

DRAFT Strategies for Stormwater Management

Water Quality State Guide Plan Element

12/12/13

Goal: Stormwater is managed to protect and restore the state's water resources

Primary Issue Topics

- LID implementation
 - Maintenance/Asset Management; including upgrading and replacing as necessary
 - Existing Sources – retrofitting public and private systems
 - Funding and Local Capacity
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Policy: Ensure stormwater management is consistent with water quality goals.

Actions:

- Implement the requirements of the 2010 RI Stormwater Design and Installation Standards Manual and the updated Erosion and Sediment Control Handbook (2013/14) by means of the regulatory programs that have incorporated these standards. Programs include the DEM and CRMC Freshwater Wetlands Programs, CRMC Coastal Management Program, DEM Water Quality Certification Program, DEM Groundwater Discharge Program, and the DEM RI Pollutant Discharge Elimination Program.
- Evaluate and update the RI Stormwater Manual and the Erosion and Sediment Control Handbook as appropriate.
- Require self-certification of compliance with the construction site requirements issued by the stormwater permitting programs.
- Continue management of the DEM Industrial Activity Multi-Sector General Permit.

Policy: Use low impact design techniques and green infrastructure BMPs as the primary method of stormwater management to maintain and restore pre-development hydrology of the state's watersheds.

Actions:

- Evaluate and implement strategies to more fully implement LID in state and local programs.
- Provide training and education opportunities for design professionals (engineers, landscape architects, contractors) and municipal officials. Consider development of training/certification program.
- Municipalities adopt local ordinances to implement LID.

Policy: Protect high quality waters from degradation caused by stormwater by limiting effective impervious cover in these watersheds.

Actions:

- Identify water resources warranting further protection than currently in place under existing regulatory programs.
- Develop a strategy to protect these waters (e.g., increased emphasis on LID, more stringent standards).

Policy: Stormwater management at the local level is an essential service that must be integrated into all relevant aspects of local government, including planning, engineering and public works. Local governments must effectively manage, maintain and upgrade their stormwater systems to minimize adverse impacts to water resources.

Actions:

- Continue implementation of DEM MS4 General Permit Program; evaluate compliance and effectiveness.
- System operators adequately maintain their systems to increase longevity and maximize performance.
- Incorporate TMDL implementation actions into the Stormwater Management Plan and implement priority actions.
- Establish sustainable funding mechanisms.
- Establish regional stormwater management approaches where practical.
- Provide technical assistance and training to municipal governments for stormwater management.
- Prioritize drainage systems for retrofitting (coordinate with TMDLs).
- Strengthen/enforce requirements for retrofitting under TMDL implementation.

Policy: State agencies must effectively manage, maintain and upgrade their stormwater systems to minimize adverse impacts to water resources.

Actions:

- System operators adequately maintain their systems to increase longevity and maximize performance.
- Establish sustainable funding mechanisms.
- Incorporate green infrastructure into state funded projects.
- Prioritize drainage systems for retrofitting (coordinate with TMDLs).
- State agencies and quasi-state agencies demonstrate leadership in adopting effective and innovative stormwater management.

Policy: Ongoing training of public officials and private contractors is an important element to ensure proper stormwater management to protect and restore water resources.

Action:

- Establish an integrated and continual training program for stormwater management professionals that addresses LID, BMP design and installation, road salting and other aspects of stormwater management.

Policy: Support the development of dedicated funding mechanisms (e.g., “stormwater utility”) to manage local, regional and state stormwater programs.

Actions:

- Provide technical and financial assistance to local governments to establish the appropriate mechanisms.

Policy: Ensure that stormwater from significant areas of impervious cover on private properties is properly managed on-site.

Actions:

- Develop effective tools to encourage and incentivize management of stormwater from private property.
- Evaluate regulatory options for requiring management of stormwater from private property.

Policy: Ensure that approved BMPs available for stormwater management are effective in meeting water quality goals.

Actions:

- Evaluate the performance of approved stormwater BMPs, as necessary.
- Support the development of new technologies/BMPs for stormwater management.

Policy: Improving source reduction is an effective means to mitigate stormwater impacts.

Actions:

- Investigate strategies for source reduction (e.g., improve/increase street sweeping, prohibit coal tar based pavement sealants...)

Policy: Reduce the amount of road salt and sand applied to state and local roads.

Actions:

- DOT and towns adopt innovative road salting techniques and alternative products.
- Evaluate training and certification mechanisms for road salt/sand applicators.
- Establish minimal equipment standards for use by road salt/sand applicators.
- Identify areas that should be designated “no/reduced salt” zones.
- Ensure that all salt piles are covered (public and private).

Policy: Stormwater management must adapt to climate change impacts.

Actions:

- Evaluate the impact on existing stormwater management systems of increased intensity of precipitation events, rising sea level and rising water tables.
- Evaluate stormwater management design standards to ensure that they incorporate new data on climate change in order to adequately protect water resources.

Terminology:

LID (from RI Stormwater Manual) – “Low impact development is a site planning and design strategy intended to maintain or replicate predevelopment hydrology through the use of site planning, source control, and small-scale practices integrated throughout the site to prevent, infiltrate and manage runoff as close to its source as possible.”

Green Infrastructure (GI) -- Utilizes infiltration, evapotranspiration, storage and reuse to either prevent runoff from occurring or treating it as close to the source as possible. These are the physical BMPs -- not just “green” (plant-based) BMPs (includes permeable pavement, subsurface infiltration systems).

Gray Infrastructure – stormwater collected and conveyed in closed systems to an off-site where it is discharged without treatment to surface waters.

In short: LID = planning principles; GI = the physical BMPs