

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

POSTAL RATE AND FEE CHANGES, 2006

Docket No. R2006-1

**RESPONSES OF UNITED STATES POSTAL SERVICE WITNESS LOUTSCH
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION**
(DMA/USPS-T6-1 - 5, 6(c) - 17)

The United States Postal Service hereby provides the responses of witness Loutsch to the following interrogatories of the Direct Marketing Association, filed on June 21, 2006: DMA/USPS-T6-1 - 5, 6(c) - 17. Interrogatories DMA/USPS-T6-6(a) and (b) were redirected to the Postal Service.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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July 6, 2006

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS LOUSCH
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DMA/USPS-T6-1. Please refer to Exhibit USPS 6A.

- a) When were the estimates in this Exhibit prepared?
- b) Please confirm that this Exhibit shows that the Postal Service will incur a net loss of \$2.143 billion in FY 2006. If you do not confirm, please explain fully.
- c) Please confirm that the April Financial & Operating Statement report shows a net loss of \$89 million year to date. If you do not confirm, please explain fully.
- d) Please confirm that as of the end of April, there were 5 months left in the Fiscal Year.
- e) Please confirm that the Postal Service will have to incur an average loss of over \$400 million in each of the remaining months if they are to lose \$2.143 billion for the year. If you do not confirm, please explain fully.
- f) Do you still believe that the Postal Service will lose \$2.143 billion in FY 2006? Please explain your underlying logic.
- g) Please confirm that if the Service loses less than \$2.143 billion in FY 2006, it will be because revenues are higher than you predicted in USPS 6A, expenses are lower, or some combination. If you do not confirm, please explain fully.
- h) Please confirm that the April Financial & Operating Statement report shows that Total Revenue is \$346.2 million favorably above budget while Total Expense is \$159.8 million above budget. If you do not confirm, please explain fully.
- i) What is the budget for net income for the year that is reflected in the 2006 Financial & Operating Statements?

Response:

- a) The revenue requirement estimates were prepared beginning in November 2005. The before rates revenue requirement assumptions and estimates, with minor corrections, were completed in early December 2005, and the after rates revenue requirement estimates were finalized approximately one week prior to the filing of this docket.
- b) Confirmed.
- c) Confirmed.
- d) Confirmed.

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- e) Confirmed.
- f) My best judgment is that the projected FY 2006 net loss of \$2.143 billion remains within a reasonable range, but it may be conservative given recent results. Postal Service finances typically worsen during the summer months as mail volume and revenue undergo seasonal declines. For example, in FY 2005 net income through April was \$2.025 billion and the year ended with a net income of \$1.445 billion reflecting losses of almost \$600 million during the period between April and September. A similar loss over the same time period in FY 2006, plus escrow expenses of almost \$1.3 billion, which were not incurred during FY 2005, would produce a FY 2006 net loss between the planned amount of \$1.8 billion (see part (i) below) and that included in the revenue requirement. I would caution that relatively small variations in revenues, year-end accounting accrual adjustments, and changes in the underlying expense drivers may all affect actual results. An example of a change that will adversely affect September results will be a much higher COLA wage increases than those estimated in the filing. Based on the CPI through May, the September COLA is now estimated to be \$666 per workyear compared to the estimate of \$291 per workyear reflected in the filing.
- g) Confirmed, assuming that the P.L. 108-18 escrow amount is considered an expense for the purposes of this question.
- h) Confirmed.
- i) The FY 2006 Operating Budget is included in the Integrated Financial Plan which projects a FY 2006 loss of \$1.8 billion after escrow expense.

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DMA/USPS-T6-2. Please assume that revenues for Fiscal 2006 were \$1 billion higher than the estimate shown in USPS 6A. Knowing this and assuming you could then re-estimate revenue for FY 2007 and FY 2008, please confirm that all else being equal, your revised estimate would be higher than the estimates shown in USPS 6A. Please fully explain any failure to confirm.

Response:

Not Confirmed. I am not responsible for forecasting revenue in this case or as a part of my function at the Postal Service. But it is my opinion that the effect of an additional \$1 billion of revenue in FY 2006 on future years would depend on the source of the revenue and the various factors considered in preparing the volume and revenue estimates for future years. If the additional revenue results from one-time events such as appropriations or gains on the sale of assets, there may be no impact on future years. In other cases, the revenue increase may result from cyclical mailings such as the Census or possibly elections mail. These types of mailings may have little or no effect on revenue estimated for future years. If the increased revenue were to result from increased non-cyclical volume, the increase may affect future year revenue estimates, but the effect would be driven by the specific mail classes that changed. I would also point out that an increase in revenue would also increase costs of the affected mail classes, and thereby mitigate any positive impact of the revenue gain.

Please see the testimony of witness Thress (USPS-T-7) for volume forecasting methods and that of witness O'Hara (USPS-T-31) for revenue estimation considerations.

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DMA/USPS-T6-3. Please assume that revenues for Fiscal 2006 were \$2 billion higher than the estimate shown in USPS 6A. Knowing this and assuming you could then re-estimate revenue for FY 2007 and FY 2008, please confirm that all else being equal, your revised estimate would be higher than the estimates shown in USPS 6A. Please fully explain any failure to confirm.

Response:

Not confirmed. Please see my response to DMA/USPS-T6-2. The additional variance of \$1 billion would not change my response.

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DMA/USPS-T6-4. As a general proposition, do you believe that predictions about the future are more accurate the closer they are made to the events being predicted? Please explain the reasoning underlying your belief.

Response:

Not necessarily. As a non-postal event driven example consider a horse race.

Although handicappers may predict, even right at the start of a race, that a particular horse will win, their forecasts oftentimes do not prove accurate. Additionally, unforeseen events may occur that would, if known in advance, substantially change a handicapper's advance judgment concerning the winner of an upcoming race. A case in point would be the results of this year's Preakness after Barbaro's sad accident.

In a more relevant postal example, an expense forecast based on trends generally can be made with more confidence and accuracy if the forecast period is nearer at hand. For example, I would expect an estimate of FY 2006 labor cost made today, barring unforeseen events in the next three months, to be more accurate than a FY 2006 forecast made one or more years earlier. With a labor estimate, new and more definite information on workyear usage, workloads, labor mix, and wage and benefits increases (e.g. COLAs) is available on a weekly and monthly basis, thereby providing the forecaster the ability to refine the estimates.

But it is difficult to accurately predict other types of events, such as the effect of a hurricane season or the result of legislative changes that could affect postal revenues, regardless of how close one is to the occurrence of the event.

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DMA/USPS-T6-5. Please provide a schedule showing when the Postal Service expects to release each Financial & Operating Statement for the rest of this year. If you do not know a precise date for the release of a statement, please provide your best estimate.

Response:

The current schedule for release of interim financial results is as follows:

Report Month	Projected Release Date
May, 2006	July 5, 2006
June, 2006	August 10, 2006
July, 2006	September 8, 2006
August, 2006	September 25, 2006

The results for September will be available upon completion of the annual financial statements and approval by the Board of Governors.

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DMA/USPS-T6-6. As you know, the Postal Service is redesigning its processing and transportation network.

