

BEFORE THE  
POSTAL RATE COMMISSION  
WASHINGTON, DC 20260-0001

EXPERIMENTAL PRIORITY MAIL FLAT-RATE  
Box, 2004

Docket No. MC2004-2

TESTIMONY OF  
L. PAUL LOETSCHER  
ON BEHALF OF  
THE UNITED STATES POSTAL SERVICE

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## **Autobiographical Sketch**

My name is L. Paul Loetscher. I am a Senior Economist at Christensen Associates, which is an economic research and consulting firm located in Madison, Wisconsin. I joined Christensen Associates in 1995 as a Staff Economist. In 1997 I was promoted to Economist and in 1999 I became a Senior Economist. My education includes a B.A. in economics from Colorado State University in 1990 and an M.A. in economics from Michigan State University in 1993. I earned an M.A. by completing coursework and qualifying examinations for a Ph.D. but did not complete a dissertation. While a graduate student at Michigan State University, I was a teaching assistant for four years. I was an instructor for Intermediate Microeconomics, Labor Economics, and Principles of Microeconomics.

Much of my work at Christensen Associates has dealt with the statistical issues related to the estimation of mail volumes and mail characteristics. In Docket No. R2001-1 I presented testimony (USPS-T-41) on the measurement of domestic mail volumes by shape, ounce increment, and rate element, and the measurement of the entry profile of Outside County Periodicals mail pieces. In Docket No. R2000-1 I supported the testimonies of witnesses Crum (USPS-T-27), Daniel (USPS-T-28), Degan (USPS-RT-5) and Yacoboucci (USPS-T-25). In Docket No. R97-1 I supported the testimonies of witnesses Schenk (USPS-RT-22), McGrane (USPS-ST-40) and Talmo (USPS-ST-50).

1 **I. Purpose of Testimony**

2 The purpose of my testimony is to present and sponsor a study I conducted that  
3 estimates the size distributions and densities of Priority Mail parcels. That  
4 study's details and documentation appear in *Priority Mail Parcel Distribution and*  
5 *Density Study, Supporting Materials of Witness Loetscher*, filed as USPS-LR-  
6 2/MC2004-2. These estimates are used by witness Scherer (USPS-T-1). The  
7 library reference is divided into four parts. Section 1 provides a description of the  
8 study. Section 2 describes the sample frame, site selection, and data collection  
9 methods. Section 3 describes the estimation methodology. The final appendix  
10 presents the software code used to generate the estimates. The library  
11 reference provides the data and documentation needed to replicate the estimates  
12 used by witness Scherer in his development of the pricing proposal for a Priority  
13 Mail flat-rate box. Some estimates used by witness Scherer rely on distributional  
14 Priority Mail volume data. The Postal Service considers these data to be  
15 commercially sensitive because they are similar to the GFY 2003 Priority Mail  
16 Billing Determinants data which, by convention, will not be reported to the Postal  
17 Rate Commission until spring of 2005. Data deemed too commercially sensitive  
18 by the Postal Service are not disclosed in the library reference.

1 **II. Priority Mail Parcel Size Distribution and Density Study**

2

3 **A. Overview**

4

5 A national study was used to estimate the size distributions and density of  
6 Priority Mail parcels. The study estimates the proportion of Priority Mail parcels  
7 by pound increment, zone, and cubic foot increment. These estimates are used  
8 by witness Scherer to develop a price proposal and to estimate the revenue  
9 implications of introducing a Priority Mail flat-rate box.

10

11 **B. Methodology**

12

13 Data collection teams comprised of Christensen Associates and Postal Service  
14 personnel sampled Priority Mail parcels at 10 randomly selected locations  
15 throughout the country. Section 2 of USPS-LR-2/MC2004-2 describes how the  
16 universe of Priority Mail parcels was defined and the site selection procedures. At  
17 each site data collection teams worked with local operations personnel to identify  
18 all flows of Priority Mail parcels through the facility and to establish data  
19 collection procedures that enable random sampling of all Priority Mail parcels  
20 with minimal operational disruptions. Each sampled parcel was weighed and the  
21 dimensions (length, width, and thickness; or length and girth) were recorded. A  
22 total of 5,368 Priority Mail parcels was sampled.

