

# FINAL MA MS4 GENERAL PERMIT



NEWTON TEDDER

EPA REGION 1

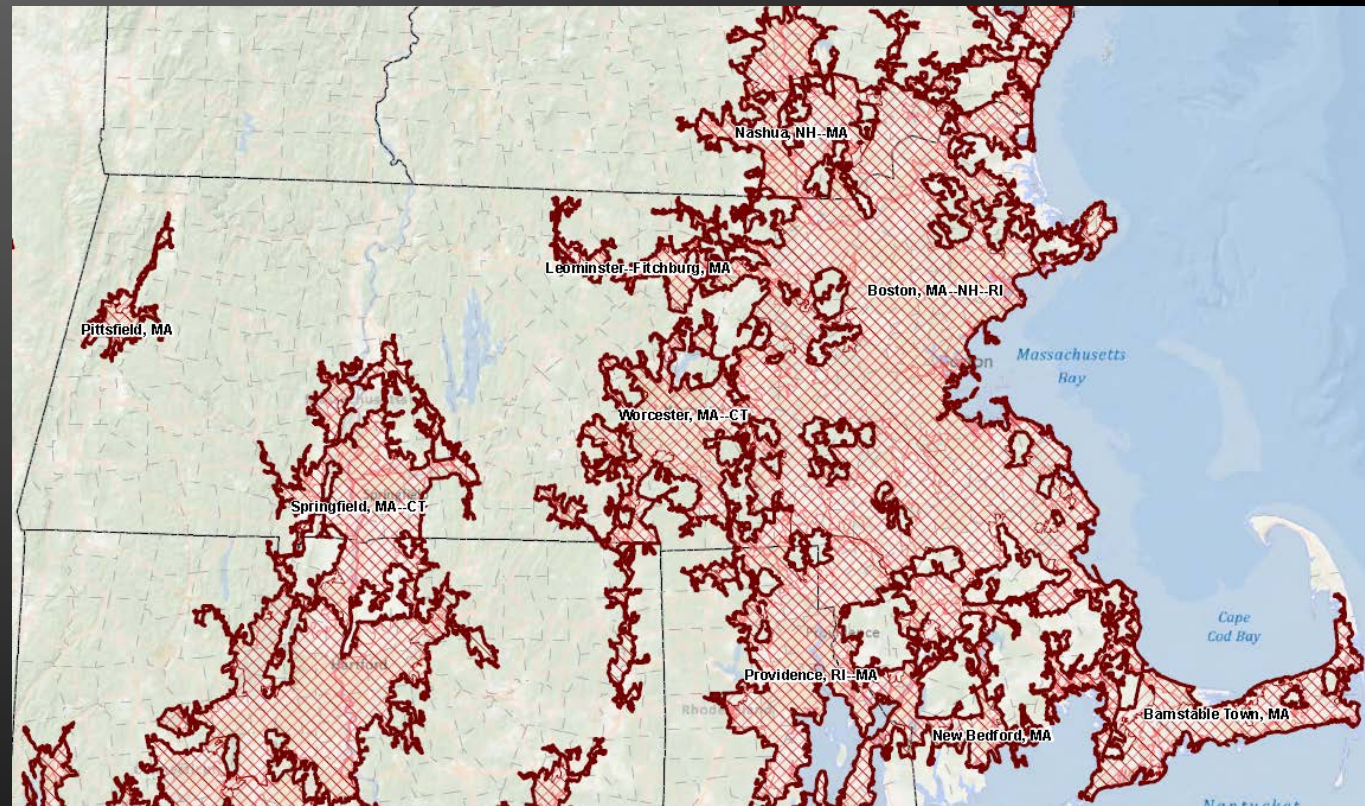
BOSTON

# PRESENTATION OVERVIEW

- HISTORY
- GENERAL OVERVIEW MS4 PERMIT REQUIREMENTS AND CHANGES FROM THE DRAFT PERMIT
- QUESTIONS

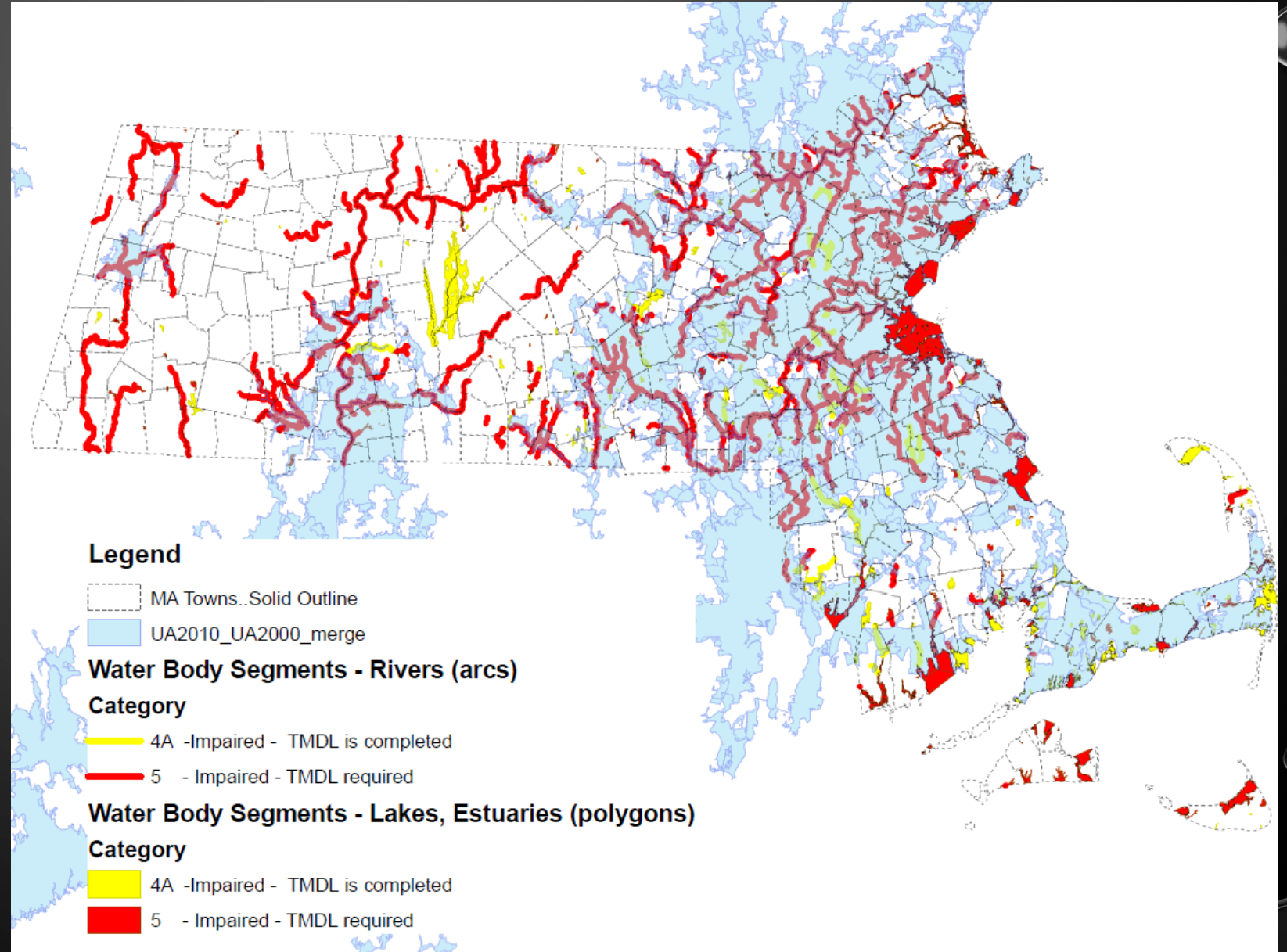
# NPDES PERMITTING FOR SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

- 1987 AMENDMENT MANDATED THAT STORMWATER WAS TO BE REGULATED UNDER THE NPDES PROGRAM
- PHASE II REGULATIONS REQUIRED THESE PERMITS – 1999
- 260 MUNICIPALITIES COVERED IN MASSACHUSETTS





STORMWATER  
DISCHARGES ARE  
CAUSING OR  
CONTRIBUTING TO AT  
LEAST OF THE **55%**  
IMPAIRMENTS IN ALL  
MASSACHUSETTS'  
ASSESSED WATERS



# MASSACHUSETTS MS4 GENERAL PERMIT

## SIX MINIMUM CONTROL MEASURES

- PUBLIC EDUCATION
- PUBLIC INVOLVEMENT
- ILLICIT DISCHARGE DETECTION & ELIMINATION
- CONSTRUCTION SITE RUNOFF
- POST-CONSTRUCTION STORMWATER MANAGEMENT
- GOOD HOUSEKEEPING/POLLUTION PREVENTION

## WATER-QUALITY BASED REQUIREMENTS

- IMPAIRED RECEIVING WATERS
  - NITROGEN OR PHOSPHORUS
  - METALS
  - SOLIDS
  - BACTERIA OR PATHOGENS
  - CHLORIDE
  - OIL AND GREASE
- W/ OR W/O A TMDL

# MCM -1 PUBLIC EDUCATION AND OUTREACH

## REQUIREMENTS

- FOUR AUDIENCES
  - RESIDENTS
  - BUSINESSES AND COMMERCIAL FACILITIES
  - DEVELOPERS
  - INDUSTRIAL FACILITIES
- TWO MESSAGES TO EACH AUDIENCE OVER THE PERMIT TERM

