Green Infrastructure Champions Program

This program is partially funded by the Rutgers New Jersey Agricultural Experiment Station, The Geraldine R. Dodge Foundation, NJ Sea Grant Consortium, The William Penn Foundation and is a collaboration of the Rutgers Cooperative Extension Water Resources Program and the Green Infrastructure Subcommittee of Jersey Water Works.

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Please enter your full name and affiliation in the chat. This is how will take attendance.

The Geraldine R. DODGE FOUNDATION
IMAGINE A BETTER NEW JERSEY

JERSEY WATER WORKS
Smart infrastructure. Strong communities.

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Green Infrastructure Champion Training: Part 4

"Stormwater management regulations, policies, and ordinances"

February 25, 2022
Virtual Class

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- 1972 Federal Clean Water Act
- Surface Water Quality Standards (N.J.A.C. 7:9B)
- Municipal “Phase II” NJPDES Stormwater Regulations (N.J.A.C. 7:14a)
- Stormwater Management Regulations (N.J.A.C. 7:8)
- NJ Soil Erosion and Sediment Control Act (N.J.S.A. 4:24-39 et seq)

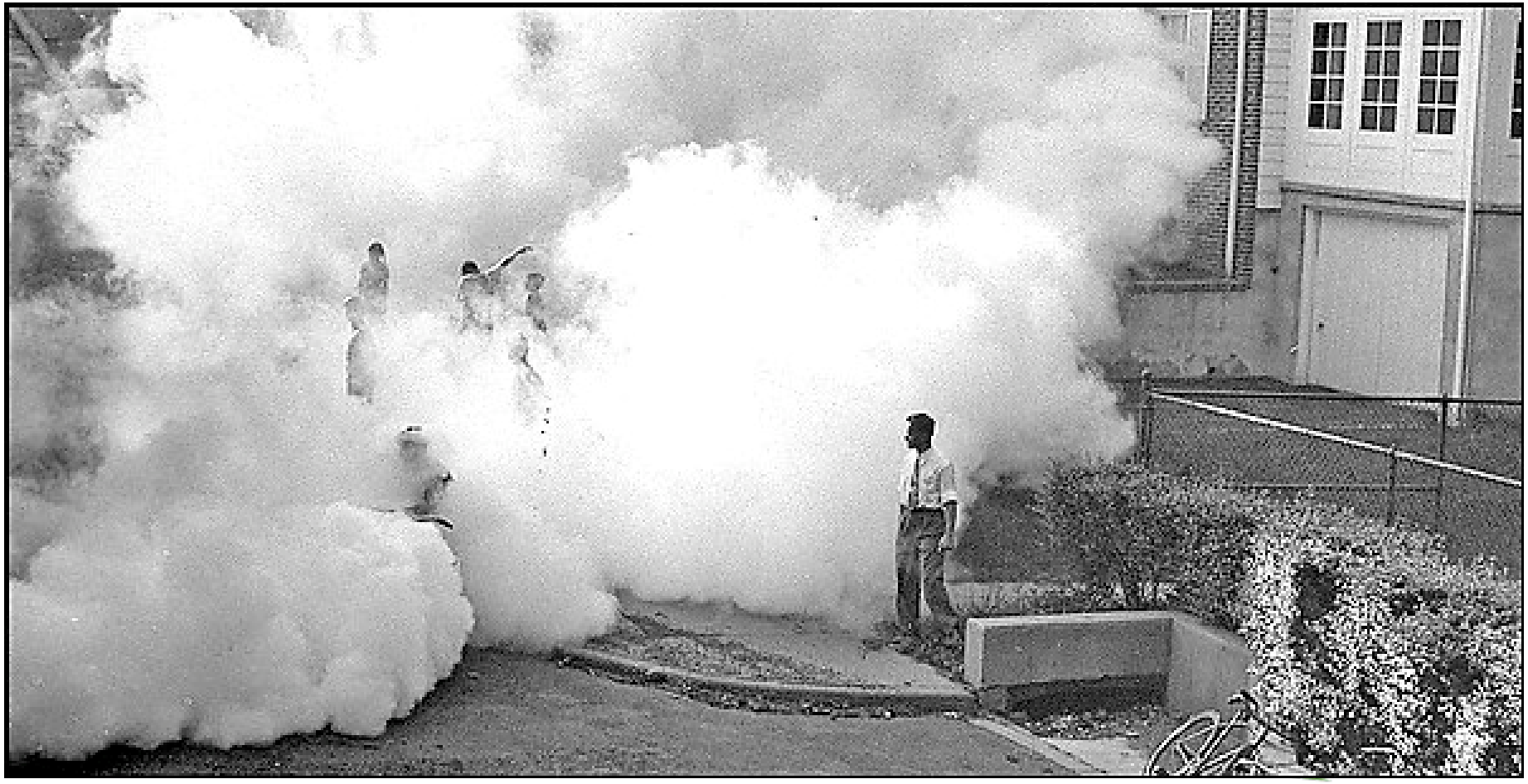
Silent Spring by Rachel Carson (1962)

- The book that give birth to the environmental movement
- Serialized in three parts in *The New Yorker*, where President John F. Kennedy read it in the summer of 1962

- The pesticide DDT thinned the eggshells of birds and made the eggs unable to withstand incubation.
- DDT had caused damage to wildlife, birds, bees, agricultural animals, domestic pets, and even humans.

https://youtu.be/X4nTCGUjfGA

Children Play in DDT Haze After Mosquito Spraying, Camden NJ (1960s)

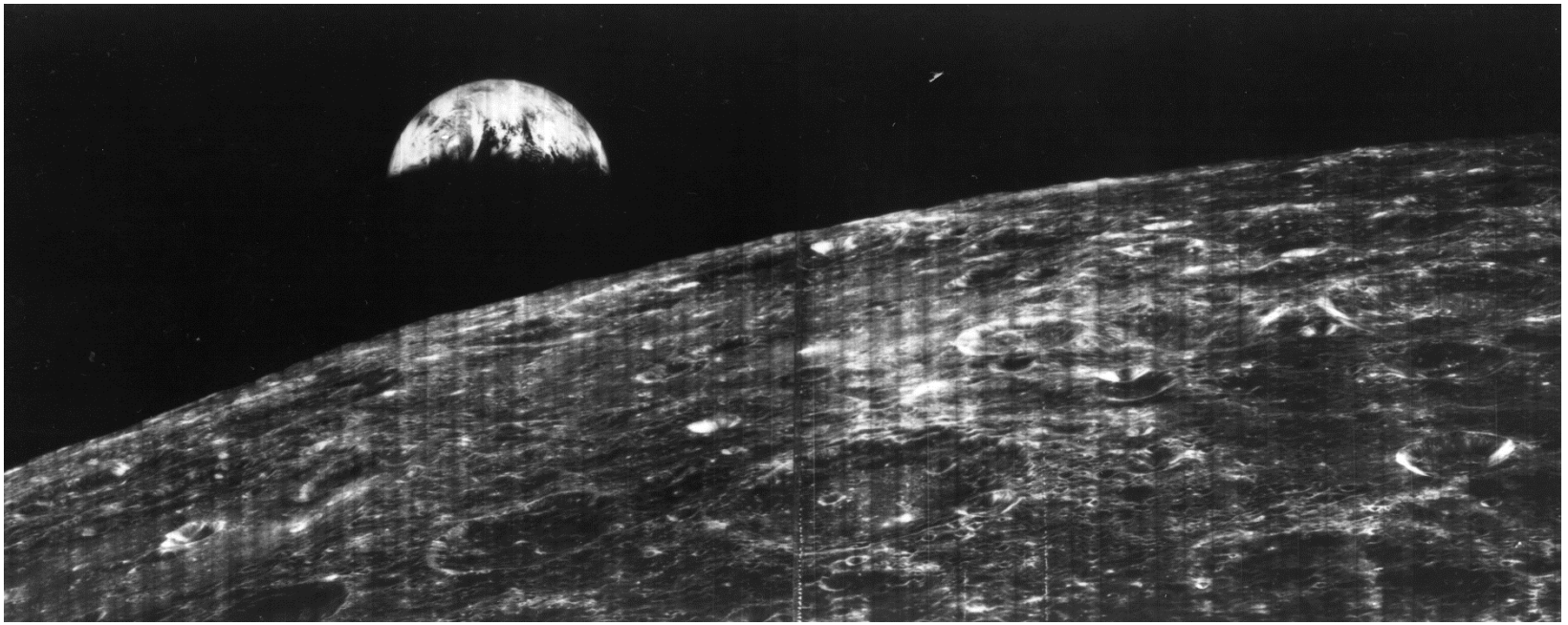


The bald eagle is a shining example of recovery in New Jersey.

In 1973, when the Endangered and Nongame Species Conservation Act was passed, there was just one nesting pair in a remote forest in Cumberland County.

Today there are more than 220 nesting pairs of **bald eagles** in the state. (NJDEP Division of Fish & Wildlife - Raptors in New Jersey)

Spaceship Earth



On August 23,1966, a NASA lunar orbiter transmitted the first image of Earth from the Moon. The grainy black & white image provided little detail, but much psychological impact. Humans got their first glimpse of “home” from the perspective of the universe, and what they saw was unsettling.

The Environmental Revolution

There were, as always, threshold moments. In the summer of 1969, the grossly polluted Cuyahoga River burst into flames as it passed through the city of Cleveland. Spurred by such outrages, millions observed the first Earth Day in April of 1970. This seminal event served to focus the energies of the nation's youth – and eventually lawmakers – on the problems facing our environment.

Cuyahoga River

https://clevelandhistorical.org/items/show/63#.WPemGvnyuUk

The Environmental Revolution

The New York Times

NEW YORK, THURSDAY, APRIL 23, 1970

Millions Join Earth Day Observances Across the Nation

Throngs jamming Fifth Avenue yesterday in response to a call for the regeneration of a polluted environment. View is north from 43d Street, with Central Park in background.

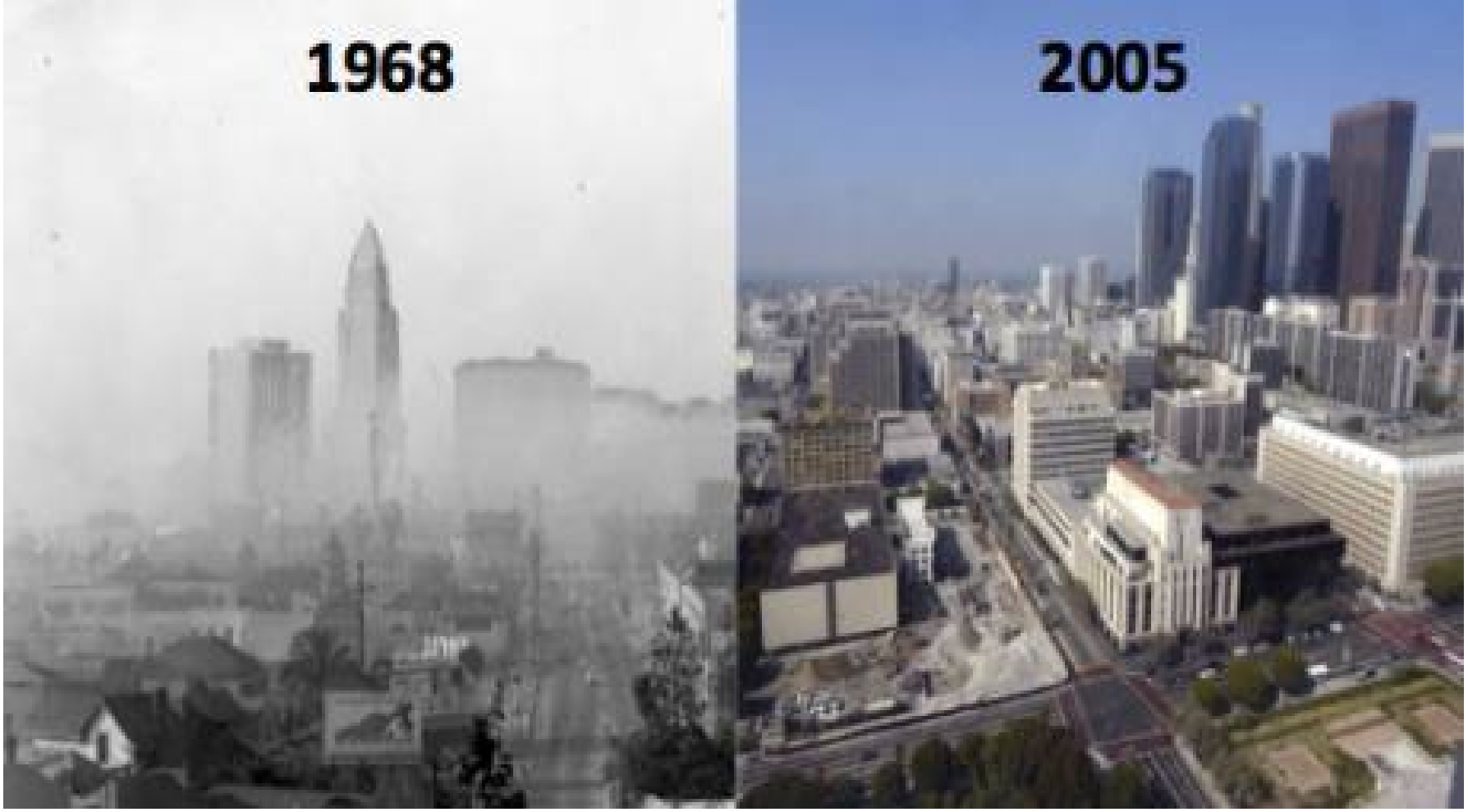
As the turbulent 1960s ran their course, the environmental movement took its place alongside civil rights, women's rights, and war protests as a hot button topic and agent for societal change.