23

1 Ordinary least squares was used to estimate the mean cubic feet/weight  
2 relationship and variance. The residual terms are tested for normality. The  
3 estimated regression parameters are then used to produce size distributions.  
4 Section 3 of the Library Reference describes the regressions used and provides  
5 their results. This section also describes how the estimated regression  
6 parameters were used to develop the size distributions of Priority Mail parcels.

7

### 8 **C. Results**

9

10 The estimation procedure used in this study generates a continuous size  
11 distribution of Priority Mail parcels by pound increment and zone. Christensen  
12 Associates worked with witness Scherer to provide the distributional tables  
13 necessary to evaluate the revenue risks associated with the introduction of the  
14 Priority Mail flat-rate box. These distributions are presented in Tables 1-6 below.  
15 In addition to the distributional tables witness Scherer required an estimate of the  
16 average density, pounds per cubic foot, of Priority Mail parcels having a cubic  
17 volume of 0.34 cubic feet. These parcels are estimated to have a density of 6.70  
18 pounds per cubic foot.

**Table 1**  
**Frequency Distribution of Cubic Feet, Zones 1-3**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	50.45%	34.54%	9.94%	1.67%	3.41%
2	17.69%	36.94%	22.01%	5.37%	17.99%
3	9.39%	27.02%	22.28%	6.66%	34.65%
4	2.95%	15.26%	18.73%	6.85%	56.22%
5	1.15%	8.73%	13.94%	5.84%	70.33%
6	0.53%	5.31%	10.25%	4.74%	79.17%
7	0.28%	3.44%	7.66%	3.81%	84.80%
8	0.16%	2.35%	5.87%	3.10%	88.52%
9	0.10%	1.68%	4.61%	2.55%	91.06%
10	0.07%	1.25%	3.70%	2.13%	92.85%
11	0.05%	0.96%	3.04%	1.81%	94.15%
12	0.03%	0.76%	2.54%	1.56%	95.11%
13	0.03%	0.61%	2.16%	1.36%	95.85%
14	0.02%	0.50%	1.86%	1.20%	96.42%
15	0.02%	0.42%	1.62%	1.06%	96.88%
16	0.01%	0.36%	1.43%	0.96%	97.24%
17	0.01%	0.31%	1.28%	0.87%	97.54%
18	0.01%	0.27%	1.15%	0.79%	97.78%
19	0.01%	0.24%	1.04%	0.73%	97.98%
20	0.01%	0.22%	0.95%	0.67%	98.16%
21	0.01%	0.19%	0.87%	0.62%	98.30%
22	0.00%	0.18%	0.81%	0.58%	98.43%
23	0.00%	0.16%	0.75%	0.55%	98.53%
24	0.00%	0.15%	0.70%	0.52%	98.63%
25	0.00%	0.14%	0.66%	0.49%	98.71%
26	0.00%	0.13%	0.62%	0.46%	98.78%
27	0.00%	0.12%	0.59%	0.44%	98.84%
28	0.00%	0.11%	0.56%	0.42%	98.90%
29	0.00%	0.11%	0.54%	0.41%	98.95%
30	0.00%	0.10%	0.51%	0.39%	99.00%
31	0.00%	0.10%	0.49%	0.38%	99.04%
32	0.00%	0.09%	0.47%	0.36%	99.07%
33	0.00%	0.09%	0.46%	0.35%	99.10%
34	0.00%	0.08%	0.44%	0.34%	99.13%
35	0.00%	0.08%	0.43%	0.33%	99.16%
36	0.00%	0.08%	0.41%	0.32%	99.19%
37	0.00%	0.07%	0.40%	0.31%	99.21%
38	0.00%	0.07%	0.39%	0.31%	99.23%
39	0.00%	0.07%	0.38%	0.30%	99.25%
40	0.00%	0.07%	0.37%	0.29%	99.27%
41	0.00%	0.07%	0.36%	0.29%	99.28%
42	0.00%	0.06%	0.36%	0.28%	99.30%
43	0.00%	0.06%	0.35%	0.28%	99.31%