# MCM – 2 PUBLIC INVOLVEMENT AND PARTICIPATION

## REQUIREMENTS

- PUBLIC REVIEW OF SWMP
- ALL REPORTS AVAILABLE TO THE PUBLIC



# MCM 3 - ILLICIT DISCHARGE DETECTION AND ELIMINATION

- MORE PRESCRIPTIVE THAN 2003 PERMIT
- BASED ON REGION 1 ENFORCEMENT

## ACTIONS:

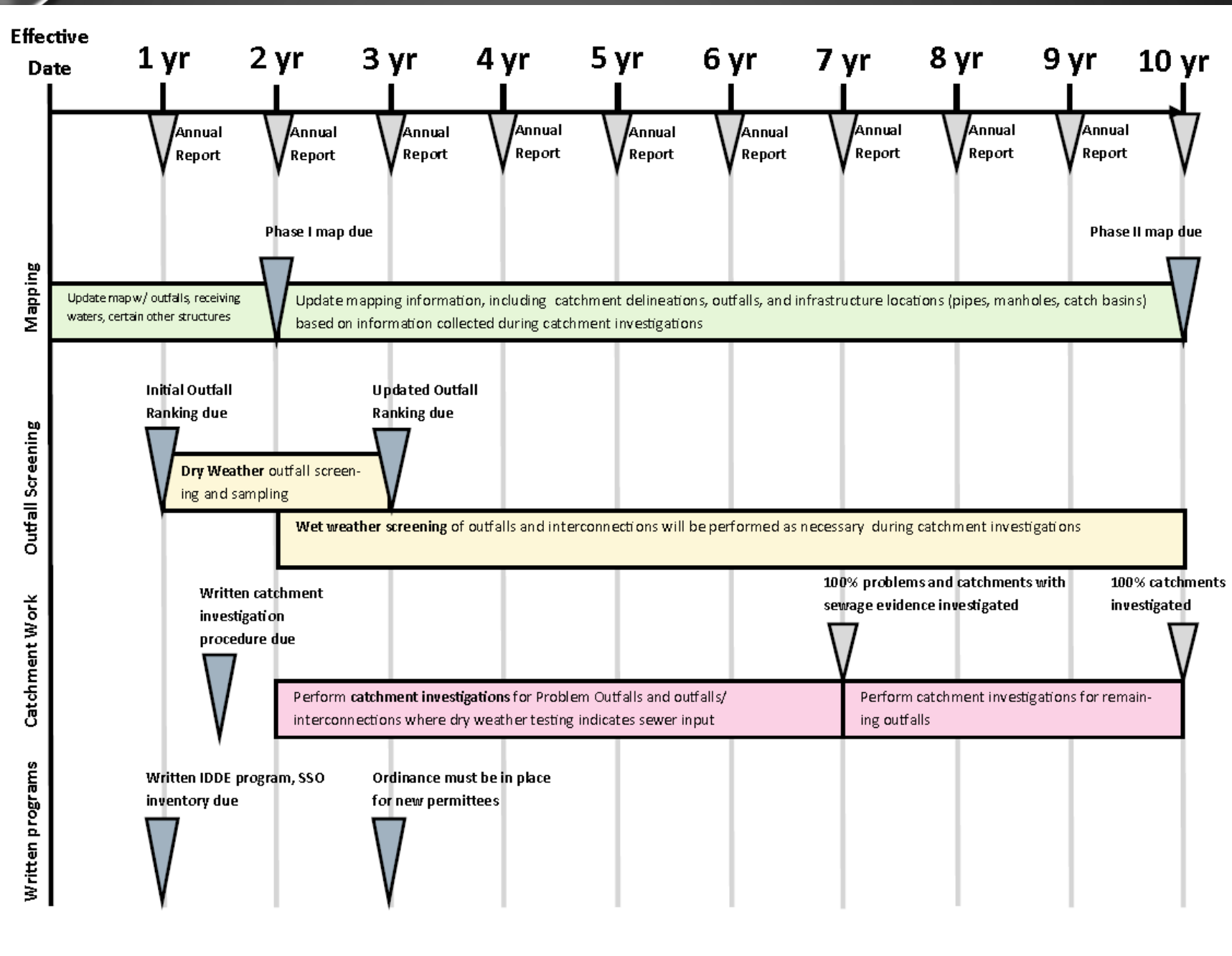
**EX: OVER 58 MILLION GALLONS PER YEAR OF SEWAGE REMOVED FROM STORMWATER IN THE BOSTON HARBOR WATERSHED**





