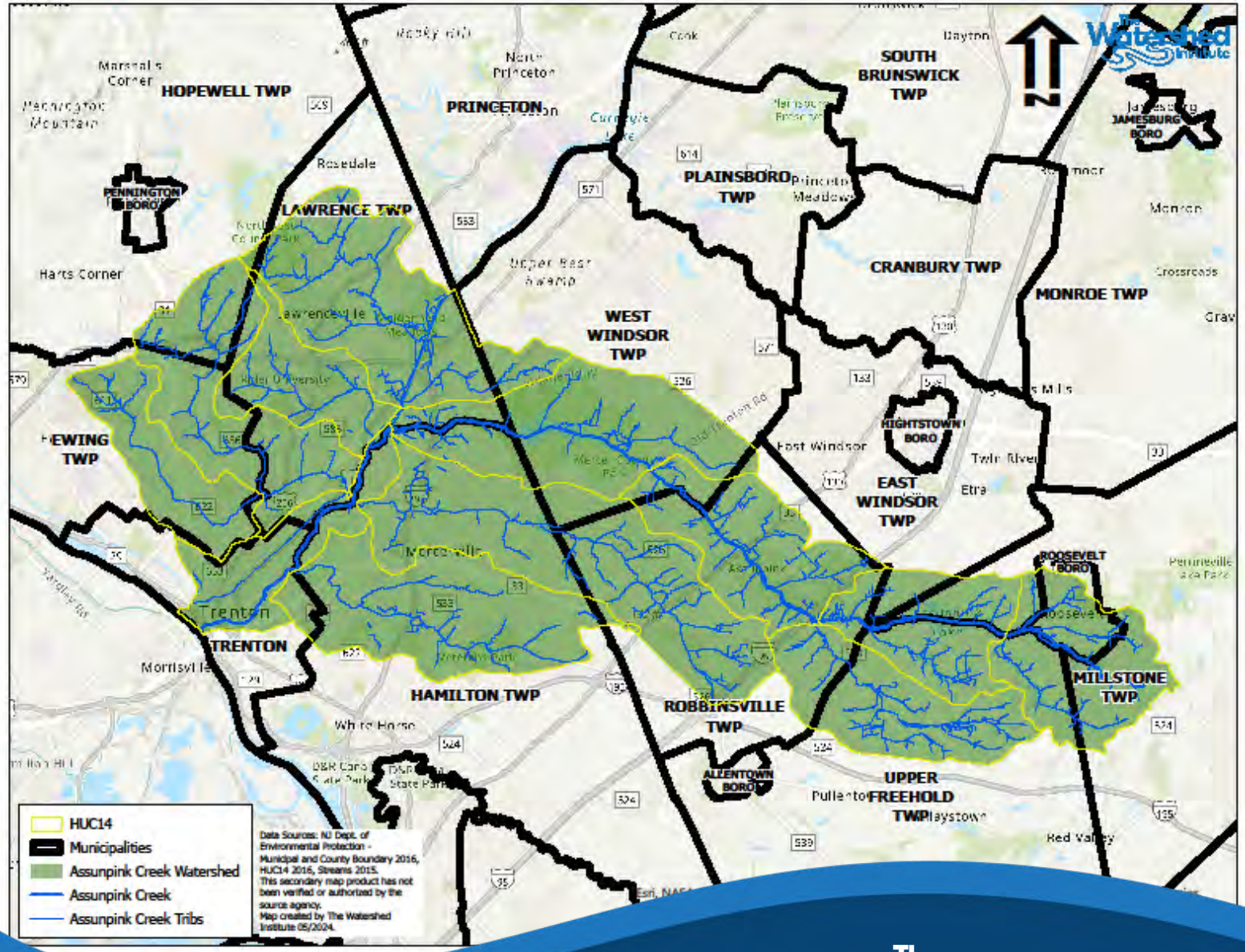

Will your town join in a Regional Assunpink Watershed Management Plan/WMP?

