

Skinny Streets and One-sided Sidewalks: A Strategy for Not Paving Paradise

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Stormwater policies and regulations aim to reduce the hydrological, water quality, and habitat impacts of stormwater runoff, but fail to directly address the source of the problem: parking lots, streets, compacted soils, and other impervious surfaces. Given their land use and permitting authority, local governments in the fast-growing Pacific Northwest and elsewhere can reduce the amount of impervious surfaces, increase groundwater recharge, and protect fish and wildlife habitat.

Results of the City of Olympia's two-year Impervious Surface Reduction Study (ISRS) indicate that a 10 to 20% reduction in impervious surfaces associated with new development is a reasonable goal. Impervious surface reduction also complements and challenges other public goals such as fire vehicle access, growth management, automobile trip reduction, and accommodating physically disabled citizens. The cross-goal aspect of impervious surface reduction offers an opportunity to reduce regulatory inconsistencies and complements comprehensive land use planning. However, broad-based public discussion is key to realizing multiple goals.

Obvious techniques such as narrower streets, clustering, and decreased land clearing can be implemented if incentives are provided and barriers removed. To identify feasible and practical reduction strategies, the City of Olympia involved the business and development community, neighborhood associations, decision-makers, and local government staff. Over 50 people were directly involved in developing study recommendations. Committees, displays, presentations and briefings, slide shows, fact sheets, and direct surveys also were used to involve and educate the community. The study recommendations are based on an evaluation of costs, benefits, sustainability criteria, and implications for water resources management.

It's expected that immediate implementation of the recommendations in Olympia, the surrounding North Thurston County Urban Growth Management Area (UGMA), and other locations will provide some land use options for local jurisdictions. It is anticipated that the recommendations will result in approximately 1,157 acres less impervious surface when the 84 square mile North Thurston UGMA is built out in the year 2012. This undeveloped acreage can be filled in with additional development such as offices or houses, or dedicated to

open space, parks, or other amenities. Filling in the area with additional development may serve as a density credit incentive for the development community to implement the study's recommendations. The resulting infill should help reduce urban sprawl and contribute to a regional per capita reduction in impervious surfaces.

Implementation of the ISRS recommendations also will delay the inevitable build out of the UGMA. The area's estimated build out could be delayed by six years if a 20% reduction in new development impervious surfaces is achieved. These six years can be used for groundwater research and development of new technologies, and will delay the irreversible changes in soils and hydrological relationships caused by impervious surfaces.

Final products of the study include implementation strategies, evaluation techniques, community involvement, and technical assistance materials. The products are tailored toward Olympia and the North Thurston County UGMA, but are applicable to other settings. Some simple but effective reduction strategies for local jurisdictions everywhere are shown in Figures 1 and 2 and include the following:

- Integrate impervious surface reduction into local policies, goals, and regulations, especially street and parking regulations.
- Reduce the size of parking areas:
 - (1) Encourage cooperative parking (e.g., park n' rides, shared parking) by allowing such arrangements and providing model legal agreements.
 - (2) Require exploration of cooperative parking and transportation demand management options before allowing excess parking.
 - (3) Develop parking standards that reflect average parking needs instead of single peak day (e.g., Christmas Eve) projections.
 - (4) Build multi-story parking structures or under the building parking.
- Reduce street coverage:
 - (1) Reduce residential (local access) street widths.
 - (2) Retrofit existing cul-de-sacs with vegetated islands designed to hold stormwater.