America suddenly awoke to the realization that the planet did and always had nurtured us and that Mother Earth was in dire trouble.

1970: The first Earth Day in Philadelphia

Spaceship Earth

The “Blue Marble” was small, fragile, and vulnerable.
There was no question who its caretaker must be.



Not everything was better “back in the day.” The quality of our water and our air has improved markedly in the past 40 years thanks to some far-sighted legislation passed by Congress during the heyday of the green movement.

Why did we need a Clean Water Act?

- 60% of waterways in the US were not “fishable or swimmable”
- The Cuyahoga River in Cleveland was so polluted that it caught fire

Federal Clean Water Act (CWA) of 1972

Primary objective of CWA is to restore and maintain the integrity of the nation's waters

Two Fundamental National Goals of the CWA:

1. To eliminate the discharge of pollutants into the nation's waters (zero discharge of pollutants by 1985)
2. To achieve water quality levels that are fishable and swimmable by mid-1983

Two Major Parts of the CWA:

1. Authorizes federal financial assistance for municipal sewage treatment plant construction

2. Creates regulatory requirements that apply to industrial and municipal dischargers

Municipal Wastewater Treatment Plants

1. Must meet secondary treatment standards by July 1, 1977
2. Case-by-case extension up to July 1, 1988
3. By 1988, 86% of all cities met the 1988 deadline

Industrial Discharges

1. Must install “best practicable control technology” (BPT) by July 1, 1977

2. BPT focused on conventional pollutants (suspended solids, biochemical oxygen demanding materials, fecal coliform, pH)

3. By March 31, 1989, industry is required to use “best available technology” (BAT) that is economically achievable

4. BATs focused on toxic substances

Technology-based Effluent Limitations

- Specific numerical limitations established by EPA and placed on certain pollutants from certain sources
- Applied to municipal and industrial discharges through numerical limitations in discharge permits

Water Quality Standards

- Standard for overall quality of water
- Consists of designated beneficial use or uses of waterbody (recreation, water supply, industrial or other)
- Plus a numerical or narrative statement identifying maximum concentrations of various pollutants that would not interfere with the designated uses
- Each state must establish water quality standards for all bodies of water in the state

Impaired Waterways

- States must identify waterways that are not meeting water quality standards (Integrated Water Quality Assessment Report)

Total Maximum Daily Loads (TMDLs)

- In waterways where water quality standards are not being met, states must set a TMDL of pollutants at a level to ensure that water quality standards are attained and maintained
- EPA estimates 40,000 U.S. Waters are impaired and require a TMDL

Nonpoint Source Pollution (Section 319)

- Directs states to develop and implement nonpoint pollution management programs
- Encouraged to pursue groundwater protection activities
- Federal financial assistance covers up to 60% of the program implementation costs

Federal and State Responsibilities

- Federal-state partnership
- Federal government sets the agenda and standards for pollution abatement
- States carry out day-to-day activities of implementation and enforcement
- 46 states have been authorized by EPA to issue/administer permit program

National Pollutant Discharge Elimination System (NPDES)

- Created in 1972 by the Clean Water Act, the NPDES permit program is authorized to state governments by EPA to perform many permitting, administrative, and enforcement aspects of the program
- New Jersey has the “NJPDES” program

N.J.A.C. 7:9B - Surface Water Quality Standards

- Protection and enhancement of surface water resources
- Class definitions and quality criteria
- Use designation and quality criteria for the mainstem of the Delaware River including the Delaware Bay
- Classification of surface waters of the state
- Procedures for establishing water quality-based effluent limitations

Designated uses

In all FW1 waters, the designated uses are:

1. Set aside for posterity to represent the natural aquatic environment and its associated biota;
2. Primary and secondary contact recreation;
3. Maintenance, migration and propagation of the natural and established aquatic biota; and
4. Any other reasonable uses.

Designated uses

In all PL waters the designated uses are:

1. Cranberry bog water supply and other agricultural uses;
2. Maintenance, migration, and propagation of the natural and established biota indigenous to this unique ecological system;
3. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection;
4. Primary and secondary contact recreation; and
5. Any other reasonable uses.

Designated uses

In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Primary and secondary contact recreation;
3. Industrial and agricultural water supply;
4. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
5. Any other reasonable uses.

Other Designated uses

- NT: Nontrout waters
- TM: Trout Maintenance
- TP: Trout Production
- C1: Category 1 Waters
- C2: Category 2 Waters
- SE: general surface water classification applied to saline waters of estuaries (SE1, SE2, or SE3)
- SC: general surface water classification applied to coastal saline waters

Substance	Criteria	Classifications
Dissolved Oxygen	i. Not Less than 7.0 mg/l at any time	FW2-TP
	ii. 24-hour average not less than 6.0. Not less than 5.0 at any time	FW2-TM
	iii. 24-hour average not less than 5.0. Not less than 4.0 at any time	FW2-NT, SE1
	iv. Not less than 4.0 at any time	Tidal portions of FW2-NT tribs to DR
	v. Not less than 5.0 at any time	SC
	vii. Not less than 4.0 at any time	SE2
	viii. Not less than 3.0 at any time	SE3

Surface Water Quality Criteria for Toxic Substances

- Criteria for FW2 and SE/SC waters
- Aquatic Life Criteria (Acute or Chronic)
- Human Health Criteria

Toxic Substance	Fresh water (FW2) Criteria			Saline Water (SE&SC) Criteria		
	Aquatic		Human Health	Aquatic		Human Health
	Acute	Chronic		Acute	Chronic	
Arsenic	340(d)(s)	150(d)(s)	0.017(hc)(T)	69(d)(s)	36(d)(s)	0.061(hc)(T)

(d) Criterion is expressed as a function of the Water Effects Ratio (WER)
(hc) Human health carcinogen
(s) Dissolved criterion
(T) Total recoverable criterion

Surface Water Classifications

- Regulations provide classification for each waterway
- Some waterways have different classifications for different sections of the waterways

SOUTH BRANCH RARITAN RIVER

(Mt. Olive) - Source to the dam that is 390 feet upstream of the Flanders-Drakestown Road bridge and the two tributaries which originate north and east of the Budd Lake Airfield	FW2-NT(C1)
(Mt. Olive) - Dam to confluence with Turkey Brook	FW2-TM(C1)
(Middle Valley) - Confluence with Turkey Brook to Rt. 512 bridge	FW2-TP(C1)
(Califon) - Rt. 512 bridge to downstream end of Packers Island, except segment described separately, below	FW2-TM
(Ken Lockwood Gorge) - River and tributaries within Ken Lockwood Gorge Wildlife Management Area	FW2-TM(C1)
(Neshanic Sta.) - Downstream end of Packers Island to confluence with North Branch, Raritan River	FW2-NT

TRIBUTARIES, SOUTH BRANCH RARITAN RIVER

(Long Valley) - Entire length	FW2-TP(C1)
(High Bridge) - Entire length	FW2-TM
(S. of Hoffmans) - Entire length	FW2-TP(C1)
(S. of Schooley's Mt.) - Entire length	FW2-TP(C1)

MAIN STEM RARITAN RIVER

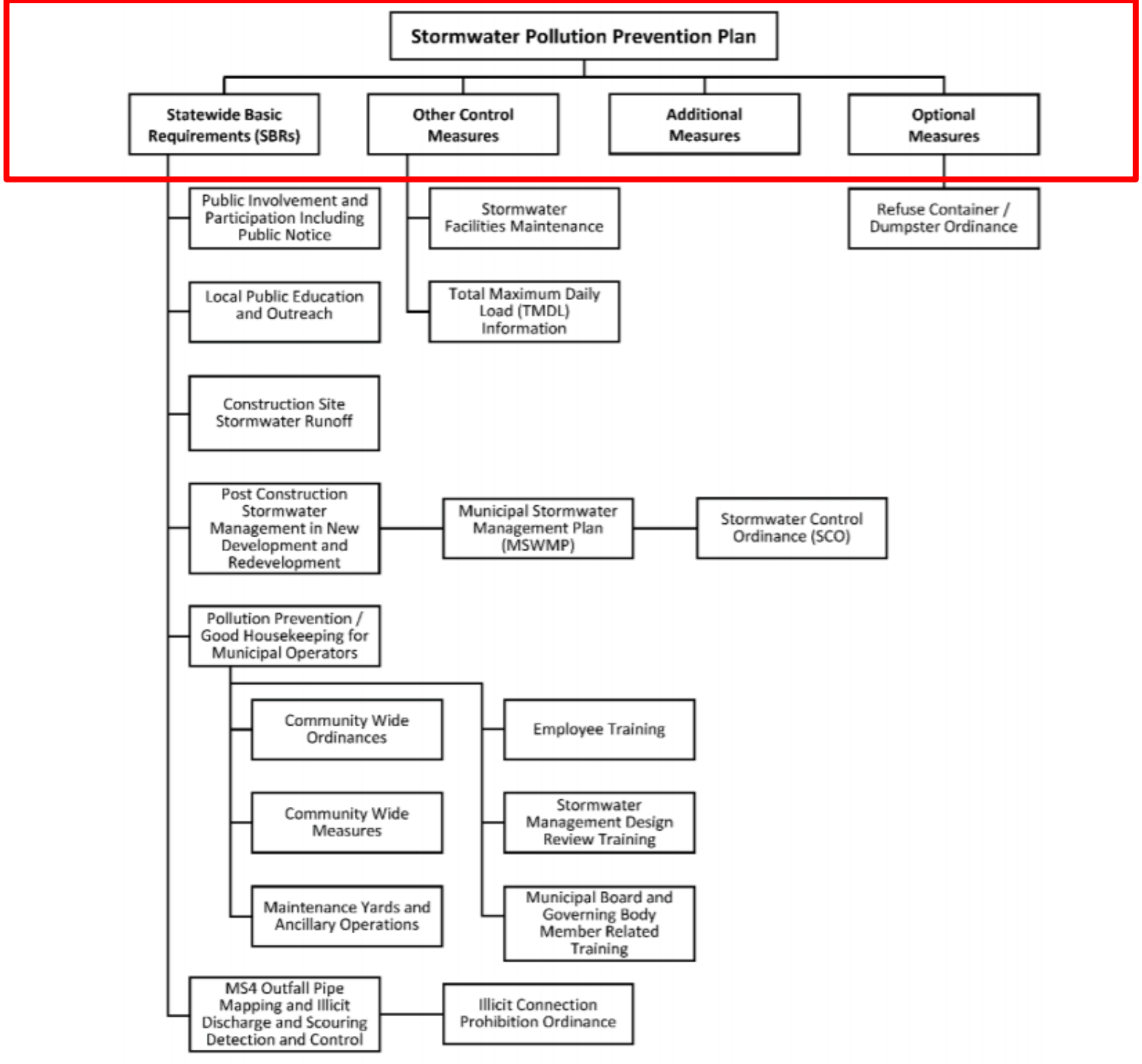
(Bound Brook) - From confluence of North and South Branches to Landing Lane bridge in New Brunswick and all freshwater tributaries downstream of Landing Lane bridge.	FW2-NT
(Sayreville) - Landing Lane bridge to Raritan Bay and all saline water tributaries	SE1

N.J.A.C. 7:14a - Municipal "Phase II" NJPDES Stormwater Regulations

- Regulates discharges to surface water and groundwater of stormwater from large, medium, and small municipal separate storm sewer systems
- Four general permits:
  1. Tier A Municipalities
  2. Tier B Municipalities
  3. Public Complexes
  4. Highway Departments