44	0.00%	0.06%	0.34%	0.27%	99.32%
45	0.00%	0.06%	0.34%	0.27%	99.33%
46	0.00%	0.06%	0.33%	0.26%	99.34%
47	0.00%	0.06%	0.33%	0.26%	99.35%
48	0.00%	0.06%	0.32%	0.26%	99.36%
49	0.00%	0.06%	0.32%	0.25%	99.37%
50	0.00%	0.06%	0.31%	0.25%	99.38%
51	0.00%	0.05%	0.31%	0.25%	99.38%
52	0.00%	0.05%	0.31%	0.25%	99.39%
53	0.00%	0.05%	0.30%	0.24%	99.40%
54	0.00%	0.05%	0.30%	0.24%	99.40%
55	0.00%	0.05%	0.30%	0.24%	99.41%
56	0.00%	0.05%	0.30%	0.24%	99.41%
57	0.00%	0.05%	0.29%	0.24%	99.42%
58	0.00%	0.05%	0.29%	0.24%	99.42%
59	0.00%	0.05%	0.29%	0.23%	99.42%
60	0.00%	0.05%	0.29%	0.23%	99.43%
61	0.00%	0.05%	0.29%	0.23%	99.43%
62	0.00%	0.05%	0.29%	0.23%	99.43%
63	0.00%	0.05%	0.28%	0.23%	99.44%
64	0.00%	0.05%	0.28%	0.23%	99.44%
65	0.00%	0.05%	0.28%	0.23%	99.44%
66	0.00%	0.05%	0.28%	0.23%	99.44%
67	0.00%	0.05%	0.28%	0.23%	99.44%
68	0.00%	0.05%	0.28%	0.23%	99.44%
69	0.00%	0.05%	0.28%	0.23%	99.45%
70	0.00%	0.05%	0.28%	0.23%	99.45%

**Table 2**  
**Frequency Distribution of Cubic Feet, Zone 4**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	44.38%	36.76%	11.98%	2.14%	4.74%
2	13.94%	34.48%	23.18%	6.03%	22.37%
3	5.29%	20.55%	20.93%	6.98%	46.26%
4	1.41%	9.86%	14.90%	6.07%	67.76%
5	0.50%	5.05%	9.90%	4.61%	79.94%
6	0.21%	2.84%	6.69%	3.43%	86.83%
7	0.10%	1.72%	4.69%	2.59%	90.90%
8	0.06%	1.12%	3.41%	1.99%	93.42%
9	0.03%	0.77%	2.57%	1.57%	95.06%
10	0.02%	0.55%	1.99%	1.27%	96.17%
11	0.01%	0.41%	1.58%	1.04%	96.95%
12	0.01%	0.32%	1.29%	0.87%	97.51%
13	0.01%	0.25%	1.07%	0.74%	97.93%
14	0.01%	0.20%	0.90%	0.64%	98.25%
15	0.00%	0.17%	0.77%	0.56%	98.49%
16	0.00%	0.14%	0.67%	0.50%	98.69%
17	0.00%	0.12%	0.59%	0.44%	98.84%
18	0.00%	0.10%	0.53%	0.40%	98.97%
19	0.00%	0.09%	0.47%	0.36%	99.07%
20	0.00%	0.08%	0.43%	0.33%	99.16%
21	0.00%	0.07%	0.39%	0.30%	99.23%
22	0.00%	0.06%	0.36%	0.28%	99.30%
23	0.00%	0.06%	0.33%	0.26%	99.35%
24	0.00%	0.05%	0.31%	0.25%	99.39%
25	0.00%	0.05%	0.29%	0.23%	99.43%
26	0.00%	0.05%	0.27%	0.22%	99.47%
27	0.00%	0.04%	0.25%	0.21%	99.50%
28	0.00%	0.04%	0.24%	0.20%	99.53%
29	0.00%	0.04%	0.23%	0.19%	99.55%
30	0.00%	0.03%	0.21%	0.18%	99.57%
31	0.00%	0.03%	0.21%	0.17%	99.59%
32	0.00%	0.03%	0.20%	0.17%	99.61%
33	0.00%	0.03%	0.19%	0.16%	99.62%
34	0.00%	0.03%	0.18%	0.15%	99.63%
35	0.00%	0.03%	0.18%	0.15%	99.65%
36	0.00%	0.03%	0.17%	0.15%	99.66%
37	0.00%	0.03%	0.16%	0.14%	99.67%
38	0.00%	0.02%	0.16%	0.14%	99.68%
39	0.00%	0.02%	0.16%	0.13%	99.69%
40	0.00%	0.02%	0.15%	0.13%	99.69%
41	0.00%	0.02%	0.15%	0.13%	99.70%
42	0.00%	0.02%	0.14%	0.13%	99.71%
43	0.00%	0.02%	0.14%	0.12%	99.71%

