

**The Nova Scotia Primary Forest Products  
Marketing Board**

**Summary Report of  
Survey Results and Prices for  
Standing Timber Sales from Nova Scotia Private  
Woodlots**

**for the period**

**July 1 to December 31, 2005**

**Prepared By:**

**Innovative Resource Elements**

**July 10, 2006**

This report is a summary of the results from the stumpage survey that was completed during the winter of 2006. The detailed report is available from Nova Scotia Primary Forest Products Marketing Board (see contact information at the end of this report).

Tables 1,2 and 3 highlight the results of the stumpage survey and covers the period from July 1 to December 31, 2005. This is the third of four scheduled surveys that are to be completed over a 2 year period.

The provincial results have been separated into three regions, Eastern Central and Western which are shown in Figure 1.

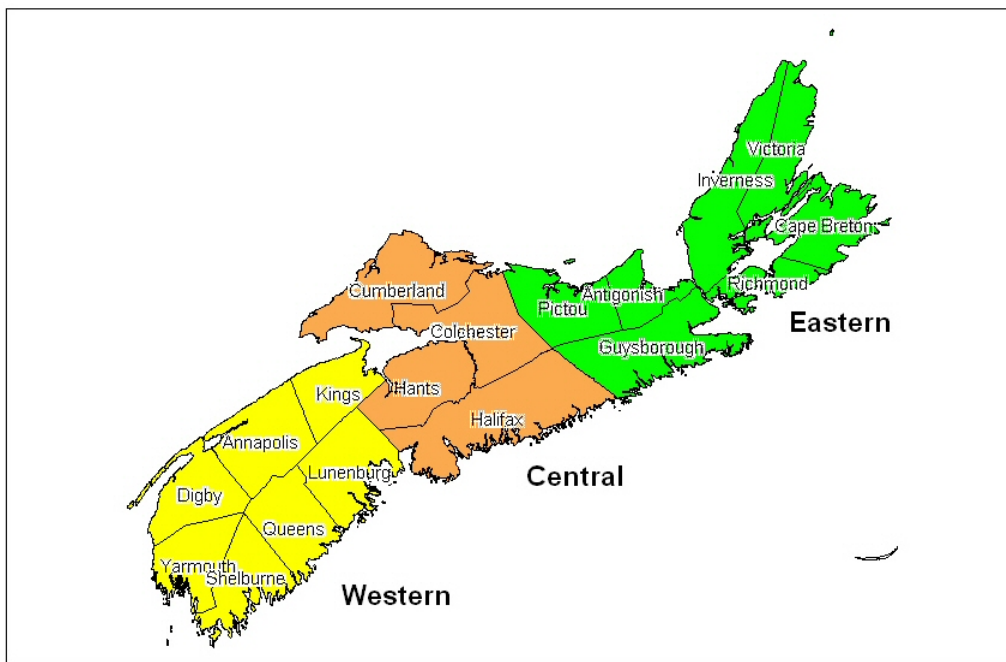


Figure 1: Regions Used to Report Nova Scotia Stumpage Prices.

The tables provide product specific stumpage rates reported for each region. Each product has an average, an upper value and a lower value. The upper and lower values give an indication of the range of survey responses that were reported during the survey (+/- one standard deviation). The tables include a rating of the mean based on the coefficient of variation which provides an indication of the reliability of the mean value. The results from the previous 6 month period (January 1 to June 30, 2005) are also provided for comparison purposes.

The tables show modified stumpage rates that were normalized using modifiers that were developed from data obtained during face to face interviews with participants that were completed during the winter of 2005. The modifiers are designed to adjust reported stumpage values if favourable or unfavourable conditions existed for the stumpage transaction reported during the survey.

The Regional User Guides (Tables 4, 5 and 6) are provided which allow users to convert the regional survey results to a particular job or woodlot. The following example highlights the steps required to make the necessary adjustments.

A woodlot owner in central Nova Scotia wishes to obtain an estimate of the current stumpage value for a white spruce stand on his farm woodlot. With a harvest block in mind, a landowner can make the necessary conversions from the regional tables to suit local conditions:

The Regional Stumpage Report for the Central Region (Table 2) shows that the average normalized price for spruce sawlogs is \$19.32/m<sup>3</sup>. The average value has a 'very good' rating. By referencing the Central Regional Users Guide, the operating condition thresholds can be determined. For this example, assume that the total harvest is expected to yield 350 m<sup>3</sup> of sawlog grade wood. The user guide indicates that at job size volumes less than 555 m<sup>3</sup>, a reduction of 12.1% is reasonable for the region. On the other hand, assume the stand is relatively pure spruce and there is only 4% hardwood scattered through out the harvest block. The regional user guide indicates that in harvest blocks with less than 8% hardwood, a 10.9% premium on stumpage may be achievable.

