

**USPS LR-J-65 / Docket R2001-1**

**Bound Printed Matter Mail Processing and Parcel Post  
Window Service Costs**

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## **I. Introduction**

This library reference documents three studies of BY2000 clerk and mailhandler mail processing volume-variable costs for Bound Printed Matter (BPM), and a fourth study of BY2000 clerk and mailhandler window service costs for Parcel Post. The mail processing costs are computed using the Postal Service's proposed cost distribution method. The Postal Service's proposed mail processing cost method includes so-called "migrated" tallies at MODS 1&2 offices in the mail processing cost pools, whereas the Commission's method assigns the costs associated with some such tallies to CRA Cost Segment 3.2 or 3.3 based on the IOCS tally operation code (IOCS field F260). Thus, a few tallies will be classified as mail processing under the Postal Service's method but not the Commission's method.

The first study estimates clerk and mailhandler mail processing volume-variable costs by IOCS "basic function" (IOCS field F261) and cost pool for BPM. The second study separates mail processing volume-variable costs for BPM into IOCS operation 07 (acceptance) costs and all other costs. The third study separates the estimated mail processing volume-variable costs into costs incurred at Auxiliary Service Facilities (ASFs) and costs incurred at non-ASF facilities for BPM. The final study disaggregates volume-variable window service "direct labor" costs for Parcel Post into costs for DBMC-endorsed Parcel Post and all other Parcel Post.

Witness Eggleston sponsors this category 2 library reference. She is the only user of the data supplied by this library reference. Other testimony and library references used in this library reference include:

- USPS-T-11 (Meehan) for BY2000 CRA costs
- USPS-T-13 (Van-Ty-Smith) for Postal Service cost methodology
- USPS LR-J-52 (Smith) for TY2003 Piggyback factors
- USPS LR-J-10 (Shaw) for the BY2000 IOCS data set

## **II. Costs by Basic Function**

The mail processing volume-variable costs by basic function for BPM are estimated using FORTRAN versions of the SAS programs used by witness Van-Ty-Smith (USPS-T-13) to

implement the proposed Postal Service cost methodology for BY2000. The FORTRAN programs compute and report mail processing volume-variable cost by basic function and subclass. This approach is different from the Docket No. R2000-1 study (USPS LR-I-103), which used only the IOCS direct tallies<sup>1</sup> for BPM mail in each cost pool to distribute mail processing volume-variable costs to basic function within each cost pool. The current methodology uses all IOCS tallies (including mixed-mail and not-handling) in a way consistent with the Postal Service's proposed cost distribution procedure.

The BPM volume variable mail processing cost estimates are presented in the worksheet named "Summary" found in the Microsoft Excel workbook "LR65BPMBF00.xls". The summary page is shown in Table 1. The BY2000 mail processing volume-variable costs by basic function for each cost pool are shown in columns (1) through (4). Test year piggyback factors and cost ratios by cost pool (found in worksheet 'pbfact') are applied to convert base year costs to test year costs, which are reported in columns (6) to (9).

### **III. Costs for IOCS Operation 07**

This part of the study estimates mail processing volume-variable costs for IOCS operation 07 (platform acceptance) versus other operations for BPM, which are estimated using the methodology described above for the basic function cost estimates. BPM mail processing volume-variable costs are reported in the Excel workbook "LR65BPM0700.xls" in the 'Summary' worksheet. The summary page is shown in Table 2. The BY2000 volume-variable costs by operation category for each cost pool are shown in columns (1) and (2). Test year piggyback factors and cost ratios by cost pool (found in worksheet 'pbfact') are applied to convert base year costs to test year costs, which are reported in columns (4) and (5).