- 10-YEAR IMPLEMENTATION TIMEFRAME





# MCM-4 CONSTRUCTION SITE STORMWATER CONTROL

## REQUIREMENTS

- ORDINANCE
- SITE INSPECTION PROCEDURES
- SEDIMENT CONTROL REQUIREMENTS
- REQUIREMENTS TO CONTROL WASTE
- SITE PLAN REVIEW

# MCM -5 POST CONSTRUCTION STORMWATER MANAGEMENT

## NEW DEVELOPMENT

- COMPLY WITH MASSACHUSETTS STORMWATER STANDARDS 1, 2, 3, 5, 6 AND 9 FULLY
- RETAIN THE FIRST 1 INCH OF RUNOFF FROM IMPERVIOUS AREA ONSITE OR DESIGN TREATMENT SUCH THAT 90% OF THE AVERAGE ANNUAL LOAD OF TOTAL SUSPENDED SOLIDS (TSS) AND 60% OF THE AVERAGE ANNUAL LOAD OF TOTAL PHOSPHORUS GENERATED FROM THE IMPERVIOUS AREA ON THE SITE IS REMOVED PRIOR TO DISCHARGE

## REDEVELOPMENT

- COMPLY WITH MASSACHUSETTS STORMWATER STANDARDS 1, 2, 3, 5, 6 AND 9 TO THE MAXIMUM EXTENT FEASIBLE
- RETAIN THE FIRST 0.8 INCH OF RUNOFF FROM IMPERVIOUS AREA ONSITE OR DESIGN TREATMENT SUCH THAT 80% OF THE AVERAGE ANNUAL LOAD OF TOTAL SUSPENDED SOLIDS (TSS) AND 50% OF THE AVERAGE ANNUAL LOAD OF TOTAL PHOSPHORUS GENERATED FROM THE IMPERVIOUS AREA ON THE SITE IS REMOVED PRIOR TO DISCHARGE
  - OFFSITE MITIGATION IS ALLOWED



# MCM – 5 POST CONSTRUCTION STORMWATER MANAGEMENT

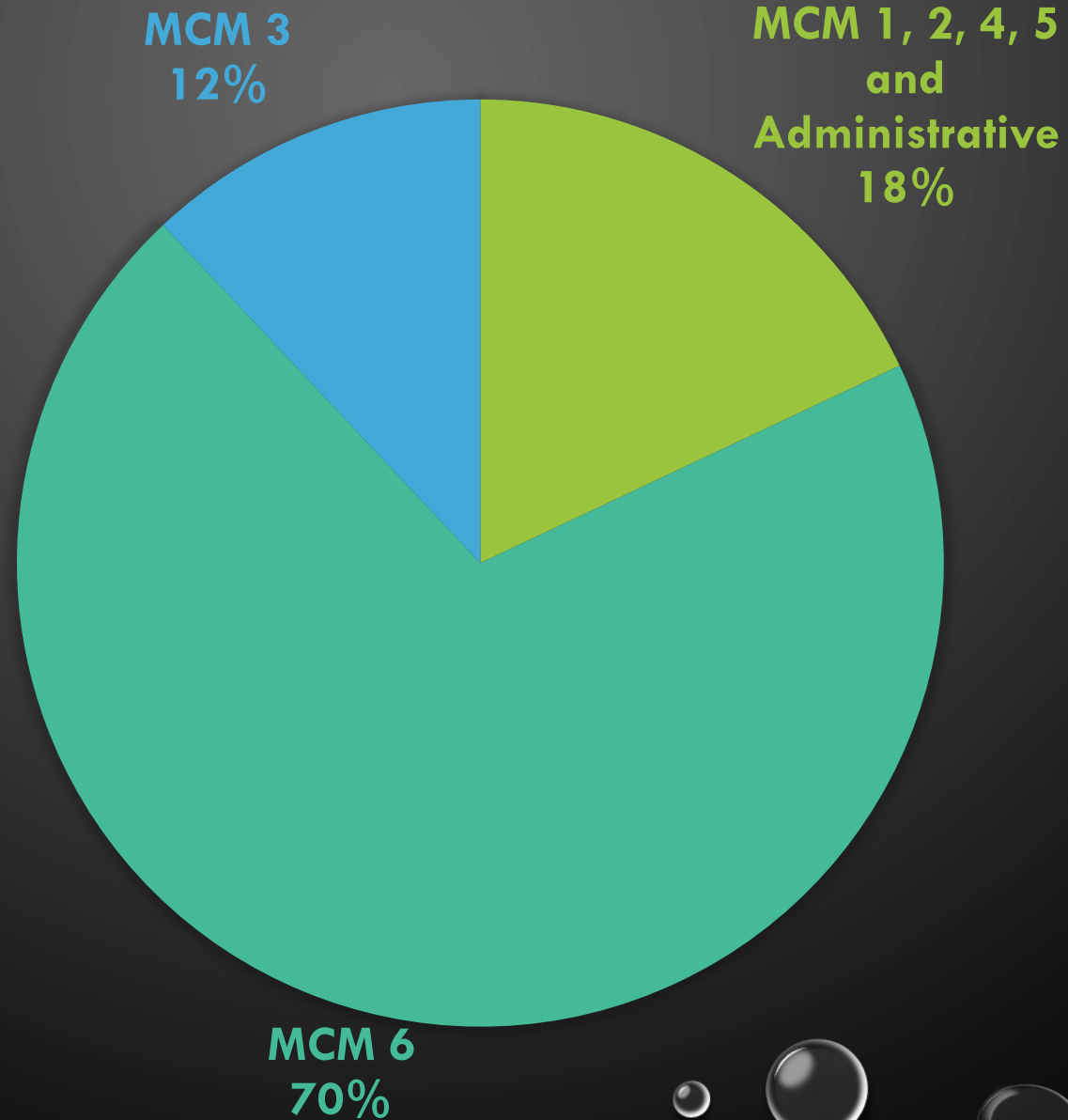
- REPORT ASSESSING STREET DESIGN AND PARKING AND ROADBLOCKS TO GI - 4 YEARS FROM PERMIT EFFECTIVE DATE
- INVENTORY OF RETROFIT SITES NOW REQUIRES IDENTIFICATION OF 5 SITES, NOT ALL SITES
- NO REQUIREMENT TO TRACK DCIA

