July 6, 2010

To: Alta Planning
From: DHM Research
Re: Intertwine MaxDiff Survey Results

I. INTRODUCTION & RESEARCH METHODOLOGY

Between May 28 and June 2, 2010 Davis, Hibbitts & Midghall, Inc. (DHM Research) conducted a scientific online survey of residents living in the Portland metro area (Clackamas, Multnomah, Washington Counties, Oregon and Clark County, Washington) on behalf of The Intertwine and Metro. The overall purpose of the research was to assess why residents spend time outdoors, including parks, trails, and natural areas.

Research Methodology: The sample size was 200 Portland metro area residents ages 18 and older. The survey was hosted on a secure and independent DHM server and available to respondents 24 hours a day. Quotas were set by age, gender, county, and education based on the total population of residents ages 18 and older in the Portland metro area to assure a representative sample.

About MaxDiff: MaxDiff is an approach for obtaining importance scores for multiple items. It has been shown to deliver greater discrimination among items and between respondents than the more commonly used rating scale questions. MaxDiff is more effective for two reasons. First, respondents must make trade-offs in order to choose the best and worst of the displayed items. They do not rate items in isolation, but in competition. Second, the choices are made without the use of a scale. Scales can often introduce interpretation bias – different individuals could feel an item is equally important yet select a different number. For these reasons, MaxDiff results are able to demonstrate greater discrimination between items. An example of a MaxDiff question from the survey is displayed below.

Diagram 1
One of 15 MaxDiff Questions Displayed in Survey

Which of the following is most and least important to you on why you spend time outdoors?

Most Important		Least Important
○	Greenways and trails you visit in the city are connected to other greenways and trails	○
○	Greenways and trails you visit in the city are connected to other parks	○
○	You feel good spending time outdoors; it's satisfying	○
○	To explore, experience something new	○

Select one item for Most Important and one item for Least Important

Source: DHM Research, June 2010

Interpreting MaxDiff Data: Our survey was built around a MaxDiff exercise designed to determine the Portland metro area residents' prioritization of 20 presented reasons for spending time outdoors. In this exercise, each respondent was asked the same question a total of 15 times. For each of the 15 questions, a slightly different set of four reasons was shown. From each group of four, respondents selected the most and least important reason for why they spend time outdoors.

By breaking up the 20 items into groups of four, the exercise is easier for respondents, and thus increases validity. At the same time, exposing each respondent to different combinations of four reasons ensures the experiment is balanced. Each service item is displayed an equal number of times and displayed in each position (top, second, third, bottom) the same number of times. This ensures that each reason has an equal chance of being selected "most" and "least" important.

A good way to interpret MaxDiff results is to consider them analogous to those that would be obtained if we asked respondents to allocate 100 points among the 20 reasons for spending time outdoors. The expected score for each of the twenty items is 5.0 (100/20). In other words, if all 20 items were equally important to the population, than each item would receive a score of 5.0. Using this logic, we set a score of 5.0 at "average" importance. Thus, reasons with scores above 5.0 are above average in importance and reasons with scores below 5.0 are below average in importance, for spending time outdoors, to the Portland metro population.

II. SUMMARY

The MaxDiff exercise reveals that 11 of the 20 reasons tested, with scores between 4.86 and 9.90, have average to above average importance to the population. We categorize these items as "somewhat important," "important," and "most important" reasons.[1] The other nine items, with scores between 1.35 and 3.60, have below average importance. These items are categorized as "least important" reasons.

The top reasons for spending time outdoors, ranked in priority order by Portland metro residents are:

Most Important Reason

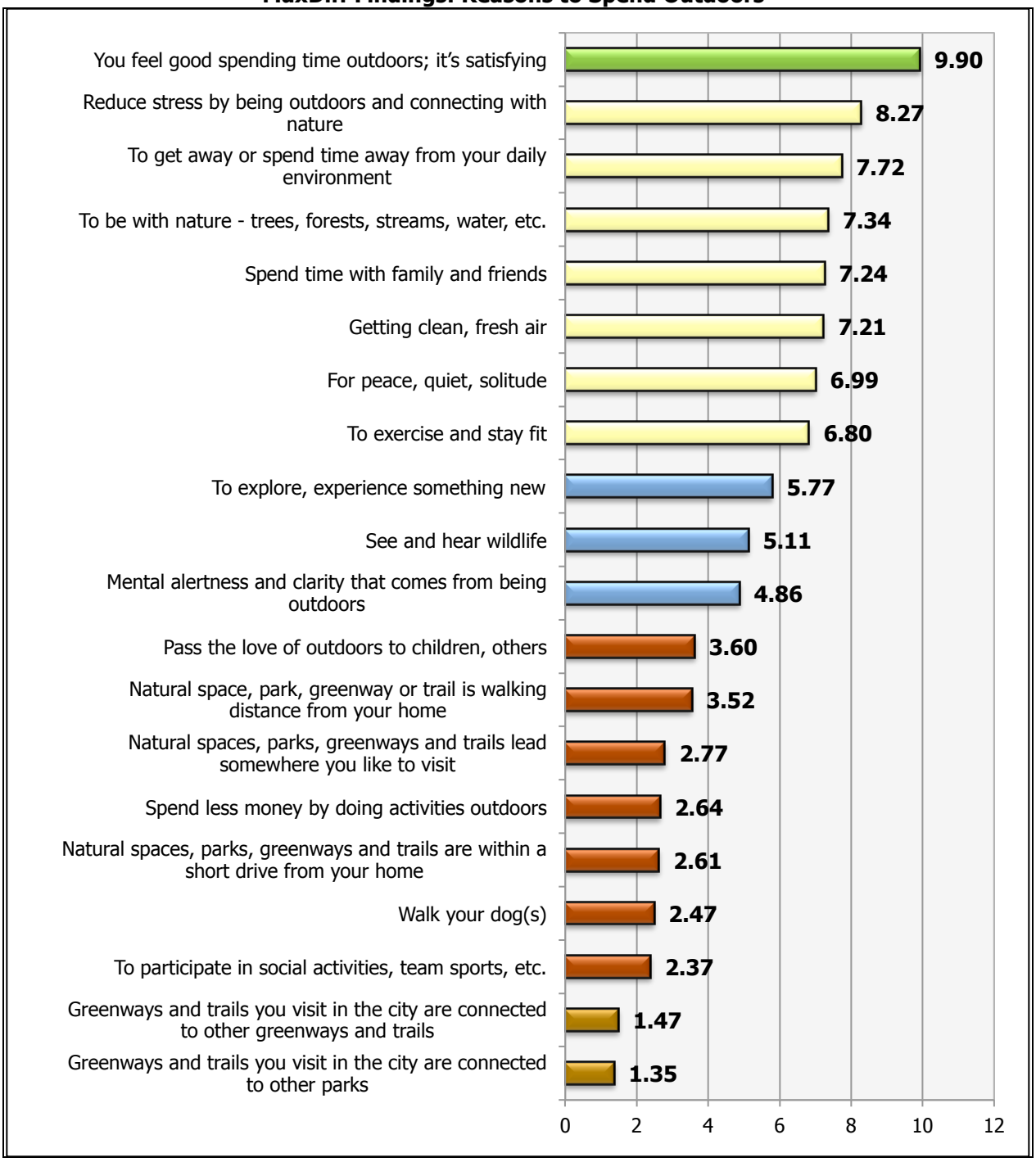
1) **You feel good spending time outdoors; it's satisfying**

Important Reasons

2) **Reduce stress by being outdoors and connecting with nature**
3) **To get away or spend time away from your daily environment**
4) **To be with nature - trees, forests, streams, water, etc.**
5) **Spend time with family and friends**
6) **Getting clean, fresh air**
7) **For peace, quiet, solitude**
8) **To exercise and stay fit**

[1] Note: we have included the 11th most important reason in the group of Somewhat Important Reasons in account of this study's sample error, along with the small gap between it and its next highest competitor. (For a 200-person sample at 95% confidence, there is a maximum range of +/- 6.93% in sample error for each score. Therefore, the eleventh item (score of 4.86) has a true result of 4.52 to 5.20, with 95% confidence. Taking this sample error into account means that its true measure may be above the 5.0 expected score. Additionally, the small gap between its score and the item above it (0.25) along with the large gap between it and the item below it (1.26), led to the decision to include this item in the group of "Somewhat Important Reasons.")

Chart 1
MaxDiff Findings: Reasons to Spend Outdoors



Source: DHM Research, June 2010

Appendix A
Intertwine MaxDiff Demographics
N=200

Demographic Group	Survey	General Population
Gender		
Female	54%	52%
Male	46%	48%
Age		
18 – 34	28%	30%
35 – 54	44%	42%
55 +	29%	28%
County		
Clark, WA	22%	21%
Clackamas	18%	18%
Multnomah	34%	35%
Washington	26%	26%
Education		
High school or less	33%	34%
Some college/technical/community college/2-year degree	31%	33%
Four year college degree or more	36%	33%

Source: DHM Research, June 2010