Therefore:

$$\begin{aligned} & \text{(Sum the negative and positive modifiers)} \quad \mathbf{(-12.1\% + 10.9\%) = -1.2\%} \\ & \text{(Convert the normalized rate)} \quad \mathbf{(\$19.32/m^3 \times [1 - 0.012]) = \$19.09/m^3} \end{aligned}$$

The final result is \$19.09/m<sup>3</sup> which can be converted to \$/Mfbm by multiplying the result by 5.66 (various conversion factors are shown in Table 7):

$$\text{(Convert \$/m3 to \$/Mfbm)} \quad \mathbf{(\$19.09/m^3 \times 5.66) = \$108.05/Mfbm}$$

Alternatively, the normalized price is also presented in Mfbm at the right hand side of the table. Simply replace the price/m<sup>3</sup> with the \$/Mfbm and the result will not have to be converted:

Therefore:

$$\begin{aligned} & \text{(Sum the negative and positive modifiers)} \quad \mathbf{(-12.1\% + 10.9\%) = -1.2\%} \\ & \text{(Convert the normalized rate)} \quad \mathbf{(\$109.35 \times [1 - 0.012]) = \$108.04/Mfbm} \end{aligned}$$

Products with 1 survey response were too small to calculate upper/lower standard deviations and ratings. If data was not reported for a product, values were calculated by deducting regional operating costs from regional product price lists.

This is a summary of the survey findings and anyone can obtain a copy of the final report by contacting the Nova Scotia Primary Forest Products Marketing Board at the following address:

Suite 804, Queen Square  
45 Alderney Drive  
Dartmouth, Nova Scotia  
B2Y 2N6

Tel (902) 424-7598  
Fax (902) 424-6965

For information on the use of modifiers, please contact Kirk Schmidt at (902) 922-3607.

**Table 1: Eastern Region Stumpage Report**  
 July 1 to December 31, 2005

| Products                         | Values | Normalized Formal Price (\$/ m <sup>3</sup> ) |            |                 | Normalized Price (\$/ UNIT) |                |                 |      |
|----------------------------------|--------|-----------------------------------------------|------------|-----------------|-----------------------------|----------------|-----------------|------|
|                                  |        | Current Period                                | Rating     | Previous Period | Rating                      | Current Period | Previous Period | UNIT |
| Softwood (SPF) #1 Pulpwood (N=9) | SDA    | \$18.56                                       |            | \$14.27         |                             | \$43.06        | \$33.11         | Cord |
|                                  | Mean   | \$12.61                                       | Acceptable | \$12.18         | Very Good                   | \$29.26        | \$28.26         | Cord |
|                                  | SDB    | \$6.66                                        |            | \$10.08         |                             | \$15.45        | \$23.38         | Cord |
| Softwood SPF #2 Pulp (N=9)       | SDA    | \$18.13                                       |            | \$17.18         |                             | \$42.06        | \$39.86         | Cord |
|                                  | Mean   | \$11.09                                       | Poor       | \$11.82         | Acceptable                  | \$25.73        | \$27.42         | Cord |
|                                  | SDB    | \$4.04                                        |            | \$6.46          |                             | \$9.37         | \$14.99         | Cord |
| Softwood (SPF) Studwood (N=11)   | SDA    | \$29.45                                       |            | \$25.26         |                             | \$68.32        | \$58.60         | Cord |
|                                  | Mean   | \$19.94                                       | Good       | \$19.00         | Very Good                   | \$46.26        | \$44.08         | Cord |
|                                  | SDB    | \$10.43                                       |            | \$12.74         |                             | \$24.20        | \$29.55         | Cord |
| Softwood (SP) Sawlog (N=8)       | SDA    | \$29.56                                       |            | \$28.35         |                             | \$167.31       | \$160.46        | Mfbm |
|                                  | Mean   | \$21.06                                       | Good       | \$21.95         | Good                        | \$119.20       | \$124.24        | Mfbm |
|                                  | SDB    | \$12.57                                       |            | \$15.55         |                             | \$71.15        | \$88.01         | Mfbm |