# MCM – 6 GOOD HOUSEKEEPING

## REQUIREMENTS

- O&M PROCEDURES
- CATCH BASIN CLEANING
- STREET SWEEPING
- SWPPP

# PROGRAM COST BREAKDOWN



# IMPAIRED WATERS REQUIREMENTS

- NITROGEN
- PHOSPHORUS
- METALS
- SOLIDS
- BACTERIA OR PATHOGENS
- CHLORIDE
- OIL AND GREASE

ALL REQUIREMENTS IN  
APPENDIX H



# BACTERIA/PATHOGEN REQUIREMENTS

## REQUIREMENTS

- ADDITIONAL PUBLIC EDUCATION MESSAGES
- CATCHMENTS RANKED AS HIGH PRIORITY FOR IDDE

## MAJOR CHANGES

- EDUCATION MESSAGES CAN BE COMBINED WITH OTHER IMPAIRED WATERS REQUIREMENTS
- RELIEF FROM REQUIREMENTS AVAILABLE UNDER CERTAIN CONDITIONS

# NUTRIENT IMPAIRED WATERS

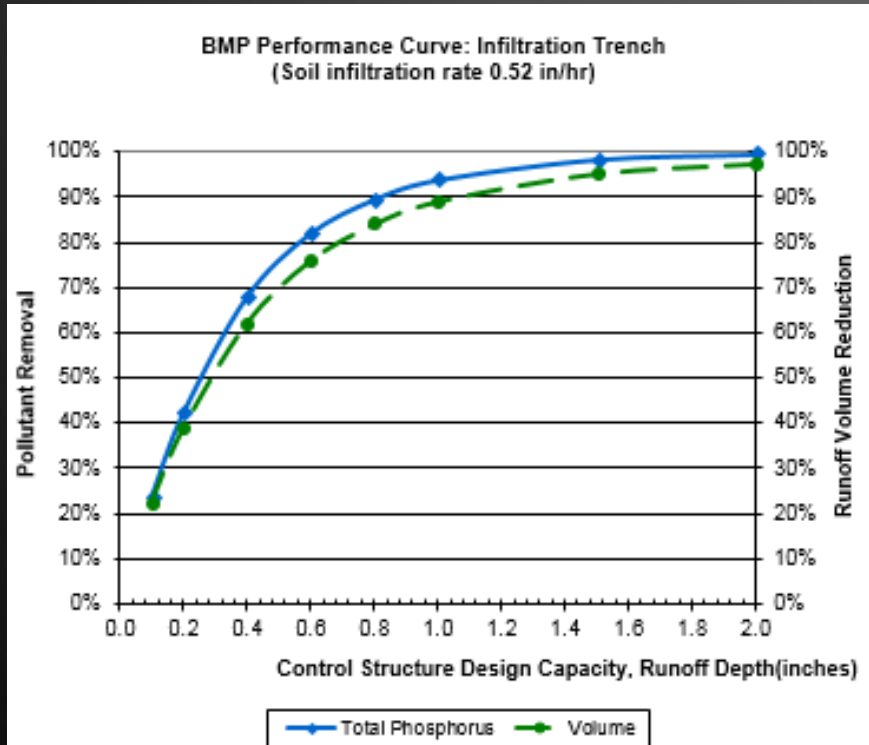
## REQUIREMENTS

- ADDITIONAL PUBLIC EDUCATION MESSAGES
- ADDITIONAL NEW AND REDEVELOPMENT REQUIREMENTS
- ADDITIONAL GOOD HOUSEKEEPING REQUIREMENTS
- NUTRIENT SOURCE IDENTIFICATION REPORT