44	0.00%	0.02%	0.14%	0.12%	99.72%
45	0.00%	0.02%	0.14%	0.12%	99.72%
46	0.00%	0.02%	0.13%	0.12%	99.73%
47	0.00%	0.02%	0.13%	0.12%	99.73%
48	0.00%	0.02%	0.13%	0.11%	99.74%
49	0.00%	0.02%	0.13%	0.11%	99.74%
50	0.00%	0.02%	0.13%	0.11%	99.75%
51	0.00%	0.02%	0.12%	0.11%	99.75%
52	0.00%	0.02%	0.12%	0.11%	99.75%
53	0.00%	0.02%	0.12%	0.11%	99.75%
54	0.00%	0.02%	0.12%	0.11%	99.76%
55	0.00%	0.02%	0.12%	0.11%	99.76%
56	0.00%	0.02%	0.12%	0.10%	99.76%
57	0.00%	0.02%	0.12%	0.10%	99.76%
58	0.00%	0.02%	0.12%	0.10%	99.76%
59	0.00%	0.02%	0.12%	0.10%	99.77%
60	0.00%	0.02%	0.11%	0.10%	99.77%
61	0.00%	0.02%	0.11%	0.10%	99.77%
62	0.00%	0.02%	0.11%	0.10%	99.77%
63	0.00%	0.02%	0.11%	0.10%	99.77%
64	0.00%	0.02%	0.11%	0.10%	99.77%
65	0.00%	0.02%	0.11%	0.10%	99.77%
66	0.00%	0.02%	0.11%	0.10%	99.77%
67	0.00%	0.02%	0.11%	0.10%	99.77%
68	0.00%	0.02%	0.11%	0.10%	99.77%
69	0.00%	0.02%	0.11%	0.10%	99.78%
70	0.00%	0.02%	0.11%	0.10%	99.78%

**Table 3**  
**Frequency Distribution of Cubic Feet, Zone 5**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	46.65%	36.00%	11.20%	1.96%	4.20%
2	15.28%	35.48%	22.80%	5.79%	20.65%
3	5.60%	21.17%	21.13%	6.97%	45.13%
4	1.52%	10.31%	15.28%	6.17%	66.72%
5	0.54%	5.34%	10.26%	4.73%	79.12%
6	0.23%	3.02%	6.99%	3.55%	86.20%
7	0.11%	1.85%	4.93%	2.69%	90.41%
8	0.06%	1.21%	3.60%	2.09%	93.04%
9	0.04%	0.83%	2.72%	1.65%	94.76%
10	0.02%	0.60%	2.12%	1.34%	95.92%
11	0.02%	0.45%	1.69%	1.10%	96.74%
12	0.01%	0.35%	1.38%	0.93%	97.34%
13	0.01%	0.27%	1.15%	0.79%	97.78%
14	0.01%	0.22%	0.97%	0.68%	98.12%
15	0.01%	0.18%	0.83%	0.60%	98.38%
16	0.00%	0.15%	0.73%	0.53%	98.59%
17	0.00%	0.13%	0.64%	0.47%	98.75%
18	0.00%	0.11%	0.57%	0.43%	98.89%
19	0.00%	0.10%	0.51%	0.39%	99.00%
20	0.00%	0.09%	0.46%	0.36%	99.09%
21	0.00%	0.08%	0.42%	0.33%	99.17%
22	0.00%	0.07%	0.39%	0.30%	99.24%
23	0.00%	0.06%	0.36%	0.28%	99.29%
24	0.00%	0.06%	0.33%	0.27%	99.34%
25	0.00%	0.05%	0.31%	0.25%	99.39%
26	0.00%	0.05%	0.29%	0.24%	99.42%
27	0.00%	0.05%	0.27%	0.22%	99.46%
28	0.00%	0.04%	0.26%	0.21%	99.48%
29	0.00%	0.04%	0.25%	0.20%	99.51%
30	0.00%	0.04%	0.23%	0.19%	99.53%
31	0.00%	0.04%	0.22%	0.19%	99.55%
32	0.00%	0.03%	0.21%	0.18%	99.57%
33	0.00%	0.03%	0.21%	0.17%	99.59%
34	0.00%	0.03%	0.20%	0.17%	99.60%
35	0.00%	0.03%	0.19%	0.16%	99.62%
36	0.00%	0.03%	0.19%	0.16%	99.63%
37	0.00%	0.03%	0.18%	0.15%	99.64%
38	0.00%	0.03%	0.17%	0.15%	99.65%
39	0.00%	0.03%	0.17%	0.15%	99.66%
40	0.00%	0.03%	0.17%	0.14%	99.67%
41	0.00%	0.02%	0.16%	0.14%	99.67%
42	0.00%	0.02%	0.16%	0.14%	99.68%
43	0.00%	0.02%	0.15%	0.13%	99.69%

