

LID feasibility barriers (and recommended solutions)

1. **Insufficient designer and policy-maker familiarity with LID applications and limitations** – Simplify, finalize, and publish the Phase I feasibility matrix (presented by Hans Hunger at the March APWA meeting). This is a good tool to quickly screen facility applications and limiting factors, and could be included as a guide in state and local guidelines.
2. **Adjust regulations to reflect recent performance data** – a) Change the misconception that you cannot infiltrate on till. It is feasible in many cases. B) Give more flow control and WQ credit for LID facilities. The data are coming in, and many facilities perform equal to or better than traditional facilities. C) Acknowledge that on small sites, traditional methods (e.g., vaults, ponds) are incapable of meeting most duration-based flow control requirements (given orifice constraints). LID is an equal, and often better option.
3. **Undue scrutiny on LID facility performance and reliability** – Ponds, bioswales, sand filters, and other “accepted” stormwater facilities have high frequencies of failure and/or poor history of performance. Why are we scrutinizing LID but not other facilities with known flaws? If we focus on getting more LID facilities into the ground, and monitoring them, this will provide empirical data on their performance and/or limitations. Promote public/private partnerships where monitoring will be performed by the public as an incentive for private installations. Municipalities need to lead the way so LID isn’t seen as something new, unknown, or risky.
4. **Still too complex for parcel/SFR-scale applications** – Continue development of simplified standards for small sites. Create tools to facilitate the non-engineered and small-scale sizing and design of LID facilities. This is already in motion in many jurisdictions, but not in all.
5. **Make regulations more clear and direct, particularly with respect to “maximum extent feasible”** – Clarify the definition of MEF. E.g., use the Phase I feasibility matrix identified above, and require developers to use LID for any situations that do not have a red box. Put the burden on developers to demonstrate that it can’t be used (as part of the submittal/permitting process). The feasibility analysis should not be limited to evaluating the use of infiltration facilities alone, but should also consider other forms of LID that are more broadly applicable on sites with poor infiltration (e.g., planter boxes, rainwater harvest, and compost amended soils). LID should be a requirement, not an option.
6. **Homeowner acceptance, understanding, and maintenance** – Need ongoing outreach and marketing campaign to increase societal value of stormwater as a resource, and to promote LID as a preferred stormwater management tool. Build stewardship. Need more on-the-ground examples, and documentation of actual maintenance at existing successful sites.
7. **The structure of the building industry in general, especially in the case of parcel-scale infiltration practices** – The developer who is charged with creating a stormwater plan often deals with stormwater on the level of the whole plat, leaving the details of each parcel to the builder who follows. For a developer’s stormwater plan to include parcel scale practices would mean having to resort to some mechanism to make sure builders and homeowners carry the plan through. This introduces many related uncertainties and risks.

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8. **Water rights** – Establishing a legal right to harvest and re use rainwater at the site scale will promote the application of LID techniques, and would expand the meaning of “maximum extent feasible”.