| Softwood (F) Sawlog (N=4)        | SDA    | \$30.94                                       |            | \$26.63         |                             | \$175.12       | \$150.72        | Mfbm |
|                                  | Mean   | \$19.16                                       | Unreliable | \$20.32         | Good                        | \$108.44       | \$115.01        | Mfbm |
|                                  | SDB    | \$7.38                                        |            | \$14.00         |                             | \$41.77        | \$79.24         | Mfbm |
| White Pine (N=0)                 | SDA    | No Data                                       |            | No Data         |                             | No Data        | No Data         | Mfbm |
|                                  | Mean   | No Data                                       | n/a        | 8.87*           | n/a                         | No Data        | \$50.20*        | Mfbm |
|                                  | SDB    | No Data                                       |            | No Data         |                             | No Data        | No Data         | Mfbm |
| Hemlock / Larch (N=0)            | SDA    | No Data                                       |            | \$15.79         |                             | No Data        | \$89.37         | Mfbm |
|                                  | Mean   | No Data                                       | n/a        | \$11.12         | Poor                        | No Data        | \$62.93         | Mfbm |
|                                  | SDB    | No Data                                       |            | \$6.44          |                             | No Data        | \$36.45         | Mfbm |
| Hardwood Pulp (N=4)              | SDA    | \$5.85                                        |            | \$6.72          |                             | \$11.29        | \$12.97         | Cord |
|                                  | Mean   | \$4.40                                        | Acceptable | \$5.34          | Good                        | \$8.49         | \$10.31         | Cord |
|                                  | SDB    | \$2.94                                        |            | \$3.96          |                             | \$5.67         | \$7.64          | Cord |
| Hardwood Pallet (N=0)            | SDA    | No Data                                       |            | \$13.01         |                             | No Data        | \$25.11         | Cord |
|                                  | Mean   | \$4.60*                                       | n/a        | \$9.30          | Poor                        | \$8.88*        | \$17.94         | Cord |
|                                  | SDB    | No Data                                       |            | \$5.58          |                             | No Data        | \$10.77         | Cord |
| Hardwood Sawlog (N=1)            | SDA    | n/a                                           |            | \$33.74         |                             | n/a            | \$190.96        | Mfbm |
|                                  | Mean   | \$54.45                                       | n/a        | \$27.39         | Good                        | \$308.19       | \$155.03        | Mfbm |
|                                  | SDB    | n/a                                           |            | \$21.03         |                             | n/a            | \$119.03        | Mfbm |
| Hardwood Veneer (N=0)            | SDA    | No Data                                       |            | \$75.04         |                             | No Data        | \$424.73        | Mfbm |
|                                  | Mean   | \$120.16*                                     | n/a        | \$57.40         | Acceptable                  | \$680.10*      | \$324.88        | Mfbm |
|                                  | SDB    | No Data                                       |            | \$39.76         |                             | No Data        | \$225.04        | Mfbm |
| Hardwood Fuelwood (N=2)          | SDA    | \$5.57                                        |            | n/a             |                             | \$10.75        | n/a             | Cord |
|                                  | Mean   | \$4.25                                        | Poor       | \$3.92          | n/a                         | \$8.20         | \$7.56          | Cord |
|                                  | SDB    | \$2.93                                        |            | n/a             |                             | \$5.65         | n/a             | Cord |

