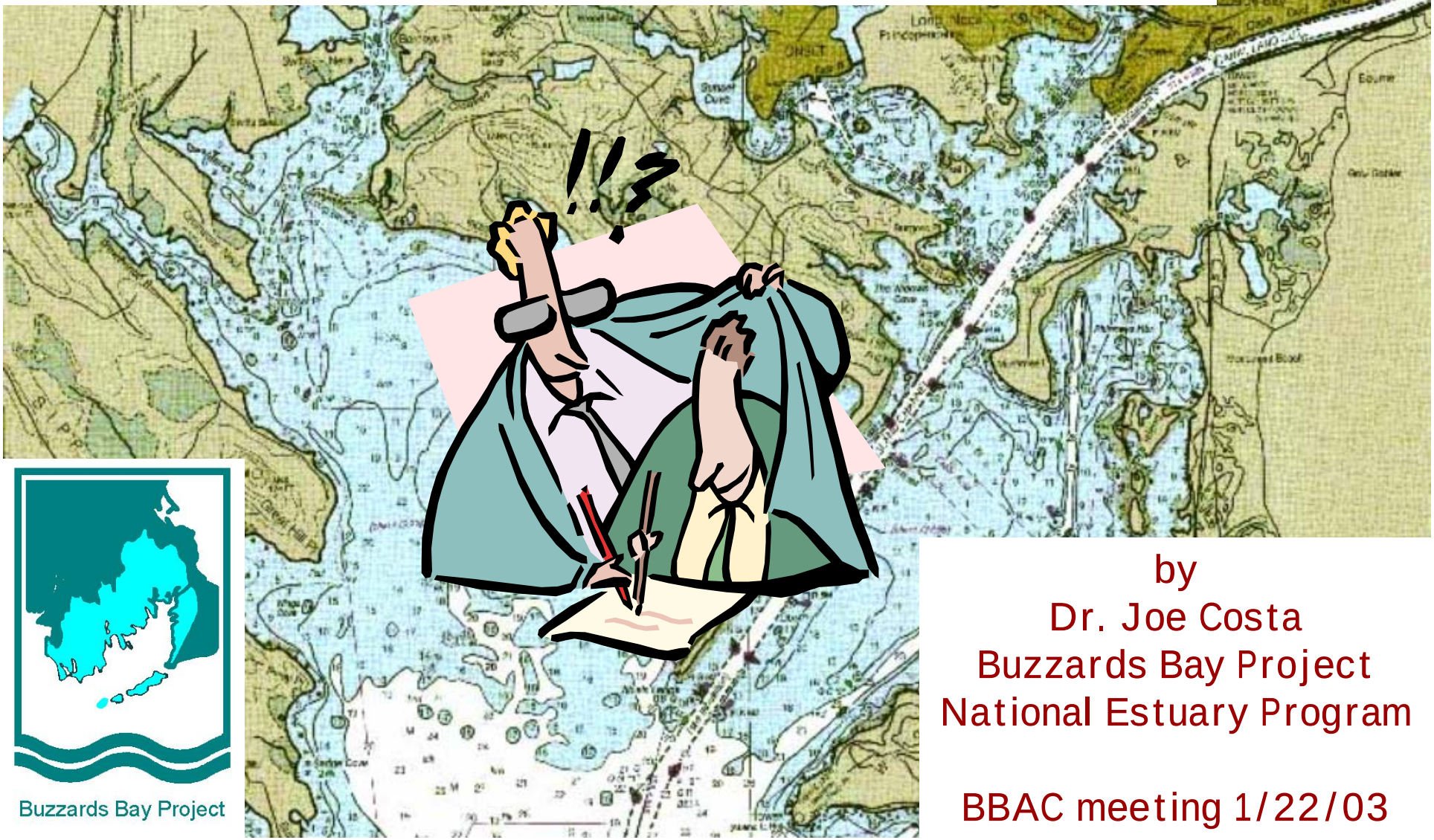
Phase II Storm Water NPDES Program

Preparing your Notice of Intent (NOI) and Storm Water Management Program (SWMP)



Buzzards Bay Project

by
Dr. Joe Costa
Buzzards Bay Project
National Estuary Program

BBAC meeting 1/22/03

Technical assistance from the Buzzards Bay Project….

How to Launch a PWC

1. Load your PWC in the back of the SUV, and drive to the nearest launch ramp. Open the back doors of the SUV and back into the water. The PWC should float out into the water.

2. Once the PWC is afloat and the SUV is half filled with water, drive the SUV back onto the ramp. It helps to have someone stand on the walkway and point toward shore.

3. If at any point the SUV starts to disappear from view, you may be fairly certain that the operation is not going as planned. However, this is a viable alternative to crowded parking conditions at most ramps.