N.J.A.C. 7:14a - Municipal "Phase II" NJPDES Stormwater Regulations

- Requires that each Tier A Municipality develop, implement, update, and maintain an MS4 stormwater program
- Stormwater Pollution Prevention Plan (SPPP) describes how the municipality will implement each permit requirement and provides a place for record keeping and documenting when permit requirements are met.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Additional Measures
Optional Measures
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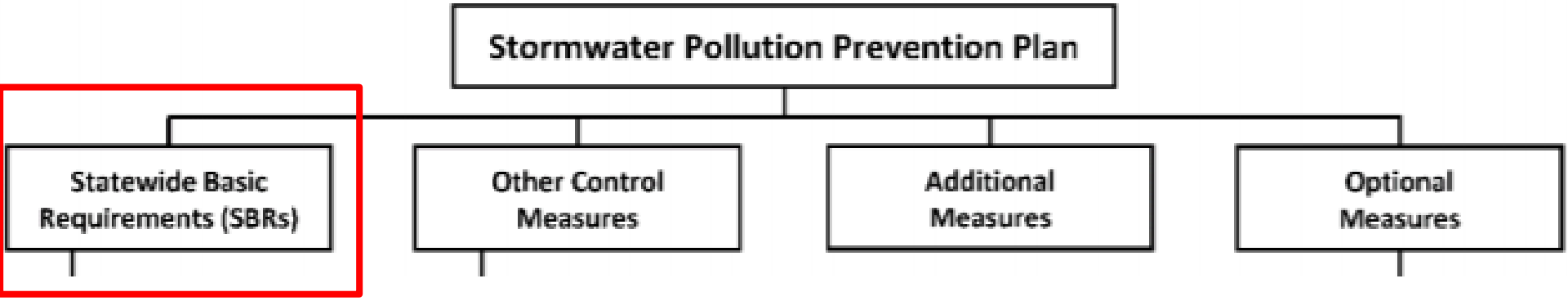
Post Construction Stormwater Management in New Development and Redevelopment
Municipal Stormwater Management Plan (MSWMP)
Stormwater Control Ordinance (SCO)
Pollution Prevention / Good Housekeeping for Municipal Operators
Community Wide Ordinances
Community Wide Measures
Maintenance Yards and Ancillary Operations
Employee Training
Stormwater Management Design Review Training
Municipal Board and Governing Body Member Related Training
MS4 Outfall Pipe Mapping and Illicit Discharge and Scouring Detection and Control
Illicit Connection Prohibition Ordinance
Stormwater Facilities Maintenance
Total Maximum Daily Load (TMDL) Information
Refuse Container / Dumpster Ordinance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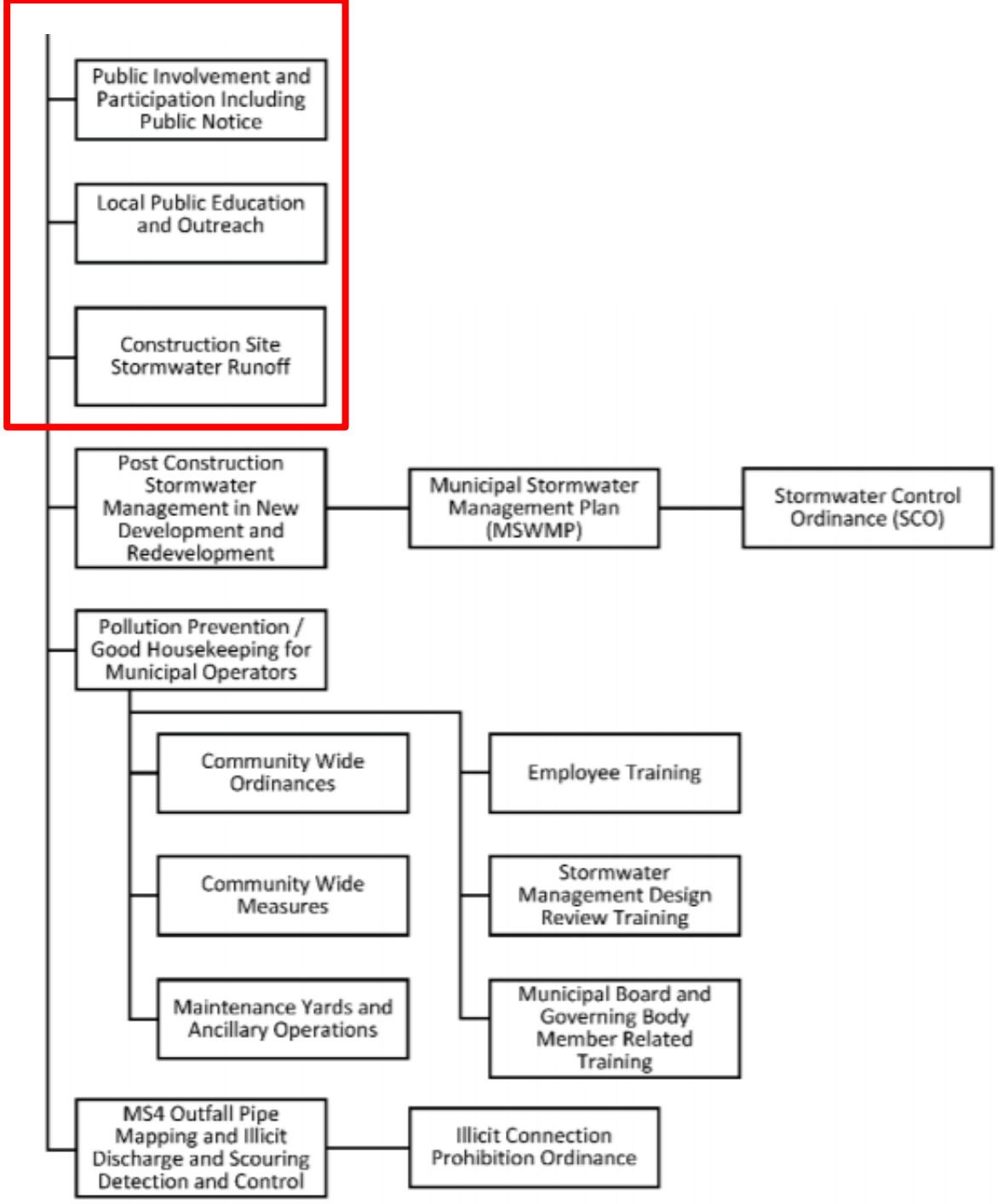
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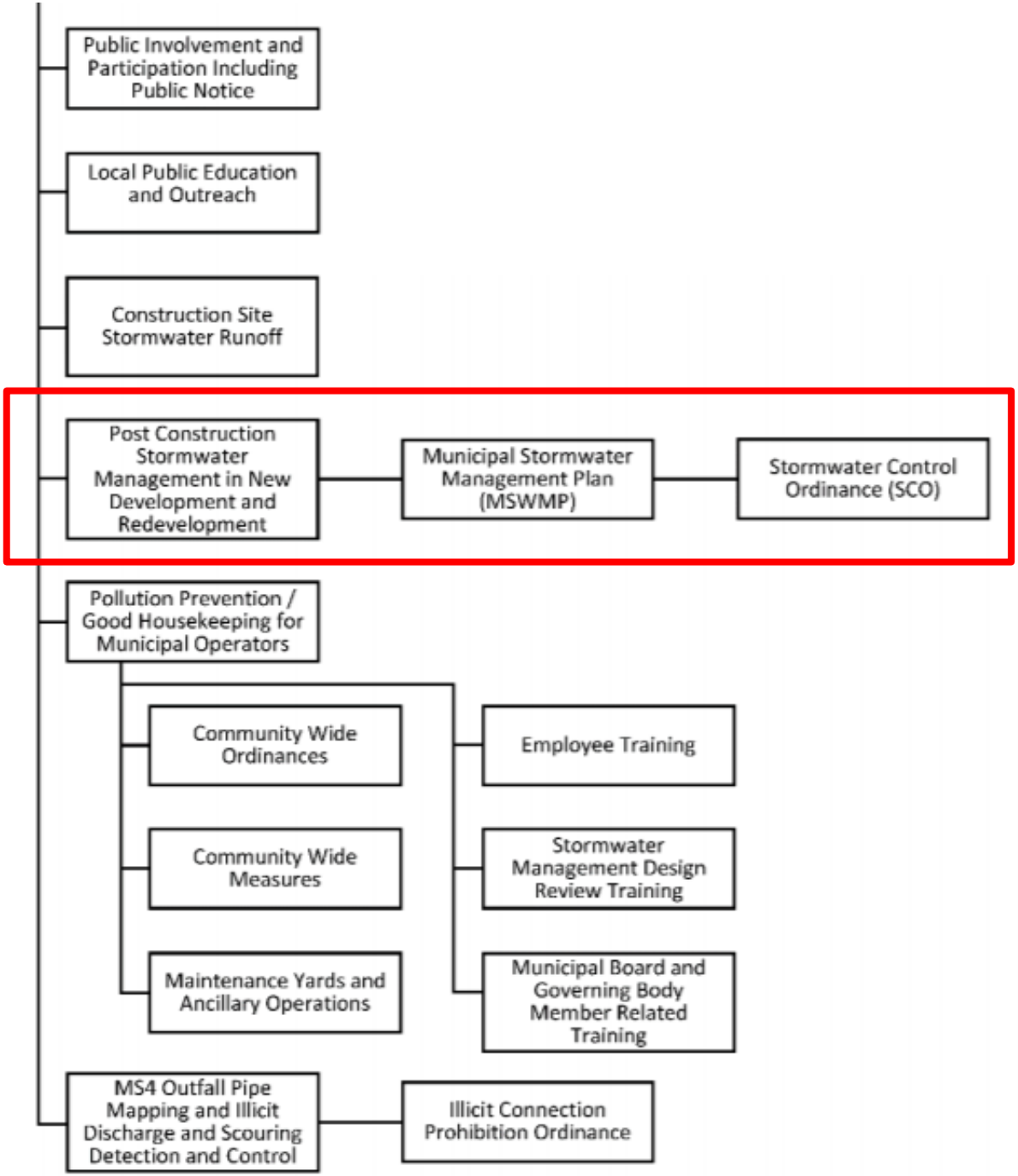
Statewide Basic Requirements (SBRs)

1. The Public Involvement and Participation SBR provides for public participation in developing and implementing the MS4 Stormwater Program
2. The Local Public Education and Outreach SBR requires compliance with the established standards for implementing a public education and outreach program ***(obtain 12 educational points – see Attachment B)***
3. The Construction Site Stormwater Runoff SBR is not required in the SPPP because construction site stormwater runoff activities are authorized under a separate NJPDES permit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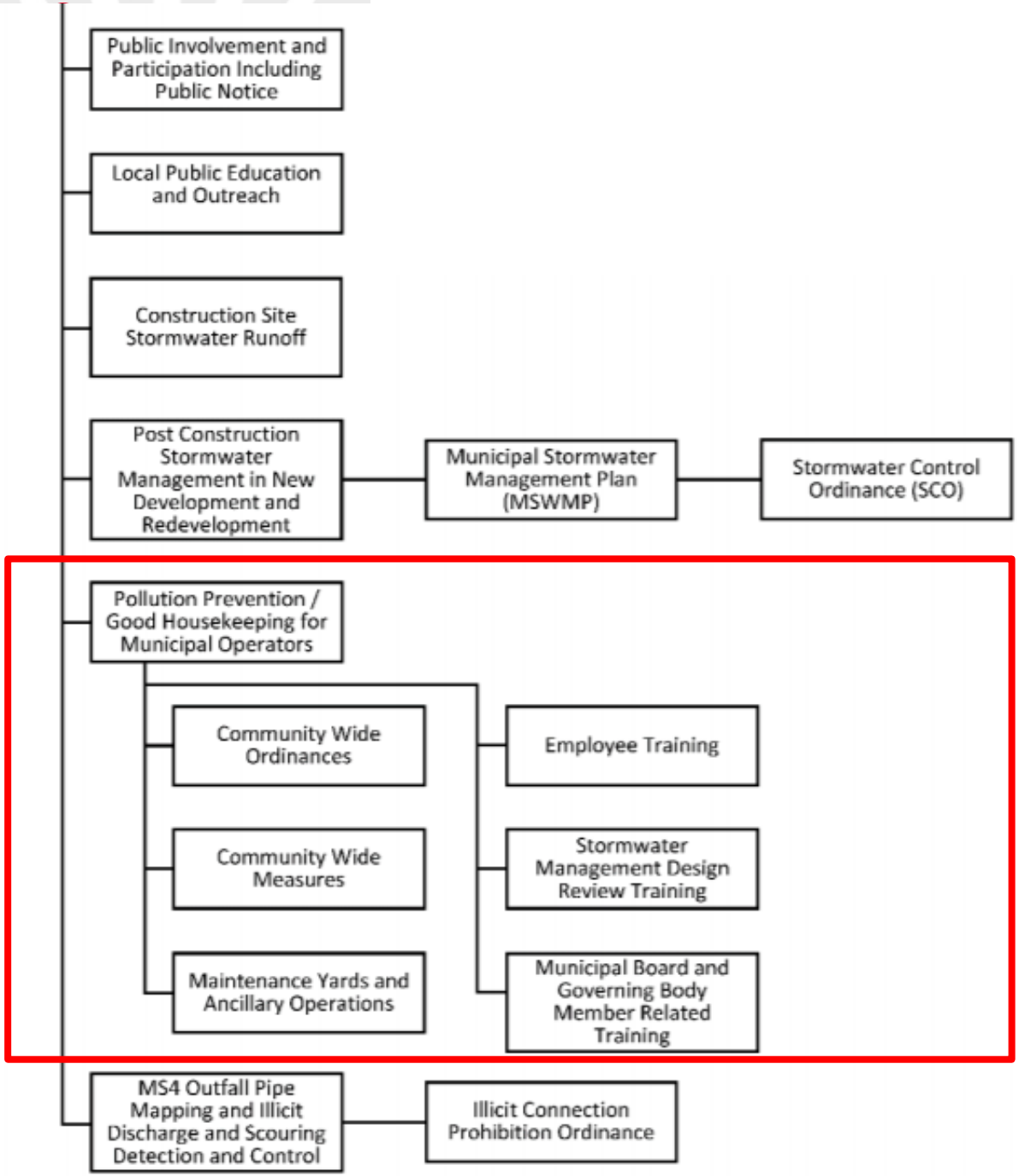
Statewide Basic Requirements (SBRs)

