

**The Market for Decking in the U.S. Northeast:
A survey of architects, contractors and homeowners**

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By David T. Damery
Building Materials and Wood Technology
Holdsworth Hall
University of Massachusetts, Amherst
Tel. 413-545-1770, email: ddamery@forwild.umass.edu

ABSTRACT

Architects, builders and homeowners in 12 Northeastern states were surveyed to learn how decking products were selected for recent construction projects. This study reveals that several issues, do in fact, control the selection and ultimate purchase of specific materials and products. Responses in this study define existing market shares for various decking materials in the Northeast region. A profile of buyer and specifier perceptions describe the relative importance of performance, cost, appearance, and other factors in the product-selection process. Pressure treated, cedar, redwood, composite and tropical hardwoods were analyzed. When compared with the importance of other selection factors, decking performance was ranked highest by all three decision-making groups; architects, contractors and homeowners. Pressure treated decking had the highest market share usage, but also ranked highest as the decking material “having the most problems”. “Quality”, “durability” and “installed stability” of decking were ranked highly as performance concerns. This is considered to be a driving force that is related to life-cycle cost. Respondents indicated that the purchaser’s “own knowledge” of the products and “product reputation” had the most influence among information sources available to the purchase decision-maker. Cost was perceived as having only an average impact.

Highlight of Results

- Pressure treated decking is the dominant choice of decking in all study group segments.
- Both architects and contractors show an awareness of western red cedar and redwood as the second choice in decking alternatives. The homeowners surveyed did not.
- The homeowners surveyed showed significant preference (15%) for plastic-wood composite decking whereas the contractors and architects surveyed (less than 3%) rarely indicated that this was their most frequent choice of decking material.
- All groups agreed that better performance was the most important reason for choosing decking.
- Architects and contractors indicated that pressure treated wood had the most problems despite the fact (or perhaps because of the fact) that it is most frequently used.
- All three groups also chose pressure treated wood as the deck material having the least problems.
- Contractors rated the cost "call-backs" for decking as "very" important.

Background

In the Spring of 1998 a project was undertaken to identify the decision-making process for the purchase of decking products in the Northeastern United States. The target geographic market included:

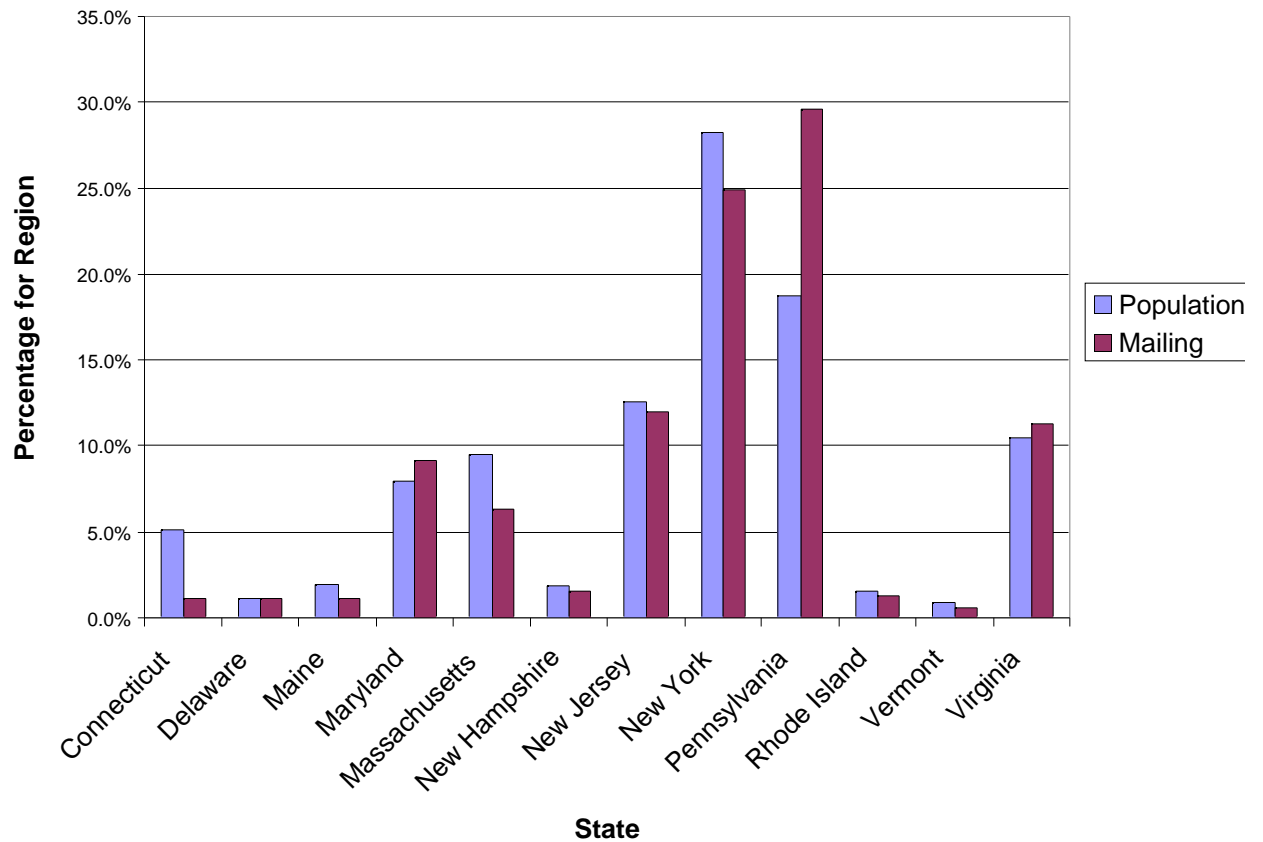
- New England (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut)
- New York
- New Jersey
- Pennsylvania
- Delaware
- Maryland
- Virginia

Though differences are recognized across and even within states, the 12 states selected were believed to have roughly similar climate and socio-economic pattern. The study area is considered as a region and no attempt has been made to compare states within this region or across other regions.

Three classes of decision-makers were analyzed; contractors, homeowners and architects. These groups were considered the primary decision makers in the purchase decision process for decking materials. A commercial mailing list provider was used to develop the list of survey participants for this research. A total of 700 surveys were mailed, 300 each to contractors and homeowners with the remaining 100 mailed to architects. The distribution of the mailing closely matched both the population distribution and measures of construction activity within the region.

The homeowner list was developed using data showing homeowners having a mortgage dated within two years of the survey date and a residency of two years or less. This data is believed to result in a high percentage of new homebuyers with recent experience with the home buying decision. This audience we hoped would have a higher probability of recent decision-making experience in home buying and potentially decking as well

Distribution of Mailing Compared to Population



Survey Method

The mail surveys were conducted using four mailings if required. A preliminary post-card announcement was followed by a first-class mailing containing the survey and cover letter mailed one week later. If necessary, a reminder post-card one week following the survey was mailed and, finally, a second copy of the survey to non-respondents approximately 3 weeks after the survey mailing. Surveys were conducted throughout the Spring, 1998.

Survey Response

Of the total 700 surveys mailed 153 of those returned were usable for inclusion in this report. This represents an overall response rate of 23% after adjusting for undeliverable addresses. This is similar to return rates in previous studies of contractors and homeowners. Architects responded most frequently with a 38% response rate, followed by homeowners 23% and contractors at 19%.