4. With your craft safely launched and engine revved, you're now ready for a great day on the lake.

More Information…

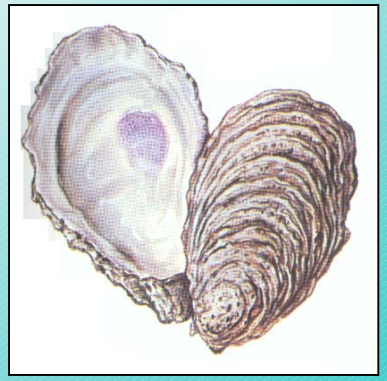
Can be found website: **WWW.BUZZARDSBAY.ORG**

-Go to the storm water page; has links to all relevant DEP and EPA Phase II permit pages.

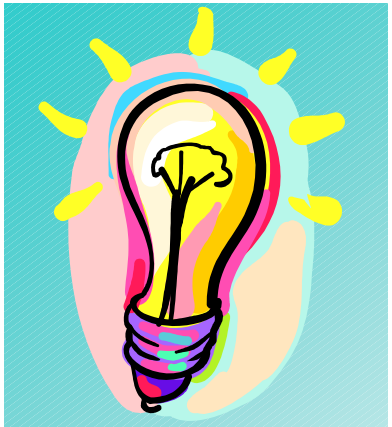
You already Know:

Untreated storm water Causes Environmental Degradation

Rainwater running off streets, parking lots, roofs, lawns, golf courses, agricultural land and other pervious and impervious areas carry contaminants into bays, rivers, and ponds.



… and Storm water has often been considered to be a “Non-Point Source” of Pollution



EPA's Solution to assist you: Expand the NPDES* program to address smaller storm water sources as "point sources" and require point source permits

"Phase I" of this effort to manage storm water began in 1992, with expansion in 1998. Phase I focused on municipalities greater than 100,000, certain construction activities, and industrial sites.

"Phase II" expands the program & requires permit applications to be submitted by March 10,2003.

*National Pollution Discharge Elimination System, traditionally an outfall pipe permitting program

Phase II Permit* Goals

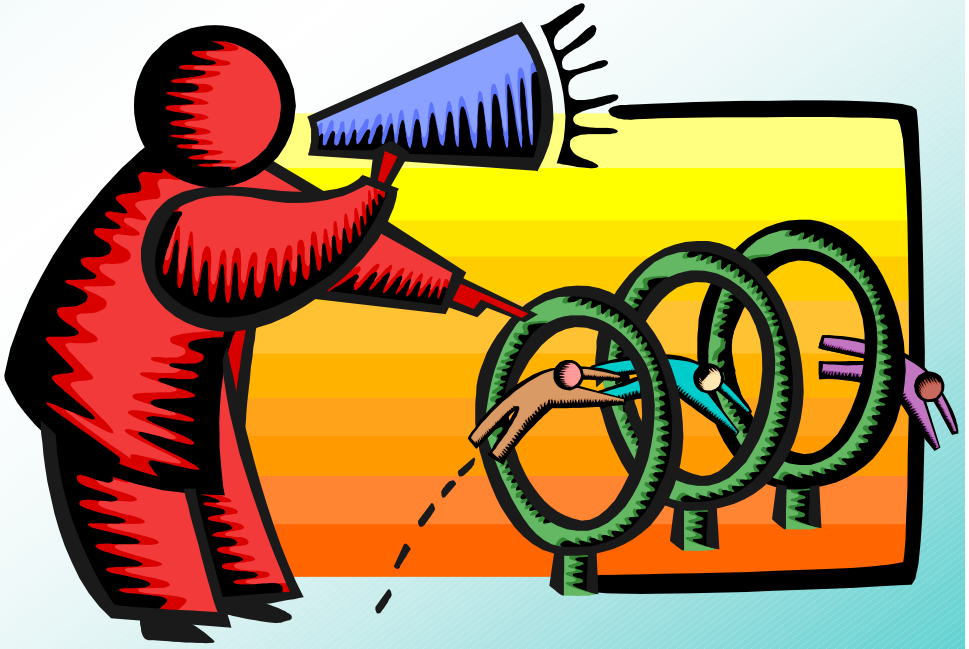
"Reduce the discharge of storm water pollutants to the "maximum extent practicable."

Availability of $ and other resources define what is "practicable."

* An NPDES permit renewed every five years in perpetuity.

Phase II Permit Goals:
What they really want

Take responsibility for managing existing and future storm water in your community.



Keep in mind that this is a national program, and many required actions area already implemented in Massachusetts. This is not the case in many other states.