4. The Post Construction Stormwater Management in New Development and Redevelopment SBR requires two key components be included in the SPPP:
   - Develop a Municipal Stormwater Management Plan (MSWMP), which becomes a key element of the municipal master plan
   - Adopt a Stormwater Control Ordinance (SCO)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Statewide Basic Requirements (SBRs)

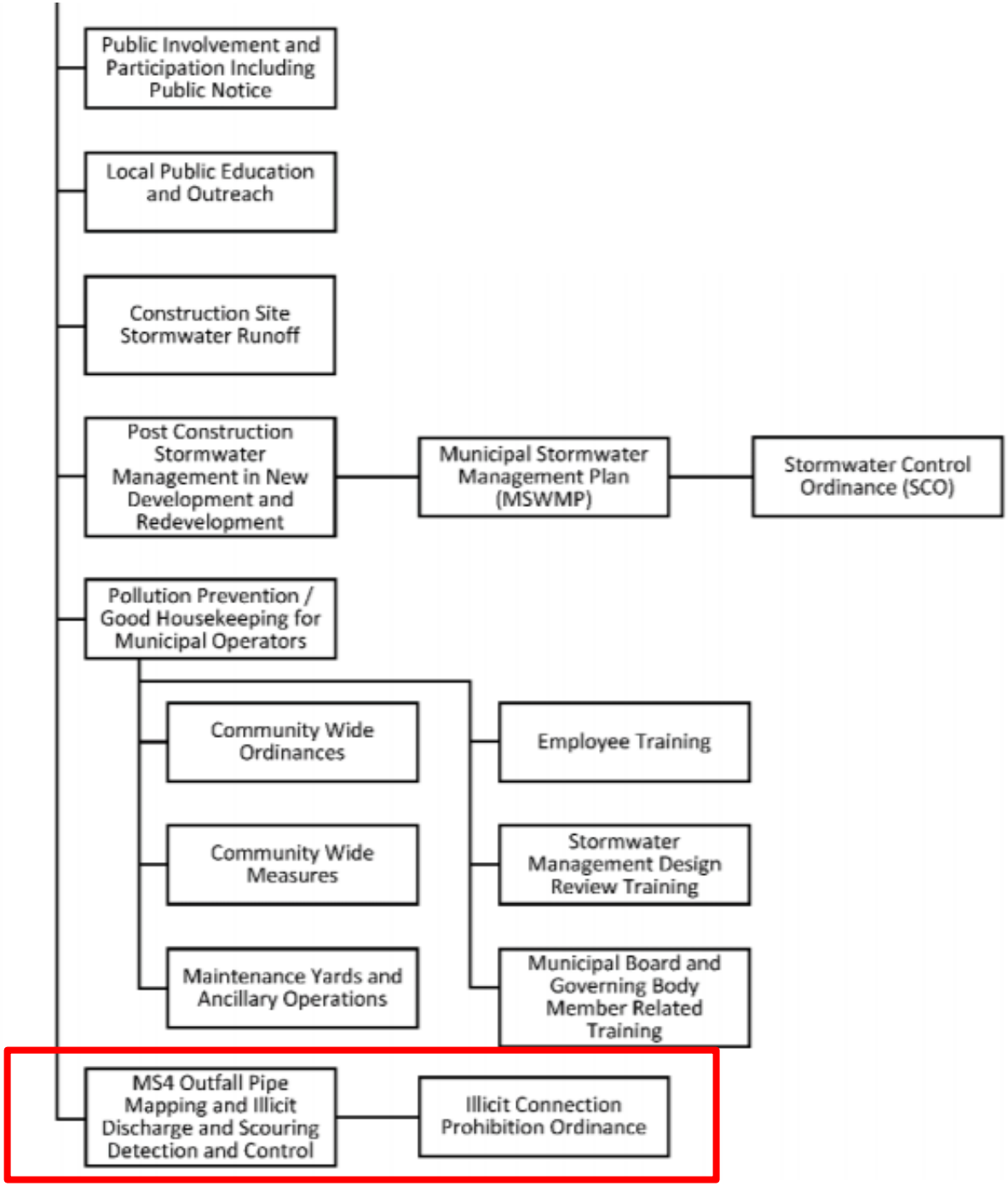
5. The Pollution Prevention/Good Housekeeping for Municipal Operators SBR for eliminating and/or minimizing stormwater pollution from public and municipal activities and educating municipal employees and officials of their responsibilities includes a number of community-wide ordinances and measures to control solids and floatables:

Local Ordinances and Measures To Control Solids and Floatables

- Community-wide ordinances for dealing with improper disposal of waste
- Community-wide measures for controlling solids and floatables
- BMPs for municipal maintenance yards and other ancillary operations for stormwater discharges from municipal maintenance yards and activities
- Employee training for stormwater on topics applicable to title and duties

Local Ordinances and Measures To Control Solids and Floatables (cont'd)

- Stormwater management design review training for engineers and others that review stormwater management designs for development and redevelopment projects
- Municipal board and governing body member related training for board and council members that review and approve applications for development and redevelopment projects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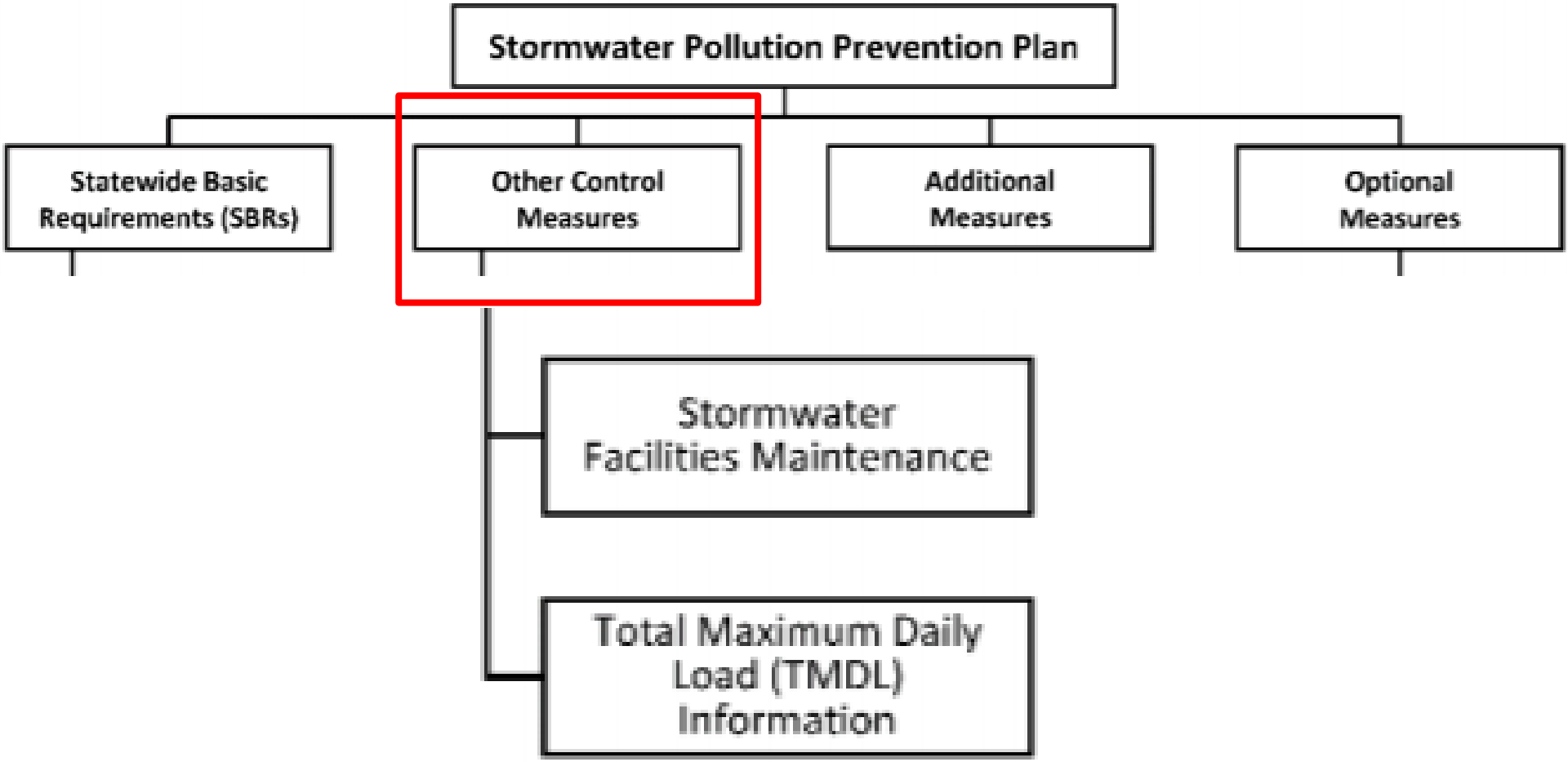
MS4 Outfall Pipe Mapping

6. The MS4 Outfall Pipe Mapping, and Illicit Discharge and Scouring Detection and Control SBR for identifying and eliminating illicit discharges and stream channel erosion at municipal stormwater outfalls, which requires:

MS4 Outfall Mapping (cont'd)

- The development, updating, and maintenance of an MS4 outfall pipe map
- The development, updating and implementation of a program for detecting, investigating, and controlling any localized stream scour at outfall pipes owned or operated by the Tier A municipality
- The development, updating, implementation, and enforcement of a program for detecting and eliminating illicit discharges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Stormwater Facilities Maintenance
Total Maximum Daily Load (TMDL) Information

Stormwater Facilities Maintenance Requirements

- Develop, update, and implement a program to ensure adequate long-term cleaning, operation, and maintenance
- Inspect and maintain stormwater facilities pursuant to any maintenance plans to ensure proper function and operation of each stormwater facility
- Maintain a log sufficient to demonstrate compliance with this section and a schedule for repairs to be made

Total Maximum Daily Loads (TMDLs)

- Identify stormwater related pollutants listed in approved or adopted TMDL reports
- Annually review the approved or adopted TMDL reports identified
- Use TMDL information to prioritize stormwater facility maintenance
- Identify and develop opportunities to address specific sources of stormwater related pollutants contributing to discharges authorized under the Tier A permit

N.J.A.C. 7:8 - Stormwater Management Regulations

- Use nonstructural management strategies
- Protect communities from increases in stormwater volume and peak flows as a result of new development
- Maintain groundwater recharge
- Protect waterways from pollution carried in stormwater runoff

New Jersey Stormwater Management Rules

- Rules apply to any "Major Development" defined as a project disturbing more than 1 acre or increasing impervious surfaces by ¼ acre or more
- Design and Performance Standards established in NJAC 7:8-5, for:
  - Nonstructural Stormwater Management Strategies
  - Stormwater Quantity
  - Groundwater Recharge
  - Stormwater Quality
  - Stormwater Maintenance Plan

Nonstructural Strategies

- Plan the project using Low Impact Development (LID) Principles
- Collect, infiltrate, and where possible reuse stormwater near its source
- Capture runoff from small storm events in vegetated systems to protect water quality and promote recharge
- Minimize and disconnect impervious surfaces

Water Quantity Performance Standards

- Demonstrate that post-development 2, 10, and 100-year storm event hydrographs do not exceed pre-development hydrographs

or

- Demonstrate that hydrograph peaks will not increase and that increase in volume or change in timing won't increase flood damage downstream

or

- Design BMPs so that 2, 10, and 100-year pre-development hydrographs are reduced to 50%, 75%, and 80%, respectively
  - 2-year rainfall (3.3 inches)
  - 10-year rainfall (5.0 inches)
  - 100-year rainfall (8.3 inches)

Groundwater Recharge Performance Standards

– Maintain 100% of average annual groundwater recharge volume

or

– Infiltrate increase in the post development runoff volume for the 2-year storm

Water Quality Performance Standards

- Install BMPs to reduce at least 80% of total suspended solids (TSS) loads
- Install BMPs to provide nutrient removal to maximum extent feasible

BMP	TSS Removal Rate
Bioretention	90%
Constructed Wetlands	90%
Forested Buffers	70%
Extended Detention Basin	40-60%
Infiltration Structure	80%
Sand Filter	80%
Vegetative Filter Strip	50%
Wet Pond	60-90%