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Stormwater Management: NJ PACT REAL rule update

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Stormwater-Volumetric Reduction

Reducing Volume- i.e. Flooding

Currently:

- Standards do not reduce volume.
- Increases volume.
- Reduces rate

Proposed:

- Retain on-site- 1.25’ (WQDS) in 2 hours
- Use Green Infrastructure or
- Reduction of impervious surfaces

(NJ PACT REAL rule update)

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Stormwater: Reduces Redevelopment Loophole

Currently: sites may not have to address Quantity, Quality or Recharge

Proposed:

- Must address Quality-
- 80% TSS removal/95% for C1
- Nutrients to MEP
- Incorporate- Volumetric Reduction Standard

(NJ PACT REAL rule update)

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Stormwater: Water Quality

Total **M**aximum **D**aily **L**oads or TMDLs must be addressed

Additional Measures in a TMDL must be incorporated into the project design.

Table 9. Distribution of TSS WLAs and LAs among source categories for parts of the Carnegie Lake Watershed

Long Term Average Daily Load (kg/d TSS)	Upper Millstone River Watershed			Stony Brook Watershed			Carnegie Lake Direct Watershed		
	Existing Condition	TMDL Allocation	Percent Reduction	Existing Condition	TMDL Allocation	Percent Reduction	Existing Condition	TMDL Allocation	Percent Reduction
Sum of Wasteload Allocations (WLAs)	3,961	1,506	62.0%	2,286	401	82.5%	602	96	84.0%
Treated Effluent from WWTP Discharges[#]	502	953	-89.6%	20	38	-89.6%	0	0	0%
Stormwater from Residential Land Cover Areas	1,615	258	84.0%	1,529	245	84.0%	272	44	84.0%
Stormwater from Other Urban Land Cover Areas	1,843	295	84.0%	737	118	84.0%	329	53	84.0%
Sum of Load Allocations (LAs)	2,775	2,060	25.8%	2,624	1,328	49.4%	58	49	14.9%
Boundary Inputs	0	0	0.0%	0	0	0.0%	0	0	0.0%
Tributary Baseflow	1,267	1,267	0.0%	297	297	0.0%	29	29	0.0%
Stormwater from Agricultural Land Cover Areas	851	136	84.0%	1,543	247	84.0%	10	2	84.0%
Stormwater from Forest and Barren Land Cover Areas	51	51	0.0%	525	525	0.0%	6	6	0.0%
Stormwater from Wetlands Land Cover Areas	605	605	0.0%	260	260	0.0%	13	13	0.0%
Total Margin of Safety (% of LC)	n/a	172	4.5%	n/a	152	8.0%	n/a	24	14.4%
Reserve Capacity (% of WWTP load)	n/a	103	10.8%	n/a	25	66.5%	n/a	0	n/a
Loading Capacity (LC)	6,735	3,841	43.0%	4,909	1,906	61.2%	660	170	74.2%

[#] Although the TSS TMDL allocation is reflective of discharging up to current permitted flow and existing NJDPES permit TSS limits, the WLAs for total phosphorus effectively limit loadings due to TP being present in suspended solids in WWTP effluent.
n/a - not applicable

(NJ PACT REAL rule update)