Under Phase II you must apply for a permit, called a "Notice of Intent" (or NOI)

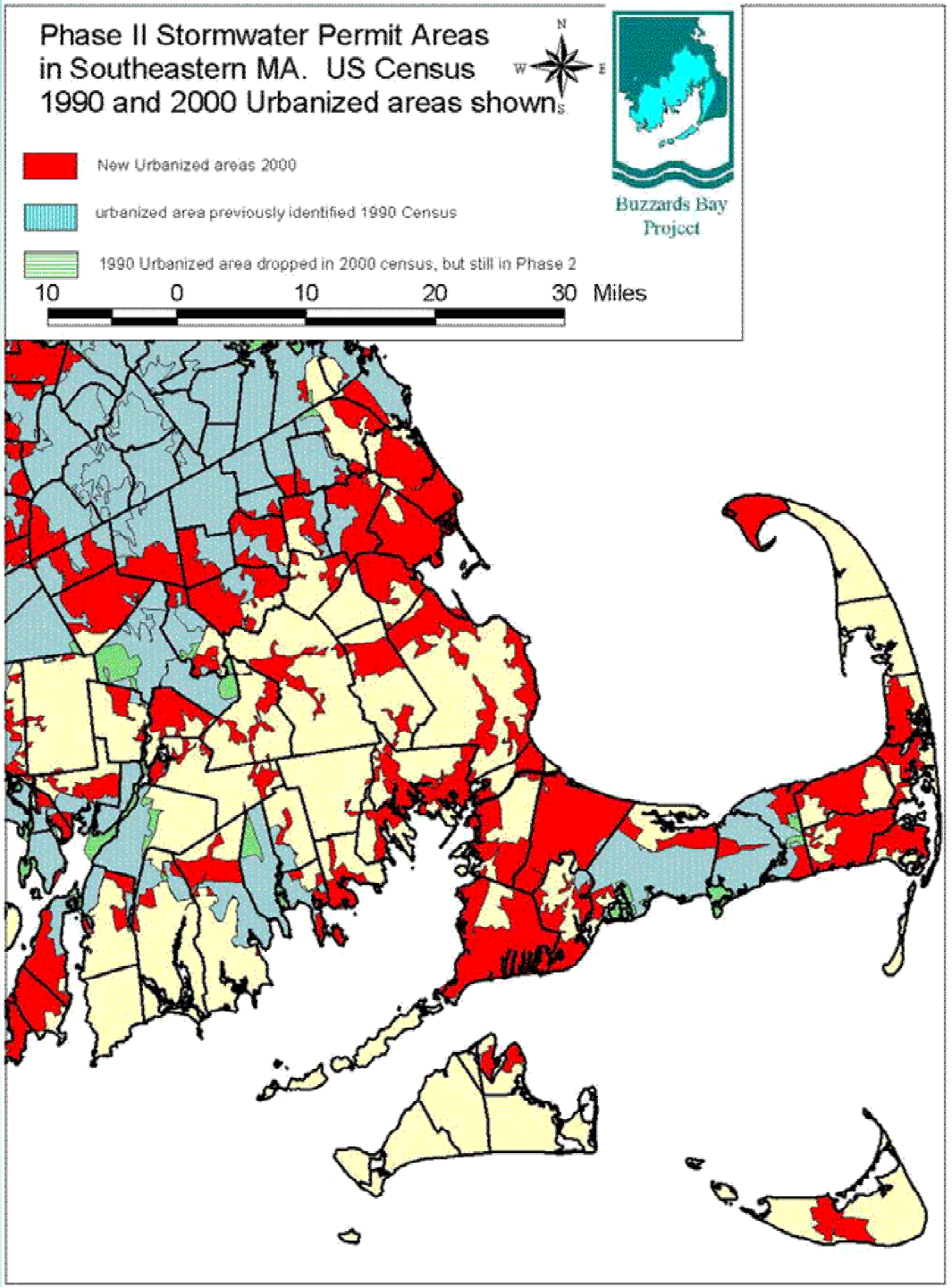
Smaller municipalities with Census defined "urbanized areas" must submit a permit application for their **m**unicipal **s**eparate **s**torm **s**ewer **s**ystems, or "MS4s" by March 10, 2003.

In plain English, all those catch basins hooked up to storm water pipes discharging to wetlands and surface waters, and even road cuts, cumulatively equal your "MS4"

Urbanized areas are defined by US Census definitions*

New US Census definitions and criteria for Urbanized Areas brought an additional 67 MA municipalities to the program in July 2002

**** But EPA can expand the coverage at a later date.***



Storm Water Permits are also required for ….

- Municipalities must submit separate storm water permit applications for their DPW garages, waste transfer stations, sewage treatment plants (design flow >= 1MGD), and other "Industrial" site. (Multi-Sector General Permit or MSPG storm water permit; separate application for each facility backed up by separate Storm Water Pollution Prevention Plan (SWPPP).

- Owners of private industrial sites

- Developers who alter 1 or more acres of land (disturbed area), includes cumulatively in segmented projects as part of "common plan," subdivisions,shopping plazas)

Some of these were required under Phase I, some, like Construction, have lower thresholds in Phase II.

Very important:
Industrial MSGP applications are now required for all municipal "industrial" sites whether or not they are in the urbanized area!!!!

-DPW garages with maintenance or fueling operations, waste transfer stations, sewage treatment plants (design flow >= 1MGD), landfills, salt storage, etc.

Each has its own NOI! (2 pages) and SWPPP

Exceptions: If there is no discharges to wetlands or waters on or off site.
There is also a "no exposure" variance.

Storm Water Permits & NOI filings not required for existing….