### **IV. Costs for ASFs**

Mail processing volume-variable costs for BPM at Auxiliary Service Facilities (ASF) are also developed similarly to the volume-variable costs by basic function. A site is determined to be an ASF by the finance number of the site (IOCS field F2) within the IOCS record. Once the

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<sup>1</sup> "Direct" tallies are tallies for which subclass information was recorded. IOCS tallies are dollar-weighted (using IOCS field F9250) unless otherwise noted.

facility type is determined, costs are estimated using the cost methodology described above in Section II. BPM mail processing volume-variable costs are reported in the Microsoft Excel workbook "LR65BPMASF00.xls" in the 'Summary' worksheet. The summary page is shown in Table 3. The BY2000 volume-variable costs by ASF category and basic function for each cost pool are shown in columns (1) through (8). Test year piggyback factors and cost ratios by cost pool (found in worksheet 'pbfact') are applied to convert base year costs to test year costs, which are reported in columns (10) through (17).

#### **V. Window Service Costs for DBMC / Non-DBMC Parcel Post**

To support the development of DBMC Parcel Post cost estimates, BY2000 IOCS clerk and mailhandler window service volume-variable costs for Parcel Post are separated into dropshipped endorsed and non-dropshipped categories. IOCS tallies with the DBMC marking recorded in question 23C of the CODES form (IOCS field F9463) are assigned an activity code created for DBMC Parcel Post. The window service volume-variable costs are estimated based on the Postal Service's proposed cost distribution method (similar to program ADMWIN, LR-J-55). These costs are used to distribute the CRA Cost Segment 3.2 Parcel Post volume-variable costs to dropshipped and non-dropshipped categories. This distribution is performed in Excel workbook "LR65WIN00.xls" and shown in Table 4.

#### **VI. Data Processing**

The IOCS data processing is performed on a Data General AViiON minicomputer with four Pentium Pro microprocessors and one gigabyte of RAM, running the DGUX version of UNIX operating system. Source programs ending with a ".f" are FORTRAN programs. The remaining processing is performed on PCs running the Windows NT 4 and Windows 2000 operating systems and Microsoft Office.

## Tables

## **Appendix A: Program Documentation**

The following are descriptions of the programs used to estimate the Bound Printed Matter mail processing volume-variable costs for clerks and mailhandlers.

#### **I. Preparation of the IOCS Data**

The following programs are used to extract, code, and process the 2000 IOCS data in preparation for Bound Printed Matter (BPM) cost estimations.

Program: **cadoc00by\_rep.f** - Divides IOCS clerk/mailhandler tallies by office group (MODS 1&2, BMCs, Non-MODS) and assigns the tallies to cost pools

Input: **FY00 IOCS Data** (USPS LR-J-10)  
**mods\_usps.00** - List of MODS 1&2 finance numbers used to identify MODS 1&2 offices (USPS LR-J-55)

Output: **mods12\_mp00by\_new.dat** – IOCS mail processing tallies for MODS 1&2 offices  
**mods12\_aw00by\_new.dat** – IOCS administrative and window service tallies for MODS 1&2 offices  
**bmcs\_mp00by\_new.dat** – IOCS mail processing tallies for BMCs  
**bmcs\_aw00by\_new.dat** – IOCS administrative and window service tallies for BMCs  
**nonmods\_mp00by\_new.dat** – IOCS mail processing tallies for Non-MODS offices  
**nonmods\_aw00by\_new.dat** – IOCS administrative and window service tallies for Non-MODS offices  
**nonmods\_op88\_new.dat** – IOCS expedited delivery tallies for Non-MODS offices



## II. Clerk/Mailhandler Mail Processing Volume-Variable Cost Estimation

The following programs use the Postal Service's proposed cost estimation methodology (USPS-T-13) to estimate mail processing volume-variable costs for clerks and mailhandlers by cost pool, subclass, shape, and basic function/ASF/operation categories.