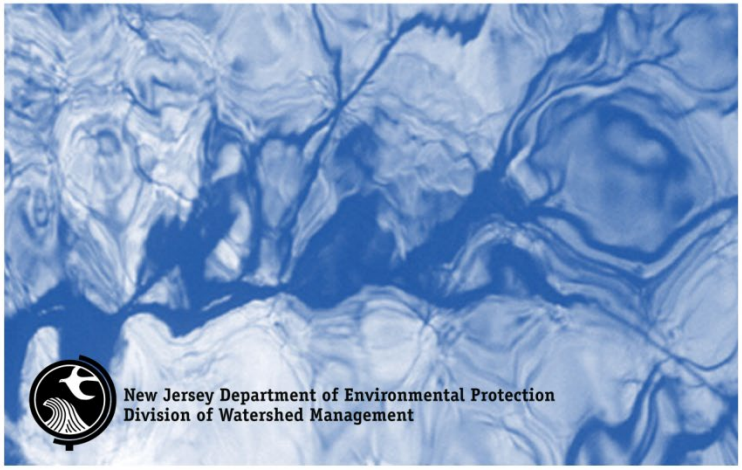
SOURCE: NJ Stormwater Management Rules and BMP Manual

NJ Stormwater Guidance

New Jersey

Stormwater

Best Management Practices Manual



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2019 Revisions

1. The current requirement that major developments incorporate nonstructural stormwater management strategies to the “maximum extent practical” to meet groundwater recharge standards, stormwater runoff quantity standards, and stormwater runoff quality standards, with a requirement that green infrastructure be utilized to meet these same standards.
2. Total suspended solids (TSS) removal only applies to runoff from motor vehicle surfaces

NJDEP Green Infrastructure Definition

A stormwater management measure that manages stormwater close to its source by:

1. Treating stormwater runoff through infiltration into subsoil
2. Treating stormwater runoff through filtration by vegetation or soil
3. Storing stormwater runoff for reuse

Green Infrastructure Standard

- Green infrastructure best management practices (BMP) must be used to satisfy recharge, quantity, and quality
- Three tables identifying the performance of each BMP in meeting the three standards
  - Water Quality & Recharge – BMPs in Table 1
  - Quantity – BMPs in Table 1 or Table 2
  - If received a variance – BMPs in Table 1, Table 2, or Table 3
- Maintain existing ability to propose an alternative stormwater design
  - Alternative design must meet green infrastructure definition and must meet drainage area limitation if similar to BMP with limit

Table 1

Best Management Practice	Quality TSS removal rate (%)	Quantity	Recharge	Minimum separation from seasonal high-water table (ft)
Bioretention Systems	80 or 90	Yes	Yes No	2 1
Cisterns	0	Yes	No	-
Dry Wells	0	No	Yes	2
Grass Swales	50 or less	No	No	2
Green Roofs	0	Yes	No	-
Infiltration Basins	80	Yes	Yes	2
Manufactured Treatment Device	50 or 80	No	No	Dependent upon the device
Pervious Paving Systems	80	Yes	Yes No	2 1
Sand Filters	80	Yes	Yes	2
Vegetative Filter Strips	60-80	No	No	-

Table 1 BMPs shall be used for recharge, quantity, and quality

Drainage area limitation applies to: bioretention basins, dry wells, infiltration basins, manufactured treatment devices, and sand filters.

Table 2

Best Management Practice	Quality TSS removal rate (%)	Quantity	Recharge	Minimum separation from seasonal high water table (ft)
Bioretention Systems	80 or 90	Yes	Yes No	2 1
Infiltration Basins	80	Yes	Yes	2
Standard Constructed Wetlands	90	Yes	No	N/A
Wet Ponds	50-90	Yes	No	N/A

Table 2 BMPs may only be used for quantity

Table 3

Best Management Practice	Quality TSS removal rate (%)	Quantity	Recharge	Minimum separation from seasonal high water table (ft)
Blue Roofs	0	Yes	No	N/A
Extended Detention Basins	40-60	Yes	No	1
Manufactured Treatment Device	50 or 80	No	No	Dependent upon the device
Sand Filters	80	Yes	No	1
Subsurface Gravel Wetlands	90	No	No	1
Wet ponds	50-90	Yes	No	N/A

Table 3 BMPs may only be used if a variance is granted

Let's talk about the practicality of these new regulations

Table 1

Best Management Practice	Quality TSS removal rate (%)	Quantity	Recharge	Minimum separation from seasonal high-water table (ft)
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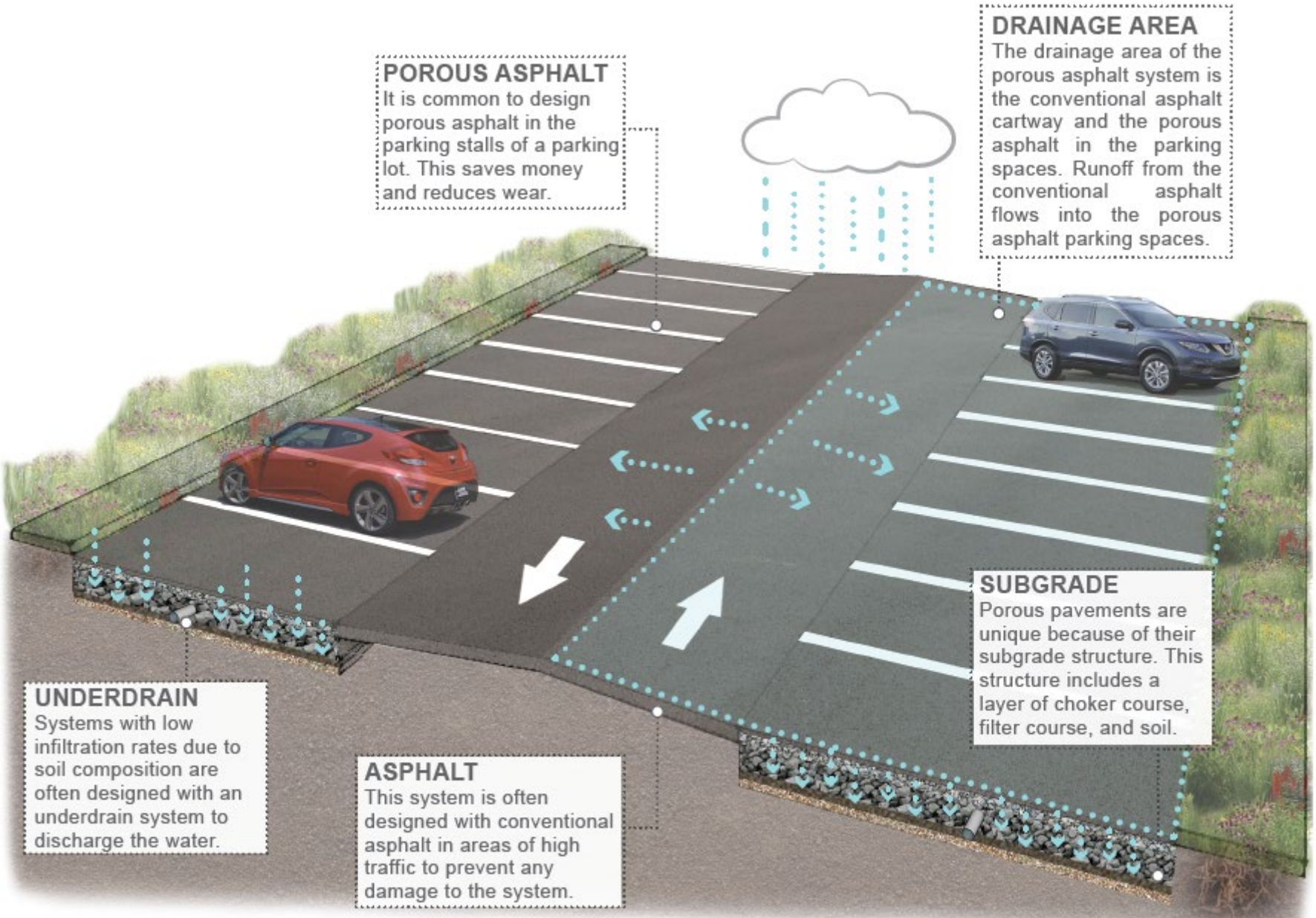
Pervious Paving Systems	80	Yes	Yes No	2 1
Sand Filters	80	Yes	Yes	2
Vegetative Filter Strips	60-80	No	No	-

Pervious Paving Systems



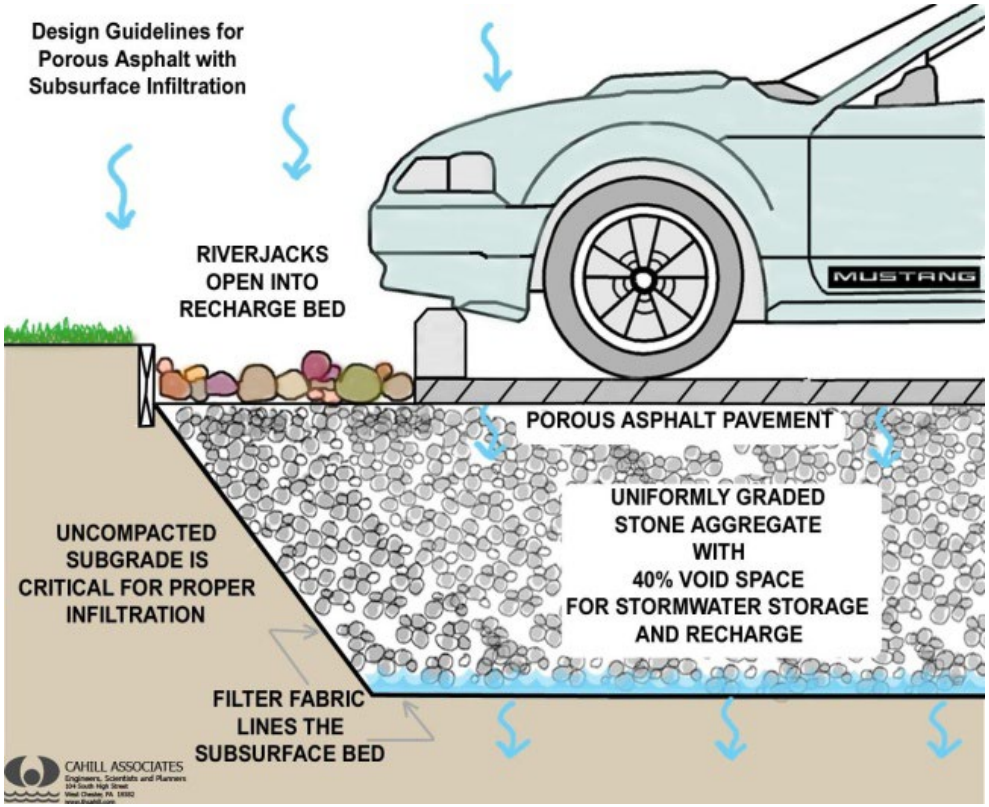
Permeable Pavements

- Underlying stone reservoir
- Porous asphalt and pervious concrete are manufactured without "fine" materials to allow infiltration
- Grass pavers are concrete interlocking blocks with open areas to allow grass to grow
- Ideal application for porous pavement is to treat a low traffic or overflow parking area

ADVANTAGES

- Manage stormwater runoff
- Minimize site disturbance
- Promote groundwater recharge
- Low life cycle costs, alternative to costly traditional stormwater management methods
- Mitigation of urban heat island effect
- Contaminant removal as water moves through layers of system

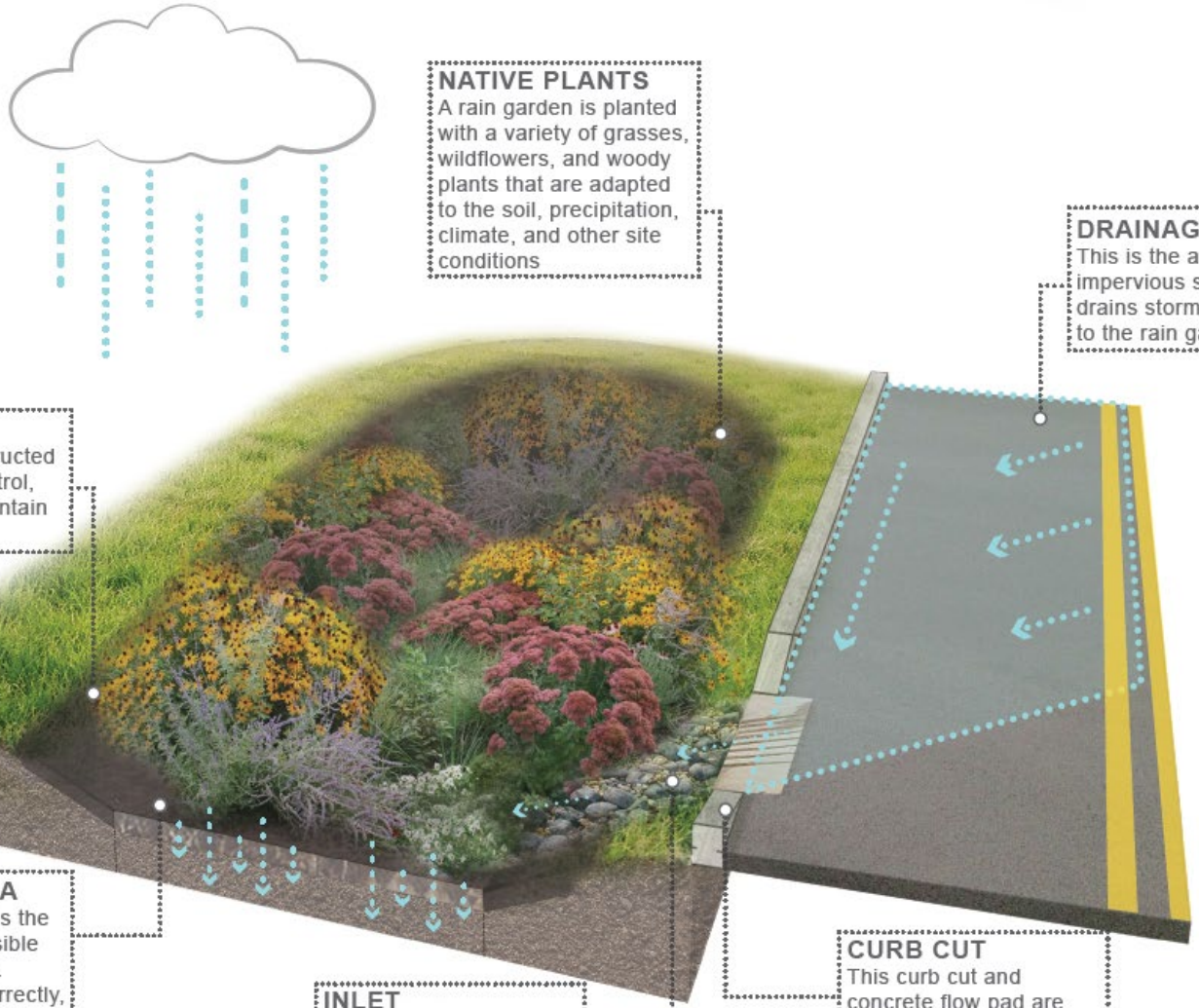
COMPONENTS



Porous Asphalt

Grass Pavers

Bioretention Systems



NATIVE PLANTS
A rain garden is planted with a variety of grasses, wildflowers, and woody plants that are adapted to the soil, precipitation, climate, and other site conditions

