

# Stormwater Management & Low Impact Development

Engineering | Planning | Environmental



The overall approach to responsible stormwater management is rapidly changing as it has become an essential element of successful community planning. With progressively more rigid regulations and an emphasis on water quality, the challenges of effectively managing stormwater have become increasingly significant. The stormwater professionals are continuously developing innovative and effective stormwater management solutions that address clients' critical issues. BREC provides services related to stormwater program assessment; regulations, permits, and policies; treatment; low-impact development; and true source control.

Through the use of low-impact development strategies, we have helped clients protect and restore water quality and improve hydrologic and ecological functions. Our knowledgeable staff brings in an array of background and experience pertaining to stormwater master planning, permitting, manual development, design assistance and ordinances.

Low Impact Development (LID) is a technique that is used to develop properties in a way that is intended to replicate a site's pre-development ecology and hydrology. LID minimizes the impact of construction and development of the land by using a planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime of urban and developing watersheds. This design approach incorporates strategic planning with micro-management techniques to achieve superior environmental protection, while allowing for development or infrastructure rehabilitation to occur. This innovative approach can be used to help meet a wide range of client and community development goals.

Environmental systems and stormwater management are key elements in our LID service offerings. Our approach to LID is framed by a rigid engineering and environmental analysis of the site constraints, contributing factors, and project budgets. Project examples include non-traditional stormwater treatment measures such as constructed stormwater wetlands, Bio Retention, and Rain Garden.

BREC experience is diverse and comprehensive. Our team has performed a broad range of projects in the following areas: stormwater system evaluations and renovations; stormwater retrofit projects with low-impact elements; water quality monitoring; establishing stormwater utilities, master plans and best management practices; and management of projects and contractors. Our consultants are experts in planning and development of structural and nonstructural controls for stormwater treatment, infiltration, and flow control and are well-versed in NPDES regulations.

**BREC provides the following LID services:**



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- Conditional Use Permits
- Re-Zoning
- Variances
- Board of Adjustment Hearings
- Expert Witness Testimony
- Special Use Permits
- Master Planning
- Recreation Plans
- Greenway Planning
- Ecosystem Restoration Planning
- Mixed Use Planning
- New Urbanism
- Site Acquisition
- Utility Easement Acquisition
- Value Estimates for Real Property
- Identification of Target Markets
- Assessment of Project Sites
- Impacts on Land Value Studies
- Marketing Strategies
- Dam Safety Permitting
- Mining and Sand Dredging Permits
- Air Quality Modeling
- Environmental Compliance Inspections
- Site Assessments/Investigations
- Remediation/Rehabilitation Planning and Design
- Phase I/II Environmental Assessments
- Wetlands Stream Delineation and Permitting Material Assessments
- Least Environmentally Damaging Practicable Alternative Analysis (LEDPA)
- Environmental Constraints Assessments
- Corrective Action Plans
- Water Quality Compliance Assistance
- Inner-Basin Transfer Services

