Response to Ecology's Draft LID Permit Framework

Curtis Hinman
WSU Extension Faculty

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Thank you for the opportunity to participate in the LID Technical Advisory Committee and to comment on the draft framework. Ecology has contributed significant and hard work to move forward with the challenging task of developing the LID permit language.

Basin-scale approach

The basin-scale approach proposes conducting an analysis of impacts to water quality and hydrology that is triggered by UGA expansion thresholds. The analysis would "identify the best combination of measures to prevent or minimize the impacts to hydrology and water quality" and "set targets to track such as for sub-basin impervious surface limits and native vegetation retention"

Current research indicates that basin planning and the protection or enhancement of native soils and vegetation at the basin and site scale are critical to protection of receiving waters. Some of that body of knowledge indicates that, while broad indicators such as TIA are useful metrics, other metrics are important as well. Road network density, road crossings of streams, previous disturbance and basin physiography are also strong, if not stronger indicators, of stream degradation.

Accordingly, Ecology should work in cooperation with local jurisdictions, GMA and regional scientists to move as quickly as possible to develop native soil and vegetation and total and effective impervious area targets. Also important would be site and basin-scale recommendations for road network design. These recommendations should link to existing GMA guidelines (which should be modified if necessary) and be strongly encouraged through incentives and regulatory requirements. However, road network recommendations would likely not be feasible to regulate, but can be encouraged through recommended designs and perhaps incentive programs.

LID Site and Subdivision technical requirements

Minimum requirements outside UGA's
Much of the development occurring in Puget Sound is small parcel development. Without adequate measures to protect receiving waters on smaller parcels, a large percentage of our development will

continue to degrade the most sensitive marine and fresh water. LID is feasible on small parcels in many physical settings.

Accordingly, small parcel development (>2,000sq ft hard surface or >7,000sq ft disturbed area) outside UGA's should be required to meet the LID and existing flow control standard.

Performance and mandatory list

Ecology proposes thresholds where a performance standard or mandatory (prescriptive) list is required. The use of mandatory list 1 or 2 is determined by saturated hydraulic conductivity of site soils. While the performance and prescriptive options provide flexibility, there may be undesirable consequences from too easily avoiding the performance standard and easily moving to the mandatory lists. The performance standard will require aggressive use of native soil and vegetation protection and well conceived site layout techniques. The mandatory lists, while requiring the use of "appropriate site development principles to retain native vegetation and minimize impervious surfaces" will currently allow project proponents or local jurisdictions to determine those levels of protection. Local jurisdictions have demonstrated a reluctance to develop native soil and vegetation protection guidelines and a greater reluctance to regulate those guidelines. Pierce County provides a good example of this trend when the native soil and vegetation requirements were revoked shortly after they were implemented for political convenience.

The performance standard should be used on all disturbance >2,000sq ft hard surface or >7,000sq ft disturbed area outside the UGA's. If the Ecology uses the performance or mandatory list approach, adequate targets should be set for jurisdictions to adopt regionally.

Additionally, if the mandatory list approach is used, require rain gardens for Mandatory list 1 and 2. Rain gardens are the most adaptable and effective LID application for both flow control and water quality treatment. Bioretention design methods that are easy to implement can be included for soils with poor infiltration rates to reduce ponded water residence time and allow for the use of this important tool in list #2.

LID Requirements Table Clarifications B and LID Requirements in Specific Areas C

Under sections B. 3. and C. 8. the LID performance standard allows for meeting existing flow durations in highly urbanized areas. Managing flow to existing conditions likely results stable but degraded condition or continued downward trend of receiving waters. We have solid evidence from City of Seattle and other LID retrofits in urbanized areas that flow control and water quality treatment can be significantly improved using LID applications. These improvements have been realized at a reasonable cost.

Accordingly, a higher standard is likely achievable in many urbanized settings. And while stream geomorphological or wetland ponding regimes may be challenging to improve, water quality can be significantly improved through overall pollutant load reduction relatively quickly. A starting point for a

higher standard may be City of Seattle's guidelines for managing peak flows to a specific storm return frequency and pasture land coverage.