- **Commercial development (Shopping Plazas, Malls, etc.)**

- **Private roads and development**

But you may have inherited their problems if they tied into a municipal storm drain, even via overland runoff.

New development projects however will have to file a NOI under the Construction General Permits program*

any new construction disturbing over 1 acre, even cumulatively in common projects

Phase II permits are required only for storm water discharges to Federal Wetlands in urbanized areas

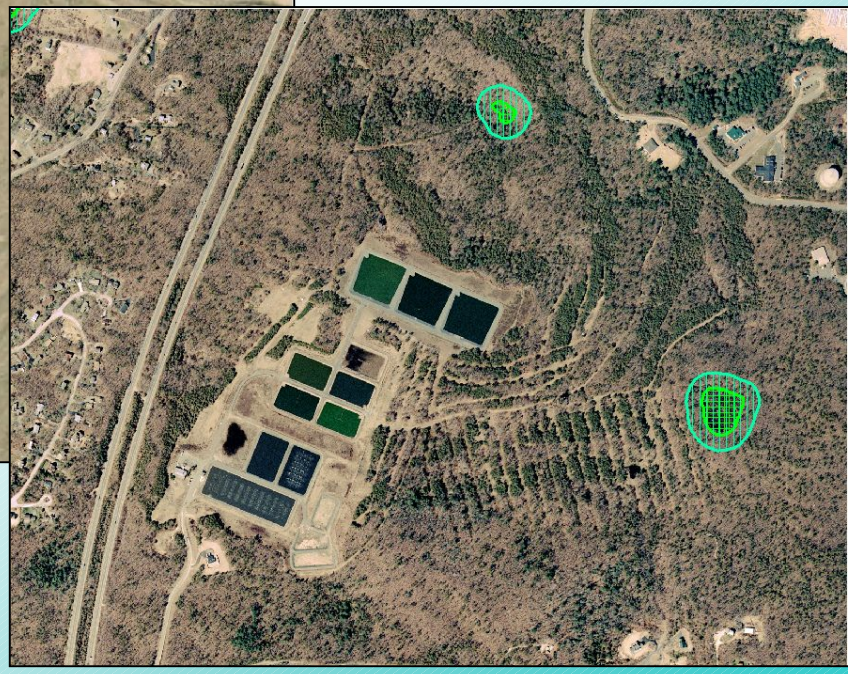
Federal Wetlands or "Waters of the United States" include all surface waters and their surrounding bordering vegetated wetlands or "BVWs".

"Isolated Wetlands", "Vernal Pools", and constructed storm water basins or isolated constructed wetlands for storm water treatment are not federal wetlands.

If your storm water goes to another MS4 (even by sheet flow) or a pipe that makes its way to a federal wetland, you must file for a permit.

EPA states: "If all of the storm water … is captured on-site and allowed to evaporate, soak into the ground on-site, or is used for irrigation, you do not need a permit.Under the Clean Water Act, it is illegal to have a point source discharge of pollutants to a water of the United States that is not authorized by a permit. If there is a potential for a discharge, you need to apply for a permit. Therefore, the best management practices that you use to keep the storm water on your site must be effective under any size storm."

Are these no file examples?
Falmouth's Waste Transfer Facility and
Sewage Treatment Facility may be possibilities



Each separate Phase II NOI filing requires a separate Storm Water Management Program (SMP) or Storm Water Pollution Prevention Plan (SWPPP)

187 MA municipalities in Phase 2
NOI filings MS4, and private and municipal MSPG permits
+ developer NOIs, government agencies and authorities
=many NOIs, much effort, considerable cost

2 MA DEP and 1 EPA staffers dedicated to the MA program and NOI permit review

= heavy agency workload
(construction general permits go only to EPA Washington)

But do turn in your NOIs by March. Non-compliance could result in $10,000 per day fines (at least theoretically)

Phase II Staff Reviewing Permits for Massachusetts

DEP:
Ginny Scarlet (508) 767-2797
Linda Domizio at (508) 849-4005

EPA:
David Gray (617) 918-1577

What parts of the urbanized areas must a town be concerned with?

Only municipally owned streets and drainage systems (or contributors to your systems).

Not state highways, private subdivisions, or commercial plazas, unless they are tied to a storm pipe or have sheet flow to your streets or storm drain systems.

NOI permit application page 1: Other MS4s

List:

1) State Highway Names

2) Any "Industrial" Sites known to you to be filers (call DEP or EPA for any industrial sites in your town that have filed in the past).

