

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

MAIL PROCESSING NETWORK
RATIONALIZATION SERVICE CHANGES, 2011

Docket No. N2012-1

Library Reference USPS-LR-N2012-1/92
Revised Mail Processing Labor Cost Savings

PREFACE

This is a Category 2 library reference that will be sponsored by Postal Service Witness Bradley (USPS-ST-4). It contains the data and spreadsheets used for the revised calculation of the cost savings for mail processing labor. The methods used to calculate the costs are explained in USPS-T-10, Direct Testimony of Michael D. Bradley on Behalf of the United States Postal Service and Library Reference USPS-LR-N2010-1/20, Calculation Mail Processing Labor Cost Savings.

There are two workbooks included in this library reference. The first is FY2010 MODS HOURS.Revised.xls. This contains the MODS hours data for the revised determination of active and inactive MODS facilities. It is used to calculate the MODS hours for active and inactive sites by cost pool. The program, Create.MODS.Hours.sas, which was provided in USPS-LR-N2012-1/20, was used to create the cost pools. The application of that program to the revised data is provided in the appendix to this library Reference.

The other workbook is Mail Processing Labor Costs.Revised.xls. This is the revised version of the corresponding workbook, Mail Processing Labor Costs.xls which is contained in Library Reference USPS-LR-N2010-1/20. This workbook contains the spreadsheets that calculate the revised cost savings for the various areas of mail processing labor.

APPENDIX

PROGRAM DOCUMENTATION

Study: Construction of Revised Cost Pools and LDCs for Active and Inactive Sites

Program: Create MODS Hours

III. Requirements of Computer Analysis Relied Upon

A. A general description of the program that includes:

1. **Objectives of the program:** This program computes MODS hours for the PRC cost pools and LDCS for active and inactive sites.
2. **Processing tasks performed:**
 - a. Reads in relevant data from MODS.
 - b. Subset the data into groups for active and inactive sites.
 - c. Create summary variable for hours by cost pool.
 - d. Create summary variable for hours by LDC.
 - e. Create data tables for hours by cost pool.
 - f. Create data tables for hours by LDC.
3. **Methods and procedures employed:**
 - a. The SAS "DATA" step is used to construct variables, and subset by active and inactive sites.
 - b. The SAS procedure "PROC MEANS" is used to aggregate the data.
4. **A listing of the input and output data:**

Input data sets: FY2010 MODS HOURS.REVISED.XLS

Output data sets: None

5. **A listing of the source codes:**

Create MODS Hours.SAS

B. For all input data:

1. **Designation of all sources of such data:** The data are an extract taken from MODS for FY2010.
2. **Explanations of any modifications to such data made for use in the program:** The data are grouped by active and inactive sites and then cumulated by Cost Pool and LDC

C. Definitions of all input and output variables or sets of variables:

1. **Input variables.** This is a listing of the all the input variable names and the definitions of those variables. T

Cost Pool	The number of the PRC Cost Pool
Cost Pool Name	The name of the PRC Cost Pool
Facility Name	The facility name
Fin_Number	The facility finance number
Hours	Labor hours
LDC	Labor Distribution Code
Op Name	MODS operation name
Operation Number	MODS operation number
Status	The facility status

2. **Output variables** There are now output datasets created.

D. A description of input and output data file organizations:

Input data files:

FY2010 MODS HOURS.REVISED.XLS
 Number of Observations: 44,860
 Number of Variables: 9

E. A machine-readable copy of all data bases:

Located in an Excel file in this Library Reference:

FY2010 MODS HOURS.REVISED.XLS

F. For all source codes, documentation sufficiently comprehensive and detailed to satisfy generally accepted software documentation standards appropriate to the type of program and to its intended use in the proceedings: The self-documented SAS program is included in this Library Reference.

G. The source program in machine-readable form:

Located in a text file this Library Reference USPS-LR-N2012-1/20

CREATE MODS HOURS.SAS

H. All pertinent operating system and programming language manuals:

SAS User's Guide: Basics

SAS User's Guide: Statistics

I. If the requested program is user interactive, a representative sample program run, together with any explanation necessary to illustrate the response sequence. N/A

K. "Canned" Statistical Packages: The SAS System For Windows, Version 9.1.3

L. Special Requirements for Computer Simulation Models Offered in Evidence or Relied upon as Support for Other Evidence: N/A

PROGRAM LOG

579 libname MDSHRS "C:\\";

NOTE: Libref MDSHRS was successfully assigned as follows:

Engine: V9
Physical Name: C:\

580

581

582 OPTIONS LINESIZE = 80;

583 OPTIONS PAGESIZE = 3200;

584 OPTIONS NOCENTER NODATE NONUMBER;

585 title;

586

587 PROC IMPORT OUT= WORK.MODS_HOURS1

588 DATAFILE= "C:\FY2010 MODS HOURS.Revised.XLS"

589 DBMS=EXCEL REPLACE;

590 GETNAMES=YES;

591 MIXED=NO;

592 SCANTEXT=YES;

593 USEDATE=YES;

594 SCANTIME=YES;

595

596

NOTE: WORK.MODS_HOURS1 data set was successfully created.

NOTE: PROCEDURE IMPORT used (Total process time):

real time 1.47 seconds

cpu time 1.39 seconds

597 data MODS_HOUR2; SET MODS_HOURS1;

598

599

600

601 MODS Hours:

602 Sum Hours by Cost Pool and LDC for "Active" and "Inactive" facilities

603 (Note: Exclude Sites with Status = ISC, NDC and REC).

604

*****;

605

606 **Code Status Variable;

NOTE: There were 44860 observations read from the data set WORK.MODS_HOURS1.

NOTE: The data set WORK.MODS_HOUR2 has 44860 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time 0.03 seconds

cpu time 0.03 seconds

607 data d; set MODS_HOUR2;

608 if status = ' Y' then status = "IN";

609 if status = ' N' then status = "OUT";

610 run;

NOTE: There were 44860 observations read from the data set WORK.MODS_HOUR2.

NOTE: The data set WORK.D has 44860 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```
611
612 Title "Distribution by Status";
613 proc freq data=d;
614 table status;
615 run;
```

NOTE: There were 44860 observations read from the data set WORK.D.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.09 seconds
cpu time	0.04 seconds

```
616
617 data d2; set d;
618
619 **Subset the In's and Out's;
```

NOTE: There were 44860 observations read from the data set WORK.D.

NOTE: The data set WORK.D2 has 44860 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```
620 data in; set d2;
621 if status= 'IN';
622 run;
```

NOTE: There were 44860 observations read from the data set WORK.D2.

NOTE: The data set WORK.IN has 25809 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```
623
624 data out; set d2;
625 if status = 'OUT';
626 run;
```

NOTE: There were 44860 observations read from the data set WORK.D2.

NOTE: The data set WORK.OUT has 16795 observations and 9 variables.

NOTE: DATA statement used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```
627
628
629
```

```

630 **Create Summary Variables for Hours;
631 *By CostPool;
632
*****;
633 proc sort data = in;
634 by cost_pool;
635 run;

```

NOTE: There were 25809 observations read from the data set WORK.IN.

NOTE: The data set WORK.IN has 25809 observations and 9 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```

636
637 proc sort data = out;
638 by cost_pool;
639 run;

```

NOTE: There were 16795 observations read from the data set WORK.OUT.

NOTE: The data set WORK.OUT has 16795 observations and 9 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.03 seconds
cpu time	0.03 seconds

```

640
641 proc means noprint data=in;
642 by cost_pool;
643 var hours;
644 output out=sums_in sum = Hours;
645 run;

```

NOTE: There were 25809 observations read from the data set WORK.IN.

NOTE: The data set WORK.SUMS_IN has 48 observations and 4 variables.

NOTE: PROCEDURE MEANS used (Total process time):

real time	0.01 seconds
cpu time	0.01 seconds

```

646
647 proc means noprint data=out;
648 by cost_pool;
649 var hours;
650 output out=sums_out sum = Hours;
651 run;

```

NOTE: There were 16795 observations read from the data set WORK.OUT.

NOTE: The data set WORK.SUMS_OUT has 49 observations and 4 variables.

NOTE: PROCEDURE MEANS used (Total process time):

real time	0.01 seconds
cpu time	0.01 seconds

```

652

```

```

653
*****
654 **Create Summary Variables for Hours;
655 *By LDC;
656
*****;
657 proc sort data = in out=in_LDC;
658 by ldc;
659 run;

```

NOTE: There were 25809 observations read from the data set WORK.IN.
NOTE: The data set WORK.IN_LDC has 25809 observations and 9 variables.
NOTE: PROCEDURE SORT used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```

660
661 proc sort data = out out=out_LDC;
662 by ldc;
663 run;

```

NOTE: There were 16795 observations read from the data set WORK.OUT.
NOTE: The data set WORK.OUT_LDC has 16795 observations and 9 variables.
NOTE: PROCEDURE SORT used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```