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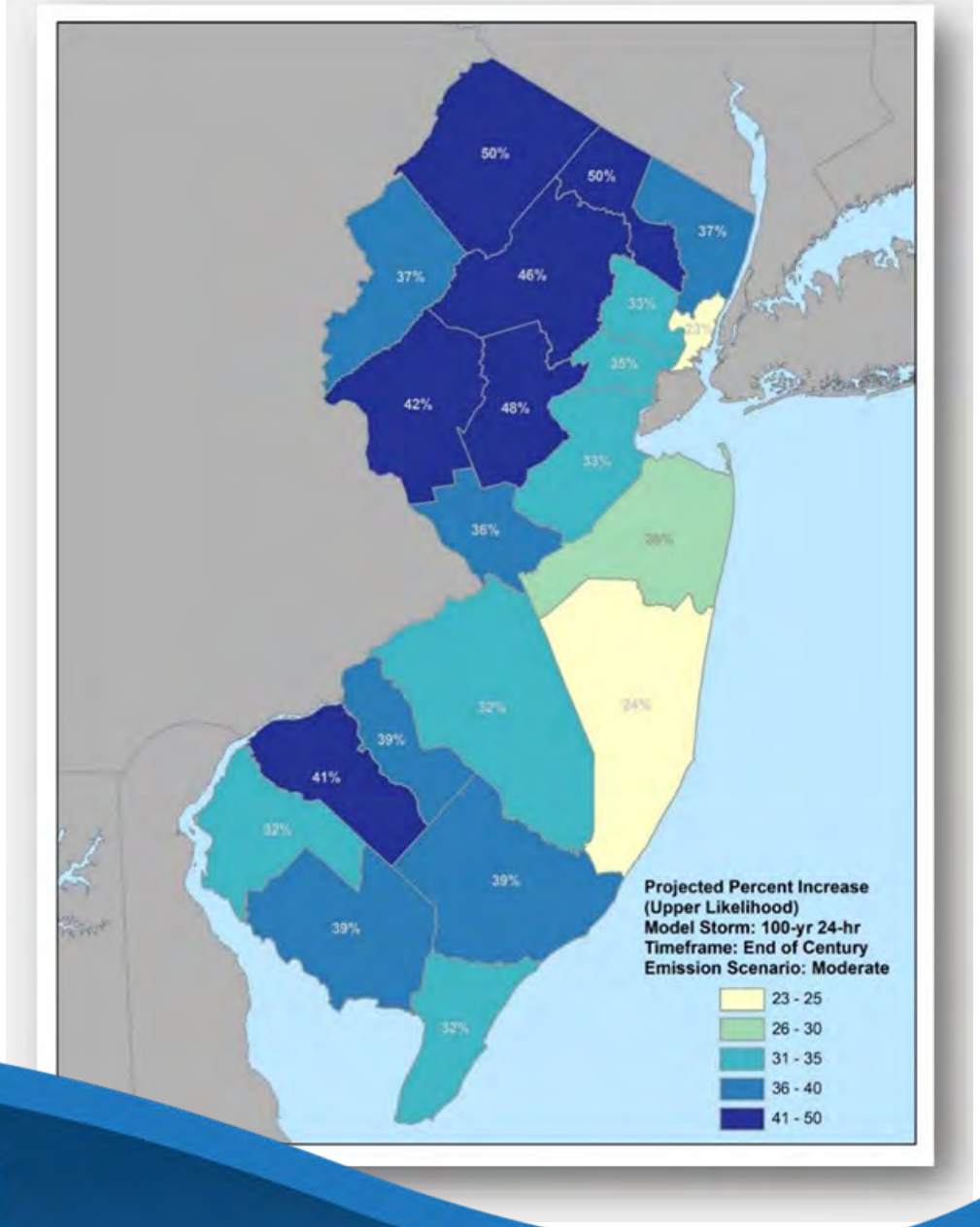
Stormwater:
Climate Change Resiliency

How does Sea Level Rise, Increased frequency of flooding; increase rainfall amounts, increased intensity, etc. impact stormwater management?

What can a Municipality do to address impacts to system?

(NJ PACT REAL rule update)



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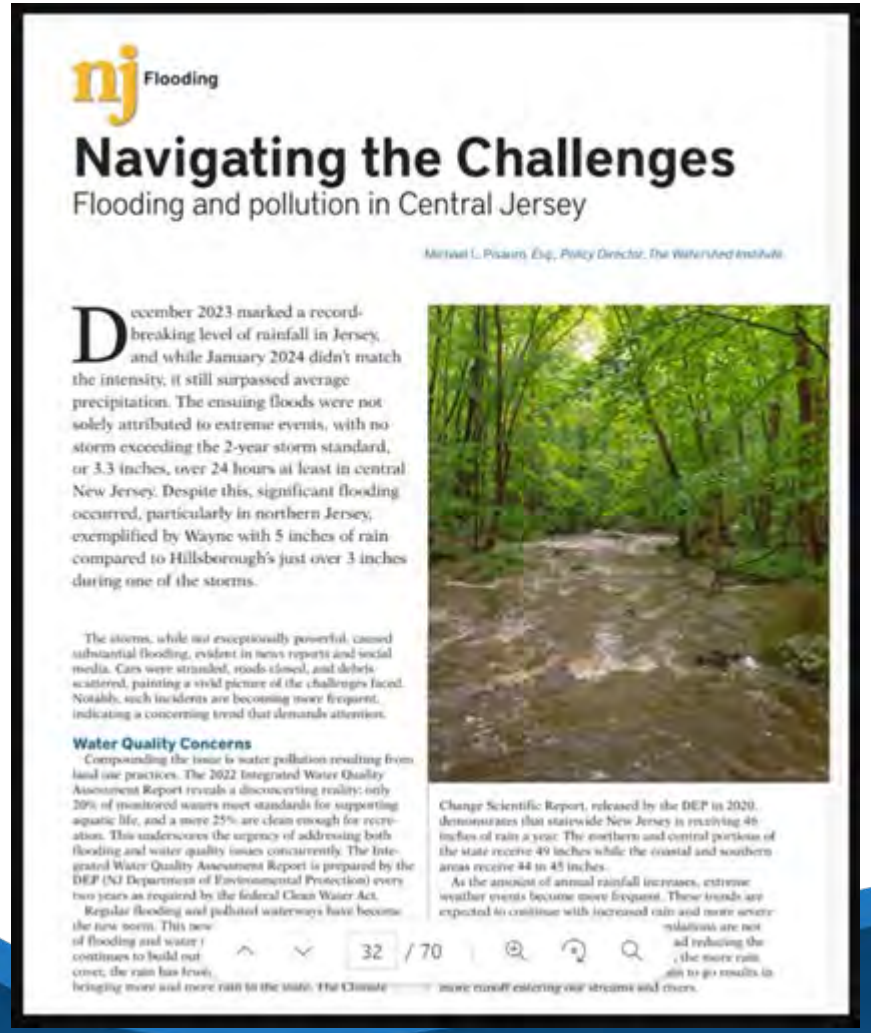
Other Resources from The Watershed Institute