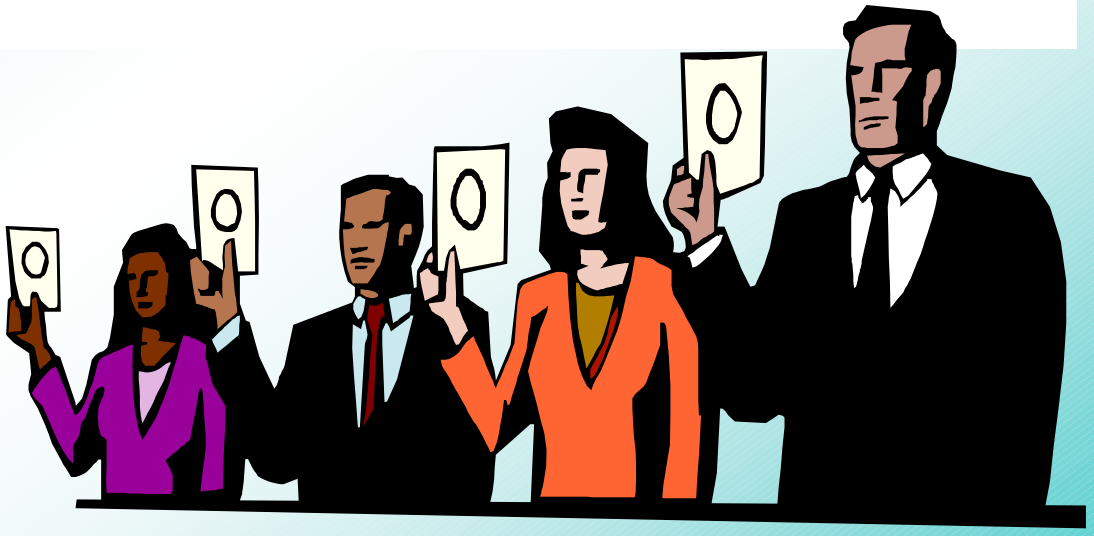
NOI page 1: Listed Species and Critical Habitat Certification

Check list of US endangered species (Bald Eagle, Piping Plover, Roseate Tern) and indicate whether storm water from your MS4 in your UA affects these species or there habitat. More guidance to follow.

Unresolved: How will Massachusetts Rare and Threatened species be addressed.

NOI page 1: Essential Fish Habitat Certification

Criteria unresolved at this time.



NOI page 2: Historic Places Certification

Check your list of historic places.

Is storm water from your urbanized area MS4 adversely affecting these properties?

NOI page 2: Names of receiving waters

Use names of ponds, streams, and bays on USGS topographic maps

Determine if they are listed as impaired on the 303d list (use 1998 list of "impaired waters", or proposed 2002 303d list of "Category 5 waters requiring a TMDL." Use same names as shown in this report.

For all other ponds, streams, and bays not on the 303d list write "not assessed."

NOI page 3: Certification: Who signs the NOI?

Whoever signs the NOI does so "under penalty of law" that the information is "true, accurate, and complete."

Selectmen or mayor could sign, or their designee.

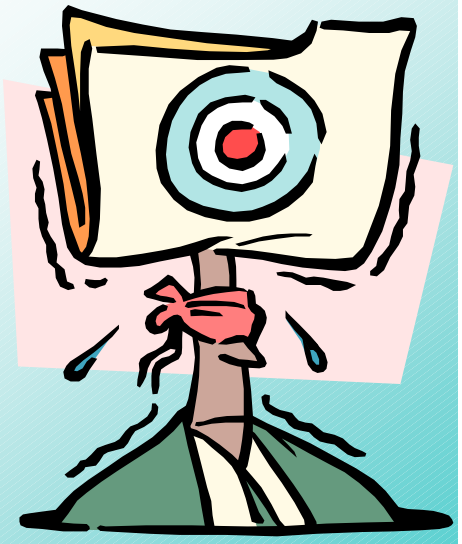
For example the Board of Selectmen could vote to have their administrator or DPW director sign the document.

The 6 “Minimum Control Measures:”

The Meat and Potatoes of the Permit

1) Commit only to what you know you can accomplish on the permit NOI application and in your Storm Water Management Program…

*…because whatever you say you will do, you will be held to**



*(*although you are allowed to reevaluate your plan at any time to revise your goals)*

“Minimum Control Measures:”

Hundreds of Suggested “BMPs,” Few Requirements

‘You must design a storm water management program that:

Reduces the discharge of pollutants to the "maximum extent practicable" (MEP);

Protects water quality; and

Satisfies the appropriate water quality requirements of the Clean Water Act.’

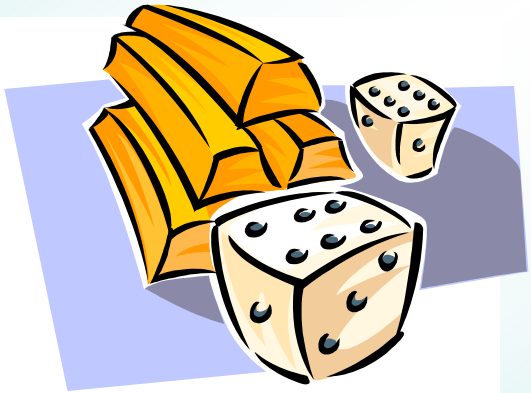
Minimum Control Measures must also have “measurable goals”

It could be as simple as counting calls, permits issued, or flyers handed out….