664
665 proc means noprint data=in_LDC;
666 by ldc;
667 var hours;
668 output out=sums_in_LDC sum = Hours;
669 run;

```

NOTE: There were 25809 observations read from the data set WORK.IN_LDC.
NOTE: The data set WORK.SUMS_IN_LDC has 84 observations and 4 variables.
NOTE: PROCEDURE MEANS used (Total process time):

real time	0.02 seconds
cpu time	0.03 seconds

```

670
671 proc means noprint data=out_LDC;
672 by ldc;
673 var hours;
674 output out=sums_out_LDC sum = Hours;
675 run;

```

NOTE: There were 16795 observations read from the data set WORK.OUT_LDC.
NOTE: The data set WORK.SUMS_OUT_LDC has 81 observations and 4 variables.
NOTE: PROCEDURE MEANS used (Total process time):

real time	0.01 seconds
cpu time	0.03 seconds

676
677
678

679 **Create Datatables By Cost Pool;

680

*****;

681

682 data sums_in; set sums_in;

683 drop _type_ _freq_;

684 run;

NOTE: There were 48 observations read from the data set WORK.SUMS_IN.

NOTE: The data set WORK.SUMS_IN has 48 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
cpu time	0.01 seconds

685

686 data sums_out; set sums_out;

687 drop _type_ _freq_;

688 run;

NOTE: There were 49 observations read from the data set WORK.SUMS_OUT.

NOTE: The data set WORK.SUMS_OUT has 49 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
cpu time	0.01 seconds

689

690 title1 "Hours for 'In' Facilities by Cost Pool";

691 proc print noobs data=sums_in;

692 run;

NOTE: There were 48 observations read from the data set WORK.SUMS_IN.

NOTE: PROCEDURE PRINT used (Total process time):

real time	0.06 seconds
cpu time	0.01 seconds

693

694 title1 "Hours for 'Out' Facilities by Cost Pool";

695 proc print noobs data=sums_out;

696 run;

NOTE: There were 49 observations read from the data set WORK.SUMS_OUT.

NOTE: PROCEDURE PRINT used (Total process time):

real time	0.04 seconds
cpu time	0.00 seconds

697

698

699 **Create Datatables By LDC;

700

*****;

701 data sums_in_LDC; set sums_in_LDC;

702 drop _type_ _freq_;

703 run;

NOTE: There were 84 observations read from the data set WORK.SUMS_IN_LDC.

NOTE: The data set WORK.SUMS_IN_LDC has 84 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time 0.01 seconds

cpu time 0.03 seconds

704

705 data sums_out_LDC; set sums_out_LDC;

706 drop _type_ _freq_;

707 run;

NOTE: There were 81 observations read from the data set WORK.SUMS_OUT_LDC.

NOTE: The data set WORK.SUMS_OUT_LDC has 81 observations and 2 variables.

NOTE: DATA statement used (Total process time):

real time 0.00 seconds

cpu time 0.01 seconds

708

709 title1 "Hours for 'In' Facilities by LDC";

710 proc print noobs data=sums_in_LDC;

711 run;

NOTE: There were 84 observations read from the data set WORK.SUMS_IN_LDC.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.05 seconds

cpu time 0.00 seconds

712

713 title1 "Hours for 'Out' Facilities by LDC";

714 proc print noobs data=sums_out_LDC;

715

716

717

718

719

720

721

722 RUN;

NOTE: There were 81 observations read from the data set WORK.SUMS_OUT_LDC.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.25 seconds

cpu time 0.00 seconds

PROGRAM OUTPUT
Distribution by Status

The FREQ Procedure

Status

Status	Frequency	Percent	Cumulative Frequency	Cumulative Percent
IN	25809	57.53	25809	57.53
ISC	456	1.02	26265	58.55
NDC	1732	3.86	27997	62.41
OUT	16795	37.44	44792	99.85
REC	68	0.15	44860	100.00

