U.S. Department of Housing and Urban Development
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Quality Control for Rental Assistance Subsidies Determinations

Final Report for FY 2005

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Prepared for:

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Executive Summary

The Department of Housing and Urban Development (HUD) Quality Control for Rental Assistance Subsidies Determinations studies provide national estimates of the extent, severity, costs, and sources of rent errors in tenant subsidies for the PHA-administered Public Housing, Section 8 Housing Choice Voucher, and Moderate Rehabilitation programs; and the owner-administered Section 8, and Section 202 and Section 811 programs with Project Rental Assistance Contracts (PRAC) or Project Assistance Contracts (PAC). These so-called "deep subsidy" programs account for nearly all of HUD's current housing assistance outlays administered by the Offices of Housing and Public and Indian Housing, as well as the large majority of units assisted by HUD. This study was designed to measure the extent of administrative error by housing providers. The errors we evaluated in this study affect the rent contributions tenants should have been charged. *The findings presented in this report are a result of data collected from February through July 2006 for actions taken by Public Housing Authority (PHA) and project staff during FY 2005(October 2004 through September 2005).* These findings show that the percent of errors in the Public Housing, Section 8 Housing Choice Voucher, Moderate Rehabilitation, owner-administered Section 8, and Section 202 and Section 811 programs with PRAC or PAC tenant subsidies is no longer declining when compared with results from previous studies. However, the average dollars in error and the gross dollar error rate did decline.

HUD's rental housing assistance programs are administered on HUD's behalf by third-party program administrators, including PHAs, public and private project owners, and contracted management agents. In the programs examined, eligible tenants are generally required to pay 30 percent of their income toward shelter costs (rent plus utilities), with HUD providing the balance of the rental payment. New program applicants are required to provide certain information on household characteristics, income, assets, and expenses that is used to determine what rent they should pay. Existing tenants are required to recertify this information annually and also, in some circumstances, when there are significant changes in household income or composition. Applicant or tenant failure to correctly report income may result in HUD's over- or underpayment of housing assistance. The failure of the responsible program administrator to correctly interview the tenant or process, calculate, and bill the tenant's rental assistance may also result in HUD's over- or underpayment of housing assistance.

In 2000, HUD began to establish a baseline error measurement to cover the three major types of rental housing assistance payment errors: 1) program administrator income and rent determination error, 2) intentional tenant misreporting of income, and 3) errors in program administrator billings for assistance payments. A second study covering (re)certifications conducted in FY 2003 was conducted in 2003/2004; and a third study covering (re)certifications conducted in FY 2004 was conducted in 2004/2005. The study referenced in this report covers FY 2005, and is being used to update the 2004 measurement of errors in program administrator income and rent determinations. The tenant data collected for this study were also used to provide the sample and data used for income matching to measure the extent of intentionally unreported tenant income. HUD will publish separate reports on FY 2005 billing error for PHA- and owner-administered programs. The balance of this report relates solely to program administrator income and rent determination error.

For purposes of this study, "error" is defined as any rent calculation or eligibility determination that differs from what would have occurred if the PHA or other program administrator had followed all HUD income certification and rent calculation requirements during the most recent income certification or annual recertification. When appropriate, study findings are compared with findings from the previous study.

Study Assumptions. The extent of the identified error is sensitive to a number of assumptions made in the study. Doubling the error threshold of plus or minus $5 per month, for example, would affect the number of units with errors and modestly affect overall dollar error estimates. Changes in tenant behavior that result from correcting errors are more difficult to estimate. Some tenants with large rent increases resulting from corrected calculations might leave the program. Because those with the largest rent increases usually have above-average corrected incomes and rents, this could minimize or even reverse any potential subsidy savings. Conversely, those with decreased rents might be more likely to remain, thereby increasing subsidy requirements. The corrections themselves are desirable outcomes, because they better target limited housing assistance to those most in need of such assistance, but it is unclear what the corrections' net effect will be on subsidy costs. The most appropriate use of this study is as a tool for strengthening HUD's procedures for ensuring administrative compliance with regulations. HUD's objective of providing the right subsidies to the right families is a worthy one that this study can assist in achieving. (Large program outlays are already being made to achieve these objectives.)

A. Methodology

HUD Requirements and Study Standards. Using the *Code of Federal Regulations* and official HUD handbooks and notices, all HUD requirements relevant to the determination of rent were consolidated into a set of HUD requirements. Nationally recognized experts were involved in establishing and reviewing the standards used in this study.

The Sample. A nationally representative sample of 600 projects in the United States and Puerto Rico was selected for this study. These projects were selected from the universe of the three program types covered by the study—

- Public Housing
- PHA-administered Section 8 (Vouchers and Moderate Rehabilitation)
- Owner-administered Section 8, Section 202 PRAC, Section 811 PRAC, Section 202/162 PAC

A random sample of four households was selected for most projects, but more tenants were selected from unusually large projects. The final study data set includes responses from 2,412 households.

The Data Collection Process. The data collection effort included creating and automating more than 30 data collection instruments, contacting and obtaining information from PHA/owner staff, hiring and training more than 60 field interviewers, and selecting the tenant sample. Field

interviewers obtained data from tenant files, and interviewed tenants using computer-assisted personal interviewing software developed for this study. The automated data collection process included built-in consistency and edit checks that prompted interviewers to probe inconsistent and anomalous responses. Collected data were electronically transferred daily to ORC Macro headquarters for review. Requested third-party verifications related to income and expenses were also processed at ORC Macro headquarters.

Calculation of Rent Error. A quality control (QC) rent was calculated for each household in the sample using the information reported by the PHA/project and household. Rent error was calculated by subtracting the QC rent from the actual tenant rent (the rent from HUD Forms 50058 or 50059 that had been calculated by the project staff). A discrepancy of $5 or less between the actual and QC rent was not counted as an error. This $5 differential was used to eliminate rounding differences and minor calculation discrepancies that have little effect on program-wide subsidy errors.

B. Major Rent Error Findings

National Rent Error Estimates. The analysis of the FY 2005 tenant files, tenant interview, and income verification data indicates that—

- 64 percent of all households paid the correct amount of rent within $5 (50 percent paid exactly the right amount)
- 19 percent of all households paid in excess of $5 less than they should have (with an average error of $63 per month)
- 18 percent[1] of all households paid in excess of $5 more than they should (with an average error of $39 per month)

Rent Error Estimates Varied by Program Type. The highest rate of underpayment of rent (20 percent) was found in the PHA-administered Section 8 program. The rate of overpayment was fairly consistent among all three program types with overpayments of rent in 19 percent of owner-administered households and 17 percent of both Public Housing and PHA-administered Section 8 households. Underpayment of rent was found in 17 percent of Public Housing households and 18 percent of owner-administered households. The exhibit that follows summarizes this information.

[1] Numbers do not add up to 100 percent due to rounding.

Exhibit ES-1
Frequency of Rent Error by Program Type

Program	Rent Underpayment (Subsidy Overpayment)	Rent Overpayment (Subsidy Underpayment)
Public Housing	17%	17%
PHA-Administered Section 8	20%	17%
Owner-Administered	18%	19%
Total	19%	18%

Dollar Error Effect of Rent Errors. All summary error estimates represent the summation of net case-level errors. That is, a case is determined to have a net overpayment error, no error, or a net underpayment error. Major findings were—

- *Rent Underpayments of Approximately $584 Million Annually (down from $681 in FY 2004).* For tenants who paid less monthly rent than they should pay (19 percent), the average monthly underpayment was $63. For purposes of generalization, total underpayment errors were spread across all households (including those with no error and overpayment error) to produce a program-wide average monthly underpayment error of $11.78 ($141 annually). Multiplying the $141 by the approximately 4.1 million units represented by the study sample results in an overall annual underpayment dollar error of approximately $584 million per year.

- *Rent Overpayments of Approximately $341 Million Annually (up from $306 in FY 2004).* For tenants who paid more monthly rent than they should pay (18 percent), the average monthly overpayment was $39. When this error was spread across all households, it produced an average monthly overpayment of $6.87 ($82 annually). Multiplying the $82 by the approximately 4.1 million assisted housing units represented by the study sample results in an overall annual overpayment dollar error of approximately $341 million per year.

- *Aggregate Net Rent Error of $244 Million Annually.* When combined, the average *gross* rent error per case is $19 ($12 + $7). Over- and underpayment errors partly offset each other. The *net* overall average monthly rent error is $5 ($12-$7). HUD subsidies for Public Housing and Section 8 programs equal the allowed expense level or payment standard minus the tenant rent, which means that rent errors have a dollar-for-dollar correspondence with subsidy payment errors, except in the Public Housing program in years in which it is not fully funded (in which case errors have slightly less than a dollar-for-dollar effect). The study found that the *net* subsidy cost of the under- and overpayments was approximately $244 million per year ($584 million - $341 million)[2].

[2] The actual estimate of annual rent underpayments is $584.2 million. The actual estimate of annual rent overpayments is $340.7 million. Therefore the actual estimate of net rent error is $243.5 million ($584.2 - $340.7 = $243.5).

Subsidy over- and underpayment dollars are summarized in Exhibit ES-2. This data responds to study Objective 1 (identify the various types of errors and error rates and related estimated variances).