**RATINGS**

| Coefficient of Variance | Estimate Quality |
|-------------------------|------------------|
| CV <= 5%                | Excellent        |
| 5% < CV <= 10%          | Very Good        |
| 10% < CV <= 15%         | Good             |
| 15% < CV <= 20%         | Acceptable       |
| 20% < CV <= 25%         | Poor             |
| CV > 25%                | Unreliable       |

| Other | Meaning                                 |
|-------|-----------------------------------------|
| N     | Sample Size                             |
| n/a   | Not Available                           |
| SDA   | Standard Deviation Above                |
| SDB   | Standard Deviation Below                |
| *     | Value Derived from Residual Calculation |

**Table 2: Central Region Stumpage Report**  
 July 1 to December 31, 2005

| Products                         | Values | Normalized Formal Price (\$ / m <sup>3</sup> ) |            |                 | Normalized Price (\$ / UNIT) |                |                 |      |
|----------------------------------|--------|------------------------------------------------|------------|-----------------|------------------------------|----------------|-----------------|------|
|                                  |        | Current Period                                 | Rating     | Previous Period | Rating                       | Current Period | Previous Period | UNIT |
| Softwood (SPF) #1 Pulpwood (N=9) | SDA    | \$11.70                                        |            | \$14.06         |                              | \$27.14        | \$32.62         | Cord |
|                                  | Mean   | \$8.65                                         | Good       | \$10.64         | Very Good                    | \$20.07        | \$24.68         | Cord |
|                                  | SDB    | \$5.61                                         |            | \$7.22          |                              | \$13.02        | \$16.75         | Cord |
| Softwood (SPF) #2 Pulp (N=7)     | SDA    | \$5.25                                         |            | \$8.26          |                              | \$12.18        | \$19.16         | Cord |
|                                  | Mean   | \$3.24                                         | Poor       | \$5.97          | Good                         | \$7.52         | \$13.85         | Cord |
|                                  | SDB    | \$1.23                                         |            | \$3.68          |                              | \$2.85         | \$8.54          | Cord |
| Softwood (SPF) Studwood (N=11)   | SDA    | \$22.34                                        |            | \$28.64         |                              | \$51.83        | \$66.44         | Cord |
|                                  | Mean   | \$16.12                                        | Good       | \$23.39         | Very Good                    | \$37.40        | \$54.26         | Cord |
|                                  | SDB    | \$9.90                                         |            | \$18.14         |                              | \$22.97        | \$42.08         | Cord |
| Softwood (SP) Sawlog (N=11)      | SDA    | \$25.18                                        |            | \$29.49         |                              | \$142.52       | \$166.91        | Mfbm |
|                                  | Mean   | \$19.32                                        | Very Good  | \$23.90         | Very Good                    | \$109.35       | \$135.27        | Mfbm |
|                                  | SDB    | \$13.46                                        |            | \$18.31         |                              | \$76.18        | \$103.63        | Mfbm |
| Softwood (F) Sawlog (N=2)        | SDA    | \$16.63                                        |            | \$31.40         |                              | \$94.12        | \$177.72        | Mfbm |
|                                  | Mean   | \$16.46                                        | Excellent  | \$28.75         | Very Good                    | \$93.16        | \$162.72        | Mfbm |
|                                  | SDB    | \$16.28                                        |            | \$26.10         |                              | \$92.14        | \$147.73        | Mfbm |
| White Pine (N=3)                 | SDA    | \$19.86                                        |            | n/a             |                              | \$112.41       | n/a             | Mfbm |
|                                  | Mean   | \$16.10                                        | Good       | \$21.31         | n/a                          | \$91.13        | \$120.61        | Mfbm |
|                                  | SDB    | \$12.35                                        |            | n/a             |                              | \$69.90        | n/a             | Mfbm |
| Hemlock / Larch (N=6)            | SDA    | \$10.79                                        |            | \$13.10         |                              | \$61.07        | \$74.15         | Mfbm |
|                                  | Mean   | \$8.08                                         | Good       | \$10.28         | Acceptable                   | \$45.73        | \$58.18         | Mfbm |
|                                  | SDB    | \$5.36                                         |            | \$7.46          |                              | \$30.34        | \$42.22         | Mfbm |
| Hardwood Pulp (N=6)              | SDA    | \$7.61                                         |            | \$11.48         |                              | \$14.69        | \$22.16         | Cord |
|                                  | Mean   | \$4.96                                         | Poor       | \$7.06          | Poor                         | \$9.57         | \$13.62         | Cord |
|                                  | SDB    | \$2.32                                         |            | \$2.65          |                              | \$4.48         | \$5.11          | Cord |
| Hardwood Pallet (N=0)            | SDA    | No Data                                        |            | \$10.40         |                              | No Data        | \$20.07         | Cord |
|                                  | Mean   | No Data                                        | n/a        | \$7.82          | Poor                         | No Data        | \$15.09         | Cord |
|                                  | SDB    | No Data                                        |            | \$5.25          |                              | No Data        | \$10.13         | Cord |
| Hardwood Sawlog (N=0)            | SDA    | No Data                                        |            | \$23.22         |                              | No Data        | \$131.42        | Mfbm |
|                                  | Mean   | \$14.73*                                       | n/a        | \$17.98         | Acceptable                   | \$83.37*       | \$101.77        | Mfbm |
|                                  | SDB    | No Data                                        |            | \$12.73         |                              | No Data        | \$72.05         | Mfbm |
| Hardwood Veneer (N=1)            | SDA    | n/a                                            |            | n/a             |                              | n/a            | n/a             | Mfbm |
|                                  | Mean   | \$26.31                                        | n/a        | \$40.09         | n/a                          | \$148.91       | \$226.91        | Mfbm |
|                                  | SDB    | n/a                                            |            | n/a             |                              | n/a            | n/a             | Mfbm |
| Hardwood Fuelwood (N=2)          | SDA    | \$7.18                                         |            | n/a             |                              | \$13.85        | n/a             | Cord |
|                                  | Mean   | \$3.90                                         | Unreliable | \$7.14          | n/a                          | \$7.53         | \$13.78         | Cord |
|                                  | SDB    | \$0.62                                         |            | n/a             |                              | \$1.20         | n/a             | Cord |

**RATINGS**

| Coefficient of Variance | Estimate Quality |
|-------------------------|------------------|
| CV <= 5%                | Excellent        |
| 5% < CV <= 10%          | Very Good        |
| 10% < CV <= 15%         | Good             |
| 15% < CV <= 20%         | Acceptable       |
| 20% < CV <= 25%         | Poor             |
| CV > 25%                | Unreliable       |

| Other | Meaning                                 |
|-------|-----------------------------------------|
| N     | Sample Size                             |
| n/a   | Not Available                           |
| SDA   | Standard Deviation Above                |
| SDB   | Standard Deviation Below                |
| *     | Value Derived from Residual Calculation |