- a) Does the Postal Service intend to sell any real estate as a result of consolidating its processing network?
- b) If the Postal Service does not intend to sell any real estate, please explain why not and what it will do with the excess real estate.
- c) How would any proceeds from the sale of real estate be treated on the books of the Postal Service?
- d) Have any proceeds from the sale of real estate been accounted for in your estimates of revenue in 2006, 2007, and 2008?

Response:

- a) Redirected to the United States Postal Service.
- b) Redirected to the United States Postal Service.
- c) I am informed that the following entries would be recorded assuming the sale of a 20 year old Postal Service building along with the land for \$100,000 with a 6% commission. The original cost of the building is recorded at \$60,000, the land cost was \$15,000 and the depreciation to date is \$30,000.

Debit: Cash	\$94,000	
Credit: Escrow, Account 23465		\$94,000

This entry records the receipt of cash at the time of the sale.

(\$100,000 gross sales amount less the commission of \$6,400.)

Debit Escrow, Account 23465	\$94,000	
Debit: Commission Fee, Account 54129	\$6,000	
Debit: Reimbursement and Cost Reduction Control, Account 45960	\$100,000	
Credit: Land and Buildings Collection from Sales, Account 45961		\$100,000
Credit: Gain/Loss on PL&EQ – Gain/Loss-Sale of Land and Buildings, Account 45610		\$100,000

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This entry records the sale based on the receipt of the property disposal letter provided by asset management.

Debit: Accumulated Depreciation, Account 17910	\$30,000
Debit: Gain/Loss on PL&EQ – Gain/Loss-Sale of Land and Buildings, Account 45610	\$45,000
Credit: Building Asset, Account 17121	\$60,000
Credit: Land, Account 17111	\$15,000

This entry removes the assets from the books and reduces the gain from the sale for the net book value of the assets. The result of the combined entries is to recognize a gain on the sale of the property of \$55,000 and commissions of \$6,000.

- d) The account for collections from the sale of real estate and buildings (account 45961) was unintentionally omitted from the miscellaneous income estimate. A correction will be provided in the near future.

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DMA/USPS-T6-7. Does the Postal Service have any studies comparing market value to book value for any real estate owned by the USPS? If so, please provide them.

Response:

I am informed that, with the possible exception of studies concerning the disposal or development of specific properties, the Postal Service has not conducted any studies that compared the book value of the Postal Service owned real estate portfolio to market value.

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DMA/USPS-T6-8. Please confirm that the market value of the real estate owned by the USPS is higher than the value at which it is carried on its books. If you cannot confirm, please explain why, particularly in light of the recent increase in the price of real estate.

Response:

The Postal Service records real estate at cost in accordance with generally accepted accounting principles. Therefore, any appreciation due to increasing land and possibly building values is not reflected in our financial statements. Although one may speculate regarding the likelihood that market value of Postal Service owned real estate exceeds book value, I have no specific information that would support that conclusion.

Moreover, market values may vary based on the location and condition of each property. The actual market value of a specific property cannot be known for certain until that property is sold.

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DMA/USPS-T6-9. Please provide a table showing for each Omnibus Rate filing the USPS estimated equity in the Test Year After Rates.

Response:

The projected equity amounts for the interim and test years after rates for this Docket are included in the table below. The FY 2005-FY 2007 after rates amounts are obtained from Exhibit USPS 6I of my testimony. FY 2008 after rates is calculated based on the FY 2007 after rates equity, less the FY 2008 after rates net deficiency included at Exhibit USPS 6A. The capital contribution of the U.S. Government is not expected to change through the test year.

Fiscal Year	Capital Contribution of U.S. Government	Cumulative Net Income/Loss (Retained Earnings)	Equity (Net Capital)
2005 – Actual	3,034	2,342	5,376
2006	3,034	(2,143)	3,233
2007 After Rates	3,034	(1,243)	1,991
2008 After Rates	3,034	(1)	1,990

The estimated equity amounts for prior dockets are included in or can readily be calculated using the information contained in the revenue requirement witness's testimony, which is available on the PRC website, in the PRC Docket Room, or the Postal Service Library.

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DMA/USPS-T6-10. Please confirm that all things being equal, in estimating Test Year Costs, a predicted decline in mail volume from the Base Year to the Test Year will lead to a reduction in clerks and mailhandlers, and that the reduction in the number of clerks and mailhandlers will lead to a reduction in the number of supervisors for these clerks and mailhandlers.

Response:

Not confirmed. A decline in total mail volume could result in a higher workload if shifts to higher work content pieces occur. I can confirm that when a decline in volume results in lower mail-volume-related workload, there is an opportunity to reduce the number of clerks and mailhandlers. This also creates an opportunity in some cases to reduce the number of supervisors. In recognition of this, it is my understanding that the rollforward reduces not only clerk and mailhandler costs, but supervisor costs as well, when mail volume workload declines.

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DMA/USPS-T6-11. Please confirm that all things being equal, in estimating Test Year Costs, a predicted decline in mail volume from the Base Year to the Test Year will lead to a reduction in the in-office cost for city delivery carriers, and that this reduction will lead to a reduction in the costs of supervisors for these carriers.

Response:

Not confirmed. For example, a decline in total mail volume could result in a higher workload if shifts to higher in-office work content pieces occur. I can confirm that lower mail-volume-related workload results in the opportunity to reduce in-office costs for city carriers. This also creates an opportunity in some cases to reduce supervisor costs. In recognition of this it is my understanding that the rollforward reduces not only city carrier in-office costs, but supervisor costs as well, when mail volume workload declines.

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DMA/USPS-T6-12. Please explain fully why the Postal Service does not fully piggyback all cost reduction programs.

Response:

It is my understanding that, as a general matter, cost reduction program savings are based on the estimates developed by the managers responsible for implementing the programs. These estimates are then subjected to the Postal Service's budget process, which involves negotiation among program managers, field managers, and headquarters managers of the amount of savings that are deemed to be achievable.

With respect to supervisor savings, these are reflected in initial cost savings estimates whenever, in the judgment of the program manager, such savings can be achieved based the specifics of the program. Once the budget negotiation process deems the savings to be achievable, they are reflected in the final budget and in the estimates provided in the rate case.

Supervisor savings of \$13.3 million in FY 2006, \$20.3 million in FY 2007, and \$26.2 million in FY 2008 have been included in the cost reduction program estimates. See attachments D, E, and F of Library Reference L-49.

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DMA/USPS-T6-13. When the Postal Service sells a stamp, is the revenue booked at the time of sale, at the time the Stamp is used on a mail piece, or at some other time? Please feel free to provide separate answers for philatelic issues.

Response:

All revenue from sales of stamps is recorded at the time of the sale rather than at the time of usage. Annually, stamp sales revenue is adjusted by an amount estimated to reflect the amount of postage sold but not yet used. This deferred revenue amount is reflected on our balance sheet in the liabilities section under the title "Estimated Prepaid Postage."

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DMA/USPS-T6-14. Please provide the dollar value of stamps sold in the Base Year and an estimate of the dollar value of those that are expected to be sold in the Test Year.

