



Current Environmental Issues for Hospital Construction

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Hot Topics

- DON Requirements for Green Building
- DEP Proposed Regulations for Stormwater Discharges
- MEPA Greenhouse Gas Regulations
- Global Warming Solutions Act

DEP Stormwater Regulations

- Who Will Be Subject to the Regulations
- What Activities Will Be Subject to the Regulations
- What Will Be Required to Comply

Who Is Subject to the Regulations?

- Focus on impervious surfaces
- Basic thresholds for existing impervious areas
 - Minimum thresholds statewide
 - Thresholds in TMDL areas
- New Development
- Redevelopment

How Much Impervious Surface?

Regulated Impervious Area (RIA)

Five or more acres of impervious surfaces that are located on a single lot or two or more ***contiguous lots aggregated in accordance with 314 CMR 21.05***

- * Lots separated by public way are “contiguous” if part of one “facility or campus”
- * Two-acre threshold in TMDL area such as Charles River




Aggregation

- Contiguous Lots Will Be Aggregated, if lots share:
 - On-site stormwater management systems, or
 - “Agreements or practices” for:
 - Shared O&M
 - Use of parking or storage
 - Off-site BMPs, or
 - Buildings or structures





TMDL-Identified Areas (2 Acre RIAs)

- 6 watersheds
- Based on phosphorus TMDLs (more to come)
- Defined by MassDEP maps:
<http://www.mass.gov/dep/water/laws/swgppaplg.htm>
- If part of property is in TMDL area, it is all in
- Coverage will change over time as additional TMDLs are established

What Is Required: Existing RIAs

	TMDL areas (2+ acres)	Statewide (5+ acres)
Baseline Performance Standards		
Retrofit to achieve pollution reduction target		

What is Required: New Development & Redevelopment

	TMDL areas (2+ acres)	Statewide (5+ acres)
Additional Performance Standards for Development		
Additional Performance Standards for Redevelopment		

Development Trigger

- New pavement or roof that did not previously exist
- New pavement or roof in connection with replacement of existing building or structure

Redevelopment Trigger

Reconstruction, rehabilitation, repair, or improvement of a roof resulting in a ***substantial improvement in the building or structure***

Reconstruction, rehabilitation, repair, or improvement of a paved surface, including:

the full depth reconstruction of previously paved surface;

the scarifying of existing pavement to lay down a new top coat; and

any repaving of a previously paved surface other than a ***minor repair of a paved surface.***

Transition Rule (21.11)

- Grandfathers projects that are fully permitted within 6 months of start of program
- Project must proceed “continuously and expeditiously to completion,” i.e. no delays of 6 months or more



General Permit Requirements

- Existing sites: baseline performance standards
 - No retrofits required for non-TMDL sites
- New development of impervious surfaces
 - Install LID techniques and stormwater BMPs
- Redevelopment of impervious surfaces
 - Install LID techniques and stormwater BMPs that maintain existing development recharge and treatment
 - Infiltration of at least 40% of “redevelopment volume”
- TMDL areas:
 - Stormwater discharges from impervious areas
 - Infiltration BMPs for pollutant reduction %

Summary of Implications

- Non-TMDL areas:
 - more formalized requirements for O&M
 - no retrofits required
- New development sites:
 - Generally the same
 - In TMDL areas (Charles River Watershed) must comply with
 - 65% phosphorous removal rates
 - May have to complete off-site mitigation
- Existing RIA sites in Charles River Watershed and other TMDL areas will require retrofits

Compliance Costs

- MassDEP provided no estimate of compliance costs
- NAIOP/AIM cost analysis by Tetra Tech Rizzo
 - Costs for retrofit \$50,000-\$100,000/acre in many areas

Greenhouse Gas (GHG) Regulation Under MEPA

- Policy in place since 2007
- Originally applied to projects meeting traffic or air emissions thresholds
- As of February 2009, all projects required to prepare Environmental Impact Report (EIR) must prepare GHG analysis

Required Analysis Under GHG Policy

Quantify GHG Emissions

- Direct emissions from energy consumption
- Indirect emissions from energy consumption (electricity, steam, cooling)
- Indirect emissions from transportation
- Compare emissions from
 - Code-compliant baseline
 - Preferred alternative
 - Alternative “plus”

Avoid, Minimize, Mitigate

- Focus on mitigation
- Appendix has list of suggested mitigation measures
- Project proponent must certify that mitigation measures have been implemented

Upcoming Changes to GHG Policy

- Global Warming Solutions Act provides statutory basis for the GHG policy
- February 2009 change to make apply policy to all projects subject to EIR requirement
- Consideration of regulatory changes
 - Discussion of specific new categorical thresholds
 - Indirect emissions – building size ?
 - Direct emissions – potential new categories of air emissions?

GHG Reporting

- DEP Emergency Regulations December 2008
 - Facilities emitting $\geq 5,000$ tons/year CO₂ or subject to CAA Title V operating permit were required to register by April 15, 2009
 - Affected sources must report 2009 emissions by April 15, 2010
 - Use Climate Registry General Reporting Protocol
 - For most subject facilities, reporting includes emissions from motor vehicles

Proposed Revisions To GHG Reporting

- Certification and third party verification
- Voluntary reporting
- Once in, always in

On The Horizon

- **Stretch Energy Code**
 - Approved this week
 - Allows communities to adopt code requiring commercial buildings to be 20% more energy efficient than ASHRAE 2007
- **Reclaimed Water Regulations (314 CMR 20.00)**
- **Mandatory GHG Reductions pursuant to GWSA Regulations (First regulations promulgated 2011)**
- **Regulation of Pharmaceuticals in Wastewater**

Questions?

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