Exhibit ES-2
Subsidy Dollar Error

Type Dollar Error	Subsidy Overpayment	Subsidy Underpayment
Average Monthly Per Tenant Error for Households with Errors	$63 (19% of cases)	$39 (18% of cases)
Average Monthly Per Tenant Error Across All Households	$12	$7
Total Annual Program Errors	$584 million	$341 million
Total Annual Errors—95% Confidence Interval	$467 – 702 million	$237 – 455 million

Exhibit ES-3 provides estimates of program administrator error by program type. This data responds to study Objectives 3 (estimate national-level net costs for total errors and major error types), 8 (provide information on the extent to which errors are concentrated in projects and programs), and 11 (estimate total positive and negative errors in terms of HUD subsidies).

Exhibit ES-3
Estimates of Error in Program Administrator Income and Rent Determinations (in $1,000's)

Administration Type	Subsidy Overpayments	Subsidy Underpayments	Net Erroneous Payments	Gross Erroneous Payments
Public Housing	$116,952	$103,512	$13,440	$220,464
PHA-Administered Section 8	$309,600	$146,640	$162,960	$456,240
Total PHA-Administered	$426,552	$250,152	$176,400	$676,704
Owner-Administered	$157,836	$90,744	$67,092	$248,580
Total	$584,388	$340,844	$243,544	$925,232
95% Confidence Interval	+/- $117,130	+/- $104,134	+/- $148,872	+/- $164,206

In response to study Objective 5 (determine whether error rates and error costs have statistically significant differences from program to program), pairwise comparisons using calculated variances were conducted to compare the three program types included in the study on percentages of proper payment (within $5), gross error, and net error. This analysis did not reveal significant differences between programs. In addition a general linear model was used to compare the programs on those three variables controlling for the sampling design. Again, no significant differences were found.

Comparison with Prior Studies. Three prior studies, the 2000 baseline, the FY 2003 study, and the FY 2004 study, estimated erroneous payments attributed to program administrator rent calculation and processing errors, using the same methodology, sampling procedures, and sample

sizes as this FY 2005 study. The 2000 "Quality Control for Rental Assistance Subsidies Determinations" study was published as a final report in June 2001. The FY 2003 final report—"Quality Control for Rental Assistance Subsidies Determinations"—was completed in August 2004. The FY 2004 final report was completed in July 2005. While the FY 2003 and FY 2004 studies demonstrated significant reductions in erroneous payments attributed to program administrator income and rent determinations, the 2005 findings indicate a smaller reduction in the gross dollars in erroneous payments that does not represent a statistically significant decrease from FY 2004. Exhibit ES-4 presents a comparison of the gross erroneous payments for 2000, FY 2003, FY 2004, and FY 2005.

Exhibit ES-4
Comparative 2000, FY 2004, and FY 2005 Gross* Erroneous Payments

Administration Type	2005 Gross Erroneous Payments (in $1,000's)	2004 Gross Erroneous Payments (in $1,000's)	2003 Gross Erroneous Payments (in $1,000's)	2000 Gross Erroneous Payments (in $1,000's)	Percent Reduction in Gross Erroneous Payments from 2000 to 2005
Public Housing	$220,464	$242,076	$316,116	$602,556	63.41%
PHA-Administered Section 8	$456,240	$521,220	$730,956	$1,096,524	58.39%
Total PHA-Administered	$676,704	$763,292	$1,047,072	$1,699,092	60.17%
Owner-Administered	$248,580	$224,460	$368,796	$539,160	53.89%
Total	$925,232	$987,744	$1,415,844	$2,238,252	58.66%
	+/- $164,000	(+/-$131,000)	(+/-$163,000)	(+/-$275,000)	

* Gross Rent Error is the sum of the absolute value of positive and negative rent error.

C. Errors Detected Using Information Obtained From Project Files

Rent errors are often a result of a mix of different types of errors. This study also examined administrative and component errors. For purposes of this study, **administrative errors** are analyzed separately from specific **component errors**. Administrative Errors are errors that result from administrative mistakes. They consist of—

- Consistency errors—errors in logical conformity between elements within the 50058 or 50059 Forms
- Calculation errors—arithmetic errors within subsections of the 50058 or 50059 Forms
- Transcription errors—errors in transferring information from documentation in the tenant file to the 50058 or 50059 Forms
- Failure to conduct a recertification in a timely manner
- Failure to verify information

Component errors are related to the income and expense components used to calculate rent. The income components are employment income, Social Security benefits and pensions, public

assistance, other income, and asset income. The expense/allowance components are elderly/disabled allowance, dependent allowance, medical allowance, child care allowance, and disability allowance. Component errors often occur when project staff do not conduct a thorough tenant interview or do not verify the information obtained during the interview. However, component error may also occur when the tenant supplies incorrect information, either intentionally or unintentionally. The discussion below responds to study Objectives 2 (identify the dollar costs of the various types of errors), and 6 (determine the apparent cause of significant rent errors).

Administrative Errors. The two most common administrative errors are calculation errors and transcription errors. The HUD PIC and TRACS data systems check the rent calculations on Forms 50058 and 50059. For tenants for whom data are submitted (and corrected if required), these systems virtually eliminate rent determination calculation errors for the items included on the forms. However, not all cases are reported and some cases returned to program sponsors for correction are ignored or are changed in HUD systems but not actually implemented.

PIC/TRACS data system matches were attempted (in an effort to respond to Objective 14) for the 2412 households in the study. Seventy-six percent of these households (96 percent of owner-administered households, and 68 percent of PHA-administered households) were found in the PIC/TRACS data bases. Interestingly enough, there was very little difference in the percent of households with rent error for households for which PIC/TRACS data were or were not available.

Verification Errors. The percentage of income items verified in FY 2005 remained about the same as in FY 2003 and FY 2004, while the percentage of expense items verified has increased slightly. Income items were verified at least 79 percent of the time. In addition, the percentage of written, third-party verification of income and expenses has stabilized as well. While there was an increase in the number of items verified with third-party, in-writing verification between FY 2003 and FY 2004, there were no increases between FY 2004 and FY 2005 (except for child care expenses). And the percentage of third-party, in-writing verification actually decreased from FY 2004 to FY 2005 for two items – public assistance income and asset income. Failure to use verified income and expense amounts continues to be a problem. Twenty-nine percent of the verified amounts of earned income did not match the amount of earned income reported on the 50058 and 50059 Forms. And while this percent for earned income remained about the same when compared to FY 2004, the percent of verified amounts for other types of income that did not match the amount reported on the 50058 or 50059 Form decreased for FY 2005 (e.g., public assistance income decreased from 72% in FY 2004 to 67% in FY 2005, and medical expenses decreased from 72% in FY 2004 to 63% in FY 2005).

Obtaining income verification is often difficult. Even when repeated requests are made, employers sometimes do not respond to requests for verification. Some program sponsors do a much better job than others in achieving third-party compliance with written verification. The QC study shows that it is reasonable to expect all program sponsors to have as high a success rate as the current high performers. The study also shows that there is significant room for improvement in using the verification data obtained, which are often collected consistent with procedures but then filed and never used.

Component Errors. Incorrect income and deduction amounts were by far the most significant sources of error in determining rents. All but 3 percent of households with rent errors had an income or expense component error. Earned income (20 percent), pension income (21 percent), and medical allowances (21 percent) continued to have the greatest error frequencies. The following exhibit shows the frequency of the most serious component errors and the average dollar amount for each type. The Percentage of Households represents the households with any rent component error where the specified rent component was responsible for the largest error. The Average Dollar Amount represents the average dollar amount for the specified rent component for households where the specified component was responsible for the largest error. Errors are ordered by their effect on program subsidy levels, which means that both the error cost per case as well as the frequency of that error type was considered. It is important to note that while the percent of households in error continue to be about the same, the dollars associated with those errors has decreased.

Exhibit ES-5
Rent Components Responsible for the Largest Dollar Error for Households with Rent Error

Rent Component	Percentage of Households	Average Dollar Amount
Earned Income	20%	$3,931
Pensions	21%	$2,740
Other Income	12%	$2,365
Public Assistance	9%	$2,118
Asset Income	3%	$911
Medical Allowance	21%	$938
Child Care Allowance	5%	$2,766
Dependent Allowance	5%	$552
Elderly/Disabled Allowance	2%	$400
No Rent Component Error	3%	$0
Total	100%	$2,210*

* The sum of the dollars associated with the largest component in error divided by the number of households with error.

D. Additional Findings

Eligibility of Newly Certified Households. A separate analysis of newly certified households (14 percent of the sample) was conducted to determine if these households were eligible for HUD housing assistance. There were no newly certified households in the sample who were not income-eligible on the basis of the QC income determination. However, 5 percent of the newly certified households failed to document *Social Security numbers* (or certify nonassignment of a number) for one or more family members (at least 6 years of age), and 7 percent lacked the signed *consent forms* needed to authorize verification of income and assets (for each member of the household at least 18 years of age). Eight percent also lacked the signed declaration forms or

evidence accepted as proof of citizenship. These findings respond to study Objective 9 (estimate the percentage of newly certified tenants who were incorrectly determined eligible for program admission).

Overdue Recertifications. HUD requires that every household be recertified annually. Recertifications for 4 percent of the households were overdue. The majority of these households were overdue by 6 months or less.

Occupancy Standards. Study Objective 7 asks for the extent to which households are overhoused relative to HUD's occupancy standards. Ten percent of all households occupied a unit that had more bedrooms than permitted under normal occupancy standards. Two percent had fewer than needed bedrooms. As found in the past studies, most of the errors involved one-person households in two-bedroom units. This could not be explained by program rules.