Response:

FY 2005 stamp revenue was \$11.045 billion, as reported in the September 2005 Financial and Operating Statements. Since revenue is estimated by class of mail, rather than type of postage payment, there are no estimates of stamped revenue for the interim or test years.

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DMA/USPS-T6-15. Please provide an estimate of the percentage of the dollar value of stamps that are sold but that are never used because they are lost, are purchased for philatelic reasons, or are not used on mail for some other reason. Please be sure to discuss how personal postage available from Zazzle or from other vendors affects the estimate. If there are studies, analyses, or reports from USPS auditors bearing on this issue, please provide them.

Response:

All stamps are assumed to be purchased for use on mail except for philatelic stamp sales by the Stamp Fulfillment Services group in Kansas City, which represented \$5 million in FY 2005.

I am not aware of any studies, analyses, or reports from USPS auditors dealing with the issue of non-philatelic stamps that are never used on mail.

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DMA/USPS-T6-16. If revenue is booked only when stamps are used, please describe how the Postal Service accounts for the value of those stamps that are lost, purchased for philatelic reasons, or are not used on the mail for some other reason.

Response:

Not applicable. See my response to DMA/USPS-T6-13.

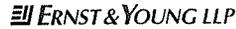
RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS LOUSCH
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DMA/USPS-T6-17. Please provide all studies, reports from USPS auditors, or analyses bearing on the topic of Postage in the Hands of the American Public.

Response:

Attached are the most recent (FY 2005) descriptions of the estimation and accounting for deferred revenue related to postage in the hands of the public (PIHOP).

Several more voluminous reports from the early and mid-1980s dealing with alternative estimation procedures, the review of the then existing model, and a system design document also exist and can be made available for review, if desired.



**United States Postal Service
Postage in the Hands of the Public
Estimation Process
A – September 30, 2005
B-Q1**

Client contact(s): Jon Stratton, Manager – Corporate Financial Reporting
Bill Harris, Accountant – Corporate Financial Reporting
Originally prepared by: Bret Johnson, senior 10/28/03
Last updated by: Andrew Ma, senior – 11/15/05
Last reviewed by: Marian Rupp, senior manager – 11/17/05
Last approved by: Marian Rupp, senior manager - 11/17/05

Carry forward file – see update section for current year updates

Purpose

The purpose of this memo is to document our understanding of the liability for Postage in the Hands of the Public (PIHOP) and the methodology used by the United States Postal Service (USPS) to compute and record the year-end PIHOP liability.

Background

The Postal Service records revenue from collections generated from the sale of postage (i.e., postage from meters and stamps). However, to complete the revenue earning process, the Postal Service must fulfill the delivery obligation related to the postage (i.e., customer use of the postage so that the postage is in the mail stream). The PIHOP calculation is an estimate of meter and stamp revenue for which the Postal Service has not earned (i.e., postage has not been used), and consists of:

1. Estimated deferral of revenue for unused postage from meters
2. Estimated deferral of revenue for unused postage from stamps
3. Estimated Mail-in-Transit (mail in the mailing system and in the process of being delivered for which a portion of the postage is considered unused)

Accounting for PIHOP Liability

As sales are generated throughout the year, revenue is recorded on a cash basis of accounting, as follows:

Dr. Cash
Cr. Revenue
To record sales generated during the year

Monthly, the USPS performs a calculation to estimate the PIHOP liability, recording the following adjustment to (1) modify the revenue that had been recorded on a cash basis to reflect revenue on the accrual basis of accounting and (2) record a computed liability for deferred revenue:

Dr. Revenue (account #41223 for meters / account #41199 for stamps)
Cr. Est. PIHOP liability (account #25111)
To adjust revenue to accrual basis and to record a liability for deferred revenue

At year-end, the revenue and PIHOP liability accounts are trued-up to match the year-end PIHOP calculation.



General Ledger Accounts in PIHOP

The following general ledger (GL) accounts are utilized in the PIHOP estimate:

- Account #25111 – Est. PIHOP (deferred revenue account)¹
- Account #41199 – Miscellaneous, including adjustment for PIHOP
- Accounts #411xx (all) – Stamp revenue accounts
- Account #41220 – Customer Postages Meters (meter revenue)
- Account #41221 – Revenue PC Postage-Retail (meter revenue)
- Account #41223 – Revenue Postage – CMRS High Speed Meters (meter revenue)
- Account #41224 – Revenue Postage – CMRS Low Speed Meters (meter revenue)

Accounts #25111 and #41199 are the main PIHOP related accounts reviewed at the Headquarters (HQ) location. Account #25111 represents the estimated liability outstanding for mail in which funds have been collected, but delivery has not occurred (i.e., revenue has not yet been earned). Account #41199 represents an adjustment account for the Postal Service to record any computed deferral adjustments to stamp revenue (i.e., reduction of revenue recorded on a cash basis to reflect the accrual basis of accounting). Deferral adjustments to meter revenue are recorded into account #41223.

Accounts #411xx, #41220, #41221, #41223, and #41224 represent the revenue accounts underlying the PIHOP calculation.²

Key Assumptions in the Calculation of PIHOP

As noted above, the calculation of PIHOP consists of three elements (see above “background” section). The following sections discuss the key assumptions used for each element currently in the calculation of PIHOP.

Assumptions for Postage from Meters

Postage sales from meters represent the majority of postage revenue generated by the Postal Service. Based on trend analyses performed by the Postal Service between fiscal year (FY) 2000 and FY 2002, the Postal Service determined that customer trends indicated the resetting of meters approximately every 30 days (i.e., funds on the postage meters are replenished approximately every 30 days). Based on this trend of meter resets, approximately 30 days of meter revenue are assumed to be in the potential mail stream at any given time. Therefore, in its calculation of PIHOP, the Postal Service applies a deferral percentage to the meter revenue for the previous 30 days in order to compute the deferred revenue liability associated with meter revenue.

This deferral percentage for postage sales from meters is derived by the Postal Service sampling the acquisition and replenishment of postage for meters. This sampling is performed in an extraction process using the Postal National Meter Accounting and Tracking System (NMATS) – see memo BT-2 for more information. From the sampling process, the Postal Service receives data for monthly revenue and deferred revenue, resulting in an estimate of monthly deferral percentages for metered revenue. The deferral percentage utilized in the calculation of PIHOP (see

¹ Prior to fiscal year 2004, the USPS also utilized an account #26311 (PIHOP – POD Unfunded Liability) to record its PIHOP liability. This account had a historical balance of approximately \$300 million per year and represented the estimated deferred revenue liability of the Post Office Department prior to Postal reorganization on July 1, 1971. In FY 2004, as part of its change to an Oracle Systems based general ledger, the USPS consolidated the balance of account #26311 into account #25111.

² There are additional meter accounts in the GL that are not included in the PIHOP calculation. These accounts (#41225 – Revenue performance CPU Meters and #41230.xxx – Postage meters in post offices) represent postage meter sales occurring on-site at a post office for which the postage is immediately placed into the mail stream so the use of postage is assumed during the time of sale. Also, account #41240 – Presorted metered mail (discount waved) is a meter revenue account that is excluded from the PIHOP calculation. Account #41240 represents presort discounts denied to a customer for failure to meet mailing requirements for presorted mail.



below) at any given time represents a rolling two-year average of the monthly deferral percentages resulting from the NMATS data extraction process.