DRAINAGE AREA
This is the area of impervious surface that drains stormwater runoff to the rain garden.

BERM
The berm is constructed as a barrier to control, slow down, and contain stormwater.

PONDING AREA
The ponding area is the lowest, deepest visible area of the garden. When designed correctly, this area should drain within 24 hours.

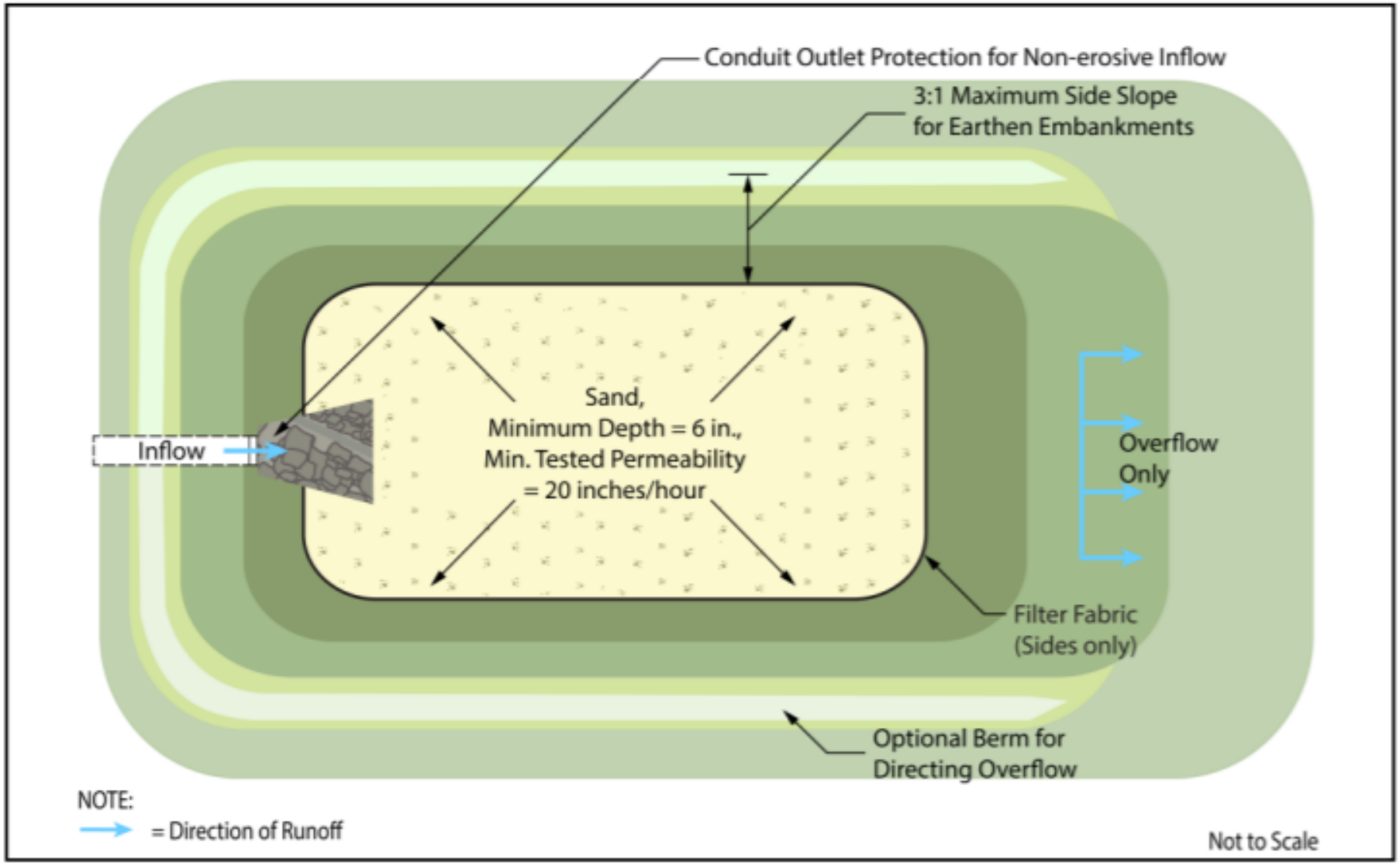
INLET
This is the area where stormwater enters. The inlet is often lined with stone to slow water flow and prevent erosion.

CURB CUT
This curb cut and concrete flow pad are designed to help redirect stormwater runoff to the rain garden system and out of the storm drain.