… or as ambitious as setting targets for opening shellfish beds or conducting public surveys.

Minimum Control Measures:
Be realistic,

…your management plan is a work in progress.



Don't say:

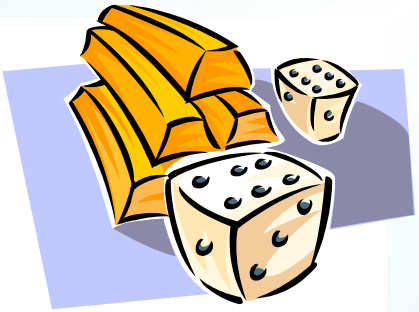
"The town will purchase a stormdrain vacuum truck by Spring 2004."

Do Say:

"Each spring at Town Meeting , the DPW will seek funding for a stormdrain vacuum truck".

If you don't get it in your first five-year permit, you can always keep this goal when your permit is renewed in five years.

Phase II Plan Overview: Who Does What?



In most Buzzards Bay towns, the breakdown of responsibility for actions in the stormwater management program will vary, but most typically will be as follows:

The DPW will map storm drains and catch basins
The Board of Health and DPW will detect and remove existing illicit connections to the stormwater system
The Conservation Commission and Planning Board will better manage future stormwater discharges by amending regulations or proposing new bylaws (if necessary), to ensure adequate stormwater treatment and management to meet the federal permit thresholds (alteration of 1 acre or more of land)
The Town Administrator will oversee the public outreach requirement and ensure compliance with the Public Meeting laws
The Board of Selectmen will establish a Stormwater Management Comittee of town officials and interested residents to guide and refine the program during the next five years

Minimum Control Measures for 1. Public Outreach

Requirement:

"You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff."

Recommended Bare Minimum Public Education BMPs

BMP 1-1: Mail flyer with {tax bills, town census form; water bill} about the program. Also send to libraries. Flyer will explain what the town is doing, what residents can do (or shouldn't do), and also invite public participation, report illicit connections (that is, this flyer should address the other control measures).

(measurable goal: printing and mailing xx,000 flyers by a certain date)

BMP 1-2: Selectmen will hold a public hearing each {spring} on town progress in fulfilling its storm water management goals and invite public input.

(measurable goal: meeting held, save newspaper clippings)

Other things to consider: Add page to your website, establish pollution hotline, implement storm drain stenciling program, school curricula, cleanup days, public events, etc.

Minimum Control Measures for
2. Public Participation/Involvement

Requirement:

"You must, at a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program."

Comply with applicable public notice requirements; and

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Recommended Bare Minimum Participation/Involvement BMPs

BMP 2-1: The town will ask for public input during its annual hearing on its storm water program.
(measurable goal: advertise public hearing, save newspaper clippings, follow-up article)

BMP 2-2: Establish a municipal storm water management committee composed of town officials from each relevant department. Invite citizen applications for this committee (appointed by Selectmen)
(measurable goal: advertise position openings, schedule meetings of storm water committee, notify public about meetings pursuant to open meeting law, save newspaper clippings)

BMP 2-3: Invite the public to report illicit connections to storm water
(measurable goal: include in outreach flyer, the phone number for Board of Health and DPW to report illicit connections, keep track of the number of calls received each year)

Other Things to consider: Involve public in storm drain stenciling, stream cleanup and monitoring, volunteer monitoring, reforestation programs, wetland plantings, Adopt-A-Stream programs. Any liability issues?

Minimum Control Measures for
3. Illicit Discharge Detection & Elimination

Requirements:

You must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at Sec. 122.26(b)(2)) into your small MS4.

Develop a storm sewer system map, showing the location of all outfalls and the names and location of all waters.

Develop a plan to detect and address non-storm water discharges, including illegal dumping into the MS4 (e.g. illicit septic tank overflow pipes into storm drains).

Prohibit (through an ordinance, etc.) non-storm water discharges into the MS4, and establish enforcement procedures;

Educate of town officials, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste

These are not Illicit Discharges (unless you identify them as a problem)

Water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water

Discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

These <u>are</u> Illicit Discharges to storm water

"illegal and/or improper connections to storm drainage systems and receiving waters"

Septic system overflow pipes
Washing Machine Discharges,
Commercial garage drains,
Direct Dumping

But these illicit discharges are already illegal discharges, so are any new ordinances or bylaws really required???
Local ordinances cannot legislate access to private property, a court order or warrant may be required. However, BOHs already can obtain administrative search warrants.

Just say existing BOH regulations already prohibit these discharges so no new bylaws will be implemented?