## MAJOR CHANGES

- EDUCATION MESSAGES CAN BE COMBINED WITH OTHER IMPAIRED WATERS REQUIREMENTS
- RELIEF FROM REQUIREMENTS AVAILABLE UNDER CERTAIN CONDITIONS

# NUTRIENT SOURCE IDENTIFICATION REPORT



- Due Year 4
- Delineate potential N or P sources
- ID potential retrofits
- 1 demonstration project by year 6
- Tracking of N or P reductions through implementation of structural BMPs

# SEDIMENT, METALS OR OIL AND GREASE IMPAIRED WATERS

## REQUIREMENTS

- ADDITIONAL GOOD HOUSEKEEPING REQUIREMENTS
- ADDITIONAL NEW AND REDEVELOPMENT REQUIREMENTS

## MAJOR CHANGES

- RELIEF FROM REQUIREMENTS AVAILABLE UNDER CERTAIN CONDITIONS



# CHLORIDE IMPAIRED WATERS

## REQUIREMENTS

- SALT REDUCTION PLAN
- ADDITIONAL PUBLIC EDUCATION MESSAGE
- MECHANISM TO ENSURE PRIVATE INDUSTRY AND COMMERCIAL SITES COVER SALT PILES
- ADDITIONAL NEW AND REDEVELOPMENT REQUIREMENTS

## MAJOR CHANGES

- RELIEF FROM REQUIREMENTS AVAILABLE UNDER CERTAIN CONDITIONS

# RELIEF FROM IMPAIRED WATERS REQUIREMENTS

- RECEIVING WATER (INCLUDING DOWNSTREAM RECEIVING WATERS FOR NUTRIENT IMPAIRMENTS) DETERMINED TO BE NO LONGER IMPAIRED
- A TMDL INDICATES ADDITIONAL MUNICIPAL STORMWATER CONTROLS ARE NOT NECESSARY TO ADDRESS POLLUTANT OF CONCERN IN WASTE LOAD ALLOCATIONS
- THE PERMITTEE'S DISCHARGE IS DETERMINED TO BE BELOW APPLICABLE WATER QUALITY CRITERIA
  - (BACTERIA, METALS, SEDIMENT, CHLORIDE, OIL AND GREASE IMPAIRMENTS ONLY)