**Table 3: Western Region Stumpage Report**  
 July 1 to December 31, 2005

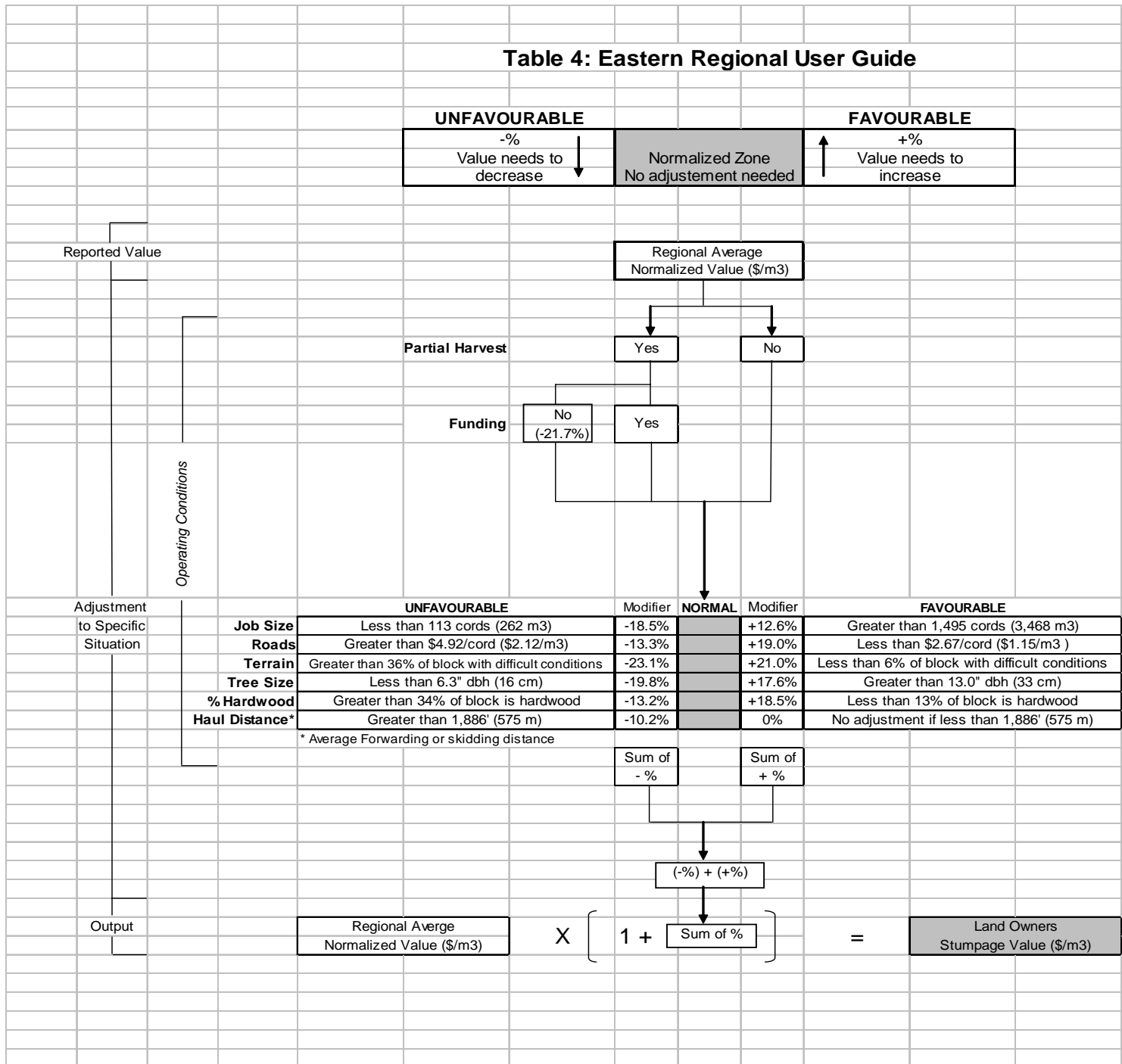
| Products                      | Values | Normalized Formal Price (\$ / m <sup>3</sup> ) |            |                 |            | Normalized Price (\$ / UNIT) |                 |      |
|-------------------------------|--------|------------------------------------------------|------------|-----------------|------------|------------------------------|-----------------|------|
|                               |        | Current Period                                 | Rating     | Previous Period | Rating     | Current Period               | Previous Period | UNIT |
| Softwood (SPF) # 1 Pulp (N=1) | SDA    | n/a                                            |            | \$15.04         |            | n/a                          | \$34.89         | Cord |
|                               | Mean   | \$1.57                                         | n/a        | \$8.77          | Unreliable | \$3.65                       | \$20.35         | Cord |
|                               | SDB    | n/a                                            |            | \$2.49          |            | n/a                          | \$5.78          | Cord |
| Softwood (SPF) # 2 Pulp (N=3) | SDA    | \$10.48                                        |            | \$10.64         |            | \$24.31                      | \$24.68         | Cord |
|                               | Mean   | \$6.26                                         | Unreliable | \$8.20          | Good       | \$14.52                      | \$19.02         | Cord |
|                               | SDB    | \$2.04                                         |            | \$5.77          |            | \$4.73                       | \$13.39         | Cord |
| Softwood (SPF) Studwood (N=2) | SDA    | \$14.61                                        |            | \$32.20         |            | \$33.90                      | \$74.70         | Cord |
|                               | Mean   | \$8.86                                         | Unreliable | \$25.41         | Good       | \$20.56                      | \$58.95         | Cord |
|                               | SDB    | \$3.12                                         |            | \$18.62         |            | \$7.24                       | \$43.20         | Cord |
| Softwood (SP) Sawlog (N=8)    | SDA    | \$30.51                                        |            | \$33.04         |            | \$172.69                     | \$187.01        | Mfbm |
|                               | Mean   | \$23.00                                        | Good       | \$26.09         | Very Good  | \$130.18                     | \$147.67        | Mfbm |
|                               | SDB    | \$15.50                                        |            | \$19.15         |            | \$87.73                      | \$108.39        | Mfbm |
| Softwood (F) Sawlog (N=3)     | SDA    | \$23.50                                        |            | \$31.30         |            | \$133.01                     | \$177.16        | Mfbm |
|                               | Mean   | \$21.68                                        | Excellent  | \$24.42         | Good       | \$122.71                     | \$138.22        | Mfbm |
|                               | SDB    | \$19.86                                        |            | \$17.53         |            | \$112.41                     | \$99.22         | Mfbm |
| White Pine (N=3)              | SDA    | \$25.80                                        |            | \$27.08         |            | \$146.03                     | \$153.27        | Mfbm |