Assumptions for Postage from Stamps

In 1990, over a 92-day period, the Postal Service conducted a survey to determine the stamp usage patterns for the stamp purchasing public as well as to determine the stamp usage for manually reset postage meters.³ Through the use of the Postal Service's PIHOP model, designed in 1976 by the outside accounting firm Arthur Young & Co., the Postal Service obtained a ratio, which represented the percentage of postage sold, but not yet used as of the end of the period. The resultant deferral ratio (20%) was then utilized by the Postal Service to estimate the amount of unearned revenue remaining at the end of the year related to stamp sales.

Each year after 1990, the Postal Service performed an annual survey of manually-reset meters in order to review the continued applicability of the deferral percentage for stamp sales. These annual surveys were performed for test periods covering April 7 to July 7 in each year in order to maintain a consistent year-over-year comparison of customer trends.⁴

Beginning in FY 1997, Postal Service management decided to cease its annual survey of stamp usage patterns for the public and from manually reset postage meters. Instead, Postal Management decided to utilize data from the NMATS data extraction process to estimate customer usage patterns. Due to data integrity issues during implementation of the NMATS process in 1997, the Postal Service maintained its use of a 20% deferral ratio for stamp revenue. In 1998, the Postal Service corrected its issues related to the NMATS data extraction process and began full implementation of the use of NMATS for estimating customer usage patterns during that year. Based on the data trends from NMATS, since FY 1998, the Postal Service has made revisions to its deferral ratio for stamp revenue, with a current ratio (implemented in FY 2005) equal to 16%.

For the calculation of PIHOP (see below), as the historical surveys of customer stamp usage patterns and manually-reset meters were based on a 92-day period, the Postal Service continues to assume that for the 92-days of revenue from stamp sales, approximately 15 days worth (i.e., 16%) are in the mail stream at any given time.

Assumptions for Mail-in-Transit

In its calculation of the mail-in-transit element of PIHOP, the Postal Service assumes that 50% of main-in-transit has already been processed and delivered so that only 50% of the mail-in-transit represents unearned revenue. This deferral percentage is applied to the dollar value of mail by class (i.e., First Class, Priority, and Package Services) for an estimated average number of days mail is in-transit at period-end. With the estimated average number of days mail is in-transit at period-end determined in a formula based on the Original Destination Information System (ODIS). ODIS reflects the time from cancellation of a piece of mail (i.e., marking so that postage cannot be reused) to the point the mail is available for delivery (i.e., placed in a carrier's bag for delivery).

Calculation of PIHOP

The calculation of the PIHOP liability consists of the sum of the following:

1. Estimated deferred meter revenue
 - o Meter revenue for the last 30-days in a period (see GL accounts above)
X
 - o Deferral percentage for meter revenue (see sections above)
2. Estimated deferred stamp revenue

³ In the early 1990s, postage meters had to be manually reset by Postal employees. Technological advances since the early 1990s have resulted in meters that can be reset remotely by authorized meter manufactures (e.g., Pitney Bowes Corporation).

⁴ In its surveys of manually-reset meters, the period of April 7 to July 7 was considered by the Postal Service as representative to the last 92-days in a fiscal year.



- Stamp revenue for the last 92-days in a period (see GL accounts above – excluding account #41199) less an estimate for Philatelic sales (see below section for Philatelic sales)
 - X
 - Deferral ratio assumption for stamp revenue (see above sections)
3. Estimated revenue for Mail-in-Transit

The estimated revenue for mail-in-transit is computed by:

- Determining an average daily mail volume based on the mail volume as reported in a Revenue, Pieces, and Weight (RPW) report for the last month of the fiscal year
- Determining an average revenue per piece of mail based on the total revenue and number of pieces of mail as reported on the RPW report for the last month of the fiscal year
- Multiplying the average daily mail volume with an estimate of the weighted average days in-transit (see above sections) to compute an estimate of total mail volume in-transit
- Multiplying the estimate of total mail volume in-transit to the average revenue per piece to compute the estimated value of mail-in-transit
- Applying the assumed deferral percentage of 50% to the computed estimated value of mail-in-transit

Philatelic Sales

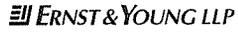
Philatelic mail represents commemorative stamps and postal stationary (e.g., postal cards, embossed stamped envelopes, and aerogrammes) that depict the cultural and historical heritage of the United States. Philatelic sales represent revenue generated when customers purchase stamps for collection purposes with the intent to never use the postage (e.g., purchase of collector stamps). Philatelic revenue is not differentiated in the general ledger accounts from revenue generated from the normal sale of stamps.

The Postal Service does not compute a deferral for revenue from philatelic sales as the Postal Service has considered its revenue earning process complete at the time of a philatelic sale (i.e., the Postal Service has assumed it has no further delivery obligation to the customer for the postage as it is assumed that the customer will never utilize the postage purchased under a philatelic sale). Because philatelic sales do represent postage, the possibility does exist that a customer whom originally intended to collect the stamp will use the stamp sometime in the future.

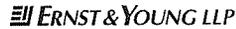
Given the inability to reasonably estimate future use of stamps sold for collection purposes, and due to the nature of the sales and consumer (stamp sales to collectors), it does not appear unreasonable to recognize revenue from philatelic sales at the time of sale.

Significant Noted Risks and Controls

Risk (What Could Go Wrong)	Control	Controlled by
<ul style="list-style-type: none"> • Revenue accounts underlying the PIHOP calculation are inaccurate 	<ul style="list-style-type: none"> • Reconciliations between the meter manufacturers and Eagan ASC are performed on a monthly basis 	Eagan ASC
<ul style="list-style-type: none"> • Assumptions for the PIHOP calculation are not valid or appropriate 	<ul style="list-style-type: none"> • Deferral ratios are derived from sampling meter resetting data from NMATS 	Eagan ASC
<ul style="list-style-type: none"> • NMATS data extraction process does not properly accumulate underlying information to the PIHOP calculation 	<ul style="list-style-type: none"> • Data extraction from NMATS is reviewed monthly and quarterly for error messages or anomalies in the data. 	Eagan ASC and HQ - Finance



<ul style="list-style-type: none">• Data from reports (e.g., RPW/ODIS) used in the PIHOP calculation are not accurate	<ul style="list-style-type: none">• RPW/ODIS Reports are reviewed monthly for unusual fluctuations.	HQ – Revenue and Volume Reporting Department
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**United States Postal Service
Postage in the Hands of the Public
NMATS Data Extraction Process
A – September 30, 2005
B-Q2**

Client contact(s): Jon Stratton, Manager – Corporate Financial Reporting
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Last updated by: Andrew Ma, senior – 11/15/05
Last reviewed by: Marian Rupp, senior manager – 11/17/05
Last approved by: Marian Rupp, senior manager – 11/17/05

Carry forward file – see update section for current year updates

Purpose

The purpose of this memo is to document our understanding of the National Meter Accounting and Tracking System (NMATS) and the program used to extract meter data from the NMATS database. NMATS data is utilized in the calculation of Postage in the Hands of the Public (PIHOP) by the United States Postal Service (USPS).