Rent Reasonableness. Study Objective 10 asks for the extent to which Section 8 voucher rent comparability (reasonableness) determinations are found in the tenant file, and the method used to support the determinations. Eighty percent of new admission files contained rent reasonableness documents, as did 65 percent of the files for households for whom data were collected for an annual recertification. However, the absence of documentation does not necessarily indicate a determination was not completed; only that it was not properly documented. Information was also collected at the PHA level to understand the method used to determine rent reasonableness. About 92 percent of the PHAs in the study used unit-to-unit rent comparison, unit-to-market rent comparison, or a point system when determining if the rent was reasonable. For the remaining 8 percent there was either no information available, the PHA used some other method of determining rent reasonableness, or the units were subject to rent control.

Automated Rent Calculation Systems. Study Objective 12 asks whether error rates in projects that use an automated rent calculation system differ from errors in those that do not. We did not find a statistically significant difference between PHA/projects that use automated rent calculation systems and those that do not. This is not surprising because nearly 95 percent of all projects use an automated rent calculation system.

50058/59 Rent Calculation Error. The tenant rent was calculated using only data on the 50058/50059 to determine the relationship between errors detected using the 50058/50059 forms and total rent errors found in the study (in response to study Objective 4). When using only the 50058/50059 data to calculate rent, errors were found in 8 percent of the households. This is clearly different then the QC error calculation where errors were found in 36 percent of the households. In addition, error was found in *both* the 50058/50059 and QC calculation in only four percent of the households.

Tenant Characteristics, and Project Characteristics and Practices. In response to study Objectives 8 (provide information on the extent to which errors are concentrated in projects and programs), data were collected from PHA/project staff via a structured mail survey. Multivariate analyses were conducted to explore whether project characteristics or practices contributed to administrative or rent errors. No significant associations were found. In response to study Objective 13 (determine whether other tenant or project characteristics on which data are available are correlated with high or low error rates), additional multivariate analyses were

conducted. Five household characteristics were found to be significantly related to administrative errors and gross rent error – household size, household annual income, household allowances, elderly/disabled households, and minority-headed households.

E. 2000–2005 Progress

In response to the findings and recommendations of the 2000 Assisted Housing Quality Control Study, HUD initiated a series of aggressive actions to address the causes of erroneous assistance payments, including extensive onsite monitoring. While it was unsuccessful in obtaining the statutory changes recommended in the 2000 study's report to simplify the program, HUD took a number of actions—

- A Rental Housing Integrity Improvement Program committee headed by the Office of the Chief Financial Officer with representatives from the other affected Offices was formed to coordinate and monitor corrective actions. The committee meets weekly to review progress, and identify and resolve impediments to progress in reducing errors.

- The Offices of Housing and Public and Indian Housing developed and issued new handbooks and instructional material that detailed all current HUD program requirements and standardized them to the extent possible without regulatory or statutory change. These handbooks cover nearly all aspects of occupancy policy, from the point of tenant application for admission and rent calculations through ongoing occupancy to lease termination. For Public Housing, the issuance of a Public Housing Occupancy Guidebook represented the first such effort in more than 20 years, and provided a defined methodology for calculating a number of complex requirements (e.g., the Earned Income Disallowance).

- The Offices of Housing and Public and Indian Housing substantially increased training efforts, and have held a number of national and regional training sessions. This contrasts with a less activist role in the 1980's and 1990's.

- The Offices of Housing and Public and Indian Housing initiated comprehensive, large-scale, and onsite occupancy and management reviews, which also represented a major procedural change from the previous two decades for most HUD offices—

  - The Office of Housing primarily used new agreements with Contract Administrators, which are usually State agencies, to perform this function. Contract Administrators provide technical support in adhering to HUD program requirements and routinely perform detailed monitoring on agency compliance.

  - The Office of Public and Indian Housing initiated a system of Rental Integrity Monitoring reviews to detect and reduce errors in income and rent calculations at targeted PHAs, reduce rent under- and/or overpayments by residents, and ensure that HUD's limited housing resources were being used to serve eligible families in a fair and equitable manner as intended by Congress.

- HUD initiated a legislative change that gives it access to the Department of Health and Human Services' New Hires income and wage database for income matching purposes. It will use these data to compare tenant-reported income with State wage data to better ensure that the right subsidy payments are made to the right households in accordance with program statutory and regulatory requirements. This legislation was passed in late 2003 and requires implementing agreements and data systems that should be in place in 2005. HUD also negotiated agreements with some States to obtain access to the same information. Some local agencies have already initiated income-matching systems, and it seems that this has made some contribution to error reductions.

The HUD's performance goals, which were developed in consultation with the Office of Management and Budget, call for reducing the 2000 benchmark assisted housing error levels by 50 percent by the end of 2005. The study of program administrator error for FY 2005 shows that HUD exceeded this goal. It should be noted, however, that the reduction of errors and improper payments is unlikely to have an equivalent effect on budget outlays. HUD's experience indicates that its program integrity improvement efforts are likely to result in some higher income tenants leaving assisted housing and being replaced with lower income tenants requiring increased outlays. Nevertheless, HUD's goal remains to ensure that the right benefits go to the right people.

F. Recommendations

The progress when comparing the 2000 findings to the FY 2005 results, even with the most conservative statistical assumptions, is impressive. There continued to be a decline in the gross erroneous payments when comparing FY 2005 to FY 2004. However, the percent of households with error is no longer declining, nor are the component or administrative errors associated with the rent calculation process. Of even greater concern is the percent of items that are verified by PHA/project staff. Future reduction in rent errors will require timely verification of all rent components and documentation of that verification in the tenant file.

On the basis of the current study's results, the following approaches to further reducing program administrator income and rent determination error rates are recommended:

- HUD should continue its plans to implement use of the Department of Health and Human Service's New Hires income matching database as quickly as possible. However, access to the New Hires income matching database by itself will not result in a reduction in error. PHA/project staff must use this information to assist them in resolving discrepancies between the database and the tenant's declaration.

- HUD should continue to provide PHAs and owners with the forms, training, and other tools required to determine rent correctly. Changes in policy should be reported to PHAs and owners in a timely fashion with the guidance needed to implement those changes in an accurate manner.

- HUD should continue to implement its onsite monitoring program, and PHAs and owners should be held accountable for implementing HUD regulations and calculating rent accurately.

- Federal laws, regulations, and HUD requirements should be simplified to the extent possible.

Recommendations for Modifying the Quality Control Process. The current QC study methodology is developed on the basis of the successes and failures of previous studies, and is generally performed well. Some minor changes in the next study appear desirable. These include continued expansion of computer systems and processes to further automate data collection, processing, and reporting functions; further research related to the characteristics and practices of PHAs and project staff that result in decreased rent calculation error; and continued investigation of the use of TRACS/PIC data to streamline the sampling and data collection process.

I. Introduction

A. Purpose of the Quality Control for Rental Assistance Subsidies Determinations Study for FY 2005

The purpose of this study is to provide national estimates of rent subsidy errors for the U.S. Department of Housing and Urban Development's (HUD's) Public and Indian Housing (PIH)-administered Public Housing (Public Housing), PIH-administered Section 8 Housing Choice Voucher and Moderate Rehabilitation programs (PHA-administered Section 8); and Housing-administered Section 8, Section 202 PRAC, Section 811 PRAC, and Section 202/162 PAC programs (owner-administered). Rent subsidy errors occur during the tenant certification and annual recertification processes, and this study examines the extent, costs, and sources of these subsidy errors.[1] For the purpose of this study, "error" is defined as any rent calculation or eligibility determination that differs from what would have occurred if the PHA/owner had followed all of HUD's income certification and rent calculation requirements during the most recent (re)certification. This study focuses on (re)certifications conducted during FY 2005. HUD identified 14 study objectives related to types of errors and cost issues; this report addresses each of these objectives. The analysis also identifies errors in assigning appropriate size units to households and certain procedural errors in the eligibility and rent determination process. In addition, a special analysis was conducted of Utility Allowances, Payment Standards and Rent Reasonableness practices used by the PHAs administering the voucher programs, and Earned Income Disallowances used by PHAs.

B. Background of the Study

This study is the fifth in a series of studies designed to identify current HUD eligibility, income, and rent determination regulations, translate these regulations into survey instruments, develop an error detection system, and provide nationally representative estimates of rent subsidy errors. In the past two studies, an additional income match of Social Security income data was conducted. The results of previous studies were published as follows:

- The final report for the first study, conducted by Macro International Inc., an Opinion Research Corporation company (ORC Macro), and KRA Corporation (KRA) was published in April 1996 (data were collected in 1992).

- The final report for the second study, conducted by ORC Macro, was published in June 2001 (data were collected in 2000).

- The final report for the third study, also conducted by ORC Macro and which covered the first half of FY 2003, was published in April 2004. Following the collection of data for the second half of FY 2003 a follow-up report was written and published in August 2004.

[1] PHAs and owners of HUD-assisted housing are required to make an initial determination of eligibility (a "certification") and thereafter an annual recertification of each household's rent (a "recertification"). In this report, the term (re)certification refers to certifications and annual recertifications. Interim recertifications were not included in this study.

- The final report for the fourth study, conducted by ORC Macro was published in July, 2005 (data were collected in 2004).

Work on the current project began in October 2005. Tasks completed before data collection included designing the research and survey methodology, compiling HUD's regulations for the programs included in the study (Public Housing, PHA-administered Section 8, and owner-administered), and automating the data collection process. Data were collected from a nationally representative sample of HUD-assisted housing projects and project residents whose (re)certifications were conducted from November 2004 through October 2005.

C. Organization of This Report

This report is organized as follows:

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- Appendices
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  - C. Source Tables
  - D. Consistency and Calculation Errors
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D. Definitions of Key Terms

Definitions of key terms used throughout this report are listed below:

Actual Rent—the tenant rent from the 50058 or 50059 Form.