44	0.00%	0.02%	0.15%	0.13%	99.69%
45	0.00%	0.02%	0.15%	0.13%	99.70%
46	0.00%	0.02%	0.15%	0.13%	99.71%
47	0.00%	0.02%	0.14%	0.12%	99.71%
48	0.00%	0.02%	0.14%	0.12%	99.71%
49	0.00%	0.02%	0.14%	0.12%	99.72%
50	0.00%	0.02%	0.14%	0.12%	99.72%
51	0.00%	0.02%	0.14%	0.12%	99.73%
52	0.00%	0.02%	0.13%	0.12%	99.73%
53	0.00%	0.02%	0.13%	0.12%	99.73%
54	0.00%	0.02%	0.13%	0.12%	99.73%
55	0.00%	0.02%	0.13%	0.11%	99.74%
56	0.00%	0.02%	0.13%	0.11%	99.74%
57	0.00%	0.02%	0.13%	0.11%	99.74%
58	0.00%	0.02%	0.13%	0.11%	99.74%
59	0.00%	0.02%	0.13%	0.11%	99.74%
60	0.00%	0.02%	0.13%	0.11%	99.75%
61	0.00%	0.02%	0.12%	0.11%	99.75%
62	0.00%	0.02%	0.12%	0.11%	99.75%
63	0.00%	0.02%	0.12%	0.11%	99.75%
64	0.00%	0.02%	0.12%	0.11%	99.75%
65	0.00%	0.02%	0.12%	0.11%	99.75%
66	0.00%	0.02%	0.12%	0.11%	99.75%
67	0.00%	0.02%	0.12%	0.11%	99.75%
68	0.00%	0.02%	0.12%	0.11%	99.75%
69	0.00%	0.02%	0.12%	0.11%	99.75%
70	0.00%	0.02%	0.12%	0.11%	99.75%

**Table 4**  
**Frequency Distribution of Cubic Feet, Zone 6**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	47.51%	35.69%	10.91%	1.89%	4.01%
2	15.81%	35.83%	22.64%	5.69%	20.03%
3	5.34%	20.66%	20.96%	6.98%	46.05%
4	1.43%	9.94%	14.96%	6.09%	67.57%
5	0.50%	5.10%	9.96%	4.63%	79.80%
6	0.21%	2.87%	6.75%	3.45%	86.72%
7	0.11%	1.75%	4.73%	2.61%	90.81%
8	0.06%	1.13%	3.44%	2.01%	93.35%
9	0.03%	0.78%	2.59%	1.59%	95.01%
10	0.02%	0.56%	2.01%	1.28%	96.13%
11	0.02%	0.42%	1.60%	1.05%	96.91%
12	0.01%	0.32%	1.30%	0.88%	97.48%
13	0.01%	0.25%	1.08%	0.75%	97.90%
14	0.01%	0.21%	0.92%	0.65%	98.22%
15	0.00%	0.17%	0.79%	0.57%	98.47%
16	0.00%	0.14%	0.68%	0.50%	98.67%
17	0.00%	0.12%	0.60%	0.45%	98.83%
18	0.00%	0.11%	0.53%	0.40%	98.96%
19	0.00%	0.09%	0.48%	0.37%	99.06%
20	0.00%	0.08%	0.43%	0.34%	99.15%
21	0.00%	0.07%	0.39%	0.31%	99.22%
22	0.00%	0.07%	0.36%	0.29%	99.29%
23	0.00%	0.06%	0.33%	0.27%	99.34%
24	0.00%	0.05%	0.31%	0.25%	99.39%
25	0.00%	0.05%	0.29%	0.23%	99.43%
26	0.00%	0.05%	0.27%	0.22%	99.46%
27	0.00%	0.04%	0.26%	0.21%	99.49%
28	0.00%	0.04%	0.24%	0.20%	99.52%
29	0.00%	0.04%	0.23%	0.19%	99.54%
30	0.00%	0.04%	0.22%	0.18%	99.56%
31	0.00%	0.03%	0.21%	0.17%	99.58%
32	0.00%	0.03%	0.20%	0.17%	99.60%
33	0.00%	0.03%	0.19%	0.16%	99.62%
34	0.00%	0.03%	0.18%	0.16%	99.63%
35	0.00%	0.03%	0.18%	0.15%	99.64%
36	0.00%	0.03%	0.17%	0.15%	99.65%
37	0.00%	0.03%	0.17%	0.14%	99.66%
38	0.00%	0.02%	0.16%	0.14%	99.67%
39	0.00%	0.02%	0.16%	0.14%	99.68%
40	0.00%	0.02%	0.15%	0.13%	99.69%
41	0.00%	0.02%	0.15%	0.13%	99.70%
42	0.00%	0.02%	0.15%	0.13%	99.70%
43	0.00%	0.02%	0.14%	0.12%	99.71%