Background

NMATS was previously referred to as the Meter Accounting and Tracking System (MATS), which consisted of 85 separate databases residing at the District Accounting Offices (DAO). With the elimination of the District Accounting Offices in fiscal year (FY) 2004, all databases have been consolidated to a national database located at the Eagan, MN Accounting Service Center (ASC). NMATS has a web-enabled interface for which users can query data from system. NMATS also provides a link with the Computerized Meter Licensing System (CMLS).

With the implementation of NMATS, the Postal Service developed a user's guide to assist all NMATS users and to provide a training tool for new users. See the permanent file for a copy of the NMATS user guide (maintained as a soft copy on the Ernst & Young LLP Headquarters team folder).

For the purposes of the following memo, NMATS and MATS can be used interchangeably.

The Meter Accounting and Tracking System

The Meter Accounting and Tracking System was part of an effort by the USPS to certify the revenue from approximately two million postage meters in use nationwide. The USPS developed MATS in response to a recommendation by the Business Process Redesign team for meters. By gathering meter transaction information through Integrated Retail Terminals (IRT)¹ and establishing a national meter directory and communications hub, MATS enabled the USPS to track meter usage, providing a means for Postal management to attain improved internal control over meter activity.

MATS tracks all meter transactions (meter settings, refunds, meter examination data, adjustments/corrections, and transfers), with the following fields recorded:

- Date of transaction
- Ascending register before transaction
- Descending register before transaction
- Amount of setting/refund
- Descending register after transaction

¹ In fiscal year (FY) 2000, the Postal Service began a replacement Integrated Retail Terminals (IRT) with Point of Service ONE (POS ONE) terminals at postal field locations (i.e., post offices).



- Control total after transaction
- Transaction type (RMRS for remote reset; AUTO for IRT transactions; ADJU or CORR for adjustments/corrections; MANU for manually keyed transactions; TRAN for transferred to; TRNF for transferred from; REFU for refund; AADJ for auto-adjustments)

In addition to postage meters, MATS tracks all data relating to electronic stamps (“e-stamps”) sold on Stamps.com and personal computer (PC) postage programs. These programs allow customers to prepay stamps over the Internet and then print postage using their own printer.

Types of Postage Meters

There are three general categories of meters: customer meters, postal meters (used by USPS), and government meters. Since customer meters are the only meters that are prepaid, they are the only meters that are relevant to the PIHOP calculation. As such, this memorandum focuses primarily on customer meters.

All meters have two registers which function similar to a car’s odometer. The registers on a new meter are set to zero. As postage is added, the value on the descending register (which represents postage available) is increased. As postage is used, the value on the descending register decreases and the ascending register (which represents postage used) increases. The combined value of the two registers makes up the control total (with the control total representing the total amount of postage paid on the meter). Maintaining continuity of the control totals is a key internal control feature of MATS.

Types of Customer Postage Meters

There are two types of customer meters used by the USPS – Manual Reset meters and Computerized Meter Resetting System (CMRS) meters.

Manual Reset meters – Older postage meters are manual reset meters. Manual reset meters represent less than half of one percent of all active meters and continue to be phased out. Manual meters are physically reset by USPS employees (either at the post office or at a customer’s place of business). To reset the meters, USPS employees add postage to a customer’s meter and enter the register readings from the meters into the IRT or into POS ONE. Entry of the information creates an automated PS Form 3602, *Receipt for Postage Meter Setting*. The receipt information is uploaded daily from the field post office level with PS Form 1412, *Daily Financial Report*, to the financial accounting systems. If a post office does not use an IRT or POS ONE, the employee creates a manual PS Form 3602. In FY 1999, the USPS decertified all mechanical manual reset meters (non customers can only use electronic manual reset meters).

CMRS meters – CMRS meters are contracted to meter manufacturing companies by the Postal Service.² Customers with CMRS meters place funds on deposit (i.e., establish a trust account) with the USPS through the use of a lockbox account with Citibank. The deposited funds are transferred into the Postal accounts at the US Treasury and are recorded as a liability in the general ledger. CMRS customers can reset meters by contacting the meter vendor via modem access or via telephone. The meter vendors track all meter resetting activity and provide a daily data file download to the Minneapolis Information Service Center (MN ISC).

Recording Meter Data into MATS

All applications for customer, postal, and government agency meters are processed through the Centralized Meter Licensing System (CMLS). The meter manufacturers send tape downloads with all meter license applications to the USPS and the data is loaded into the CMLS. The CMLS processes the applications and electronically transmits approvals to the meter manufacturers, with the meter license data also transmitted to NMATS.

² The largest meter manufacturing companies contracted with the Postal Service are: (1) Pitney Bowes Corporation, (2) Neopost, (3) Hasler, and (4) Francotyp-Postalia.



In a few rare instances, a customer submits an application directly to the USPS. In these cases, the USPS inputs the information into the CMLS with the system generating a license that is mailed to the customer. The license data is then transmitted to the meter manufactures and NMATS.

A customer should have only one meter license number per city and may have an unlimited number of meters associated with the license. Each new meter added to a customer's license is automatically recorded as "Active" in NMATS. However, employees may update the status to "Withdrawn", "Malfunction", "Lost", or "Stolen" as necessary.

Refunds and Transfers

If a meter is taken out of service, the remaining amount on the meter can be either refunded to the customer or transferred to another meter. To process a refund or transfer, the customer must complete a Form 3601-C, *Postage Meter Activity Report*. This form requires the following information to be provided:

- License information
- Meter location
- Meter type
- Register readings (ascending, descending, and control total)
- MATS control total

In addition, the amount of refund, transfer, or credit to the CMRS deposit account must be completed. A USPS employee is required to review all data for accuracy and sign the form.

Post offices can issue refunds up to \$700 with money orders. Any refund over \$700 must be processed through the district accounts payable application.

The completed Form 3601-C is sent to the district office for entry into MATS. For all refunds and transfers, MATS ensures that the amount of the refund/transfer is less than the descending register after the last setting. If the refund/transfer is more than this reading, then MATS provides an error notification. In addition, MATS performs the standard edit check of ensuring that the control total is accurate (ascending register before + descending register before - refund/transfer = control total).

MATS Finance Operations

Daily, POS ONE data is automatically loaded into MATS. Relative to IRT data, on a daily basis MATS Finance operations personnel at each district load IRT data and correct errors associated with IRT transactions. The Accounting Technician assigned to MATS is responsible for loading the daily Form 3603 transactions transmitted from the IRT. During a typical business day, the Accounting Technician will perform the following functions:

- Load IRT transactions
- Correct Errors
- Enter manual Forms 3603
- Print daily reports and balance setting amounts with the financial systems
- Enter Forms 2602-PO, *Postage Collected Through Post Office Meter*
- Balance MATS totals for Post Office meters with amounts in the financial systems
- Enter refunds for withdrawn meters
- Enter meter transfer information
- Enter six-month examination information

There are several edit checks for data entered into MATS. Some of the errors that may occur are listed in the following table.