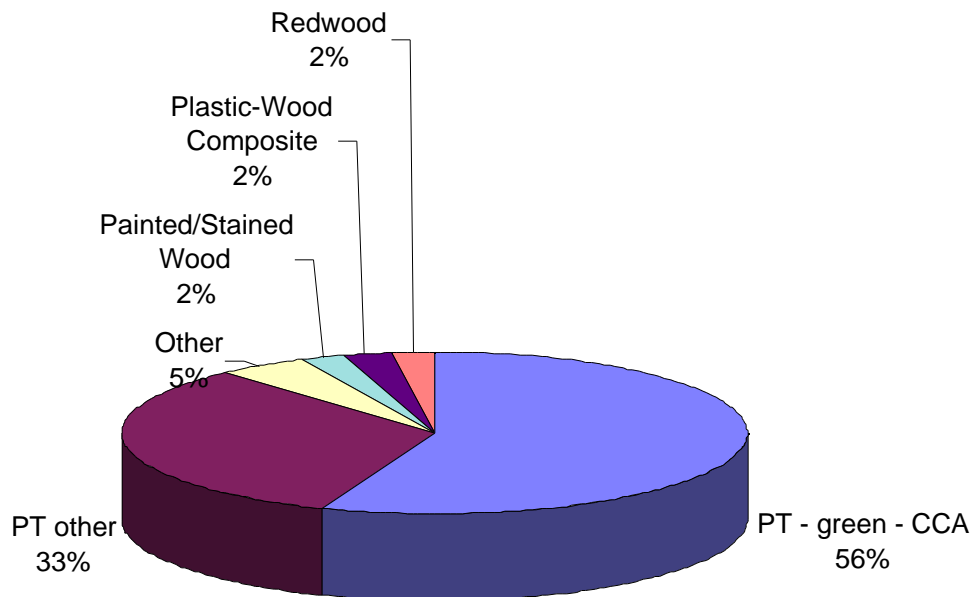
Survey Questions

Architects, contractors and homeowners were asked a series of 7 questions regarding their opinions on purchasing decking. They were asked to:

- 1) Specify all types of decking that they used
- 2) Identify one decking material they used most frequently.
- 3) Rate the importance of four influences on the deck purchase choice decision:
 - Better performance
 - Lower cost
 - Better appearance
 - Recommendation of others
- 4) Rate the importance of several performance problems
- 5) Rate the importance of several cost considerations
- 6) Rate the importance of several appearance characteristics
- 7) Rate the influence of several information/recommendation sources

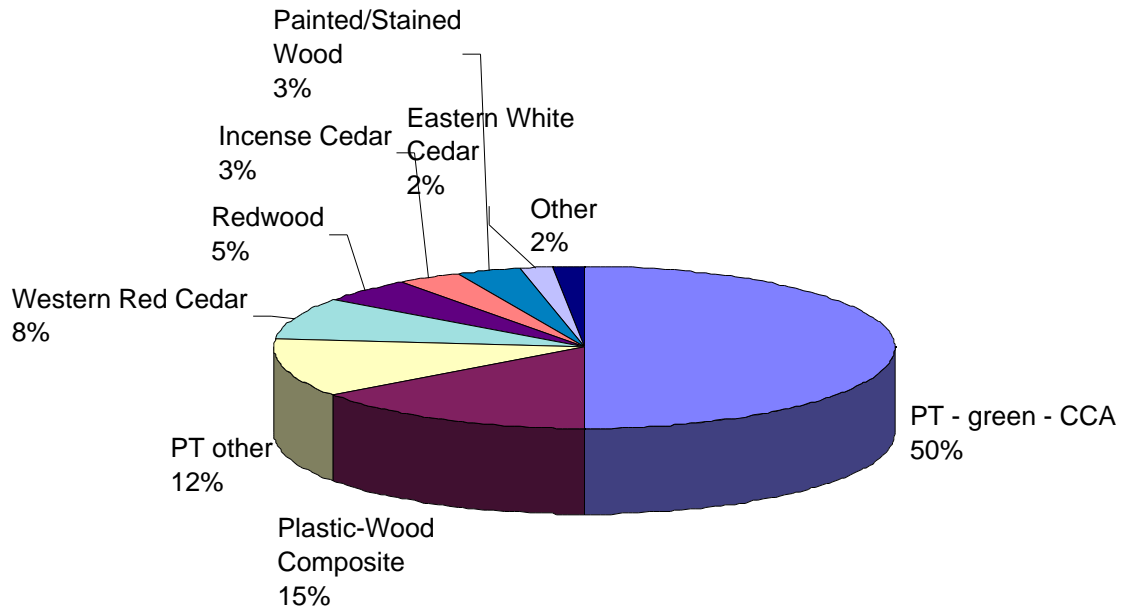
Results

Forty-three homeowners responded that they currently owned a deck with a majority, 89% indicating that it was pressure treated.