44	0.00%	0.02%	0.14%	0.12%	99.72%
45	0.00%	0.02%	0.14%	0.12%	99.72%
46	0.00%	0.02%	0.14%	0.12%	99.73%
47	0.00%	0.02%	0.13%	0.12%	99.73%
48	0.00%	0.02%	0.13%	0.12%	99.73%
49	0.00%	0.02%	0.13%	0.11%	99.74%
50	0.00%	0.02%	0.13%	0.11%	99.74%
51	0.00%	0.02%	0.13%	0.11%	99.74%
52	0.00%	0.02%	0.12%	0.11%	99.75%
53	0.00%	0.02%	0.12%	0.11%	99.75%
54	0.00%	0.02%	0.12%	0.11%	99.75%
55	0.00%	0.02%	0.12%	0.11%	99.75%
56	0.00%	0.02%	0.12%	0.11%	99.76%
57	0.00%	0.02%	0.12%	0.11%	99.76%
58	0.00%	0.02%	0.12%	0.10%	99.76%
59	0.00%	0.02%	0.12%	0.10%	99.76%
60	0.00%	0.02%	0.12%	0.10%	99.76%
61	0.00%	0.02%	0.12%	0.10%	99.76%
62	0.00%	0.02%	0.11%	0.10%	99.77%
63	0.00%	0.02%	0.11%	0.10%	99.77%
64	0.00%	0.02%	0.11%	0.10%	99.77%
65	0.00%	0.02%	0.11%	0.10%	99.77%
66	0.00%	0.02%	0.11%	0.10%	99.77%
67	0.00%	0.02%	0.11%	0.10%	99.77%
68	0.00%	0.02%	0.11%	0.10%	99.77%
69	0.00%	0.02%	0.11%	0.10%	99.77%
70	0.00%	0.02%	0.11%	0.10%	99.77%