Error	Description of Error
Incorrect Unit Value	Meter has incorrect model code (i.e., unit value incorrectly recorded in MATS with a hundredths setting instead of a thousand setting, or vice versa)
Control Total Error	Incorrect control total recorded in MATS or reported incorrectly with setting (in most cases, when a model code is changed, the control total must also be changed)
Incorrect Finance Number	Meter is set at a location other than the licensing office and the setting is reported by the setting office
License Not Found/ Meter Not Found (Invalid Serial Number)	A setting is entered to an IRT but the meter information does not match a meter record in MATS
Manual Receipt IRT Error	Meter was set and only the setting was entered on the IRT receipt (i.e., the register readings were not included)
Un-settable Meter Status	Meter was set and the meter number is identified as either Withdrawn or Malfunction in MATS
Improper Set Method	IRT transaction is for a meter identified in MATS as a CMRS (CMRS meters are set by the customer via the telephone)
Under-set / Overset PS 3603 Meter Setting	When a setting employee places an incorrect amount of postage in a meter, a control total error will occur in MATS when the meter is reset. The error is not detected on the initial setting because the register readings are entered correctly to the IRT

Another edit check performed by MATS is a comparison of data for each meter transaction to the National Lost and Stolen Meter List. The National Lost and Stolen Meter List include all meters that the manufacturers and the USPS are unable to locate. This list is maintained by the meter manufacturers and provided to the USPS. The table in the MATS database containing the lost and stolen meter data is updated each accounting period. Transactions in MATS are compared to this list and MATS displays a message when a match occurs. The technician is responsible for printing the MATS screen and forwarding a copy to the Office of Inspector General (OIG).

Daily, MATS automatically identifies CMRS setting errors. It is the responsibility of the district Accounting Technician to follow-up and correct all meter errors. To ensure accuracy of the data in MATS, each district has a supervisor that oversees the correction of these errors.

When a transaction occurs for a particular meter error, the error is placed in a suspense table in the MATS database until it is corrected. Furthermore, if a meter has an outstanding error, then all subsequent transactions will show an error until all transactions are corrected. To resolve an error, the MATS technician often contacts the customer directly to obtain additional information. Adjustment transactions are recorded in MATS with a transaction type of: "ADJU" or "CORR." ADJU transactions do not go through the same edit checks as regular transactions therefore, if an adjustment transaction is incorrect, it will not result in an error. CORR transactions have the same edit checks as regular transactions.

After the errors have been corrected, the technician prints the *Consolidated Daily AIC 111 Report* from MATS and reconciles the amounts to the *Trial Balance Report for AIC 111*. The technician also prints the *Consolidated Post Office Meter Setting Report* from MATS and reconciles the amounts to the *Trial Balance Report for AIC 110*.



Meter Examinations

All customer meters are required to undergo a periodic examination. A setting or examination of a customer meter includes reviewing that the meter is in good operating condition and is secured properly. Additionally, the ascending and descending register readings must be recorded and submitted to the district MATS office for entry into the database to verify the control total. The register readings are usually recorded directly on the notification letter.

The date of examination and register readings are entered into MATS. The system verifies the control total and provides an error message when the control total entered does not equal the MATS control total. Under the new POS ONE systems that are replacing the IRT systems, meter exam data is automatically uploaded into MATS.

MATS is designed to print a three (3) month exam notification letters for all manual meters which have not been set or examined within the previous three (3) months or on demand for selected meter numbers. When a three (3) month letter is generated and the meter is not examined within 30 days, a final notification letter should be printed from MATS stating that the meter must be examined within five (5) days or the license may be revoked. Remote reset (CMRS) meters must be examined at least annually. The district offices are responsible for generating all exam notification letters.

By comparing control totals from the meters to MATS, the examination process helps to ensure that MATS is accurate. For CMRS meters, it specifically helps to ensure that the data received on the daily data files from the meter manufacturers is accurate (for example, if the control total on the meter was higher than the control total in MATS, it may indicate that the manufacturer has not transmitted all meter settings to MATS). In the case of manual reset meters, it specifically helps to ensure that data has been recorded correctly in MATS by Postal employees.

Meter Extraction

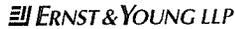
Postal programmers in Eagan, MN coded the MATS extraction program in 1997. The program was designed to extract all meter data needed for the PIHOP calculation. This program extracts all of the necessary data, but does not actually perform the actual PIHOP calculation. A separate program takes all of the extracted data and performs the PIHOP calculation (see further below).

As the NMATS application is maintained at the Eagan ASC, the data extraction occurs at the Eagan ASC. There are several tables in the database that are used in the extraction program. These tables include the following:

- Meter table (list of all meter numbers)
- Setting table (list of all meter transactions)
- License table (list of meter license numbers)
- Status table (e.g., active, inactive, withdrawn)
- Finance number table (list of finance numbers)
- Model table (list of meter models)

The extraction process consists of several different steps. Data for manual and CMRS meters is maintained separately in the MATS database; therefore, the extraction program is actually run twice – once for manual meters and once for CMRS meters. The logic of the extraction process is as follows:

1. **LTBSP** – The program scans the tables and extracts the LTBSP (where applicable) for all **active** customer meters (meter type = C and meter status = A). All government meters, postal meters, and inactive, withdrawn or malfunctioning customer meters are excluded. In addition, all transactions meeting the following criteria are excluded from the calculation:
 - a. Transaction type \diamond ADJU, UNDER, OVER, TRNF, OR TRAN (note: this logic is applicable to manual meters only because CMRS meters do not have these transaction types) or



- b. Ascending register before setting <= zero; and descending register after setting <= zero; and ascending register before setting plus descending register after setting <= zero

OR

Ascending register before setting <= zero; and descending register before setting <= zero; and ascending register before setting plus descending register after setting <= zero

2. **FTISP** – The program performs the same logic as step #1, except it extracts the FTISP (where applicable).
3. **LTISP** – The program performs the same logic as step #1, except it extracts the LTISP (where applicable).
4. **FTASP** – The program performs the same logic as step #1, except it extracts the FTASP (where applicable).

Note - If there are two (2) or more transactions on the same day, all of the transactions on that day are extracted and sent to the mainframe in Minneapolis.

The result of the above extraction process is a raw data file, which consists of all active customer meters meeting the above criteria, residing in the Minneapolis mainframe. If a meter has no transactions, then the meter is not included in the raw data file.

The programmers in Minneapolis then run four (4) separate programs on the mainframe to further edit the data. The edits performed include the following:

- The programs scan the “ascending register before” and “descending register before” readings. If both of these readings are zero, then the transaction is excluded. (See additional discussions regarding “meter initialization” setting issues below).
- If there are two (2) or more transactions on the same day, then the program reads the date stamp on the transaction and selects only the first transaction on that day.
- The programs scan the transactions and exclude all transactions that have a negative in any one of the following fields: ascending register before setting, descending register before setting, amount set, and control total.