# TMDL REQUIREMENTS

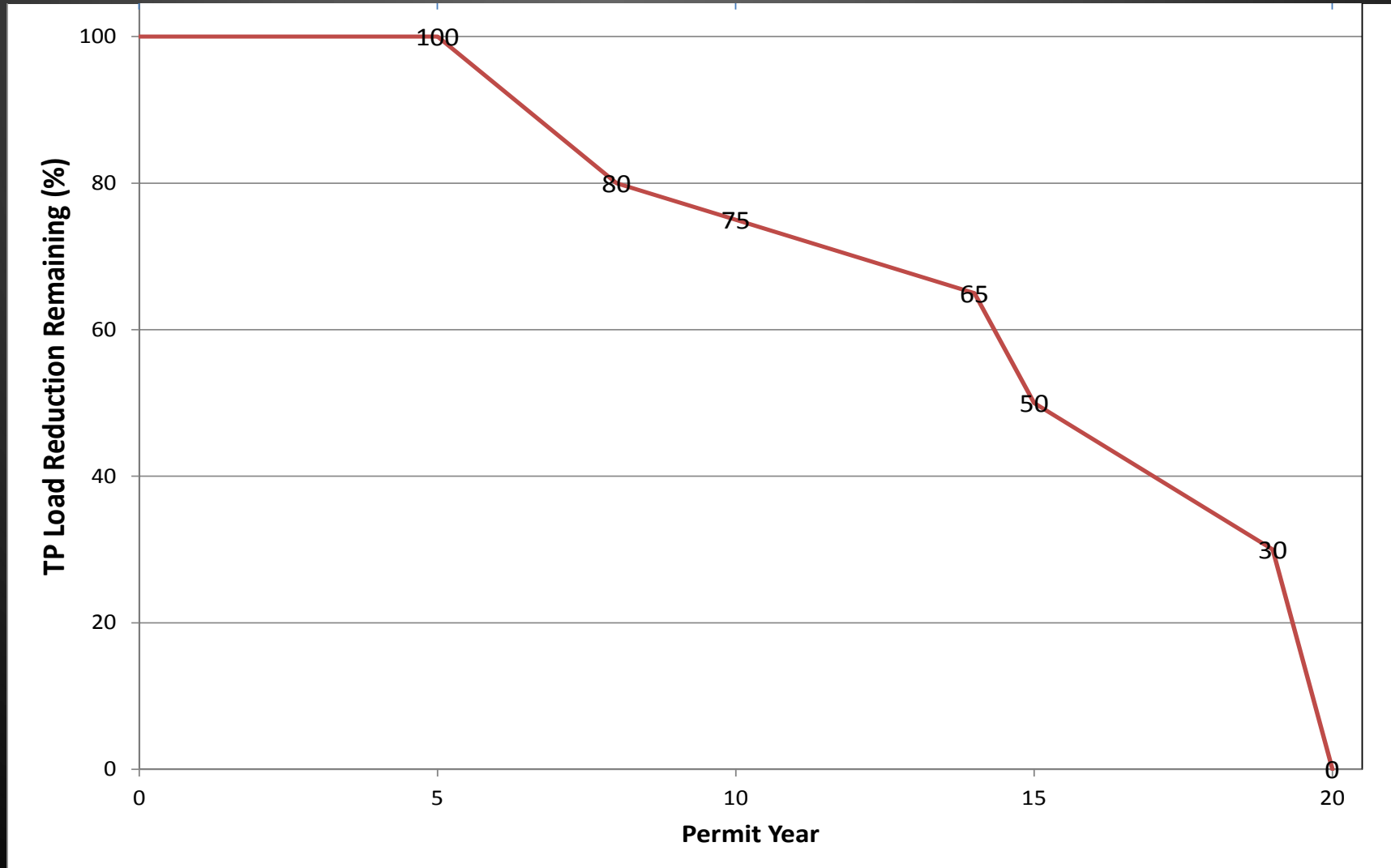
- BACTERIA AND PATHOGEN TMDLS
- CHARLES RIVER PHOSPHORUS TMDLS
- LAKE AND POND PHOSPHORUS TMDLS
- CAPE COD NITROGEN TMDLS
- ASSABET RIVER PHOSPHORUS TMDLS
- LONG ISLAND SOUND NITROGEN TMDL
- PHOSPHORUS AND METALS TMDLS FOR RHODE ISLAND WATERS

# CHARLES RIVER TMDL

<b>5 years after permit effective date</b>	<b>5-10 years after permit effective date</b>	<b>10-15 years after permit effective date</b>	<b>15-20 years after permit effective date</b>
<b>Create Phase 1 Plan</b>	<b>Implement Phase 1 Plan</b>		
	<b>Create Phase 2 Plan</b>	<b>Implement Phase 2 Plan</b>	
		<b>Create Phase 3 Plan</b>	<b>Implement Phase 3 Plan</b>