Administration Type—PHA or owner.

Abstract Month—the month in which the data collection process for any given household was initiated.

Calculation errors—arithmetic errors within subsections of the 50058 or 50059 Form.

Case Type—certification, recertification, and overdue recertification.

Component errors—the income and expense components used to calculate rent. The income components are employment income, Social Security and pensions, public assistance, other income, and asset income. The expense/allowance components are elderly/disabled allowance, dependent allowance, medical expenses, child care expenses, and disability expenses.

Consistency errors—errors in logical conformity between elements within the 50058 or 50059 Form.

Dollar Rent Error—is calculated at the household level by subtracting the household's QC Rent from the Actual Rent.

Error Rate—the sum of the dollar amount of Gross Rent Error divided by the sum of the dollar amount of the QC Rent.

Gross Rent Error—the sum of the absolute values of under- and overpayments.

Largest Component Dollar Error—the annual dollar amount of error in the component with the largest error.

Net Rent Error—the arithmetic sum of over- and underpayments.

(Rent) Overpayment—results when the household paid more than it should have paid; HUD's contribution was less than it should have been.

Payment Type—underpayment, proper payment, and overpayment.

Program Type—Public Housing, Section 8 Housing Choice Voucher, Section 8 Moderate Rehabilitation, Section 8 project-based, Section 202 PRAC, Section 811 PRAC, and Section 202/162 PAC.

Quality Control Month—the month in which the PHA/owner completed the rent calculation.

Quality Control (QC) Rent—calculated by ORC Macro using the tenant file, household interview and verification data.

Rent Component—the five sources of income (earned, pensions, public assistance, other income, and assets) and the five types of deductions (medical, child care, and disability assistance expenses, dependent allowance, and elderly/disabled allowance).

Rent Error—the difference between the monthly Actual Rent and the monthly QC Rent.

Total Component Dollars in Error—the absolute sum (i.e., the sum of the positive and negative amounts, ignoring the plus or minus signs) of all individual income and expense component errors. These errors are combined to provide an overall Total Dollars in Error and are presented as an annual amount.

Transcription errors—errors in transferring information from documentation in the tenant file to the 50058 or 50059 Form.

(Rent) Underpayment—results when the household paid less than it should have paid; HUD's contribution was higher than it should have been.

II. Methodology

A. HUD Requirements and Study Standards

Using the *Code of Federal Regulations* and official HUD handbooks and notices, all HUD rules relevant to the determination of rent were consolidated into a set of HUD requirements. These requirements were used to create a uniform set of rules that could identify errors in eligibility determination, rent calculation, and unit assignment for the housing programs in the study. In general this uniform set of rules, known as the standards, follows the official HUD requirements. However, for some complex requirements, standardized procedures had to be developed so the data could be collected in a uniform manner. A complete list of standards used in this study can be found in the *Data Collection Standards, Quality Control for Rental Assistance Subsidies Studies 2005.*[1]

B. The Sample

The initial sampling design called for a nationally representative sample of 600 projects with four households randomly selected from each project, or 2,400 households. Projects were selected with probabilities proportional to size (PPS), but projects whose size exceeded the sampling interval were selected for eight, twelve, or more households in the project, and were counted as more than one project for purposes of determining the sample size. The sampling design required approximately equal allocations for the three assisted program types: Public Housing, PHA-administered Section 8 (Vouchers and Moderate Rehabilitation), and owner-administered (Section 8, Section 202 PRAC/PAC, and Section 811 PRAC/PAC). PHAs that participated in the Move to Work block grant demonstration program through Public Housing or Section 8 Vouchers were removed from the project-level sample. Because some large projects were selected multiple times, the study sample included 544 distinct projects in 59 geographic areas across the United States and Puerto Rico. We sampled 201 projects from each major program type (instead of 200) to insure we met the minimum required sample. For additional information on the sampling procedures, see the *Sampling Report, Quality Control for Rental Assistance Subsidy Determinations: 2005.*[2]

A random sample of four households was selected from most projects. An equal number of potential "replacement" households were identified as potential substitutes when selected households did not meet the study requirements or were unavailable to be interviewed. However, as noted above, some large projects had additional households. For example, the New York City Housing Authority Section 8 Voucher program had a household sample size of 28.

The tenant sample was selected from all households that were receiving assistance in FY 2005.

The final data set includes responses from 2,412 households in the 544 projects.

[1] ORC Macro unpublished report to HUD dated November 8, 2005.

[2] ORC Macro unpublished report to HUD dated November 23, 2005.

C. Data Collection

This study used a multi-stage data collection process to obtain all required information. Mail surveys provided project-level information from PHA/project staff. Tenant-level information was obtained by field interviewers who abstracted data from the household file, interviewed the tenant, and requested verification for income, expense, and household composition items from third parties.[3] Tenant income, expense, allowance, and third-party verification information were collected using HUD-sanctioned data collection procedures. ORC Macro data collectors strictly adhered to these procedures to avoid misclassifying errors caused by PHAs/projects that did not follow HUD requirements.

The initial collection of project level data began in November 2005. Field data collection began in February 2006 and ended in June 2006. Because PHAs/projects have varying practices, data collection forms and guidelines for data collection were designed to be flexible enough to obtain data from circumstances as found in the PHA/project. The major tasks accomplished during data collection and the forms used to accomplish them are discussed below.

Creating the Data Collection Instruments. More than 30 data collection forms were used for this study to collect data on both the project and tenant levels. These forms were similar to those used for the 2003 and 2004 data collection efforts, though modifications were made to all forms to improve the data collection process. Project-level forms were developed to gather information to facilitate data collection, collect data elements necessary to calculate Quality Control (QC) rent, and gather information about certification and recertification practices. The tenant-level data collection forms were created to collect data and determine whether: 1) there were errors in the eligibility determination, 2) the household rent was calculated correctly, and 3) units were correctly assigned according to the study standards. Each form was created by a survey research specialist and reviewed by a HUD policy expert. The Office of Management and Budget approved all data collection forms.

Automating the Data Collection Process. This study used an enhanced version of the data collection system used in previous studies. While project-level data were collected on paper and the data entered upon receipt at ORC Macro, data from tenant files were entered directly into laptop computers, and a computer-assisted personal interviewing (CAPI) system was used to interview tenants. This system, referred to as the HUDQC Data Collection Software (HDCS) system, was developed by a special team of ORC Macro survey specialists and computer systems experts.[4] As sections of the instruments were collected by field interviewers, the HDCS system compared the data with a range of acceptable responses and data previously entered, allowing data entry errors to be corrected in the field. The system required that the data be collected in the correct order, and that all the appropriate skip patterns be followed. The automated system also alerted the field interviewer if key pieces of information used to calculate rent were missing and needed to be located and documented. This structured, automated process

[3] Verification is a process of obtaining information about income or expenses from a third party who can attest to the accuracy of the information provided by the household. HUD requires that most information provided by the household be verified by a third party or substantiated from documents (e.g., print-outs from EIV system).

[4] The base of HDCS is the CSPRO software system used to collect demographic and health information in many countries, in conjunction with the U.S. Agency for International Development.

greatly reduced the need to edit, code, and clean the data after data collection was completed. HDCS data were transferred to ORC Macro electronically on a daily basis. The incoming data was reviewed in an ongoing Quality Control process. This continual review of data during data collection ensured the accuracy of the data and permitted headquarters staff to resolve issues or request further clarifying documents while the data collectors were still in the field.

Contacting the PHA/Project. PHA/project contact names were obtained from HUD headquarters staff. Letters were sent to PHA/project staff advising them of the study and requesting their participation. Prior to field interviewer training and data collection, each project in the study was sent a form requesting background information essential to the data collection process and specific data used in the calculation of QC rent. The rent calculation information requested varied by program but included such items as passbook rate, utility allowance schedules, payment standards, minimum rent and flat rent. PHA/project staff verified the project type and size, and the location of project offices and files. Projects were also requested to indicate if the selected project had been designated a "special demonstration project" by HUD. If a project answered in the affirmative to this question, the status was confirmed and the project was replaced in the study. Public Housing projects were also requested to identify any income exclusions that had been adopted in addition to those specified by HUD. The data requested from the PHA/project were essential in preparation for interviewers to begin the process of collecting data and for the calculation of the QC rent. For these reasons, a 100 percent response rate to our request for information was necessary. Rigorous strategies were employed to ensure compliance and completeness of requested information prior to field data collection.

After data collection in the field had begun, a second mail survey was sent to a PHA/project staff person knowledgeable about certification and recertification procedures. This survey requested information about local policies and procedures that might help explain the rent error findings. Questions included staff training practices, verification procedures, workload of staff who conduct certifications and recertifications, and quality control practices used to review the work of this staff.

Hiring and Training Field Interviewers. More than 60 field interviewers were hired to complete the field data collection. Each field interviewer was assigned a group of projects. Field interviewers typically lived in the same general area as the projects selected for the study. Eight-day training sessions were held for 42 field interviewers who had not worked in the FY 2004 study, and one four-day training was conducted for 21 interviewers who had completed the FY 2004 study. The eight-day training covered:

- Project background
- HUD programs and requirements
- Survey procedures
- Automated data collection
- Administrative procedures

The four-day training covered a review of the background and procedures and focused particularly on changes implemented for the 2005 study.