|                               | Mean   | \$15.54                                        | Unreliable | \$21.38         | Very Good  | \$87.96                      | \$121.01        | Mfbm |
|                               | SDB    | \$5.28                                         |            | \$15.77         |            | \$29.88                      | \$89.26         | Mfbm |
| Hemlock / Larch (N=1)         | SDA    | n/a                                            |            | \$24.30         |            | n/a                          | \$137.54        | Mfbm |
|                               | Mean   | \$14.13                                        | n/a        | \$17.83         | Acceptable | \$79.98                      | \$100.92        | Mfbm |
|                               | SDB    | n/a                                            |            | \$11.37         |            | n/a                          | \$64.35         | Mfbm |
| Hardwood Pulp (N=1)           | SDA    | n/a                                            |            | \$11.53         |            | n/a                          | \$22.25         | Cord |
|                               | Mean   | \$7.77                                         | n/a        | \$9.27          | Good       | \$15.00                      | \$17.89         | Cord |
|                               | SDB    | n/a                                            |            | \$7.02          |            | n/a                          | \$13.55         | Cord |
| Hardwood Pallet (N=0)         | SDA    | No Data                                        |            | No Data         |            | No Data                      | No Data         | Cord |
|                               | Mean   | No Data                                        | n/a        | No Data         | n/a        | No Data                      | No Data         | Cord |
|                               | SDB    | No Data                                        |            | No Data         |            | No Data                      | No Data         | Cord |
| Hardwood Sawlog (N=2)         | SDA    | \$74.00                                        |            | \$35.95         |            | \$418.84                     | \$203.48        | Mfbm |
|                               | Mean   | \$41.88                                        | Unreliable | \$33.16         | Very Good  | \$237.04                     | \$187.68        | Mfbm |
|                               | SDB    | \$9.76                                         |            | \$30.37         |            | \$55.24                      | \$171.89        | Mfbm |
| Hardwood Veneer (N=1)         | SDA    | n/a                                            |            | No Data         |            | n/a                          | No Data         | Mfbm |
|                               | Mean   | \$96.89                                        | n/a        | \$145.87*       | n/a        | \$548.40                     | \$825.62*       | Mfbm |
|                               | SDB    | n/a                                            |            | No Data         |            | n/a                          | No Data         | Mfbm |
| Hardwood Fuelwood (N=3)       | SDA    | \$17.12                                        |            | \$16.31         |            | \$33.04                      | \$31.48         | Cord |
|                               | Mean   | \$10.12                                        | Unreliable | \$11.98         | Acceptable | \$19.53                      | \$23.12         | Cord |
|                               | SDB    | \$3.11                                         |            | \$7.65          |            | \$6.00                       | \$17.76         | Cord |

