

Community LID Workgroup Issue Paper #1

Topic: Buildings

Discussion Items: Stormwater best management practices such as vegetated roofs, minimal excavation foundations, and rainwater collection systems; public-sector outreach and incentives.

Background/Problem: The Department of Ecology's stormwater manual defines Best Management Practices, or BMPs, as "schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices that, when used singly or in combination, prevent or reduce the release of pollutants" to state waters. LID BMPs — ranging from rain gardens to permeable pavements — continue to allow the hydrologic processes that would have existed on a site before it was developed, such as infiltration, as well as filtration, storage, evaporation and transpiration (*See attachments for BMP requirements and examples*).

Thurston County's 2011 Low-Impact Development Barriers Analysis found that the County could do more to spur building-related BMPs that support onsite stormwater infiltration and flow-control — notably minimal excavation practices (pin foundations), vegetative/green roofs, and cisterns/rainwater harvesting. The County currently offers a specific credit against stormwater fees for rainwater harvesting: commercial buildings that harvest rainwater from more than 90% of their roof area and use it for internal water supplies can reduce their stormwater fees by 10%. Non-residential properties that implement any stormwater BMPs and document their water quality benefit can receive a 25% credit. Despite a lot of outreach, very few property owners utilize these incentives.

The Thurston County Code (TCC) adopts by reference the International Building Code as amended by the State Building Code Council. Similarly, with some administrative amendments, the TCC adopts comparable international codes for the Residential Code, Mechanical Code, Fuel Gas Code, and Plumbing Code. The codes allow for minimal excavation foundations, green roofs, and rainwater harvesting, though such practices are not specifically called out nor encouraged in the TCC. For some of these practices, such as green roofs, design specifications and standards are currently included in the Thurston County Drainage Design and Erosion Control Manual (DDECM). Thurston County Water Resources staff are updating the DDECM via a separate process.

Analysis: The County LID Workgroup considered whether Thurston County should adopt some or all of the International Green Construction Code (IGCC) as a way to reduce stormwater impacts and encourage buildings' use of green roofs, cisterns and other LID practices. To the same end, the County LID Workgroup also considered whether and how Thurston County should offer incentives and education.

The IGCC, developed by the International Code Council (ICC), is the first model code to include sustainability measures for the entire building project — from design through construction, certificate of occupancy and beyond. The [IGCC](#) establishes minimum green requirements for new and existing buildings, and it acts as an overlay to the existing set of ICC codes, including the International Building Code and International Existing Building Code.

Ultimately, the County LID Workgroup decided not to recommend that Thurston County adopt the IGCC as a code overlay. The IGCC is highly prescriptive in some cases (e.g., soil and water quality protection) and could potentially conflict with the DDECM. In other cases, the IGCC is overly broad (e.g., with regard to cisterns) so as not to be of much guidance. As noted above, green roofs, cisterns and minimal-excavation foundations are allowed by Thurston County's existing codes. Further, the DDECM already lists vegetative roofs as a BMP and references the same ASTM (American Society for Testing and Materials) standards as referenced in the IGCC.

Recommendation: The County LID Workgroup did, however, recommend the following:

- Amend the DDECM to reference appropriate aspects of the IGCC as well as the Puget Sound Partnership LID Technical Guidance Manual for Puget Sound's design specifications and other requirements for vegetated roofs, minimal excavation foundations, and rainwater collection systems.
- Create outreach tools for building developers, owners and operators that reference technical details about vegetative roofs, minimal excavation foundations and rainwater collection systems.

Community LID Workgroup Discussion: Based on the analysis and recommendations above, project staff are seeking Community LID Workgroup feedback on the following:

- What kind of outreach materials would be helpful to encourage the use of these BMPs? For example, should the County provide builders with technical details about what plants work best on vegetated roofs in this climate or case studies noting the costs and benefits of the BMPs noted above?

- What financial incentives, if any, should Thurston County offer to encourage the stormwater BMPs noted above? (*See discussion below*)

At the October 2014 Vision2Action symposium hosted by the Northwest EcoBuilding Guild and supported by TRPC and Thurston County jurisdictions, attendees expressed considerable interest in municipal incentives for the development community, including tax credits, tax abatement, and expedited permit review.

While the County LID Workgroup discussed offering incentives for the BMPs noted above, there wasn't consensus about what incentives the County should offer nor how the County could fund them over the long term. Below are examples of incentives offered by other municipalities:

- The City of Chicago offers developers expedited permit review and reductions in building permit fees if builders include site-scale green infrastructure (green roofs, solar PV panels, and other sustainability features) in their projects: http://www.cityofchicago.org/city/en/depts//bldgs/supp_info/overview_of_the_green_permitprogram.html
- New York City allows a one-year property tax abatement of up to \$4.50/sq. ft. for buildings with green roofs: <http://www.nyc.gov/html/gbee/html/incentives/roof.shtml>
- Philadelphia provides low-interest loans of \$75,000 to \$1 million to non-residential property owners to implement green stormwater infrastructure practices: <http://www.phila.gov/water/wu/stormwater/Pages/Grants.aspx>.
- Philadelphia businesses may also earn a rebate of 25% of green roof costs-- up to \$100,000: http://www.phillywatersheds.org/whats_in_it_for_you/residents/green-roofs
- Minneapolis offers a credit of up to 50% off of the stormwater utility fee for practices such as installing rain gardens and green roofs: http://www.minneapolis.gov/publicworks/stormwater/fee/stormwater_fee_stormwater_mngmnt_fecredits
- King County has a Surface Water Management Fee Discounts and Cost-Sharing Program that offers several discounts, credits, and cost-share opportunities to owners of developed parcels. This applies to more than just buildings (See printed handout): <http://www.kingcounty.gov/depts/dnrp/wlr/surface-water-mgt-fee/discount.aspx>