Recommended Bare Minimum
Illicit Discharge Detection and Elimination

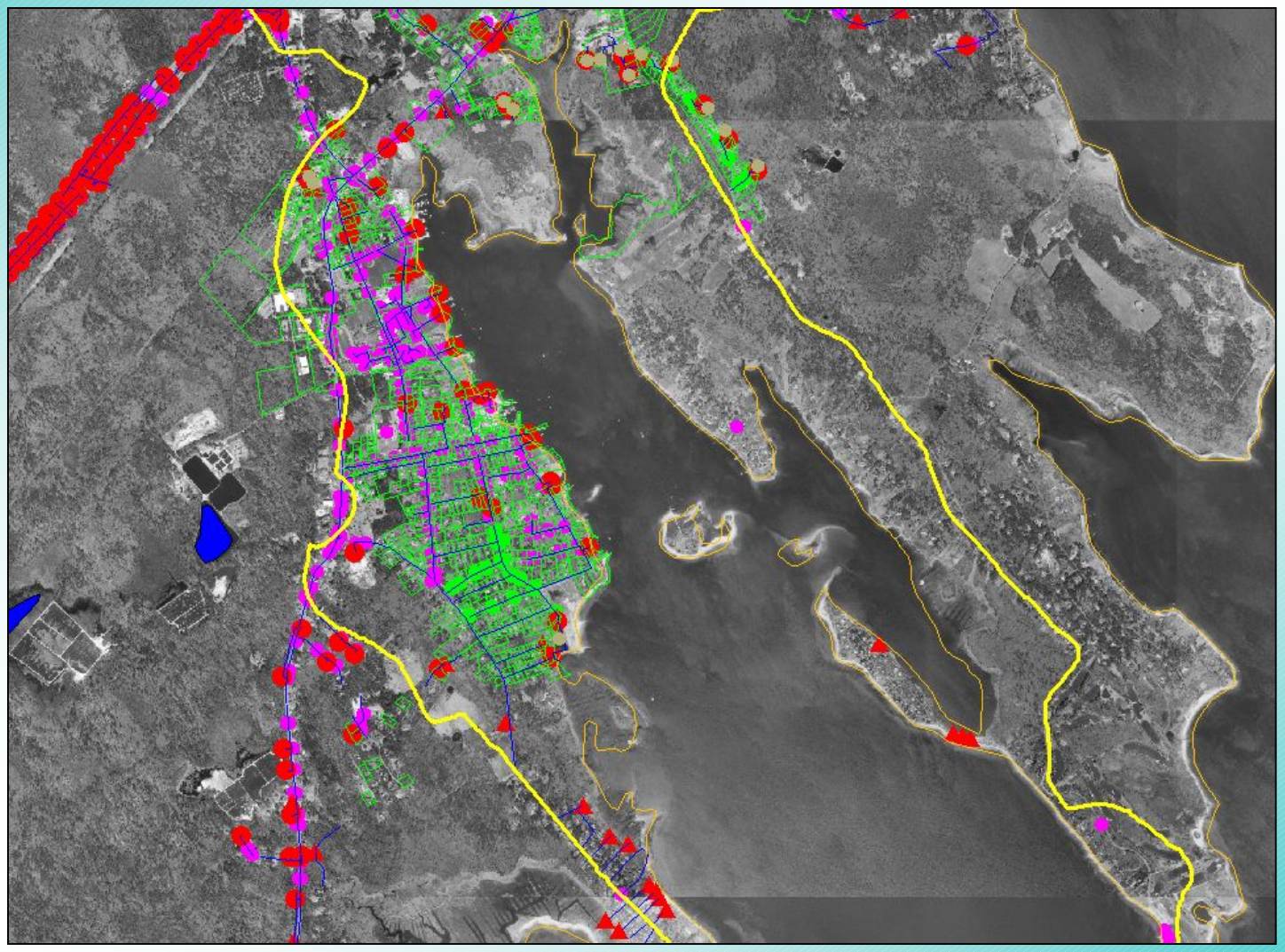
Illicit detection and response BMP:

Low cost version:
BMP 3-3: During surveys, DPW staff will note whether unusual odors, or non-storm water materials are being discharged, or note unusual pipes (e.g. washer machine discharges. Indications of elevated contaminant levels will initiate additional evaluations {smoke testing, dye tablets, storm drain inspections} by DPW and BOH staff to the extent that funds are available. Town staff will also investigate reported illicit connections by the public.

Expensive version:
BMP 3-3: DPW or BOH staff will systematically test, during both dry weather conditions, for bacteria and {contaminant} in every storm water discharge inventoried. High bacteria or other contaminant levels will be investigated with pipe creeper cameras, additional upgradient testing, smoke testing, …

(measurable goals: a schedule for inspection and evaluation)

Mapping Discharges: Technical assistance and support from the Buzzards Bay project and Buzzards Bay Action Committee



Recommended Bare Minimum
Illicit Discharge Detection and Elimination

Illicit detection and response BMP:
Other possibilities suggested by EPA: Implement a certification program that shows that buildings have been checked for illicit connections; implementing an inspection program of existing septic systems;

"Prohibit (through an ordinance, etc.) non-storm water discharges into the MS4, and establish enforcement procedures;"

BMP 3-4: DPW or BOH staff will require elimination of all illegal tie ins to the storm water system
(measurable goals: number of enforcement actions are recorded each year)