**RATINGS**

| Coefficient of Variance | Estimate Quality |
|-------------------------|------------------|
| CV ≤ 5%                 | Excellent        |
| 5% < CV ≤ 10%           | Very Good        |
| 10% < CV ≤ 15%          | Good             |
| 15% < CV ≤ 20%          | Acceptable       |
| 20% < CV ≤ 25%          | Poor             |
| CV > 25%                | Unreliable       |

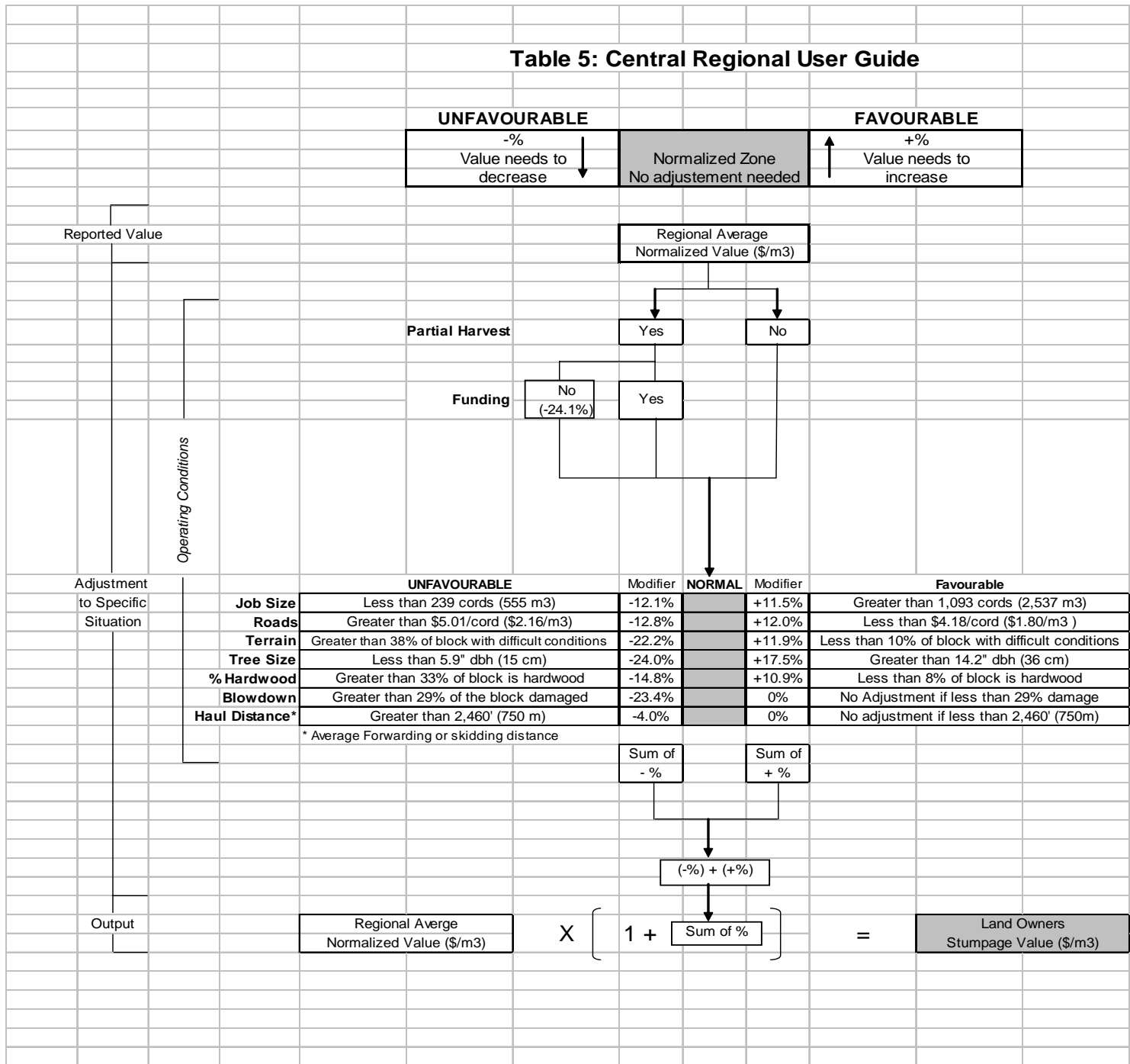
| Other | Meaning                                 |
|-------|-----------------------------------------|
| N     | Sample Size                             |
| n/a   | Not Available                           |
| SDA   | Standard Deviation Above                |
| SDB   | Standard Deviation Below                |
| *     | Value Derived from Residual Calculation |