Program: **modsproc00\_cat.f** – Estimates mail processing volume-variable costs for MODS 1&2 offices by activity code, cost pool, and basic function/ASF/operation category

Input: **mods12\_mp00by\_new.dat** – IOCS mail processing tallies for MODS 1&2 offices  
**iocs2000.h** – Declaration of IOCS tally fields  
**asf.fin.srt** – List of ASF finance numbers  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**mixclass.intl** – List of class specific mixed mail activity codes  
**mxmail.intl.dat** – Maps the direct activity codes to their respective class specific mixed mail activity codes  
**costpools.00.619** - List of MODS 1&2 cost pool dollars and corresponding variability factors used in the cost distribution for MODS 1&2 offices (USPS LR-J-55)  
**windk\_dbmc.00** – BY2000 CRA Cost Segment 3.2 costs by activity code and basic function/ASF/operation category for 'function 4 support' cost pool distribution (USPS LR-J-55) – See Section IV of Appendix A for creation of these costs

Output: **mods002by\_cat.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category

Program: **sumclass\_mod\_cat.f** - Rolls up the output from modsproc00\_cat.f from activity code to subclass by cost pool and basic function/ASF/operation category

Input: **mods002by\_cat.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category  
**costpools.00.619** - List of cost pools for MODS 1&2 offices (USPS LR-J-55)  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**classes\_intl.cra.old** - List of original CRA subclasses  
**classmap\_intl.old** - Maps IOCS activity codes to the appropriate CRA subclass

Output: **mod002\_pp\_cat.csv** – Estimated mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category

Program: **bmcproc00\_cat.f** – Estimates mail processing volume-variable costs for BMCs by activity code, cost pool, and basic function/ASF/operation category

Input: **bmcs\_mp00by\_new.dat** – IOCS mail processing tallies for BMCs  
**iocs2000.h** – Declaration of IOCS tally fields  
**asf.fin.srt** – List of ASF finance numbers  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**mixclass.intl** – List of class specific mixed mail activity codes  
**mxmail.intl.dat** – Maps the direct activity codes to their respective class specific mixed mail activity codes  
**costpools.00.bmc.619** – List of BMC cost pool dollars and corresponding variability factors used in the cost distribution for BMCs (USPS LR-J-55)

Output: **bmc003by.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category

Program: **sumclass\_bmc\_cat.f** - Rolls up the output from bmcproc00\_cat.f from activity code to subclass by cost pool and basic function/ASF/operation category

Input: **bmc003by.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category  
**costpools.00.bmc.619** – List of cost pools for BMCs (USPS LR-J-55)  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**classes\_intl.cra.old** - List of original CRA subclasses  
**classmap\_intl.old** - Maps IOCS activity codes to the appropriate CRA subclass

Output: **bmc002\_pp\_cat.csv** – Estimated mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category

Program: **nmodproc00\_cat.f** – Estimates mail processing volume-variable costs for Non-MODS offices by activity code, cost pool, and basic function/ASF/operation category

Input: **nonmods\_mp00by\_new.dat** – IOCS mail processing tallies for Non-MODS offices  
**iocs2000.h** – Declaration of IOCS tally fields  
**asf.fin.srt** – List of ASF finance numbers  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**mixclass.intl** – List of class specific mixed mail activity codes  
**mxmail.intl.dat** – Maps the direct activity codes to their respective class specific mixed mail activity codes  
**costpools.00.nmod.619** – List of Non-MODS office cost pool dollars and corresponding variability factors used in the cost distribution for Non-MODS offices (USPS LR-J-55)

Output: **nmod002by\_cat.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category

Program: **sumclass\_nmod\_cat.f** - Rolls up the output from nmodproc00\_cat.f from activity code to subclass by cost pool and basic function/ASF/operation category

Input: **nmod002by\_cat.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category  
**costpools.00.nmod.619** – List of cost pools for Non-MODS offices (USPS LR-J-55)  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes  
**classes\_intl.cra.old** - List of original CRA subclasses  
**classmap\_intl.old** - Maps IOCS activity codes to the appropriate CRA subclass

Output: **nmod002\_pp\_cat.csv** – Estimated mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category

Workbook: **DBMC Costs BY00 New.xls** – Summarizes the clerk/mailhandler mail processing volume-variable cost estimates by cost pool and basic function/ASF/operation category for BPM. This file has a separate worksheet for each office type (MODS 1&2, BMCs, and Non-MODs).

