

Survey on Consumer Preferences for Residential Landscapes along Streams: Description and Results

by Virginia I. Lohr and Rita L. Hummel
Washington State University
December 2013

A survey of consumer preferences for residential landscapes along streams was developed after consultation with specialists from Washington State University, WA Dept. of Ecology, and the City of Puyallup. It was reviewed, pretested, and modified based on feedback received in the process. A paper version and a web version of the survey were created.

The survey consisted of 20 digitally enhanced streamside residential landscape photos (see attached copy of the survey). These were created from photos of home landscapes on waterfront property in western Washington. These photos were taken specifically for this study. A single generic home was selected from one of the photos, digitally enhanced, and then used to replace the home in each photo used in the study, so that preferences would not be based on home preferences. The photos were categorized based on the amount of turf grass used in each landscape. The categories were no turf, some turf, and nearly all turf (Figure 1).



Figure 1. Example of images from the survey that represent different amounts of turf: no turf (left), some turf (center), and mostly turf (right).

In the final survey, each of the 20 home landscape photos was accompanied by the same four questions. Response choices to the questions were based on a 5-point scale. A 5-point scale was chosen to give respondents a chance to have no opinion on a landscape and to make positive and negative choices quick, with only two levels for opinion distinctions. The goal of this project is to develop recommendations to encourage the adoption of residential landscapes that will improve water quality. To that end, the most important of the four questions in the survey was: “If you owned a house on a creek or stream, how much would you want this **as your yard?**”

Other questions, such as how attractive the landscape is, helped to direct people's focus to different aspects of the landscape, and thus ensure that they considered each landscape closely.

Requests to complete the surveys were sent to three groups of potential participants.

Descriptions of each group and how they were contacted are listed below.

- 1) Residents living in properties whose parcels abutted Clarks Creek. The addresses for people living along Clarks Creek were obtained from the City of Puyallup, and their locations were verified by parcel number with the Pierce County Assessors website maps and parcel overlays. A notification postcard was sent to all identified residential addresses. The postcard was followed by a mailing of the paper version of the survey with an enclosed, self-addressed, stamped, return envelope to WSU Puyallup. A follow-up postcard was also sent. A total of 115 paper surveys were mailed and six came back as undeliverable. Completed surveys were returned to WSU Puyallup from 41 respondents. This gave a response rate of 37.6%.
- 2) Residents living within 1-mile of the centerline of Clarks Creek who were not part of the first group and residents living on one of the smaller waterways in Puyallup (Woodland Creek, Meeker Creek, Silver Creek, Diru Creek, and Dead Man's Pond). The addresses were also obtained from the City of Puyallup and verified by parcel number with the Pierce County Assessors website maps and parcel overlays. A notification postcard was sent to all identified residential addresses. These survey participants received follow-up postcards requesting them to access a website to take the survey online. A follow-up postcard was sent. A total of 438 postcards were mailed. Of these, 28 came back as undeliverable, and many showed signs of problems associated with mail-processing equipment. A total of 35 surveys were completed on Survey Monkey. This gives an apparent response rate of 8.5%, but it may be higher, since fewer postcards were likely delivered than expected.
3. Washington State Department of Ecology water quality professionals. Tammy Riddell sent an email to approximately 240 Department of Ecology water quality professionals requesting that they complete the same online survey as the residential property owners. According to Survey Monkey there were 62 responses from this population, yielding a response rate of 25.8%

Results:

The 20 photos in the survey elicited a wide range of opinions. This indicated that the photos were effective in representing a range of residential landscaping options. The results showed that residents living on or near Clarks Creek and other waterways in Puyallup, WA rated

streamside residential landscapes that included **no turf** significantly lower than landscapes with some turf and significantly lower than landscapes with nearly all turf (Table 1). They gave landscapes without turf a rating of 2.1, which indicates a strong negative reaction to such designs, showing that most residential respondents do not want landscapes without turf for their own yards. The Department of Ecology water quality professionals rated those landscapes without turf significantly better for water quality than both those with some or those with nearly all turf.

Table 1. Responses of residents living on or near Clarks Creek and other waterways in Puyallup to the question: “If you owned a house on a creek or stream, how much would you want this **as your yard?**” compared to Department of Ecology water quality professionals’ responses to the question: “Would this landscape be good for water quality?” by amount of turf in the photograph of a residential streamside landscape.

Amount of turf in the landscape photograph	Residents response to: <i>How much would you want this as your yard^z</i>	Dept. of Ecology response to: <i>Would this landscape be good for water quality^z</i>
No turf	2.1 c ^y	3.5 a ^y
Some turf	3.2 a	2.7 b
Mostly turf	2.7 b	1.6 c

^zResponses are based on a five-point scale, from 1 (*not at all*) to 5 (*very much*).

^yMeans within a column followed by a different letter are significantly different at the 5% level.

While residential respondents do not want turf-free landscapes, they also do not have a strong desire for landscapes that are **nearly all turf**. These were rated at 2.7, which is just below neutral. This low rating indicates that convincing homeowners to adopt landscapes that are not dominated by turf may be successful. Department of Ecology water quality professionals rated those landscapes with nearly all turf significantly worse for water quality than both those with some and those with no turf.

Residential respondents rated landscapes with **some turf**, those that were intermediate between none and nearly all, the highest. These were the only landscapes that received ratings above neutral, indicating that these were they only landscapes that residential respondents were likely to consider adopting for their own homes. Department of Ecology water quality professionals rated these landscapes as intermediate in effect on water quality.

Conclusions:

Residents do not want turf-free landscapes for their own homes. Their dislike of landscapes with no turf was stronger than their dislike of landscapes dominated by turf, even though many

expressed an understanding that landscapes dominated by turf were bad for water quality and wrote that they were concerned about water quality. To encourage the adoption of residential landscapes that will contribute to improved water quality, examples that include some turf are likely to be the more successful than ones that are turf-free. While this may not be best management practice for a single lot, it should be considered best management practice on a larger scale, such as the municipal level, because it is more likely to result in a greater total reduction of turf along the entire waterway.