Abstracting from Tenant Files. At certification and recertification, PHAs/projects must complete a HUD Form 50058 for each household in Public Housing and PHA-administered Section 8 programs. A HUD Form 50059 is required for all other programs in the study. Data from the HUD Forms 50058/50059 (50058/50059 Form) were entered directly into the HUD Data Collection Software (HDCS) on each field interviewer's laptop computer. As the data were entered, the system identified potential data entry errors, such as incorrect codes or numbers, on the basis of internal calculations and consistency checks. If key data used in the rent calculation formula were missing from the 50058/50059 Form, the system alerted the interviewer and the interviewer obtained the information from another document in the tenant file or project office. These electronic checking procedures enabled field interviewers to make immediate corrections and updates.

HDCS was designed to collect data in the same formats as the official 50058 and 50059 Forms published by HUD. New York City Public Housing Authority uses a format for the 50058 that differs from this standard format. Due to the large number of NYC Public Housing cases in the study, data entry screens that reflected the NYC Public Housing format were specifically developed to be used by field interviewers who collected data in NYC Public Housing projects. In other projects where the 50058 or 50059 Forms differed from the official HUD format, paper crosswalks were developed by ORC Macro. Quality Specialists examined the data elements on the atypical form and developed a plan that illustrated which fields corresponded to the standard 50058/50059 Form reflected in HDCS. A paper crosswalk was developed for approximately 4 percent of projects in the study.

In addition to the data collected from the 50058/50059 Form, field interviewers collected data from the tenant files to document the determination of tenant eligibility and the calculation of rent. A series of Documentation Forms were created for this purpose. The Documentation Form data were entered directly into the HDCS system. The Documentation Form module also collected information indicating whether the income, asset, household composition, or expense used by the PHA/owner was verified. HDCS compared data from the 50058/50059 Form with that entered into the Documentation Forms module and alerted the field interviewer to possible data entry errors so that data could be reviewed and any necessary corrections made immediately, while the file documents were easily accessible.

During the Documentation Form data entry phase documents from the file were photocopied when appropriate and sent to ORC Macro weekly. In addition to the earned income documents required, field interviewers were requested to photocopy file documents that displayed information that was missing from the 50058/50059 Form necessary to calculate QC rent (i.e., number of bedrooms) any Earned Income Disregard documentation in the file, and the 50058/59 itself when appropriate. The photocopies were used to insure the accuracy of QC rent.

Interviewing Tenants. An adult household member (preferably the head of the household) was interviewed in person using CAPI for this study. Interview questions focused on family composition, sources and amounts of income, assets, and applicable expenses. Data were collected for the same point in time as when the (re)certification was conducted. HDCS

compared data from the 50058/50059 Form with that entered during the interview to alert the interviewer to possible errors.

Requesting Verification from Third-Party Sources. When there was no evidence in the tenant file that the PHA/owner verified the information used for calculating rent, or the existing verification information did not meet requirements agreed to for this study,[5] ORC Macro requested verification from the appropriate third-party sources. Verification was also requested from third parties when household interviews resulted in the identification of sources of income that were not shown in the tenant files. Tenants signed release forms during the household interview so that third-party verification of income and expenses could be obtained. Third-parties completed the forms and returned them to ORC Macro.

Matching Social Security Data. Sample household members were matched with Social Security Administration (SSA) files by HUD. Using the output from this match, the Social Security and SSI benefit, and Medicare premium data for all household members were identified. These data were considered third-party verification during the final QC rent determination.

D. Field Data Collection Time Periods

Data were collected in the field between February 2006 and May 2006 for the most recent certification or annual recertification that occurred during FY 2005 (October 2004 through September 2005)[6]. Field interviewers collected data related to actions that may have occurred up to 20 months prior to the file abstraction and household interview. One of the challenges of collecting data to document actions taken in the past is developing methodologies to ensure data are collected for the situation that existed at the selected point in time. For the respondent in the household interview, recalling details of life situations at a past point in time presents difficulties. This may be complicated by the fact that some respondents in this population may have unstable situations resulting from inconsistent income or changing numbers of household members. In light of this, strategies were developed to ensure consistent and accurate collection of data across program types, projects, and households in the study. Two of the strategies developed that were of primary importance to the data collection are described in this section.

Quality Control Month. The month for which data were collected is referred to as the Quality Control Month (QCM). This month represents the date the rent calculation for the most recent certifications or annual recertification (conducted in FY 2005) was completed. For most households in the owner-administered programs, the QCM is the month in which the project manager (or other authorized housing project staff member) signed the 50059 Form, certifying that the information contained on the form was correct. The rent calculation date on the 50058 Form was the "date modified" printed on the form. If these pieces of information were not available on the 50058/50059 Form, the data collector used other documentation in the tenant file to determine when the action was taken.

[5] For purposes of this study, verification was acceptable if it was in writing, received from the third party, and dated 60 days before or 30 days after the (re)certification was completed.

[6] To account for delays between the time the work is completed by the PHA/project staff and the effective date of the (re)certification, actions effective in October 2005 were included in the FY 2005 study.

After the QCM was established, the data from the 50058/50059 Form corresponding to the QCM was entered into HDCS. The data from the documents used by the project staff to verify information on the 50058/50059 Form in the QCM were also entered in a separate HDCS module. The household interview was conducted with frequent reminders to the respondent that questions were being asked as of the QCM.

Note: If the recertification was overdue by more than 12 months, the QCM was moved forward in 12-month intervals to a point in time within FY 2005. In this situation, during the household interview, the respondent was questioned about circumstances for the month in which the recertification would have been completed had the housing project staff completed it on time. In rare situations, when the rent was calculated after the effective date of the action (because of retroactive adjustments) the QCM is the earlier of the two dates—the rent calculation or the effective date of the action.

Third-Party Verification Rules. Occasionally the verifications found in the file for household composition, income, asset, and expense items were different than those required by HUD. In addition, files were likely to contain verification documents other than those intended to support the (re)certification corresponding to the QCM. To ensure that the data from the right documents (those that had been gathered to verify the information on the 50058/50059 Form being reviewed) were entered in to HDCS, and to apply rules fairly and consistently across all households in the study, a set of rules defining acceptable verification were developed. For purposes of this study, verification was considered acceptable if it was *in writing, was received from a third party, and was dated 60 days before or 30 days after the date the (re)certification was completed*. Field interviewers were given detailed instructions on the various types of documents they were likely to find in the file and how to classify them. The date and type of verification for each household, income, and expense item was entered in to HDCS during file abstraction. The HDCS system informed the interviewer if any items did not meet the verification requirements of the study. For the items that did not meet the requirements, the field interviewer requested written verification from the appropriate third party.

E. Constructing the Analysis Files

The initial database consisted of five separate files that included abstracted 50058 and 50059 Forms, tenant file information from the Documentation Form module, information from the household interview, and the third-party release forms. Data fields were at both the member and household levels, with income and expense items in hourly, weekly, monthly, or annual amounts. ORC Macro constructed an analysis file that annualized all income and expense data at the household level. For some items, such as stable income from Social Security, this calculation was relatively easy. For other items, such as seasonal employment or medical expenses, annualizing income or deductions was more complicated. A unique linking variable was created to compare information abstracted from the 50058/50059 Form and other file documentation with information obtained in the household interview and received from third-party verification. This variable specifically identified the income/asset/expense and household member to which it belonged.

For the calculation of rent error, the final analysis files contained income and expense/allowance data aggregated at the household level in annual amounts. Rent data were in monthly amounts.

Separate files were created for the analysis of issues such as verification, internal 50058/50059 Form errors, and occupancy standards.

F. Rent Formulae

HUD uses specific formulae for determining tenant rents for each of its programs. The formula for determining the Total Tenant Payment (TTP) is the same for all programs except Sections 202 PRAC, 811 PRAC, and 202/162 PAC. The TTP is the greater of:

1) 30 percent of a household's adjusted monthly income, which is one-twelfth of the total of all household members' earned and unearned income (other than those amounts specifically excluded by HUD or PHA policy), less allowances for elderly/disabled households and for household dependents, and deductions for disability, medical, and child care expenses.

2) 10 percent of a household's gross monthly income with no allowances or expense deductions.

3) The welfare rent in as-paid states (New York and Vermont were the only as-paid states in this study).

4) The minimum rent ($25 for owner-administered projects, or an amount established by the PHA, not to exceed $50).

The formula for determining the TTP for the Sections 202 PRAC, 811 PRAC, and 202/162 PAC programs includes steps (1) through (3) above, but there is no minimum rent requirement for these programs.

There are five different rent calculations used to calculate the actual amount of the household's rent depending on the program type. For the Section 8 Voucher program, household-specific characteristics also affect the calculation. These five rent calculations include:

- Public Housing
- Section 8 Project-Based (including Moderate Rehabilitation), Sections 202 PRAC, 811 PRAC, and Section 202/162 PAC
- Section 8 Vouchers
- Section 8 Enhanced Vouchers (there were seven Enhanced Voucher households in the study)
- Manufactured Home Space Rental for Section 8 Vouchers (there were no households in the study sample that met this criterion)

The household rent was calculated after data from all sources were collected. When calculating rent, a cap was placed on the maximum amount of rent the tenant was required to pay. For all Section 8 programs, this is the *Gross Rent*. In the Public Housing program, this is the *Flat Rent*.

If the Flat Rent was not available, the *Ceiling Rent* was used to cap the rent. The rent is not capped for the Section 202 PRAC or Section 811 PRAC programs.

Additional rent calculations were necessary for households with ineligible noncitizens. Determining the correct rent for these households is a multi-part process that first determines whether the household is entitled to continued assistance, or temporary deferral of termination of assistance, and then prorating the rent if appropriate. Two proration formulae were used—one for Public Housing and one for all Section 8 programs.

The algorithms for the rent calculation formulae can be found in Appendix A.