**Homeowners - Currently Owning a Deck
(n=43)**

However, given the choice of building a new deck the percentage who favor pressure treated dropped to 62%.

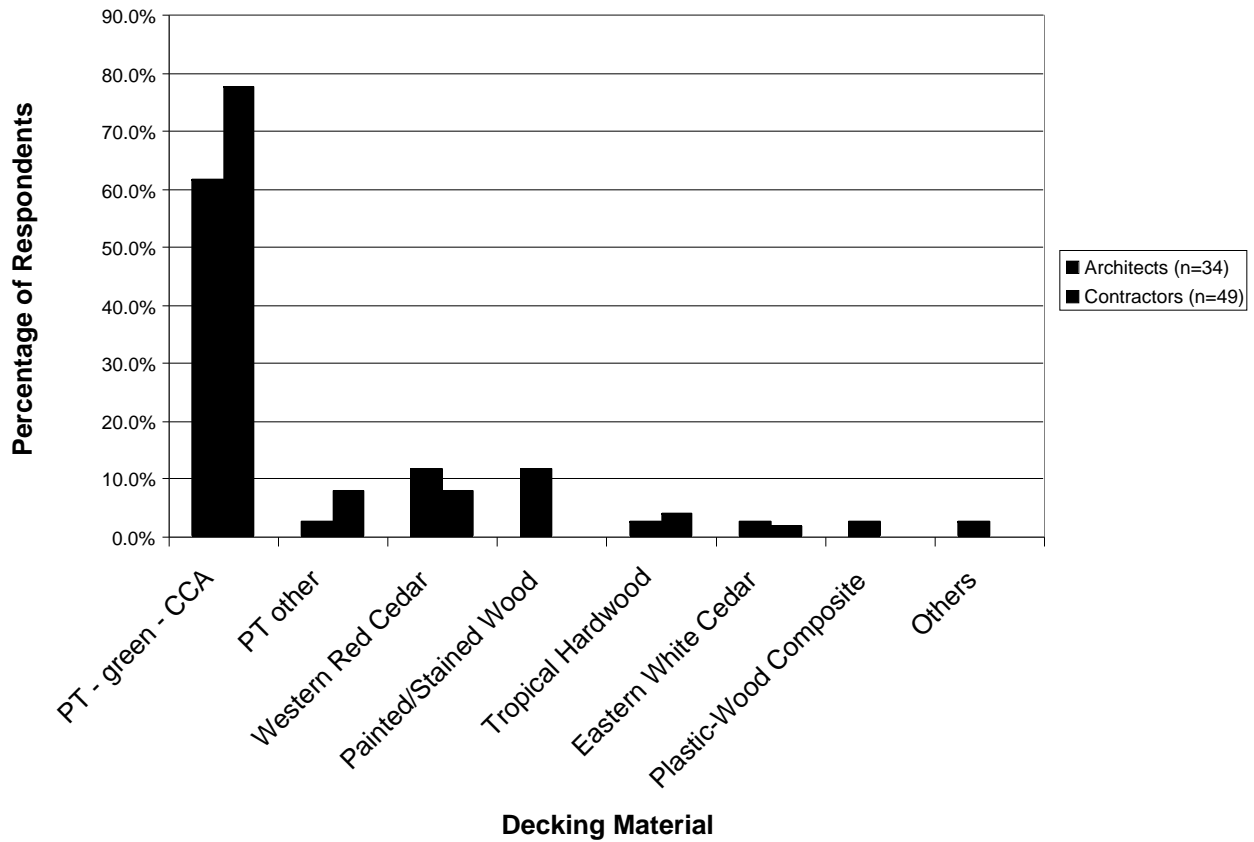


**Homeowners First Choice For A New Deck
(n=60)**

Eighty-nine percent of architects and 86 percent of contractors indicated that they specify pressure treated (Green - CCA) deck material on occasion. Western red cedar and redwood were the next most frequently specified with 50% and 44% of respondents indicating they specified these deck materials.