Input: **mod002\_pp\_cat.csv** – Estimated MODs 1&2 mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category  
**bmc002\_pp\_cat.csv** – Estimated BMC mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category  
**nmod002\_pp\_cat.csv** – Estimated Non-MODs mail processing volume-variable costs for BPM by cost pool and basic function/ASF/operation category

### III. Cost Reports

#### A. Bound Printed Matter (BPM) Mail processing volume-variable Costs by Basic Function

Workbook: **LR65BPMBF00.xls** – Summarizes clerk/mailhandler mail processing volume-variable costs by cost pool and basic function for BPM. Test year piggyback factors and cost ratios are applied to generate test year BPM costs by cost pool and basic function.

Input: **DBMC Costs BY00 New.xls** - Provides BY2000 clerk/mailhandler mail processing volume-variable cost estimates by cost pool and basic function/ASF/operation category for BPM  
**BY00 USPS mail processing volume-variable costs** – BPM volume-variable costs for mail processing using the USPS method cost distribution (USPS LR-J-55)  
**Test Year 03 Piggyback Factors and Cost Ratios** – Supplied by witness Smith (USPS LR-J-52)  
**BY00 USPS Method CRA Segment & Components Report** – For Cost Segment 3.1, used to calculate the worksheet adjustment factor (USPS-T-11)

**B. Bound Printed Matter (BPM) Mail processing volume-variable Costs by Operation**

Workbook: **LR65BPM0700.xls** – Summarizes clerk/mailhandler mail processing volume-variable costs by cost pool and operation 07 versus all other operations for BPM. Test year piggyback factors and cost ratios are applied to generate test year BPM costs by cost pool and operation category.

Input: **DBMC Costs BY00 New.xls** - Provides BY2000 clerk/mailhandler mail processing volume-variable cost estimates by cost pool and basic function/ASF/operation category for BPM  
**BY00 USPS mail processing volume-variable costs** – BPM volume-variable costs for mail processing using the USPS method cost distribution (USPS LR-J-55)  
**Test Year 03 Piggyback Factors and Cost Ratios** – Supplied by witness Smith (USPS LR-J-52)  
**BY00 USPS Method CRA Segment & Components Report** – For Cost Segment 3.1, used to calculate the worksheet adjustment factor (USPS-T-11)

**C. Bound Printed Matter (BPM) Mail processing volume-variable Costs by Auxiliary Service Facilities (ASF) versus Non-ASF offices**

Workbook: **LR65BPMASF00.xls** – Summarizes clerk/mailhandler mail processing volume-variable costs by cost pool and ASF versus non-ASF facilities for BPM. Test year piggyback factors and cost ratios are applied to generate test year BPM costs by cost pool and facility category.

Input: **DBMC Costs BY00 New.xls** - Provides BY2000 clerk/mailhandler mail processing volume-variable cost estimates by cost pool and basic function/ASF/operation category for BPM  
**BY00 USPS mail processing volume-variable costs** – BPM volume-variable costs for mail processing using the USPS method cost distribution (USPS LR-J-55)  
**Test Year 03 Piggyback Factors and Cost Ratios** – Supplied by witness Smith (USPS LR-J-52)  
**BY00 USPS Method CRA Segment & Components Report** – For Cost Segment 3.1, used to calculate the worksheet adjustment factor (USPS-T-11)

#### IV. Window Service Cost for Parcel Post (dropshipped versus non-dropshipped)

The following are descriptions for the FORTRAN programs used to replicate the Postal Service's proposed cost distribution methodology for estimating clerk and mailhandler window service volume-variable costs. These programs estimate window service costs for Parcel Post in terms of dropshipped versus non-dropshipped mail. These programs are also used to compute the window service distribution key for Function 4 Support costs for the Postal Service mail processing cost distribution replication described in Section II of Appendix A.