G. Calculation of Rent Error

The monthly rent algorithms used by ORC Macro to calculate the national estimates of error are the following:

- **Actual Rent:** The monthly rent indicated on the 50058/50059 Form. If this item was missing on the 50058/50059 Form, the Actual Rent was taken from another official document in the file.[7]

- **Quality Control Rent:** The monthly rent calculated by ORC Macro using all of the verified household information.[8]

Rent error was calculated by subtracting the QC Rent from the Actual Rent. A discrepancy of $5 or less between the monthly Actual and QC Rent was not considered to be an error. The $5 window was used to allow for minor calculation and rounding errors, and to focus the data analysis on major sources of error.

H. Quality Control Rent

ORC Macro calculated QC Rents using the best available information. Every effort was made to use data that would have been available to the PHA/project when determining which data to use in the QC rent calculation. Each income and expense item was processed individually. For each item, ORC Macro first used available verification from the project files. If acceptable verification was not available from the tenant file, verification was requested from an appropriate third party (see Section II-D for a discussion of acceptable verification). If the verification was not returned by the third party and the tenant file did not include verification, information obtained during the household interview was used. The following special procedures were followed when calculating the QC Rent as appropriate:

[7] Rent Roll data was not used as a substitute for Actual Rent because a previous study found that the Rent Roll sometimes included amounts to make up for previous unpaid rent, fines, or damages, etc.

[8] Attempts were made to verify items that were not verified by PHA/owner staff; however, verification was not always obtained. If verification was not available, other information from the tenant file or information obtained during the household interview was used to calculate the QC rent. When calculating QC rents, codes were assigned to indicate which rents were based on verified information and those for which the income/expense information was only partially or not verified.

- Income that started after the QCM was not counted when calculating the QC Rent.
- Income that ended after the QCM was counted for the full year unless it was clear that the PHA/owner knew that this income was going to end.
- Earned income bonuses were not counted.
- Temporary Assistance to Needy Families (TANF) and Other Welfare income were treated as the same source of income so that income listed as TANF on one form (e.g., the household questionnaire), and Other Welfare on another form (e.g., the Documentation Forms) would not be counted twice.
- Welfare (TANF and Other Welfare) income, Child Support income, and Child Care expenses were treated at the household level instead of the member level so that the same source of income associated with one member (e.g., the head of household) on one form, and another member (e.g., a child) on another form would not be counted twice.
- Disability status is not identified in the Social Security match data for household members receiving Social Security benefits. It is, however, provided for household members receiving Supplemental Security Income (SSI) benefits. Therefore, if unreported Social Security benefits were identified, the disability status code from the SSI section of the data was used to determine the disability status for the recipient of the Social Security benefit.
- Passbook rates (for determining the imputed income from assets) for PHA-administered programs were taken from the project-level information provided by PHA/owner staff. The passbook rate for owner-administered programs is 2 percent.
- For new certifications, the low and very low income limits were obtained from HUD's Web site.
- When determining the prorated rent for Public Housing households with ineligible noncitizens, if the Maximum Rent was not present on the 50058 Form, the Fair Market Rent (FMR) was used instead of the 95th percentile of Gross Rent because the 95th percentile of Gross Rent was not available.
- The values from the 50058 Form were used for Minimum Rent, Gross Rent, Payment Standard, and Flat Rent unless the value was missing, in which case the missing value was taken from the PHA/project-level information provided by PHA staff.
- The values from the 50059 Form were used for Gross Rent and Contract Rent unless the value was missing, in which case the missing value was taken from the project-level information provided by owner staff.
- Welfare rent for the State of New York and Vermont was taken from the project-level information provided by PHA staff.

I. HUD Requirements Complicating the Analysis

Several HUD requirements affected the data collection methodology and subsequent analysis. As noted in Section II-A, relevant HUD requirements were incorporated in the study standards used to determine error. All data collection procedures and analyses were developed on the basis of these study standards. Though most standards were easily implemented, several were more problematic and they complicated the data collection or analysis, as discussed below.

Anticipated Income. The amount of rent a household will pay is determined on the basis of *anticipated* household income and deductions for the 12 months following (re)certification. For households with a stable income source like Social Security or steady employment, annual income estimates for the next 12 months are relatively accurate. However, many assisted households have members with seasonal employment or members who move in and out of the household. Also, certain expenses such as medical expenses (for elderly/disabled households) and child care costs may be very difficult to anticipate. Determining whether such income and expense amounts were figured correctly at the time of recertification is very difficult when data are collected after the changes occurred. Every effort was made to treat questionable income or expenses in the same manner as PHA/project staff treated them. Several of the special procedures described in Section II-H were created for this purpose.

Third-Party Verification. HUD regulations require that the information supplied by residents at (re)certification be verified by third parties (e.g., employers, the Social Security Administration, banks, medical personnel). Data collectors obtained release forms from the households when evidence of verification was not present in the tenant's file and they then requested verification from the appropriate third parties. However, some third parties did not respond, others returned information for incorrect time periods, others required payment for the information requested, and other problems were encountered in obtaining the correct verification. Follow-up requests for missing verification were not made in all cases due to time constraints.

ORC Macro and HUD established a set of verification rules to determine whether an item was verified. Section II-D shows the rules used to determine if verification was acceptable and for each matched item used in the rent calculation. Verification rates for different rent components are in Tables 1a–1d (in Appendix C) and Exhibit IV-1 in Section IV-B.

Earned Income Disregard. The regulations governing the Public Housing and the Section 8 Voucher programs require PHAs to exclude a portion of earned income for households meeting certain criteria. Only participants in these programs—not applicants entering the programs—are eligible for this income exclusion.

To identify households eligible for the earned income disregard, tenants were asked about training and self-sufficiency programs during the household interview. Eighty-one household members were identified as possibly being entitled to an earned income disregard.

For these household members, we examined the tenant file information on the 50058 and the Documentation Forms. We compared the QC calculated earned income exclusion (using the household questionnaire information) with the earned income used by the PHA when calculating

the total annual income. When determining whether a household member was entitled to an earned income disregard, we reviewed income match data available from the NDNH.

In 52 (of the 81) cases, the PHA/project did not give an earned income disregard. In 39 of these cases, the QC calculated earned income disregard also indicated that the disregard was not applicable. In 29 (of the 81) cases the PHA/project did give an earned income disregard. In 13 of these cases, the QC calculated earned income disregard also indicated that the disregard was applicable.

After considering this information, we realized that we did not have enough information on all the cases involved to say with certainty that the PHA applied the earned income disregard correctly (or incorrectly). Therefore, *we did not apply the earned income disregard unless the PHA also applied the disregard.* If the PHA disregarded earned income, we also disregarded income using the amount of the exclusion. If the PHA did not disregard earned income, the QC rent calculation does not reflect an earned income disregard.

It should be noted that the policy related to the earned income disregard is very complex. It requires the PHA staff to keep and verify a historical record of household member's employment and participation in self-sufficiency incentive programs. The policy is hard to follow and subject to interpretation by the staff involved. This makes reviewing and determining whether the policy has been followed correctly extremely difficult.

Training Programs. The regulations governing all housing programs included in this study require PHA/owners to exclude all amounts received under training programs funded by HUD, and the incremental earnings and benefits resulting to any family member from participation in qualifying State or local employment training programs.

To identify households eligible for the training program exclusions, the field interviewers documented training program information found in the tenant file and provided during the tenant interview. Thirteen individual household members from 13 families claimed to have been enrolled in training programs. None of these 13 household members were determined by our review to be eligible for a training program income exclusion and in none of these cases did the PHA/project give them a training exclusion. There were varied reasons why the training program income exclusion was not applied to these cases. In 7 instances the training program did not yield any income (therefore nothing to be excluded). In 3 instances the income was already being excluded by provisions of other HUD regulations. For one case the training program did not meet HUD's definition. In an additional case the household member was not enrolled in a training program, but rather was entitled to an EID. In one instance the training program started after the effective date of the annual recertification.

Permissible Deductions. Public Housing programs may adopt deductions from annual income in addition to HUD's required deductions. To make sure that the appropriate additional permissible deductions were taken into consideration when determining the adjusted annual income, we looked at two sources. First, we looked at items 8b through 8e on the 50058 Form where the type and amount of permissible deductions were recorded. Second, we asked a question in the Project Specific Information request to identify additional exclusions adopted by the Public Housing PHAs. We found that many PHAs use the Permissible Deduction section

(items 8b through 8e) of the 50058 Form to record all kinds of information that have nothing to do with permissible deductions. Therefore, we had to rely on the Project Specific Information request to determine whether the items listed on the 50058 Form were in fact additional permissible deductions. On the basis of the information obtained through the Project Specific Information requests and the 50058 Forms, 11 households representing eight PHAs were entitled to permissible deductions—three for medical insurance premiums, five for the percent of FICA tax (7.65%) deducted from gross earned income, two for 15 percent of earned income, and one for 20 percent of earned income. The permissible deduction applied for QC purposes was exactly the same as the permissible deduction allowed by the PHA.

Flat Rent. Households that elected to pay a flat rent rather than an income-based rent were included in the study. For these households there is no rent error. The QC rent is the same as the Flat Rent used by the PHA. There are 52 flat rent cases in the study sample. It should be noted that determining if a household is paying the flat rent is not always easy because of contradicting data within the 50058 Form. For most cases, items 2a-Flat Rent Annual Update, and 10u-Type of Rent Selected could be used to identify whether the household is paying the flat rent instead of income-based rent. However, if these two items contradicted one another, notations from other documents in the file were taken into consideration.