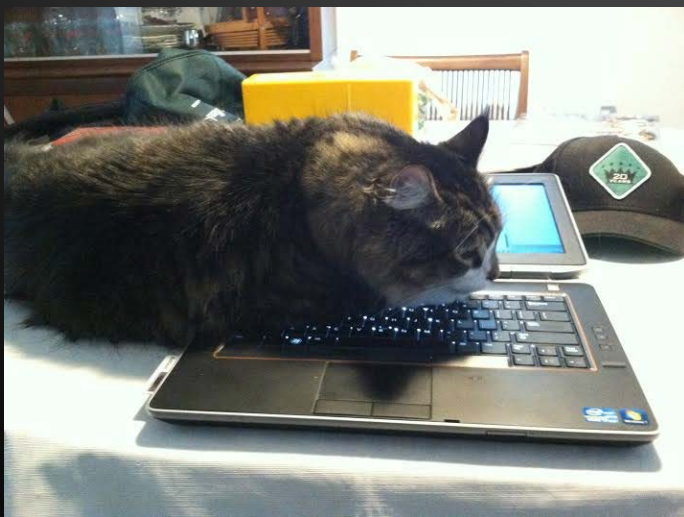
# IMPLEMENTATION SCHEDULE



# BATT AUTOMATED CALCULATIONS

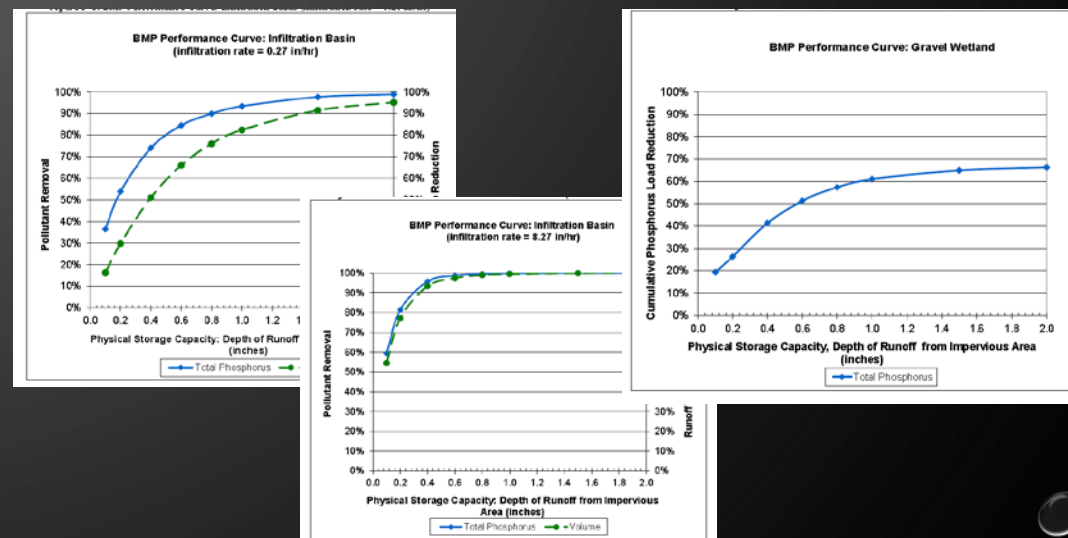
## LAND AREA POLLUTANT LOADING:

- BASED ON LAND USE, SOIL TYPE, IMPERVIOUS AREA
- ANNUAL PHOSPHORUS LOAD EXPORT RATES (PLERS) FROM PERMIT BUILT INTO TOOL



## BMP POLLUTANT REDUCTIONS:

- EPA/TETRATECH WORK ON BMP CURVES FOR STRUCTURAL BMPS IN PERMIT AND BUILT INTO TOOL



- LITERATURE VALUES FOR NON-STRUCTURAL BMPS FROM PERMIT BUILT INTO TOOL

# RELIEF FROM TMDL REQUIREMENTS

- IF THE TMDL HAS BEEN MODIFIED/REVISED/WITHDRAWN WITH EPA APPROVAL
- A NEW TMDL INDICATES ADDITIONAL MUNICIPAL STORMWATER CONTROLS ARE NOT NECESSARY TO ADDRESS THE POLLUTANT OF CONCERN IN THE WASTE LOAD ALLOCATIONS

# ASSISTANCE TOOLS AND WORKSHOP/WEBINAR IDEAS

## THINGS WE HAVE

- OPTI-TOOL
- BATT
- COST ESTIMATOR SPREADSHEETS
- IDDE TIMELINE
- MASSDEP WEBSITE

## OTHER IDEAS

- TIMELINE FOR PERMIT DELIVERABLES
- PERMIT CHECKLISTS
- TEMPLATES FOR ANNUAL REPORT, SWPPP  
OTHERS?
- TARGETED WORKSHOPS /WEBINARS ON  
SPECIFIC TOPICS (E.G.: IDDE)

# TIMING

- EFFECTIVE DATE **JULY 1, 2017**
- NOTICE OF INTENT DUE **SEPTEMBER 29, 2017**
- STORMWATER MANAGEMENT PLAN **JULY 1, 2018**



# YEAR 1 REQUIREMENTS

REQUIREMENT	TASK	PERMIT SECTION FOR REFERENCE
Notice of Intent (NOI)	Prepare and Submit Notice of Intent for Permit Coverage (NOI) * Within first 90 days	Appendix E
Catch Basin Cleaning	Clean catch basins to ensure no catch basin is more than 50% full. Document catch basins inspected and cleaned, including total mass removed and proper disposal.	2.3.7 a iii b
Street Sweeping	Sweep all streets (rural exceptions apply) a minimum of once a year in the spring. Each annual report shall include number of miles cleaned and volume or mass of material removed.	2.3.7 a iii c
Develop Infrastructure O&M Procedures: Winter Road Maintenance	Establish written procedures for winter road maintenance including storage of salt and sand; minimize use of sodium chloride and other salts; ensure snow disposal activities do not result in disposal of snow into surface waters.	2.3.7 a iii e
Prepare and Submit Stormwater Management Plan (SWMP)	Develop/update written SWMP.	1.10.a & 1.10.2
Illicit Discharge Detection and Elimination (IDDE)	Complete written IDDE procedures and rank outfalls for IDDE investigation Document Sanitary Sewer Overflows to the MS4	2.3.4.6 & 2.3.4.7 2.3.4.4.b
Construction Site Runoff Control	Create written procedure for inspecting construction sites for proper sediment controls	2.3.5

# QUESTIONS

EPA MA MS4 WEBSITE:

[HTTPS://WWW3.EPA.GOV/REGION1/NPDES/STORMWATER/MS4\\_MA.HTML](https://www3.epa.gov/region1/npdes/stormwater/ms4_ma.html)

Newton Tedder

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