Extraction Process for Capturing “Meter Initializations” - Revised Logic during FY 2002

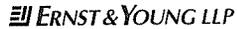
During FY 2002, management continued to review the PIHOP process and the trend analysis for the average days for meter resetting. Based upon the continuing trend of 30-35 days in reset patterns, management decided to implement a new 30-day method for the PIHOP calculation.

Based on the monthly data extracted from the MATS system, the PIHOP model calculated a 24-month period as the PIHOP deferral ratio. This initial calculation of the deferral ratio in FY 2002 was based on 61% of the “active” meters that period, which when management analyzed at year-end, realized that there were some issues with the meters being rejected as “invalid” as follows:

1. The initialization of meters for new customers were rejected by Extraction Program due to “0000” setting as first entry in MATS (computerized meters are able to be reset to zero instead of being continuous, like an odometer). The program then rejected all subsequent transactions for those specific meters with a “0000” setting as its first transaction entry.

Management was uncertain of the impact of the Initialization Transactions to the overall outcome on the PIHOP estimate, so management discussed an alternative approach to capturing these transactions with the Postal IT Programmers in Eagan, MN, that are familiar with the MATS extraction process.

2. The Meters specific to “PC Postage” (online transaction) were noted as “active” by the manufacturers. Customers who signed up for the product obtained free postage (totaling \$10 to \$20) as a promotion. The free postage was not included as Meter revenue, but was included as a transaction entry within the MATS. In addition, the customers may not “refresh” their postage after the promotional amount was used up,



resulting in only one transaction in the MATS system, and thus an “invalid” meter status per the Extraction Program. Also, reset patterns for these customers tended to be longer than 30 days, thus it was unlikely that their meters were being captured in the monthly extraction process.

3. Some meters that were used had only one setting. The Postal Service’s sales group wanted to keep these meters listed as “active” in MATS in order to improve their statistics even though they were really “inactive” due to non-use, and thus “invalid” per the Extraction Program.
4. The change in the extraction program from MATS was made to “count” the transactions subsequent to the initialization of meters for new customers (with “0000” as first entry) as “valid” meter transactions. This change increased the number of “active” meters available each month per MATS to approximately 1.9 million. The invalid meters continue to be related to the same issues (PC Postage, Sales Group listed as active, etc).

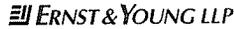
To correct the above issues, the Eagan IT programmers wrote the following code to include the meters with “0000” as the initialization setting as “valid” meter transactions:

```
AND E.ascending_register_before>=0
And E.descending_register_after>=0
And E.descending_register_before>=0
And ((E.ascending_register_before>=0
And E.descending_register_after>=0
And E.descending_register_before>0)
Or (E.ascending_register_before>=0
And E.descending_register_after>0
And E.descending_register_before>=0)
Or (E.ascending_register_before>0
And E.descending_register_after>=0
And E.descending_register_before>=0))
```

Data Extraction from MATS

From MATS:

1. For each “commercial” postage meter in service during the “Sample Period” extract the following data:
 - FDC Code
 - Finance Number
 - Meter Number
 - Type Meter (electronic or manual)
 - Meter Value (P equals pennies or F equals fractions of a penny)
 - Date
 - Ascending Register Reading
 - Descending Register Reading
 - Amount of Setting
 - Descending Register Reading after Setting
 - Control Total
2. For Each:
 - Last transaction before sample period (LTBSP)
 - First transaction in sample period (FTISP)
 - Last transaction in sample period (LTISP)
 - First transaction after sample period (FTASP)



NOTE(s):

1. Transactions include monthly and quarterly review (inspections).
2. If a meter doesn't have one or more of the four transactions identified above, then only an extraction of those transactions that are applicable is done.
3. If a meter changed hands during the sample period, provide only those transactions applicable to the customer who held the meter at the end of the sample period.

Examples:

1. Assuming the specified sample period was May 10, 1996 to August 10, 1996, and the meter had only one transaction during sample period:

Transaction Meter			Ascendin	Descending		Descending	Control
Type	Number	Date	g Register	Register	Setting	Reg. Setting	After Total
LTBSP	123456789	4/21/1996	00010000	00050000			00060000
FTISP	123456789	5/21/1996	00050000	00010000	0005000	00015000	00065000
	123456789	8/21/1996	00064950	00000050	0010000	00010050	00075000
FTASP							

2. Assuming the specified sample period was May 10, 1996 to August 10, 1996, and the meter had two (or more) transactions during the sample period:

Transaction Meter			Ascending	Descending		Descending	Control
Type	Number	Date	Register	Register	Setting	Reg. After Setting	Total
LTBSP	123456789	4/21/1996	00010000	00050000			00060000
FTISP	123456789	5/21/1996	00050000	00010000	0005000	00015000	00065000
LTISP	123456789	7/15/1996	00064950	00000050	0010000	00010050	00075000
FTASP	123456789	8/21/1996	00064950	00000050	0010000	00010050	00075000

3. Assuming specified sample period was May 10, 1996 to August 10, 1996, and the meter had no transactions during the sample period:

Transaction Meter			Ascending	Descending		Descending	Control
Type	Number	Date	Register	Register	Setting	Reg. After Setting	Total
LTBSP	123456789	4/21/1996	00010000	00050000			00060000
FTASP	123456789	8/21/1996	00059950	00000050	0010000	00010050	00070000

4. Assuming the specified sample period was May 10, 1996 to August 10, 1996, and the meter had no transactions before or during the sample period:

Transaction Meter			Ascending	Descending		Descending	Control
Type	Number	Date	Register	Register	Setting	Reg. After Setting	Total
LTBSP	123456789	4/21/1996	00010000	00050000			00060000

5. Assuming the specified sample period was May 10, 1996 to August 10, 1996, and the meter had no transactions before or during the sample period:



Transaction Meter			Ascending	Descending		Descending	Control
Type	Number	Date	Register	Register	Setting	Reg. After Setting	Total
FTASP	123456789	8/21/1996	00059950	00000050	0010000	00010050	00070000

The following data is extracted from MATS:

- Add appropriate Budget Authorization (BA) code.
- Verify transactions received from MATS cross-foots to the control total received with the transaction
- Update register/control total readings that have been “reset” (see exception handling).

PIHOP Model – Summary

The Postal Service uses meter transaction data from MATS to calculate the estimated PIHOP ratio. The following meter transaction data is extracted from MATS and downloaded into the PIHOP model:

- First transaction before the sample period (FTBSP)
- First transaction in the sample period (FTISP)
- Last transaction in the sample period (LTISP)
- First transaction after the sample period (FTASP)

Based on the customer’s meter resetting history, each meter could have a combination from one (1) to four (4) of the above transactions. The PIHOP calculation varies based on the combination of transactions available for each meter (i.e., FTBSP, FTISP, LTISP, and FTASP). However, if only one transaction is available, the calculation excludes the meter and places it in an error category because deferred revenue cannot be estimated.