2025 Annual Conference: 02/21/25 – ‘Resiliency through Restoration’



nj Flooding

Navigating the Challenges

Flooding and pollution in Central Jersey

Michael L. Pisauro, Esq., Policy Director, The Watershed Institute

December 2023 marked a record-breaking level of rainfall in Jersey, and while January 2024 didn't match the intensity, it still surpassed average precipitation. The ensuing floods were not solely attributed to extreme events, with no storm exceeding the 2-year storm standard, or 3.3 inches, over 24 hours at least in central New Jersey. Despite this, significant flooding occurred, particularly in northern Jersey, exemplified by Wayne with 5 inches of rain compared to Hillsborough's just over 3 inches during one of the storms.

The storms, while not exceptionally powerful, caused substantial flooding, evident in news reports and social media. Cars were stranded, roads closed, and debris scattered, painting a vivid picture of the challenges faced. Notably, such incidents are becoming more frequent, indicating a concerning trend that demands attention.

Water Quality Concerns

Compounding the issue is water pollution resulting from land use practices. The 2022 Integrated Water Quality Assessment Report reveals a disconcerting reality: only 20% of monitored waters meet standards for supporting aquatic life, and a mere 25% are clean enough for recreation. This underscores the urgency of addressing both flooding and water quality issues concurrently. The Integrated Water Quality Assessment Report is prepared by the DEP (NJ Department of Environmental Protection) every two years as required by the federal Clean Water Act.

Regular flooding and polluted waterways have become the new norm. This new [illegible] of flooding and water [illegible] continues to build out [illegible] cover, the rain has fewer [illegible] bringing more and more rain to the state. The Climate Change Scientific Report, released by the DEP in 2020, demonstrates that statewide New Jersey is receiving 46 inches of rain a year. The northern and central portions of the state receive 49 inches while the coastal and southern areas receive 44 to 45 inches.

As the amount of annual rainfall increases, extreme weather events become more frequent. These trends are expected to continue with increased rain and more severe [illegible] solutions are not [illegible] aid reducing the [illegible], the more rain [illegible] to go results in more runoff entering our streams and rivers.

32 / 70

- **Understanding NJPACT Real**

Date: September 9, 2024 (7 p.m. EST)

- ***‘DAYLIGHTING’ STREAMS: Design & Engineering***

Date: October 4, 2024 at noon

- **Eliminating RSIS’ Hold on Stormwater**

Date: November 1, 2024 (12 p.m. EST)

https://thewatershed.org/professional-programs/

https://thewatershed.org/eight-annual-watershed-conference/

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THANK YOU

FOR CONSIDEIRNG A REGIONAL APPROACH TO IMPROVING OUR WATERSHEDS!

Learn more at **thewatershed.org**

Stay in touch: 609-737 3735 | **sbristol@thewatershed.org**

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