**Table 5**  
**Frequency Distribution of Cubic Feet, Zone 7**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	45.63%	36.35%	11.54%	2.04%	4.44%
2	14.67%	35.04%	22.98%	5.89%	21.41%
3	5.21%	20.41%	20.88%	6.98%	46.52%
4	1.39%	9.76%	14.81%	6.05%	68.00%
5	0.49%	4.99%	9.81%	4.58%	80.13%
6	0.21%	2.79%	6.62%	3.40%	86.97%
7	0.10%	1.70%	4.63%	2.56%	91.01%
8	0.06%	1.10%	3.37%	1.97%	93.51%
9	0.03%	0.75%	2.53%	1.55%	95.13%
10	0.02%	0.54%	1.96%	1.25%	96.23%
11	0.01%	0.40%	1.56%	1.03%	96.99%
12	0.01%	0.31%	1.27%	0.86%	97.55%
13	0.01%	0.25%	1.05%	0.73%	97.96%
14	0.01%	0.20%	0.89%	0.63%	98.28%
15	0.00%	0.16%	0.76%	0.55%	98.52%
16	0.00%	0.14%	0.66%	0.49%	98.71%
17	0.00%	0.12%	0.58%	0.44%	98.86%
18	0.00%	0.10%	0.52%	0.39%	98.99%
19	0.00%	0.09%	0.46%	0.36%	99.09%
20	0.00%	0.08%	0.42%	0.33%	99.18%
21	0.00%	0.07%	0.38%	0.30%	99.25%
22	0.00%	0.06%	0.35%	0.28%	99.31%
23	0.00%	0.06%	0.32%	0.26%	99.36%
24	0.00%	0.05%	0.30%	0.24%	99.41%
25	0.00%	0.05%	0.28%	0.23%	99.44%
26	0.00%	0.04%	0.26%	0.21%	99.48%
27	0.00%	0.04%	0.25%	0.20%	99.51%
28	0.00%	0.04%	0.23%	0.19%	99.53%
29	0.00%	0.04%	0.22%	0.18%	99.56%
30	0.00%	0.03%	0.21%	0.18%	99.58%
31	0.00%	0.03%	0.20%	0.17%	99.60%
32	0.00%	0.03%	0.19%	0.16%	99.61%
33	0.00%	0.03%	0.18%	0.16%	99.63%
34	0.00%	0.03%	0.18%	0.15%	99.64%
35	0.00%	0.03%	0.17%	0.15%	99.65%
36	0.00%	0.03%	0.17%	0.14%	99.67%
37	0.00%	0.02%	0.16%	0.14%	99.68%
38	0.00%	0.02%	0.16%	0.13%	99.68%
39	0.00%	0.02%	0.15%	0.13%	99.69%
40	0.00%	0.02%	0.15%	0.13%	99.70%
41	0.00%	0.02%	0.14%	0.13%	99.71%
42	0.00%	0.02%	0.14%	0.12%	99.71%
43	0.00%	0.02%	0.14%	0.12%	99.72%

44	0.00%	0.02%	0.14%	0.12%	99.73%
45	0.00%	0.02%	0.13%	0.12%	99.73%
46	0.00%	0.02%	0.13%	0.11%	99.74%
47	0.00%	0.02%	0.13%	0.11%	99.74%
48	0.00%	0.02%	0.13%	0.11%	99.74%
49	0.00%	0.02%	0.12%	0.11%	99.75%
50	0.00%	0.02%	0.12%	0.11%	99.75%
51	0.00%	0.02%	0.12%	0.11%	99.75%
52	0.00%	0.02%	0.12%	0.11%	99.76%
53	0.00%	0.02%	0.12%	0.11%	99.76%
54	0.00%	0.02%	0.12%	0.10%	99.76%
55	0.00%	0.02%	0.12%	0.10%	99.76%
56	0.00%	0.02%	0.12%	0.10%	99.77%
57	0.00%	0.02%	0.11%	0.10%	99.77%
58	0.00%	0.02%	0.11%	0.10%	99.77%
59	0.00%	0.02%	0.11%	0.10%	99.77%
60	0.00%	0.02%	0.11%	0.10%	99.77%
61	0.00%	0.02%	0.11%	0.10%	99.77%
62	0.00%	0.02%	0.11%	0.10%	99.77%
63	0.00%	0.02%	0.11%	0.10%	99.78%
64	0.00%	0.02%	0.11%	0.10%	99.78%
65	0.00%	0.02%	0.11%	0.10%	99.78%
66	0.00%	0.02%	0.11%	0.10%	99.78%
67	0.00%	0.02%	0.11%	0.10%	99.78%
68	0.00%	0.02%	0.11%	0.10%	99.78%
69	0.00%	0.02%	0.11%	0.10%	99.78%
70	0.00%	0.02%	0.11%	0.10%	99.78%