The general theory behind the calculations in the PIHOP model is that if two (2) or more meter transactions are available, then the average daily postage used can be calculated. Using the average daily postage used, a person can estimate a dollar value of deferred postage at the end of the monthly period by subtracting estimated postage used from the descending register reading on the last setting in the sample period (or adding estimated postage used to the descending register reading on the first setting after the sample period). A person can then calculate total revenue collected in the period (based on meter settings), and calculate a ratio of estimated deferred revenue to revenue. This ratio of estimated deferred revenue to revenue is the “PIHOP ratio.”

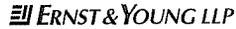
PIHOP Model – Detailed Program to Compute the PIHOP Ratio

The following is the detailed program(s) to calculate the PIHOP ratio for meters based on data file(s) received from MATS.

When LTBSP, FTISP, and LTISP are available:

For each meter-

- Calculate revenue collected during the sample period by subtracting the control total from the last setting before the sample period from the control total of the last setting in the sample period.
- Calculate the number of days between LTISP and FTISP by subtracting the date of FTISP from the date of LTISP.
- Calculate deferred revenue by subtracting the estimated postage used from the greater of the descending register or descending register after setting on LTISP.
- Calculate average daily usage by dividing Postage Used by number of days between LTISP and FTISP.
- Calculate number LTISP and the end of the sample period by subtracting date of LTISP from sample end date.
- Calculate estimated postage used by multiplying number of days between LTISP and end of sample period by average daily usage.
- Calculate deferred revenue as a % by dividing deferred revenue by revenue collected for sample period.



When only LTBSP, FTISP and FTASP are available:

For each meter-

- Calculate revenue collected during sample period by reading setting value on FTISP.
- Calculate number of days between LTBSP and FTISP by subtracting date of LTBSP from date of FTISP.
- Calculate postage used by subtracting ascending register of LTBSP from ascending register of FTISP.
- Calculate average daily usage by dividing postage used by number of days between LTBSP and FTISP.
- Calculate number of days between FTISP and end of sample period by subtracting date of FTISP from sample end date.
- Calculate estimated postage used by multiplying number of days between FTISP and end of sample period by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on FTISP.
- Calculate deferred revenues as % by dividing deferred revenue by revenue collected in sample period.

When only FTISP, LTISP and FTASB are available:

For each meter-

- Calculate revenue collected during sample period by subtracting control total from FTISP from control total from LTISP and adding setting from FTISP.
- Calculate number of days between LTISP and FTISP by subtracting date of LTISP from date of FTISP.
- Calculate postage used by subtracting ascending register of LTISP from ascending register of FTISP.
- Calculate average daily usage by dividing postage used by number of days between LTISP and FTISP.
- Calculate number of days between FTISP and end of sample period by subtracting date of FTISP from sample end date.
- Calculate estimated postage used by multiplying number of days between FTISP and end of sample period by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on LTISP.
- Calculate deferred revenues as % by dividing deferred revenue by revenue collected in sample period.

When only FTISP, LTISP and FTASP are available:

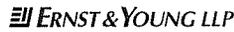
For each meter-

- Calculate revenue collected during sample period by subtracting control total from FTISP from control total from LTISP and adding setting from FTISP.
- Calculate number of days between FTISP and LTISP by subtracting date of FTISP from date of LTISP.
- Calculate postage used by subtracting ascending register of FTISP from ascending register of LTISP.
- Calculate average daily usage by dividing postage used by numbers of days between FTISP and LTISP.
- Calculate number of days between LTISP and end of sample period by subtracting date of LTISP from sample end date.
- Calculate estimated postage used by multiplying number of days between LTISP and end of sample period by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on LTISP.
- Calculate deferred revenues as % by dividing deferred revenue by revenue collected in sample period.

When only FTISP and LTISP are available:

For each meter-

- Calculate revenue collected during the sample period by subtracting sum of ascending register and descending register before setting from FTISP from control total on LTISP.
- Calculate number of days between FTISP and LTISP by subtracting date of FTISP from LTISP.
- Calculate postage used by subtracting ascending register on FTISP from ascending register on LTISP.
- Calculate average daily usage dividing postage used by number of days FTISP and LTISP.
- Calculate number of days between LTISP and the end of sample period by subtracting date of LTISP from sample ending date.



- Calculate estimated postage used by multiplying number of days between LTISP and end of sample period by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on LTISP.
- Calculate deferred revenues as % by dividing deferred revenue by revenue collected in sample period.

When only LTASP and FTASP are available:

For each meter-

- Calculate number of days between LTASP and FTASP by subtracting date of LTASP from date of FTASP.
- Calculate postage used by subtracting ascending register of LTASP from ascending register of FTASP.
- Calculate average daily usage by dividing postage used by number of days between LTASP and FTASP.
- Calculate number of days between end of sample period and FTASP by subtracting sample end date from date of FTASP.
- Calculate estimated postage used by multiplying number of days between FTASP by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on FTASP.

When only FTISP and FTASP are available:

For each meter-

- Calculate revenue collected during sample period by reading setting value on FTISP.
- Calculate number of days between LTASP and FTISP by subtracting date of LTASP from date of FTISP.
- Calculate postage used by subtracting ascending register on LTASP from ascending register of FTISP.
- Calculate average daily usage by dividing postage used by number of days between LTASP and FTISP.
- Calculate number of days between FTISP and end of sample period by subtracting date of FTISP from sample end date.
- Calculate estimated postage used by multiplying number of days between FTISP and end of sample period by average daily usage.
- Calculate deferred revenue by subtracting estimated postage used from greater of descending register or descending register after setting on FTISP.
- Calculate deferred revenue as % by dividing deferred revenue by revenue collected in sample period.

Also calculate deferred revenue as a percentage for each organization level (e.g., finance number, FDC, BA and National) as follow:

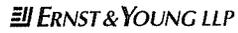
- Divide total deferred revenue for meters in that organizational level by total revenue collected for meters in that organizational level.

NOTE - If meter is used in fractions of penny (meter value equals fractions) it will be necessary to include additional steps to round register and control total values.

Other Functions in PIHOP Model

Exception Handling

1. Meter has only one transaction. Drop from calculation. Include on list of excluded meters with message "Only one transaction received – LTASP". Message to include abbreviation for transaction that was received. Above example shown for Last Transaction before Sample Period.
2. Transaction received for meter does not cross-foot. Meter readings are similar to a car odometer in that they have a certain "high" value that once achieved results in the meter being reset to zero. When readings associated with a date do not cross-foot to the meter's control total, determine if the ascending register or control total have reset. If reset has occurred, determine if the totals in the meter cross-foots by expanding reading by one position to the left and placing a one (1) in that position. If a meter cross-foots using this expanded reading, use the meter. Otherwise exclude meter from the PIHOP calculation, list meter on report of excluded meters with message "Data for meter does not cross-foot".



Inquiry

Provide ability for on-line initiated inquiry and display of selected meter transactions including ability to print selected data to printer specified by user.

Provide user options for sorting and selecting data displayed and included in calculations. Options used in generating reports are to be displayed on each screen or hard copy report page (preferably at top but under any standard heading). Sort data by BA, FDC, Finance Number, Meter Type (Manual or Electronic) and/or up to three random starting points and skip intervals.