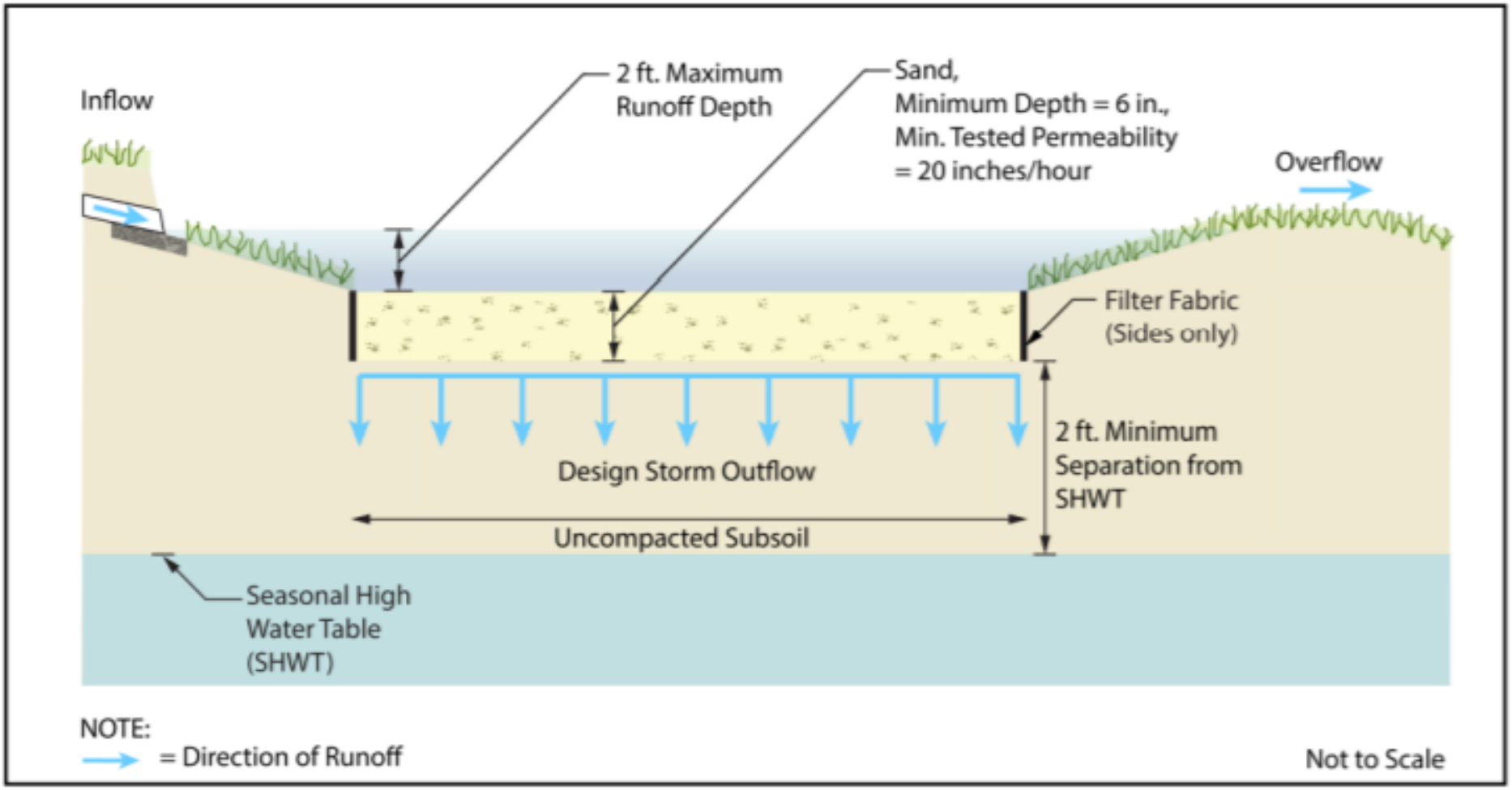
Lots of Bioretention Systems

Infiltration Systems

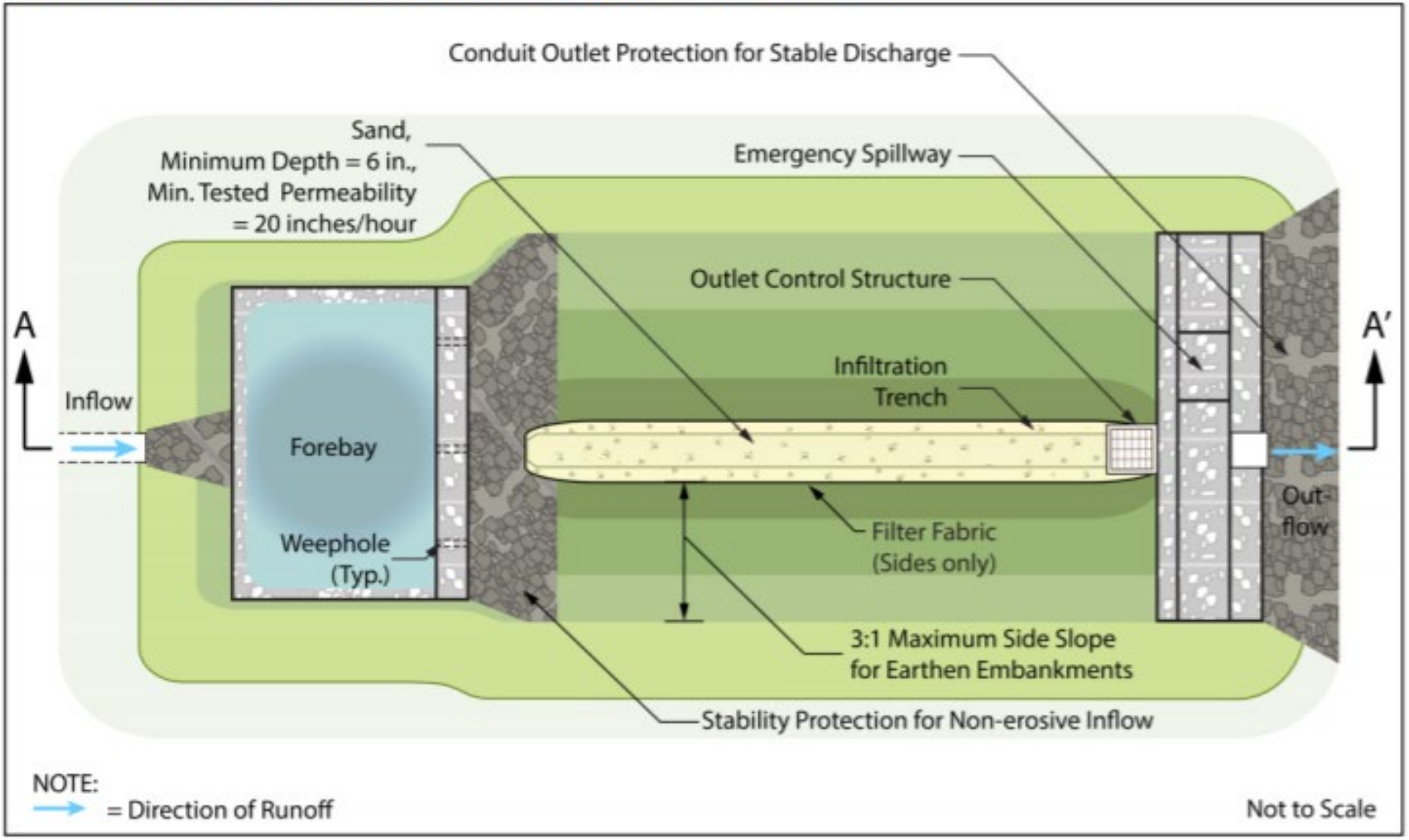
Surface Infiltration Basin – Plan View



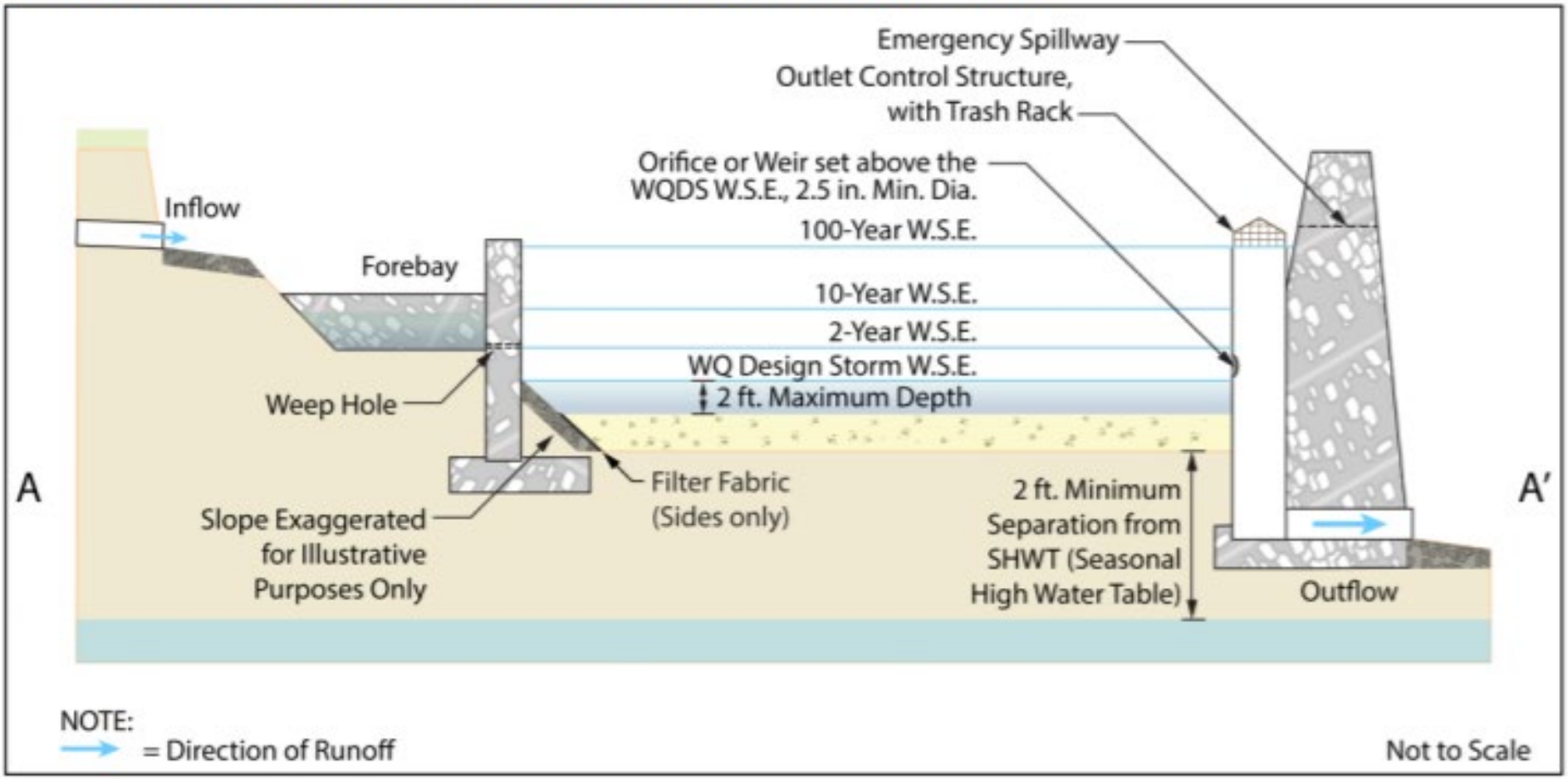
Surface Infiltration Basin – Profile View