Hours for 'In' Facilities by Cost Pool

Cost_ Pool	Hours
0	49568789.57
1	32039744.94
3	178068.93
4	12354167.43
6	509130.93
7	132532.57
8	151416.70
9	5429208.73
10	5113262.83
11	576868.28
12	5651086.57
13	3557346.45
14	9444971.38
15	596254.88
16	4273343.28
18	5307619.74
19	2937420.06
20	1403385.78
21	439398.00
22	1815807.38
23	5400247.09
24	1634277.52
25	25249154.94
26	944190.32
27	1609261.99
28	1028611.93
29	1178165.74
31	446098.66
32	1807433.34
34	1823810.99
35	372398.06
36	625503.43
37	2191617.27
38	4090033.61
40	4.70

41	6198.11
42	57121.87
43	29142.87
44	8765.90
45	40449.55
46	114350.77
47	21971.89
49	41698.62
50	194713.64
51	79288.51
95	106510.50
97	3.75
98	17009589.54

Hours for 'Out' Facilities by Cost Pool

Cost_ Pool	Hours
0	18461187.73
1	10439557.27
3	42261.14
4	3248055.98
6	526033.57
7	83259.05
8	37957.87
9	1331783.50
10	1282128.60
11	153464.21
12	981781.37
13	1142156.14
14	2337687.29
15	278646.11
16	1683337.63
18	1464167.02
19	832482.12
20	636788.26
21	97635.02
22	684389.18
23	2068420.77
24	235987.59
25	7636288.06
26	548450.60
27	320811.05
28	355335.60
29	373360.58
31	120431.23
32	648519.63
34	624822.53
35	56588.25
36	210014.99
37	657245.71
38	1109773.46
40	13016.81
41	17295.43
42	191075.11
43	52249.54
44	10226.13
45	145556.40
46	276943.89
47	27459.42
48	6981.49
49	8299.48
50	144790.30
51	42467.92
95	277965.80
97	3876.87
98	3100764.20

Hours for 'In' Facilities by LDC

LDC	Hours
.	12.97
1	221033.33
2	406201.27
3	1407893.08
4	1327.01
5	46937.81
8	529036.20
9	2516.19
10	8904323.75
11	32217808.22
12	6155497.80
13	16902958.98
14	17871915.99
15	157334.49
17	55655341.05
18	11436183.87
20	93902.83
21	253542.06
22	887897.75
23	8047.53
25	0.36
26	3556.53
27	29155.64
28	2.33
29	95.89
30	1082529.15
31	920348.26
32	5004.41
33	28755.25
34	11578984.27
35	3499650.46
36	17624446.97
37	4576193.67
38	9889309.20
39	2357258.67
40	9453.60
41	4.70
42	6198.11
43	57121.87
44	29142.87
45	106510.50
46	49.08
48	185538.11
49	41698.62
50	12.69
52	5779.74
54	4.21
56	183.87
57	34588.05
58	22091.30
60	134.86
61	2033.78

62	130.95
63	35327.15
64	1434.79
65	122609.38
66	1358.24
68	6092.18
69	632.60
70	305.53
72	55.57
73	8.69
75	3.75
76	4808.29
77	536.78
78	5324.65
79	194713.64
80	326320.70
81	93.70
82	250612.00
83	121309.61
84	118.09
85	166.66
88	39214.24
89	44339.04
90	2951.33
91	606714.40
92	6394.48
93	552019.23
94	8624.81
95	456.19
96	85.85
97	1478.19
98	649.63

Hours for 'Out' Facilities by LDC

LDC	Hours
1	63378.83
2	131661.44
3	405266.44
4	454.00
5	9811.51
8	160364.84
9	1816.48
10	2688901.30
11	10481818.41
12	2253149.97
13	3832416.73
14	5441827.17
15	38525.37
17	16775055.43
18	3469863.72
20	182771.18
21	535667.95
22	1851332.98
23	45317.62
25	80.82
26	5070.57
27	53852.50
28	7.16
29	7.10
30	170591.03
31	139000.84
32	4230.84
33	21709.58
34	1354109.93
35	1128329.61
36	5626130.54
37	1607331.48
38	3435838.82
39	833225.81
40	45652.91
41	13016.81
42	17295.43
43	191075.11
44	52249.54
45	277965.80
46	20.38
48	467167.33
49	8299.48
50	1.73
56	1735.96
57	52329.50
58	3055.53
60	1415.23
61	2065.53
62	110.55
63	7612.95
64	598.77

65	47641.85
68	88.24
69	206.55
70	408.77
71	2.78
72	0.40
73	7.48
74	1744.83
75	3876.87
76	3366.14
77	3445.34
78	3467.05
79	144790.30
80	291391.75
81	3275.23
82	171785.39
83	50523.68
85	13.21
88	2716.31
89	6536.00
90	1467.36
91	235368.59
92	11005.11
93	142336.07
94	11797.18
95	646.66
96	12.54
97	694.27
98	575.41