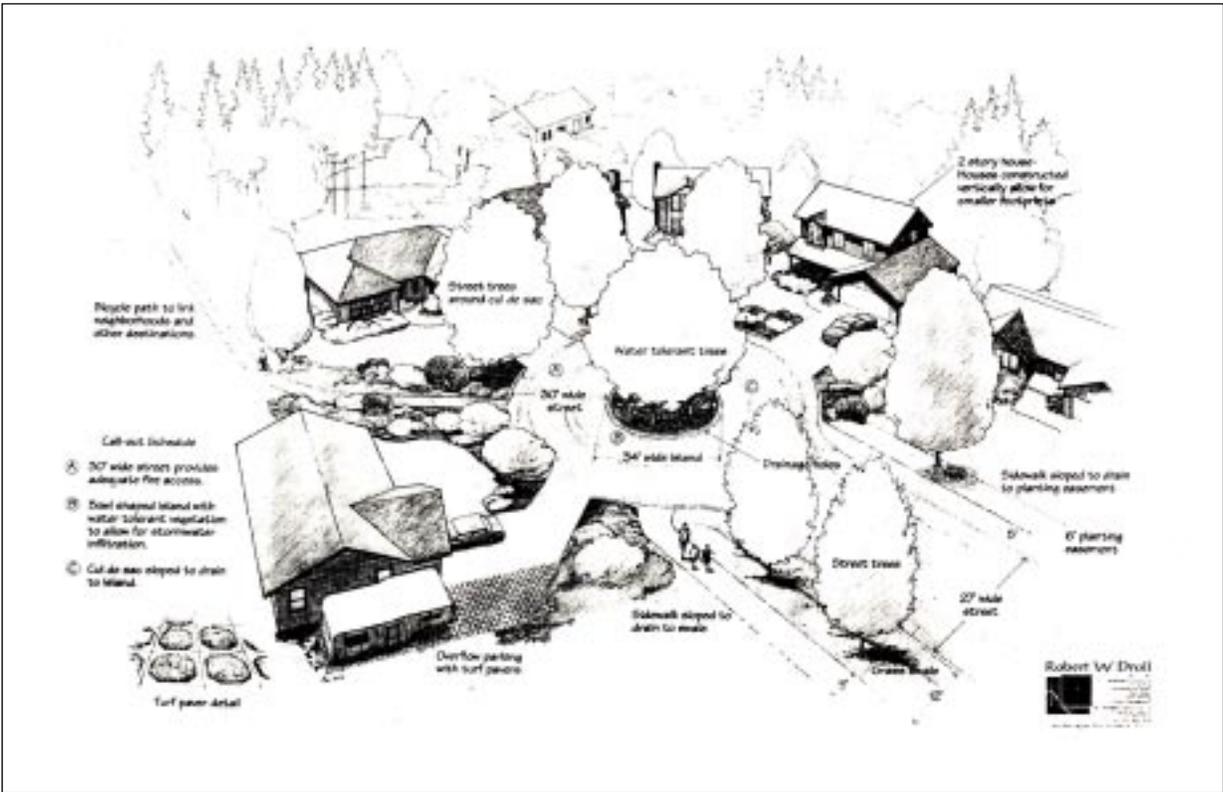


Figure 1: Strategies for Impervious Cover Reduction in Residential Areas (Wells, 1995)

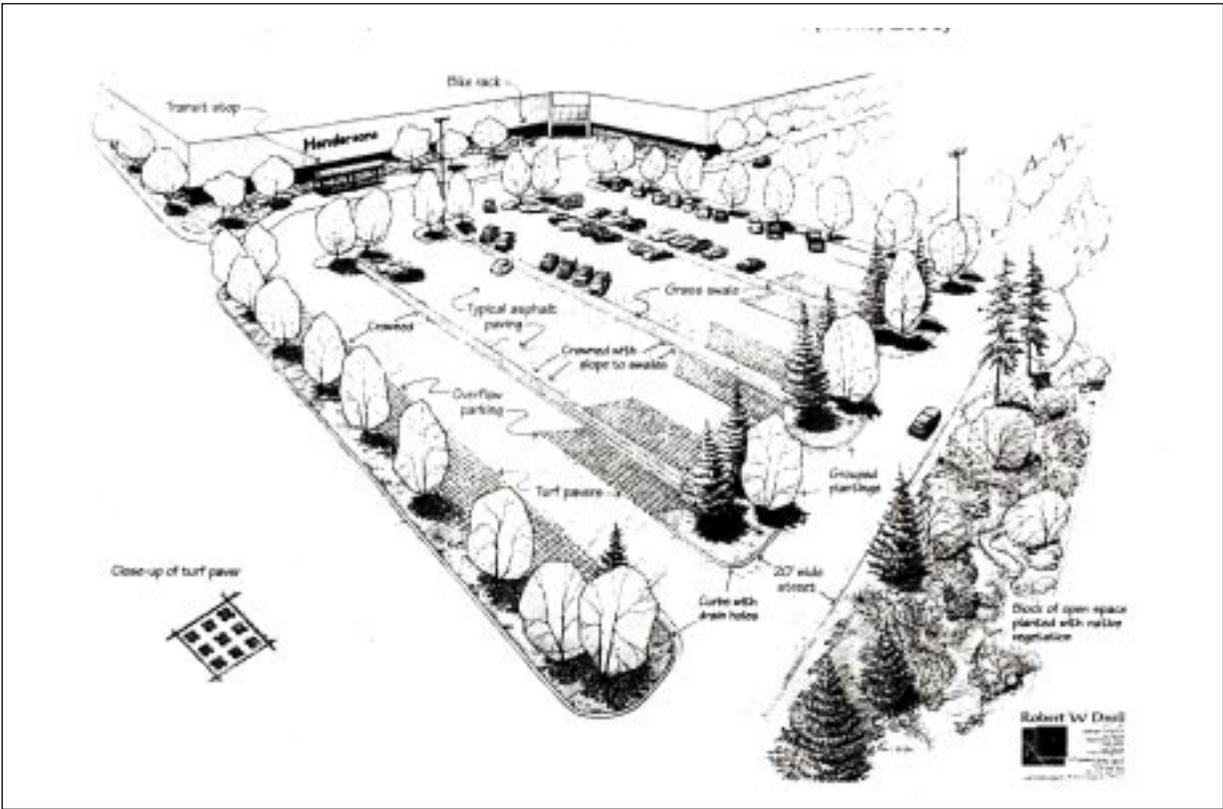


Figure 2: Strategies for Impervious Cover Reduction in Commercial Areas (Wells, 1995)

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- Narrow sidewalks:
 - (1) Narrow low-use sidewalks to at least four feet in width.
 - (2) Build sidewalks on only one side of the street.
 - (3) Slope sidewalks to drain to vegetated swales or gravel strips.

 - Design and locate buildings more effectively:
 - (1) Encourage cluster development that minimizes impervious surfaces
 - (2) Build and use taller buildings, and modify policies to allow taller buildings.

Reference

Wells, Cedar. 1995. *Impervious Surface Reduction Study: Final Report*. City of Olympia Public Works Department. Olympia, WA.