Infiltration - Extended Detention Basin: Plan View

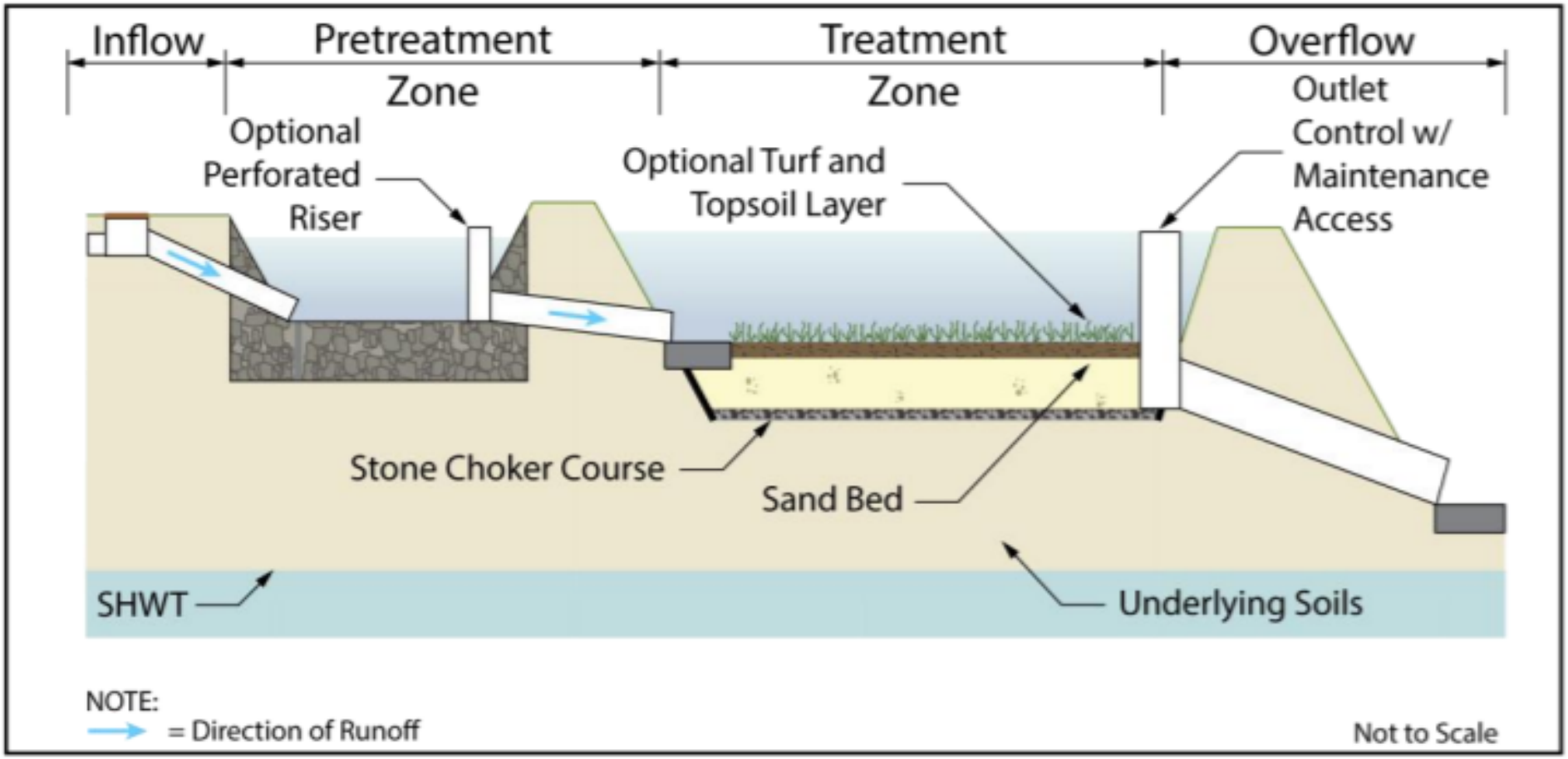


Infiltration – Extended Detention Basin: Profile View

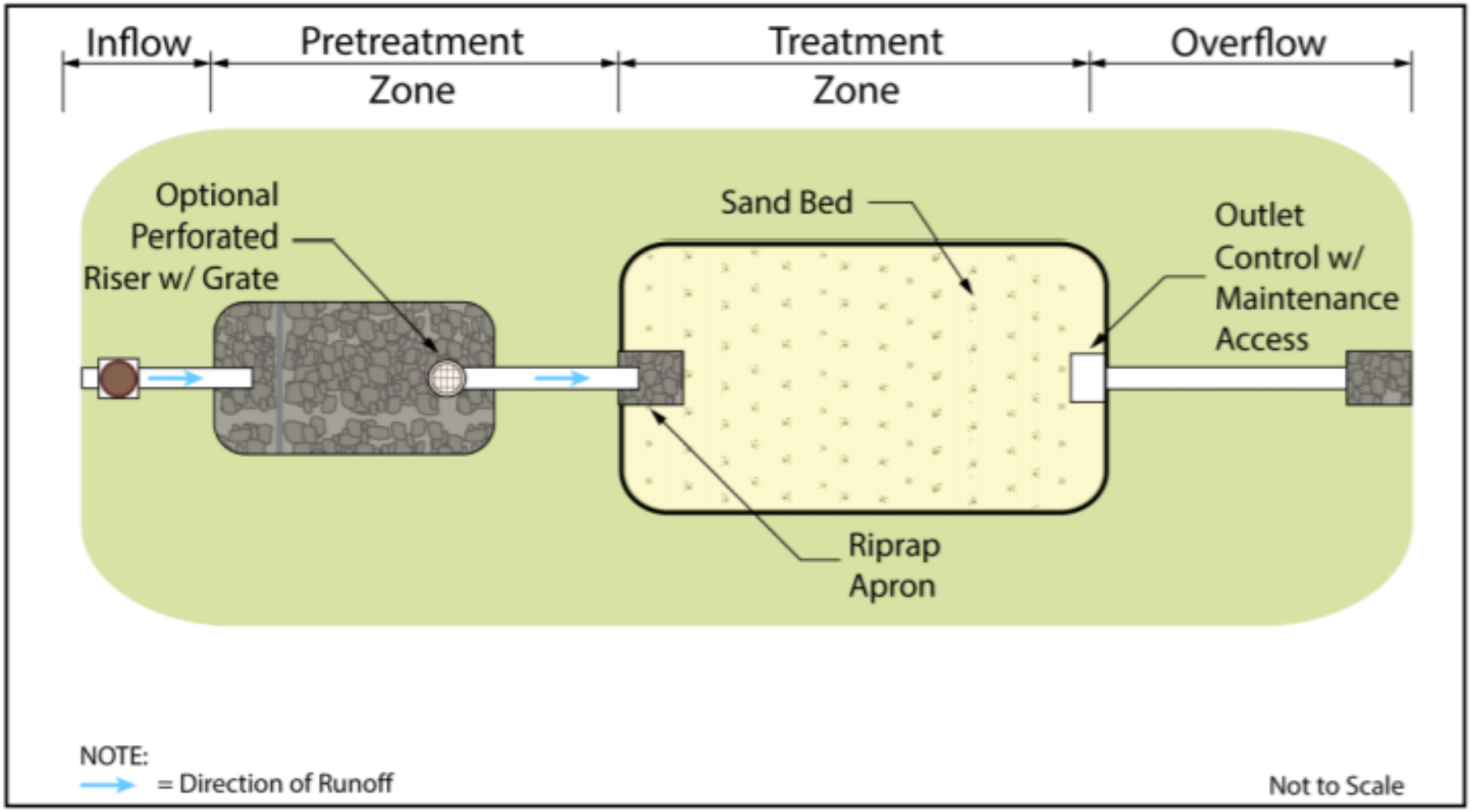


Sand Filter

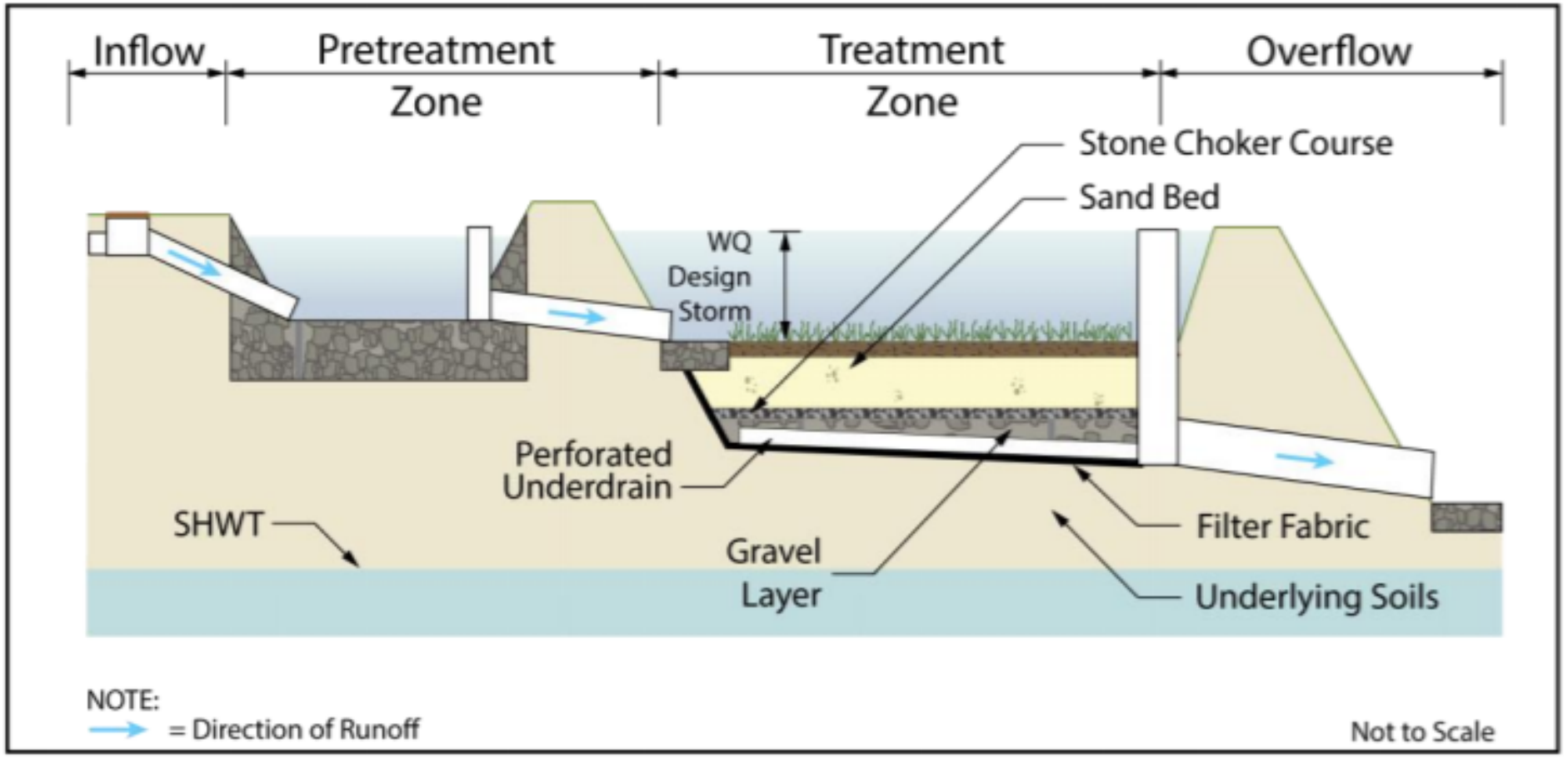
Profile View – Sand Filter Basics



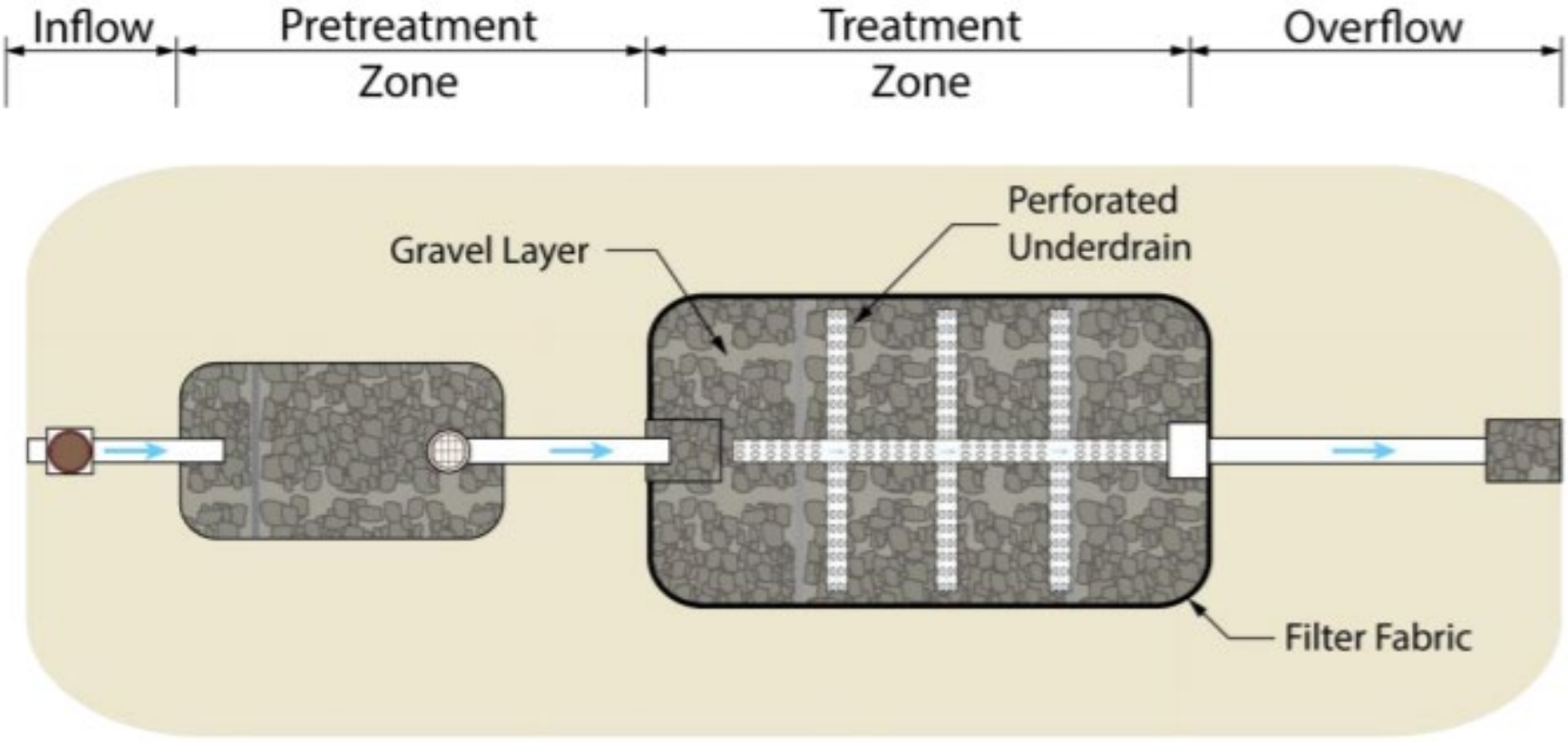
Plan View – Sand Filter Basics



Profile View – Sand Filter with Underdrain



Plan View – Sand Filter with Underdrain



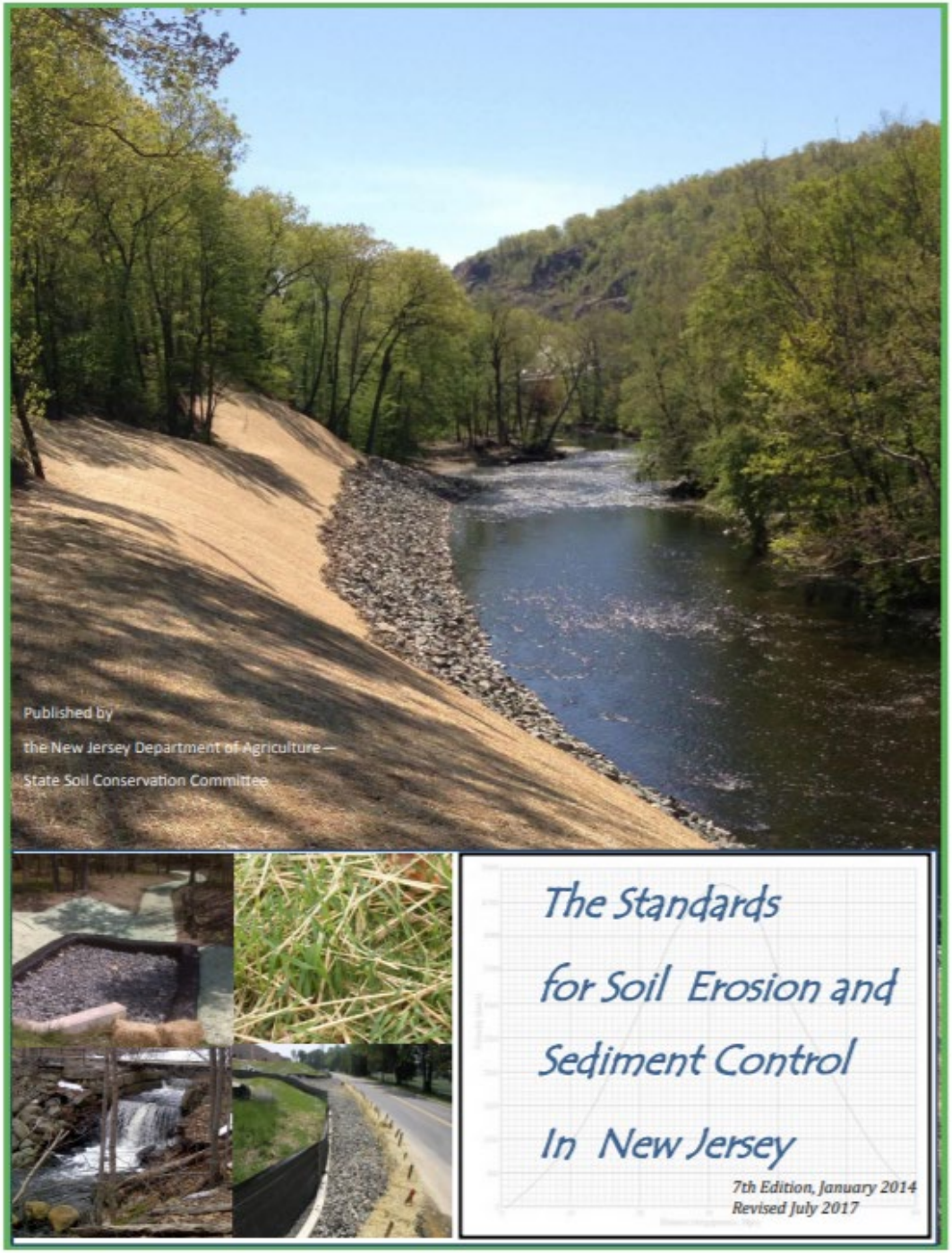
NOTE:
→ = Direction of Runoff
Surface Vegetation, Topsoil, Sand Layer & Stone Choker Course Not Shown

Not to Scale

N.J.S.A. 4:24-39 - NJ Soil Erosion and Sediment Control Act

Establishes and implements, through the State Soil Conservation Committee and the Soil Conservation Districts, in cooperation with the counties, the municipalities and the Department of Environmental Protection, a Statewide comprehensive and coordinated erosion and sediment control program to reduce the danger from stormwater runoff, to retard nonpoint pollution from sediment and to conserve and protect the land, water, air and other environmental resources of the State.

The Standards



Some Highlights

- Requires all development that disturbs more than 5,000 square feet to have a soil erosion and sediment control plan
- Requires practices such as:
  - Silt fences
  - Tree protection
  - Gravel tracking pads
  - Inlet protection

Vegetative Standards

- Acid Soils Management
- Dune Stabilization
- Maintaining Permanent Vegetative Cover for Soil Stabilization
- Stabilization with Mulch Only
- Stabilization with Sod
- Temporary Vegetative Cover for Soil Stabilization
- Topsoiling (revised July 2017)
- Tree Protection During Construction
- Trees, Shrubs and Vines

Engineering Standards

- Channel Stabilization
- Conduit Outlet Protection
- Detention Structures
- Dewatering
- Diversions
- Dust Control
- Grade Stabilization Structure
- Grassed Waterway
- Land Grading (revised July 2017)
- Lined Waterway
- Off-Site Stability Analysis

Engineering Standards

- Riprap
- Sediment Barrier
- Sediment Basin
- Slope Protection Structures
- Soil Bioengineering
- Stabilized Construction Access
- Storm Sewer Inlet Protection
- Stream Crossing
- Subsurface Drainage
- Traffic Control
- Turbidity Barrier


Unprotected, stockpiled soil
Eroded soil from unprotected construction sites
Vehicle tracked soil

- New Jersey League of Conservation Voters
- ANJEC (Association of NJ Environmental Commissions)
- Citizens' Climate Lobby
- New Jersey Environmental Lobby
- New Jersey Sierra Club
- Pinelands Preservation Alliance
- New Jersey Highlands Coalition
- Watershed Institute


QUESTIONS?