When asked which deck material they specify most frequently pressure treated with CCA was again the most popular choice.

Decking Type Most Frequently Used



Architects were asked to rate the importance of decking characteristics in the decking selection process. Performance was rated more important than appearance, cost, and the recommendation of others. Performance ranked an average 4.04 respectively on a 5 point Likert scale with 1 being not important, 2 = somewhat important, 3 = of average importance, 4 = very important and 5 = extremely important.

Average ratings of reasons for choosing decking

	Better <u>Performance</u>	Lower <u>Cost</u>	Better <u>Appearance</u>	Recommended <u>By Others</u>
Architects (n=29)	4.04	3.39	3.61 (ah)	2.56 (ah)
Contractors (n=28)	3.67 (ch)	3.44	3.30*(ch)	3.07*
Homeowners (n=65)	4.27 (ch)	3.55	4.17 (ah, ch)	3.11*(ah)

(Scale: 1=not important, 2=somewhat, 3=average, 4=very, 5=extremely important)

* indicates no statistically significant difference from a neutral response (3 = average).

Comparison of means test indicates statistically significant (0.05 alpha level) pair-wise differences for: (ac) – Architects vs. Contractor, (ch) – Contractors vs. Homeowners

The influences ranking highest in importance were performance and appearance concerns. These are explored in detail below. Of the cost concerns, respondents were asked to rank the importance of six considerations. Of these considerations, only one scored an importance rating above 4.0 “very important” and that was only for contractors. This item was the cost of call-backs for which the mean contractor rating was 4.02. All other cost ratings were between 3.0 and 4.0.

Architects, contractors and homeowners alike indicated having few performance problems with regard to their most frequently specified decking material. Average responses for 9 performance issues all indicating a rating near 2 indicating "Few" problems.

Average performance problem expectations/experience for first choice in decking

	Architects (n=34)	Contractors (n=46)	Homeowners (n=56)
Poor durability	2.56	2.33	2.45
Easily damaged	2.41	2.22	2.40
Material not available	2.12	2.11	2.31
Poor environmental record	2.38	2.24	2.31
Short service life	2.21	2.09	2.48
Difficult to install	1.85	1.86	2.33
Installed stability	2.21	2.51	2.60
Inconsistent quality	2.44	2.93	2.47
Not long enough	2.00	2.11	2.17

(Scale: 1=none, 2=few, 3=some, 4=many, 5=always)

Comparison of means test indicates no statistically significant pair-wise differences across respondent types.

When asked which decking material had the most problems architects chose pressure treated decking 48% of the time. 26% of 27 respondents indicated painted or stained wood had the most problems. Contractors ratings were similar to those of architects. Homeowners most frequent response was “solid wood” with 34.6%. This might indicate a difficulty with the terminology used in the questionnaire as homeowners would be expected to have less experience with materials than either architects or contractors.

Ranking of decking with the MOST problems

	Architects (n=27)	Contractors (n=32)	Homeowners (n=26)
PT-Green-CCA	48.1%	50.0%	11.5%
Painted/Stained Wood	25.9%	18.8%	26.9%
Solid Wood	n/a	n/a	34.6%
Pine	7.4%	3.1%	3.8%
Cedar	3.7%	6.3%	7.7%
Plastic-Wood Composite	3.7%	6.3%	7.7%
Other	11.2%	15.5%	7.7%

It is interesting to note that pressure treated was also chosen as having the LEAST problems by all three respondent types. Homeowners differed from architects and contractors in rating plastic-wood composite decking equal to pressure treated in having the least problems. Other deck materials that ranked highly were cedar, redwood, and tropical hardwoods.