Recommended Bare Minimum
Illicit Discharge Detection and Elimination

Educate town officials, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste

BMP 3-5: DPW will hold annual training for DPW staff on identifying illicit and illegal connections
(measurable goals: meeting held, save minutes or meeting summary)

BMP 3-6: Public information flyers will include information about hazards associated with illegal discharges and improper disposal of waste
(measurable goals: flyers printed and distributed containing this information)

Minimum Control Measures for

4. Construction Site Storm Water Runoff Control

Requirement:

"You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

If the NPDES permitting authority waives requirements for storm water discharges associated with small construction activity in accordance with Sec. 122.26(b)(15)(i), you are not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites. "

Minimum Control Measures for Construction Site Storm Water Runoff Control "Required"? Elements:

"An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;

Requirements for construction site operators to implement appropriate erosion and sediment control (ESC) best management practices;

Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

Procedures for site plan review which incorporate consideration of potential water quality impacts;

Procedures for receipt and consideration of information submitted by the public, and

Procedures for site inspection and enforcement of control measures. "

Minimum Control Measures for

Construction Site Storm Water Runoff Control

What do you really need to do at a minimum?:

Conservation Commissions, through state WPA, already require Storm Water Management Programs for commercial sites and 9 or greater lot subdivisions (and 5-9 lots discharging to critical areas). A Local Bylaw would need to be amended to address lower EPA thresholds.

Planning Board subdivision regulations and site plan review may already address storm water, but often these regulations requires design standards for Rates are to prevent flooding. Regs need to be updated to address Volume, Quality, and Rate. Moreover, a general (non-zoning) "Erosion Control Bylaw" would need to be adopted at town meeting to capture ANRs and other projects that do not currently fall under SPR or Subdivision Control.

Recommended Bare Minimum

Construction Site Storm Water Runoff Control

Bare minimum BMPs

BMP 4-1. The Conservation Commissions will seek town meeting approval to adopt local wetland bylaws to require…..

BMP 4-2. After public hearings, the Planning Board will amend its subdivision regulations to require….

BMP 4-3. The Planning Board will seek town meeting approval for an erosion control bylaw to require…..

See BBP's model "Unified Storm Water Regulations" and sample Town of Falmouth Wetland Regulations.

Push for “Low Impact Development” (LID) Strategies for Managing Storm Water

An innovative, ecosystem-based approach to land development and storm water management

LID Philosophy:
Conserve Natural Areas

- Conservation of drainages, trees & vegetation
- Land use planning
- Watershed planning
- Habitat conservation plans
- Stream & wetland buffers

Buzzards Bay Project will do LID workshops for Planning Boards

Conventional

Low Impact

Conventional

Functional Landscape Design

Minimum Control Measures for

5. Post-Construction Storm Water Management in New Development & Redevelopment

"You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre,

including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts."

Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;

Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable ,

Ensure adequate long-term operation and maintenance of BMPs.

Recommended Bare Minimum

Post-Construction Storm Water Management in New Development & Redevelopment

Bylaws relating to pre-construction will also address post construction

(note BMP Operation and Maintenance Inspection Report Submission requirement in Falmouth Wetland Regulations.

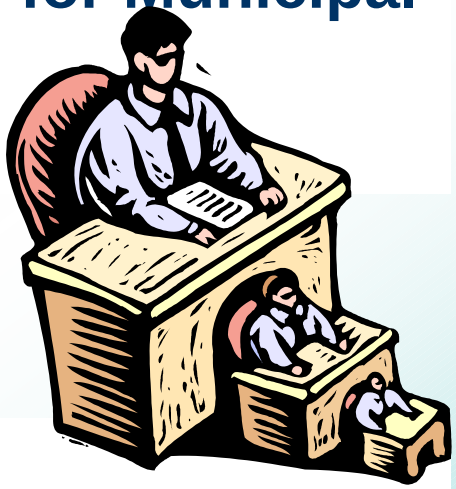
BMP 5-1. The Conservation Commissions will seek town meeting approval to adopt local wetland bylaws to require…..

BMP 5-2. After public hearings, the Planning Board will amend its subdivision regulations to require….

BMP 5-3. The Planning Board will seek town meeting approval for an erosion control bylaw require…..

Minimum Control Measures for

6. Pollution Prevention/Good Housekeeping for Municipal Operations



Requirement:

"You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using available training materials, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance."

Recommended Bare Minimum

Pollution Prevention/Good Housekeeping for Municipal Operations

BMP 6-1: The DPW will develop a policy guide and details of BMPS and pollution prevention strategies relating to for vehicle maintenance, washing, fueling, salt storage…, and what to do in the case of accidents…

BMP 6-2: The DPW will conduct annual training of applicable municipal staff stormwater and pollution prevention policies…

BMP 6-3: DPW will adhere to Conservation Commission storm water treatment performance standards and guidelines when designing new storm water treatment systems or during the reconstruction of roads…

Take Home Message:

?

OR

?

You can view this permit program as a bureaucratic exercise, or a chance to change the future of your town to restore and protect water quality.