

Managing Stormwater in Redevelopment and Greenfield Development Projects Using Green Infrastructure

Economic Factors that Influence Developers' Decisions

Executive Summary

This report was prepared by ECONorthwest, a consulting firm specializing in economics, planning, and finance. The full report can be found at www.americanrivers.org/cleanwatersmartgrowth

Low-impact development and green-infrastructure (LID) are viable strategies for managing stormwater, and an increasing number of jurisdictions are either encouraging or requiring their use. There is some debate as to whether strong stormwater standards driving the use of green infrastructure undercut efforts to reduce sprawl and to direct future development into already-urbanized areas, or conversely, provide economic, clean water, and livability benefits that actually encourage redevelopment projects. To address these questions, this report was commissioned by Smart Growth America and American Rivers in collaboration with the Center for Neighborhood Technology, River Network and NRDC.

Conceptual Framework and Methodology

This report was conducted in two phases: a literature review followed by key-informant interviews. Through the literature review, ECONorthwest gained a conceptual framework to understand the issues developers face with regard to the factors that influence the costs and benefits of increasingly protective stormwater regulations in redevelopment and greenfield projects and to inform interview questions. Key-informant interviews with public officials and individuals involved in development were conducted in three jurisdictions. Jurisdictions were selected based on criteria including the adoption of a strong stormwater regulation (e.g., volume-based, water-quality-based, or explicit LID requirement) that applied similarly to development and redevelopment and that opportunities for both types of development existed within the jurisdiction. Based on this, the jurisdictions selected were: Montgomery County, Maryland, Olympia, Washington, and Philadelphia, Pennsylvania.

Findings

- 1. Developers are successfully incorporating stronger stormwater controls to meet strict volume-reduction and water-quality standards in both redevelopment and greenfield projects** – The study found that interviewees who had completed developments that met stronger stormwater standards using LID indicated that doing so required creativity and willingness to experiment with new approaches to projects. They emphasized that pursuing these projects was not without challenge, but they will continue developing in places that require strong stormwater controls and LID. Although staff at each jurisdiction had encountered some skepticism by developers, none had actually observed that developers were choosing to invest in greenfield projects over redevelopment projects because of the new standards.

- 2. Complying with stormwater regulations is one factor among many that influences a project's costs. It is rarely the driving factor** – While some developers indicated that the costs associated with meeting stronger stormwater standards may change the types of projects they will pursue in the future, many described the cost of implementing stormwater controls as minor compared to the other economic factors in deciding whether or not to pursue a project, especially in the context of highly-complex redevelopment projects and green-building infill projects. Some developers pointed out that using LID controls has helped offset some of the increased cost compared to using conventional controls.
- 3. The costs of stormwater controls in general, and LID controls in particular, tend to be more variable and site-specific for redevelopment versus greenfield development** – Developers interviewed were reluctant to make specific predictions about the extent to which stronger stormwater controls influence the cost of projects. They emphasized that stormwater designs are highly site-specific, and one solution may be feasible and cost-effective at one site, but infeasible or cost-prohibitive at another site.
- 4. Developers respond to benefits that influence their bottom line. In some cases, these may help offset increased costs of complying with stronger stormwater regulations** – Developers interviewed suggested that LID controls that helped them comply with stronger stormwater regulations at lower cost, increased the sale price or rent of a project, reduced the time to sale, or all three, would affect their decisions to use LID. Specific examples of LID controls providing economic benefits to developers include bioswales and other vegetative stormwater controls that improve the appearance and market appeal of a development while also reducing overall landscaping costs, and greenroofs that reduce energy costs and the long-term cost of roof maintenance. Developers noted, however, that market demand for projects that include LID stormwater controls have not yet expanded to all markets.
- 5. Market adjustments are already reducing costs of implementing stronger stormwater standards, for both redevelopment and greenfield development, a trend that is likely to continue** – Market adjustments include changes on the supply side that result in lower costs to implement stronger stormwater standards and changes in demand that result in increased consumer willingness to pay for projects that incorporate stronger stormwater controls.
- 6. Developers are supportive of incentives that offset costs and ease the transition to stronger stormwater standards. Jurisdictions can use them to increase the level of social benefits derived from LID practices** – Jurisdictions themselves have an incentive to offer developers incentives, in part, because many of the benefits that green infrastructure provides accrue to the jurisdiction or the public at large, but don't register in the developers' private accounting of costs and benefits. Enhancing the private benefits developers can receive from LID by passing through some of the public benefits can create a more economically efficient outcome for society.