Ineligible Noncitizens. HUD regulations require that rent be prorated for households with ineligible noncitizens unless the household meets certain criteria that allow continuation of full assistance. ORC Macro reviewed 21 households with ineligible noncitizens to ensure that the rent was calculated correctly. No households with ineligible noncitizens were entitled to continuation of full assistance.

Reduced or Terminated TANF Benefits. The regulations governing Public Housing and PHA-administered Section 8 programs included in the study require using the amount of the TANF benefit before reduction or termination, resulting from fraud or failure to cooperate with the welfare family self sufficiency program. To identify households with reduced or terminated TANF benefits, tenants were asked during the household interview about previous receipt of TANF and whether their TANF benefits were reduced during the household interview. If the TANF benefits were reduced or terminated due to fraud or failure to comply with the welfare family self sufficiency requirements, the value of the TANF benefit before the reduction or termination was used in the QC Rent calculation.[9] The TANF benefits in 11 households were reviewed and in all cases the PHA/project was accounting for TANF correctly.

Full-Time Students. The regulations governing PHA-administered programs included in the study require that Full-Time students who are heads of households meet certain criteria that indicate that they are emancipated from their parents. To identify households headed by Full-Time students, the field interviewers documented student enrollment and dependent information found in the tenant file and provided during the tenant interview. Cases in which Full-Time students were designated as the head or co-head were reviewed to determine if they were eligible to receive housing assistance. Thirteen cases were reviewed and all were correctly receiving housing assistance.

[9] The value of this reduced or terminated TANF is offset by the amount of additional income the family received that started after the time the sanction was imposed.

III. Study Objectives and Analytic Methods

This section presents the 14 study objectives and a brief description of the methodology used to meet them.[1]

Objective 1: Identify the various types of rent errors, rent error rates, and calculate their variance estimates.

The types of errors and error rates in the 2000 through 2004 studies are replicated in the 2005 analyses. These errors include percent of households paying correct and incorrect rent, dollar error amounts, and dollar error rates. Variance estimates (standard errors) are provided for selected error rates. Errors are determined by recalculating the tenant rent on the basis of verified QC information and subtracting this amount from the tenant rent indicated on the 50058/50059 Form (Actual Rent). The following three types of dollar rent error estimates were calculated:

Dollar Rent Error—The difference between the *monthly* Actual Rent and the *monthly* QC Rent (i.e., Actual Rent minus QC Rent). A household rent is found to be in error if the difference between the Actual Rent and QC Rent is greater than $5, while "proper" rent payments reflect differences of $5 or less. Rates of exactly matching Actual and QC rents (within $1) are also presented. Simple percentages of the number of households paying the proper and exact rents are reported, as well as the percentage of households in error per program, the average gross dollars in error, and the percentage of rent dollars in error. For households who were ineligible when initially certified, the QC Rent is the flat rent for Public Housing households, or the Housing Assistance Payment (HAP) for Section 8 programs. The dollar error is this amount minus the Actual Rent.

Total Component Dollars in Error—The absolute sum (i.e., the sum of the positive and negative amounts, ignoring the plus or minus signs) of all individual income and expense component errors. These errors are combined to provide an overall Total Dollars in Error and are presented as *annual* amounts[2]. A dollar amount of rent overpayment and underpayment was calculated for each component with identified error; however, some of these errors were overlapping or offsetting. For example, earned income may have been underreported while—perhaps because of a calculation error—Supplemental Security Income may have been overstated. The net difference could be zero, or a positive or negative amount.

Largest Component Dollar Error—The *annual* dollar amount of error for the income or expense components with the largest error. Income and expense components include the five sources of income (earned, pension, public assistance, other income, and assets) and the five types of deductions (medical, child care, and disability assistance expenses, dependent allowance, and elderly/disabled allowance). If the component with the largest error is earned

[1] See *Quality Control for Rental Assistance Subsidy Determinations: 2005 Analysis Plan*, an unpublished ORC Macro report to HUD, dated November 14, 2005, for a more detailed description of the methodology.

[2] Because dollar component errors (CE) are reported on an annual basis while dollar rent errors (RE) are reported on a monthly basis, and rents are generally set at 30 percent of adjusted income, component errors are usually 40 times the corresponding rent error (.30 * CE = 12 * RE, or CE = (12/.30) * RE = (120/3) x RE = 40 * RE).

income, the largest dollar error would reflect the difference between the earned income used by the PHA/project, and the earned income used in the QC rent calculation.

The dollar error rate is used for other error calculations, including the National Rent Error Rate and Net and Gross Error Rates. The latter error calculations link errors in the rent determination process to dollar error rates, sparking new oversight practices to better manage HUD subsidies.

Objective 2: Identify the dollar costs of the various types of errors.

Five types of administrative errors are linked to rent errors. Data obtained directly from the 50058/50059 Form as well as project and tenant information from the tenant file are used to identify and measure each of the following error types:

- Calculation errors
- Consistency errors
- Transcription errors
- Incorrect determination of allowances and income sources
- Overdue recertifications

Calculation errors are detected by recalculating section subtotals and the final rent based on the exact information in the 50058/50059 Form. The tenant rent is calculated using the detailed information on the 50058/50059 Form and compared to the actual tenant rent on the 50058/50059 Form. If the two rents differ, there is a calculation error.

Consistency errors are determined when there is a lack of logical conformity between elements within the 50058/50059 Form. For example, the Effective Date of Action must be on or after the Date of Admission. Elderly status information must be consistent with information about the age of the head of household or spouse.

Transcription errors are detected by comparing 50058/50059 Form data with information in the tenant file. If the 50058/50059 Form data for a specific income or expense item does not match the tenant file data, a transcription error exists.

Incorrect determination of allowances and income sources are identified by taking tenant file information and comparing it with the 50058/50059 Form data. Allowance errors are detected by calculating the allowances based on the tenant file information and comparing this QC allowance with the Actual Allowance on the 50058/50059 Form. Similarly, income is calculated based on the types and amounts of income reported in the tenant file. The improper application of allowances and incorrect calculation of income are a subset of transcription errors.

Overdue Recertifications produce rent errors because rents are based on out-of-date information. For households with overdue recertifications, the QC information is based on the month the recertification should have been completed rather than when it was completed.

Objective 3: Estimate the national-level costs for total error and major error types.

This analysis includes determining the National Rent Error Rate, the numbers and proportions of households found to be in error, and the dollar amount of rent error and the proportion of total dollars found to be in error. Sample data are weighted to provide national estimates.

Objective 4: Determine the relationship between errors detectable using the HUD 50058 and HUD 50059 Forms and total errors found in the study.

As discussed under Objective 2, calculation and consistency errors identify mistakes made by the housing project staff. Under Objective 4, households with calculation and consistency errors are compared to households with QC errors to determine if error found within the 50058/50059 Form can be used to predict QC error.

Objective 5: Determine whether error rates and error costs have statistically significant differences from program to program.

This analysis presents differences in error rates by program type. Data are provided for three program groups: Public Housing, PHA-administered Section 8 (Section 8 Vouchers and Moderate Rehabilitation programs), and owner-administered (Section 8, Section 202 PRAC, Section 811 PRAC, and Section 202/162 PAC). The gross and net error rates are provided for each of these program types. The gross error rate is the sum dollar amount of gross error divided by the sum dollar amount of QC Rent, and the net error rate is the sum dollar amount of net error divided again by the sum dollar amount of QC Rent.

Objective 6: Determine the apparent cause of significant rent errors, either on a sample or a comprehensive basis, to provide HUD with information on whether the error was caused primarily by the tenant or by program sponsor staff.

As was done in the previous studies, we provide descriptive information on the sources of discrepancies between housing file information and verified information, and describe the incidence of administrative errors and their impacts. We also examine whether failure to verify sources of income and expenses contributes to QC error. Multivariate analyses using administrative errors and income components as independent variables are performed to identify how these errors affect the QC Dollar Rent Error.

Objective 7: Determine the extent to which households are overhoused relative to HUD's occupancy standards.

This objective addresses whether households reside in units with the correct number of bedrooms. Generally acceptable HUD guidelines specifying the appropriate size unit for assisted households are shown in Exhibit III-1.[3]

[3] Local projects have discretion in determining unit size, and may determine unit size differently than shown.

For most programs, the rules are not based solely on household size and allow discretion on the part of the project staff. All programs allow exceptions to these rules. This study replicates the analyses in the previous studies that identified bedroom size and program, and the proportion of households in compliance with and in violation of occupancy standards according to the guidelines in the table below.

Exhibit III-1
PHA-Administered Section 8 Unit Size Standards

Number of Bedrooms	Number of Persons in Household	
	Minimum	Maximum
0	1	1
1	1	2
2	2	4
3	3	6
4	5	8
5	7	10

Objective 8: Provide information on the extent to which errors are concentrated in projects and programs.

Further descriptive analyses are conducted to examine whether errors are concentrated within or are randomly distributed across PHAs/projects. Multivariate analyses are conducted with the tenant as the unit of analysis. Tenant and PHA/project characteristics were analyzed as independent variables predicting error rates. This analysis identified how each of these variables contributes to rent error. The results will help guide HUD's management of error rates and elaborate relationships between management practices and project/tenant characteristics that affect error rates.

Objective 9: Identify the percentage of newly certified tenants who were incorrectly determined eligible for program admission.