Program: **admwin\_set.f** – Prepares the IOCS tallies for the Postal Service cost distribution for window service costs. Tally dollar weights are converted to cost pool dollars and activity codes are encircled

Input: **iocs2000.h** – Declaration of IOCS tally fields  
**fincag.00** - List of tally finance number/CAG combinations  
**mods12\_aw00by\_new.dat** – IOCS administration and window service tallies for MODS 1&2 offices  
**bmcs\_aw00by\_new.dat** – IOCS administration and window service tallies for BMCs  
**nonmods\_aw00by\_new.dat** – IOCS administration and window service tallies for Non-MODS offices

Output: **admwin00.dat** – IOCS admin/window tallies prepared for the cost distribution program

Program: **admwin\_dbmc.f** – Estimates volume-variable costs for window service operations by activity code and basic function/ASF/operation category

Input: **iocs2000.h** – Declaration of IOCS tally fields  
**asf.fin.srt** – List of ASF finance numbers  
**activity00.auto.intl2** – List of the direct and class specific mixed activity codes  
**admwin00.dat** – IOCS admin/window tallies prepared for the cost distribution program

Output: **awdist00\_dbmc.data** – Estimated volume-variable costs for window service by activity code and basic function/ASF/operation category

Workbook: **LR65WIN00.xls** – Uses the estimated window service volume-variable costs reported in the Fortran output file from **admwin\_dbmc.f** to distribute CRA window service costs to Parcel Post dropshipped versus non-dropshipped

Input: **BY00 USPS Method CRA Costs** – As reported in USPS CRA Worksheet 3.2.1, column 1, costs for Parcel Post (USPS LR-J-57)  
**awdist00\_dbmc.data** – Estimated volume-variable costs for window service by activity code and basic function/ASF/operation category

Program: **sumclass\_win\_dbmc.f** – Sums the estimated window service costs by subclass and basic function/ASF/operation category used to develop the window service cost distribution key used to distribute Function 4 Support costs in the mail processing cost distribution process

Input: **activity00.auto.intl2** – List of the direct and class specific mixed activity codes and corresponding subclass codes  
**classes.auto.intl2** – List of subclasses  
**awdist00\_dbmc.data** – Estimated volume-variable costs for window service by activity code and basic function/ASF/operation category

Output: **wincost\_dbmc2.prn** – Estimated window service volume-variable costs by subclass, shape, and basic function/ASF/operation category

Workbook: **Win DK DBMC 00.xls** – Uses estimated direct labor costs from the MODS based cost distribution process to distribute CRA Cost Segment 3.2 costs to subclass, shape, and basic function/ASF/operation category. Used as the window service distribution key in the mail processing cost distribution process to distribute Function 4 Support costs (see Section II of Appendix A)

Input: **wincost\_dbmc2.prn** – Estimated window service volume-variable costs by subclass, shape, and basic function/ASF/operation category  
**BY00 USPS Method CRA Costs** – As reported in USPS BY2000 CRA Cost Segment 3.2, Worksheet 3.2.1 (USPS LR-J-57)

Output: **windk00.prn** – BY2000 CRA Cost Segment 3.2 costs by activity code and basic function/ASF/operation category

Program: **win\_key\_fcn4.f** - Prepares distribution key for Function 4 Support distribution key

Input: **windk00.prn** – BY2000 CRA Cost Segment 3.2 costs by activity code and basic function/ASF/operation category  
**activity00.cra.wgt** – List of the direct and class specific mixed activity codes

Output: **windk\_dbmc.00** – BY2000 CRA Cost Segment 3.2 costs by activity code and basic function/ASF/operation category for 'function 4 support' cost pool distribution (see Section II of Appendix A)

## **Appendix B: Program Lists**

## **Appendix B: Program Lists**

### **Section I: Preparation of IOCS Data**

(Program: cadoc00by\_rep.f)



## **Appendix B: Program Lists**

### **Section II: Clerk/Mailhandler Mail Processing Volume- Variable Cost Estimation**

(Programs: modspc00\_cat.f, sumclass\_mod\_cat.f,  
bmcpc00\_cat.f, sumclass\_bmc\_cat.f,  
nmodpc00\_cat.f, sumclass\_nmod\_cat.f)

## **Appendix B: Program Lists**

### **Section III: Window Service Cost for Parcel Post (DBMC versus Non-DBMC)**

(Programs: admwin\_set.f, admwin\_dbmc.f,  
sumclass\_win\_dbmc.f, win\_key\_fcn4.f)

