



Oregon

Kate Brown, Governor

Department of Environmental Quality

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Dear Mayor Hales and Commissioners,

We are writing to highlight Oregon DEQ's research on reducing the environmental impacts of materials in residential buildings. This information may help inform the Portland City Council's deliberations regarding residential infill.

A 2010 Oregon DEQ research project demonstrates that home size is among the most important determinants of environmental impact. Smaller homes reduce waste and yield significantly smaller carbon footprints. Specifically:

- Of 30 material reduction and reuse practices DEQ evaluated, reducing home size achieved the largest greenhouse gas reductions, and significant reductions in other impact categories.
- The life cycle carbon impact of a code-built 1,600 square foot house is less than that of a 2,200 square foot home built to minimum green certification standards (Energy Star Standards).

The same study showed that the impacts of producing building materials typically dominate a new home's environmental impacts during the first 5 years of operation. Retaining existing housing stock avoids part or all of the environment impacts of using new materials. While there are numerous site specific scenarios that can affect this evaluation, existing building stock has environmental value and in some scenarios – it makes sense to preserve that building stock.

DEQ's subsequent statewide survey and evaluation of one type of smaller housing, accessory dwelling units (ADU), found that ADUs have a lower square foot per person of living area than other single-dwelling housing types, and that 80% of ADUs are used for long term rental housing.

If you have any questions regarding these studies, please contact Jordan Palmeri (palmeri.jordan@deq.state.or.us | 503-229-6766)

Sincerely,

Wendy Wiles

Administrator - Environmental Solutions

Oregon DEQ