Ranking of decking with the LEAST problems

	Architects (n=26)	Contractors (n=34)	Homeowners (n=27)
PT-Green-CCA	19.2%	20.6%	33.3%
Cedar	19.2%	14.7%	n/a
Redwood	15.4%	17.6%	18.5%
Plastic-Wood Composite	11.5%	17.6%	33.3%
Tropical Hardwood	11.5%	14.7%	7.4%
Douglas Fir	11.5%	n/a	n/a
Other	11.5%	14.7%	7.4%

The ability to change colors was reported as being the least important of the decking appearance characteristics. The appearance of the deck and how it fits with the style of the house influenced architect, contractor, and homeowner choice of decking material slightly more than the other appearance considerations. Furthermore, homeowners differed from architects in their ranking of importance that the decking “fit the landscape”.

Average rating of decking appearance characteristics

	Architects (n=34)	Contractors (n=49)	Homeowners (n=64)
Able to change colors	2.29	2.73*	2.44
Up-close appearance	3.71	3.63	3.95
Fits style of house	3.76	3.63	3.98
Fits the landscape	3.41 (ah)	3.53	3.94 (ah)
Fits neighborhood	3.18*	3.29	3.33*
Fits desired status	3.19*	3.41	2.93*

(Scale: 1=not important, 2=somewhat, 3=average, 4=very, 5=extremely important)

* indicates no statistically significant difference from a neutral response (3 = average). Comparison of means test indicates statistically significant (0.05 alpha level) pair-wise differences for: (ah) – Architects vs. Homeowners

The last question regarding decking asked respondents to rank the influence of various information sources on their choice of decking. Advertising was ranked least important and own knowledge was ranked as the most important. However, one must ask the question, how is “own knowledge” developed? Some of this must necessarily come from advertising. Homeowners were less sure of their own knowledge than were architects and contractors.

Closely following their own knowledge, respondents ranked “product reputation” as the second most important information influence on the choice of deck material. Homeowners appear more inclined to respect builder’s opinions than do architects.

Average rating of information sources on decking choice

	Architects (n=35)	Contractors (n=48)	Homeowners (n=64)
Advertising	1.88	2.11	2.08
My own knowledge	4.14 (ah)	4.04 (ch)	3.57 (ah,ch)
Product reputation	3.86	3.87	3.81
Specified by architect	n/a	2.98*	2.77*
Chosen/specified by builder	2.15 (ah)	n/a	2.69 (ah)
Chosen/specified by homeowner	3.15* (ac)	3.65 (ac)	n/a
Specified by zoning	2.41	2.81*	2.72*
Magazine/technical articles	3.06* (ah)	2.67*	2.35 (ah)
Supplier/lumber retailer	2.35	2.89*	2.59

(Scale: 1=not important, 2=somewhat, 3=average, 4=very, 5=extremely important)

* indicates no statistically significant difference from a neutral response (3 = average). Comparison of means test indicates statistically significant (0.05 alpha level) pair-wise differences for: (ac) – Architects vs. Contractors, (ah) – Architects vs. Homeowners, (ch) – Contractors vs. Homeowners

Conclusions

This research surveyed architects, builders and homeowners in 12 Northeastern U.S. states to learn how decking is selected in new residential construction projects. This study reveals that several issues control the purchase-choice decision for deck materials Responses in this study show pressure-treated wood decking has the dominant market shares in the Northeast region. Better performance of the decking product emerged as a significant influence in product choice. Quality, durability and installed stability of decking were ranked highly as performance concerns. This has implications on the importance of life cycle analysis in developing decking product features and promotional campaigns. Pressure-treated decking was ranked as both the material showing the most performance problems and least performance problems. However, pressure-treated was closely followed by cedar, redwood, plastic-wood composites and tropical hardwoods as having the “least” problems. Respondents indicated that the purchaser’s “own knowledge” of the products and “product reputation” had the most influence among information sources available to the purchase decision-maker.

Decking manufacturers, marketers, architects and contractors can use these results to 1) focus on important deck product attributes that match their target customer perceptions and 2) identify decking product concerns, features, and benefits for more effective promotion to customers and the ultimate homeowner.