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Water Quality Mitigation Banking

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BACKGROUND

New Jersey Department of Transportation is required to do "on-site" treatment of stormwater runoff to comply with applicable local and federal laws. This report investigates the concept of water quality banking that can allow greater flexibility in dealing with water quality mitigation issues while complying with applicable local and federal laws.

HERE'S THE PROBLEM

The requirement of "on-site" treatment of water quality in NJDOT projects results in the creation of excessive number of BMPs, which are difficult to manage, expensive on-site mitigations if ROWs are not easily accessible and significant delays in project permitting process.

AND, HERE'S THE SOLUTION…

The water quality banking concept allows NJDOT to meet water quality mitigations requirements in a watershed area through a system of credits and debits. Off-site credits generated can be used for on-site requirements. Credits can be used by various means, such as excess on-site treatment where possible, impervious surface removal, etc.

THESE ARE OBJECTIVES…

The objective of the project has been to:

a. Investigate regulatory feasibility of water quality banking
b. Investigate technical feasibility of water quality banking
c. Demonstrate the need through a pilot watershed and show the design of a pilot bank in the Hackensack River watershed.
d. Develop a banking tracking approach and a computer program to implement it.

1.

HERE IS WHAT WE DID…

We carried out a detailed literature review to determine current state of the water quality banking approach and states implementing it. In order to investigate regulatory and technical feasibility, we conducted meetings with a panel consisting of officials from NJDOT, NJDEP, and FHWA and obtained feedback from Maryland State, a leader in implementing the concept. In order to identify future needs of NJDOT, we carried out an exhaustive review of NJDOT project in planning. On the basis of this, Hackensack River watershed was selected as pilot watershed. For this watershed, we further identify a feasible initial banking site, designed water quality mitigation of this site and demonstrated the need and feasibility. In order to track banking credits, we developed an approach and a completer program.

CONCLUSION:

Water quality mitigation banking concept is an innovative approach for NJDOT to manage its stormwater mitigation requirements during highways projects. The concept allows the flexibility, economies of scales and lesser permitting delays which meeting applicable local and federal laws. In fact, the approach may result in much better environmental compliance and community benefits if implemented.

WHAT IS THE NEXT STEP?

- The implementation of the approach requires approval and close coordination with NJDEP. Following activities may be required towards the implementation:
- Discussions with NJDEP to identify possible water quality credits options, such as removal of existing pavement, excess on-site treatment where possible, etc.
- A Memorandum of Agreement (MOA) with NJDEP for the implementation of the water quality banking program.
- Development of a joint mechanism with NJDEP for the management, audit, tracking and review of the banking program.

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A final report is available online at

http://www.state.nj.us/transportation/refdata/research/ReportsDB.shtm

If you would like a copy of the full report, please FAX the NJDOT, Bureau of Research, Technology Transfer Group at (609) 530-3722 or send an e-mail to Research.Bureau@dot.state.nj.us and ask for:

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