**Table 4: Eastern Regional User Guide**





**Table 5: Central Regional User Guide**



**Table 6: Western Regional User Guide**

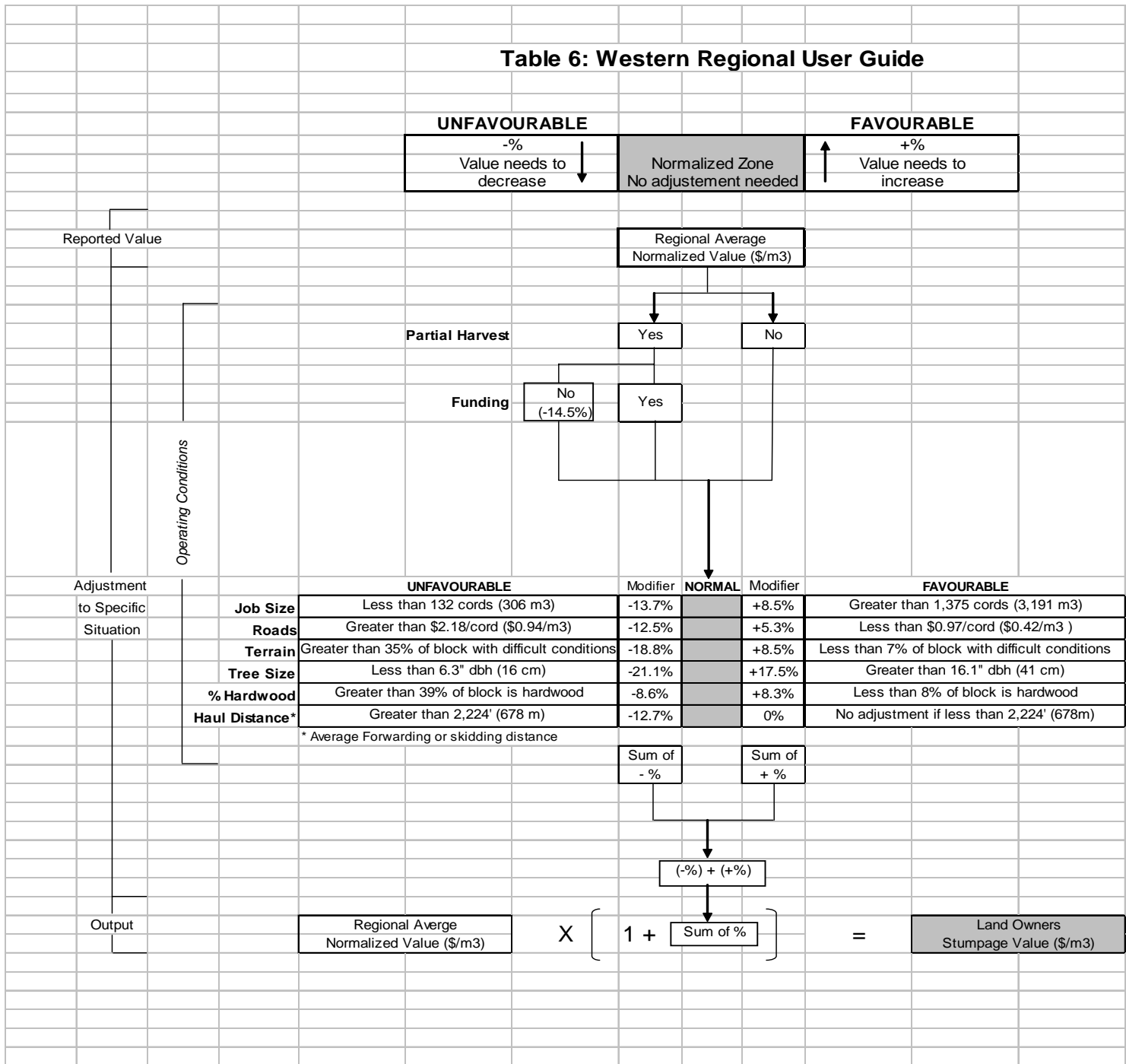


Table 7: Conversion Factors

| Primary Forest Product Conversion Factors |          |   |         |   |                |
|-------------------------------------------|----------|---|---------|---|----------------|
| Common units of measure                   | Species  | x | Factor  | = | m <sup>3</sup> |
| Mfbm                                      | Softwood |   | 5.66    |   |                |
| Mfbm                                      | Hardwood |   | 5.66    |   |                |
| Cords                                     | Softwood |   | 2.32    |   |                |
| Cords                                     | Hardwood |   | 1.93    |   |                |
| Tonnes                                    | Softwood |   | 1.17    |   |                |
| Tonnes                                    | Hardwood |   | 0.96    |   |                |
| m <sup>3</sup> (stacked)                  | Softwood |   | 0.64    |   |                |
| m <sup>3</sup> (stacked)                  | Hardwood |   | 0.53    |   |                |
| fbm                                       | Softwood |   | 0.00566 |   |                |
| fbm                                       | Hardwood |   | 0.00566 |   |                |
| tons                                      | Softwood |   | 1.06    |   |                |
| tons                                      | Hardwood |   | 0.87    |   |                |

Conversion Factors Derived from the Nova Scotia Registry of Buyers