**Table 6**  
**Frequency Distribution of Cubic Feet, Zone 8**

Weight up to: (Pounds)	0 to 0.1	0.1 to 0.2	0.2 to 0.3	0.3 to 0.34	Over 0.34
1	49.13%	35.07%	10.37%	1.76%	3.66%
2	16.83%	36.46%	22.30%	5.52%	18.88%
3	4.54%	18.99%	20.33%	6.96%	49.18%
4	1.17%	8.75%	13.90%	5.81%	70.37%
5	0.40%	4.36%	8.98%	4.29%	81.97%
6	0.17%	2.40%	5.95%	3.13%	88.36%
7	0.08%	1.44%	4.10%	2.32%	92.06%
8	0.04%	0.92%	2.95%	1.77%	94.32%
9	0.03%	0.63%	2.19%	1.38%	95.78%
10	0.02%	0.45%	1.69%	1.10%	96.75%
11	0.01%	0.33%	1.33%	0.90%	97.43%
12	0.01%	0.25%	1.08%	0.75%	97.91%
13	0.01%	0.20%	0.89%	0.63%	98.27%
14	0.00%	0.16%	0.75%	0.54%	98.54%
15	0.00%	0.13%	0.64%	0.47%	98.75%
16	0.00%	0.11%	0.55%	0.42%	98.92%
17	0.00%	0.09%	0.48%	0.37%	99.05%
18	0.00%	0.08%	0.43%	0.33%	99.16%
19	0.00%	0.07%	0.38%	0.30%	99.24%
20	0.00%	0.06%	0.35%	0.28%	99.32%
21	0.00%	0.06%	0.31%	0.25%	99.38%
22	0.00%	0.05%	0.29%	0.23%	99.43%
23	0.00%	0.04%	0.27%	0.22%	99.47%
24	0.00%	0.04%	0.25%	0.20%	99.51%
25	0.00%	0.04%	0.23%	0.19%	99.54%
26	0.00%	0.03%	0.21%	0.18%	99.57%
27	0.00%	0.03%	0.20%	0.17%	99.60%
28	0.00%	0.03%	0.19%	0.16%	99.62%
29	0.00%	0.03%	0.18%	0.15%	99.64%
30	0.00%	0.03%	0.17%	0.15%	99.65%
31	0.00%	0.03%	0.16%	0.14%	99.67%
32	0.00%	0.02%	0.16%	0.14%	99.68%
33	0.00%	0.02%	0.15%	0.13%	99.70%
34	0.00%	0.02%	0.14%	0.13%	99.71%
35	0.00%	0.02%	0.14%	0.12%	99.72%
36	0.00%	0.02%	0.13%	0.12%	99.73%
37	0.00%	0.02%	0.13%	0.11%	99.74%
38	0.00%	0.02%	0.13%	0.11%	99.74%
39	0.00%	0.02%	0.12%	0.11%	99.75%
40	0.00%	0.02%	0.12%	0.11%	99.76%
41	0.00%	0.02%	0.12%	0.10%	99.76%
42	0.00%	0.02%	0.11%	0.10%	99.77%
43	0.00%	0.02%	0.11%	0.10%	99.77%

44	0.00%	0.02%	0.11%	0.10%	99.78%
45	0.00%	0.02%	0.11%	0.10%	99.78%
46	0.00%	0.01%	0.11%	0.09%	99.78%
47	0.00%	0.01%	0.10%	0.09%	99.79%
48	0.00%	0.01%	0.10%	0.09%	99.79%
49	0.00%	0.01%	0.10%	0.09%	99.79%
50	0.00%	0.01%	0.10%	0.09%	99.80%
51	0.00%	0.01%	0.10%	0.09%	99.80%
52	0.00%	0.01%	0.10%	0.09%	99.80%
53	0.00%	0.01%	0.10%	0.09%	99.80%
54	0.00%	0.01%	0.09%	0.09%	99.81%
55	0.00%	0.01%	0.09%	0.09%	99.81%
56	0.00%	0.01%	0.09%	0.08%	99.81%
57	0.00%	0.01%	0.09%	0.08%	99.81%
58	0.00%	0.01%	0.09%	0.08%	99.81%
59	0.00%	0.01%	0.09%	0.08%	99.81%
60	0.00%	0.01%	0.09%	0.08%	99.82%
61	0.00%	0.01%	0.09%	0.08%	99.82%
62	0.00%	0.01%	0.09%	0.08%	99.82%
63	0.00%	0.01%	0.09%	0.08%	99.82%
64	0.00%	0.01%	0.09%	0.08%	99.82%
65	0.00%	0.01%	0.09%	0.08%	99.82%
66	0.00%	0.01%	0.09%	0.08%	99.82%
67	0.00%	0.01%	0.09%	0.08%	99.82%
68	0.00%	0.01%	0.09%	0.08%	99.82%
69	0.00%	0.01%	0.09%	0.08%	99.82%
70	0.00%	0.01%	0.09%	0.08%	99.82%