Incorrect initial eligibility determinations create long-term problems for assisted-housing programs. Newly certified households are reviewed to determine whether they met the eligibility requirements for assisted housing. Five eligibility requirements reviewed at initial certification are not a part of the recertification process (and thus not confirmed on an ongoing basis): definition of family, citizenship, verification of Social Security numbers, signing consent forms, and low and very low income limits. This study did not investigate definition of family because it is determined by the PHA or owner. Therefore, findings are provided on four of the five initial certification criteria. This study also did not include suitability factors that PHA/owners may use in selecting tenants—factors such as tenant histories, histories of drug use or criminal activity.

Objective 10: Determine the extent to which Section 8 voucher rent comparability determinations are found in the tenant file, and indicate the method used to support the determination. Determine whether voucher payment standards are within 90-110 percent of fair market rents, and determine whether the correct utility allowances are being used.

To comply with the rent reasonableness requirement, housing authorities must determine that Section 8 voucher rents are reasonable in comparison with rents for similar housing in the private, unassisted market. Using information collected from tenant files, we estimated the proportion of Section 8 voucher recipients with comparable documentation. For those with documentation, we classified the type of evidence cited in the tenant file documentation (e.g., no evidence, cited market estimates for comparable units, or the rents of one or more units considered to be comparable). We present weighted proportions of voucher recipients with rent comparability data.

Additionally, payment standard data from the 50058 Form are compared with FMR data to identify the households whose payment standards fall outside the 90–110 percent FMR band. Utility allowance schedules are likewise matched to tenant files to evaluate the issues associated with independently evaluating utility allowances as a potential component of rent error.

Objective 11: Estimate the total positive and negative errors in terms of HUD subsidies.

Proper payments are those in which the Actual Rent equals the QC Rent. Errors can be either overpayments (Actual Rent greater than QC Rent) or tenant underpayments (Actual Rent less than QC Rent). Overpayment error rates were calculated by dividing the total amount of overpayment by the total QC Rent; underpayment error rates were calculated similarly by dividing the total amount of underpayments by the total QC Rent.

Objective 12: Determine the extent to which error rates in projects that use an automated rent calculation system differ from errors in those that do not.

We investigated the relationship between using an automated rent calculation system and project-level gross error rate using an Analysis of Variance. We also examined whether gross rent error differed significantly by computer use between programs.

Objective 13: Determine whether other tenant or project characteristics on which data are available are correlated with higher or low error rates.

To respond to this objective, we use multivariate analysis to conduct more detailed analyses of differences among PHA/projects and provide HUD with more information for identifying projects and tenants likely to exhibit high error rates.

Objective 14: Determine whether cases for which 50058/50059 Form data had been submitted to HUD were more or less likely to have errors than those for which data had not been submitted.

The QC sample was matched to the TRACS/PIC data. Analysis was conducted to compare the average dollars in error for households included in TRACS/PIC with those that are not.

IV. Findings

A. Overview

Analyses were conducted using weighted sample data for the 2,412 households in the sample.[1] Data are presented by the three program types that were the basis for the sampling design—Public and Indian Housing (PIH)-administered (Public Housing), PIH-administered Section 8 Housing Choice Voucher, and Moderate Rehabilitation programs (PHA-administered Section 8); and Housing-administered Section 8, Section 202 PRAC, Section 811 PRAC, and Section 202/162 PAC programs (owner-administered). Each of the major study findings, the reasons for the errors, and other background information concerning these errors are discussed below. In many of the exhibits throughout the report, the data collected during the current study (referred to as the FY 2005 data) are compared with the data collected in a previous study. The data for this earlier study (referred to as the FY 2004 data) were collected in 2004; the analysis was completed in 2005.

This discussion is divided into eight parts: the errors in the rent amount based on the QC data (rent error), the errors in sources of income and expenses (component errors), the errors found using only project file data (procedural error), occupancy standards, comparisons with PIC/TRACS data, project-level analysis, multivariate analysis, and findings related to rent reasonableness determinations. The first three parts present different types of error.

Rent error is error that results in an actual dollar error. A dollar error means the household paid too much rent (an overpayment) or the household paid less rent than it should have paid (an underpayment).

Component errors are the income and expense components used to calculate rent. The income components are employment income, Social Security and pensions, public assistance, other income, and asset income. The expense/allowance components are elderly/disabled allowance, dependent allowance, medical expenses, child care expenses, and disability expenses.

Administrative Errors are errors that result from administrative mistakes. They consist of the following:

- Consistency errors—errors in logical conformity between elements within the 50058 or 50059 Form
- Calculation errors—arithmetic errors within subsections of the 50058 or 50059 Form
- Transcription errors—errors in transferring information from documentation in the tenant file to the 50058 or 50059 Form
- Failure to conduct a recertification in a timely manner
- Failure to verify information.

[1] Appendix B presents the procedure used in weighting the data.

Component and administrative errors may or may not result in rent errors. Administrative errors tell us at what point during the rent determination process that an error occurred, while the component errors tell us which income or expense caused the error. Data supporting the discussion are presented in the source tables found in Appendix C.

B. Rent Error

Overview. Rent errors were identified by subtracting the QC Rent from the Actual Rent.[2] The QC Rent was calculated using third-party verification whenever possible. If third-party verification was not available, information from the Documentation Forms or Household Questionnaire was used. The Actual Rent is the Tenant Rent from the 50058/50059 Form. As noted above, a household was considered to be correct (proper payment) if the QC Rent and the Actual Rent matched within $5. All exhibits included in this report (except IV-2) and all tables in Appendix C define households whose Actual and QC Rents matched within $5 as proper payments, except for the supplemental tables (designated by the letter "S"), which are based on exact matches between these two rents.

Definitions of Rent Errors. Dollar error can be determined by comparing the rent the household should have paid with what it was paying, or by identifying the percentage of the Federal subsidy that was paid in error. In this study, error was determined by the first method. The rent errors presented throughout this report were calculated in the following manner:

- **Dollar Rent Error** was calculated at the household level by subtracting the household's QC Rent from the Actual Rent. Note that these are *monthly* rents. A negative number indicates an underpayment, meaning the household paid less than it should have paid, and that HUD's contribution was higher than it should have been. A positive number indicates a household overpayment, meaning HUD's contribution was less than it should have been.

- **Gross Rent Error** is the absolute value (i.e., the sum of the absolute value of positive and negative Rent Error) of the Dollar Rent Error for the sample as a whole or a specified group of households. The Gross Rent Error functions simply as a measure of the magnitude of the errors. The dollar amounts presented in the tables are Gross Rent Error values, unless otherwise indicated.

- **Net Rent Error** is the arithmetic value (i.e., the sum of the negative and positive values of over- and underpayments) of the rent error.

- **Error Rate** is calculated by dividing the sum of the Gross Rent Error by the sum of the QC Rent, for the entire sample or a specified group of households.

[2] Rent error is determined on the basis of Tenant Rent, not TTP. Error based on TTP may differ from Tenant Rent because of the program specific rent formulas applied when calculating Tenant Rent. These rent formulas are listed in Section II-F and presented in detail in Appendix A.

Verification Used in Determining the QC Rent. As indicated above, a set of rules was established for third-party verification (see Section II-D). If an income or expense component was used for a rent calculation and was not verified by the PHA/owner, ORC Macro staff sought third-party verification. However, ORC Macro verification could not be obtained for all PHA/owner unverified items despite considerable effort and expense3.

Exhibit IV-1 shows the percentage of each rent component that was verified by either the PHA/owner or ORC Macro. The first two columns present the percentage of rent components that were verified with third-party, in-writing, third-party verbal, or documentation.[4] The remaining two columns present the percentage of rent components that were verified with the more stringent verification requirements for this study (i.e., third-party, in-writing). As the table indicates, there have been both increases and decreases in the percentage of rent components that were verified with either third-party, in-writing or other types of verification. It should be noted that since the sample size is quite small for Disability Expenses, the findings are not reliable national estimates and the apparently large increase in verification should be considered with that in mind.

Exhibit IV-1
Percent of Households Fully Verified by Either the PHA/Owner or ORC Macro

	Third-Party, Verbal or In-writing, or Documentation		Third-Party, In-writing	
Rent Component	**2004**	**2005**	**2004**	**2005**
Earned Income	90%	90%	76%	76%
Pensions, etc.	99%	99%	95%	94%
Public Assistance	93%	91%	74%	71%
Other Income	88%	85%	69%	65%
Asset Income	90%	92%	68%	65%
Child Care Expense	76%	74%	68%	69%
Disability Expense	23%	40%	23%	40%
Medical Expense	79%	75%	61%	53%

Source: Tables 1a and 1b, Appendix C

Tables C-1c and C-1d in Appendix C provide additional verification information by rent component. They present the number of households for which the income or expense component was not verified (i.e., no component items verified), partially verified (i.e., some component items verified), or fully verified (i.e., all component items verified). Table C-1b includes items that were verified by third parties in-writing. Table C-1c includes items that were verified verbally by a third party. Table C-1d provides data for items verified by file documentation.

[3] If third-party verification was not available, documentation from the tenant file was used to calculate the QC rent. If neither third party not file documentation was available, information collected during the household interview was used to calculate the QC rent.

[4] Documentation means documents submitted by the family such as pay stubs or bank statements, or a statement in the file indicating the project staff viewed an acceptable verification (but there was no copy in the file).

Proper Payments. Exhibit IV-2 shows the percentage of households with proper payments by program, for households where the Actual and QC Rents matched within $5 and where the Actual and QC Rents matched exactly. At (re)certification, the rent was calculated correctly (within $5) in 64 percent of the households, 2 percent lower than FY 2004's total of 66 percent. Half matched exactly for FY 2005 (50%), down 3 percent from 53 percent in FY 2004.

Exhibit IV-2
Percent of Households with Proper Payments

Administration Type	Percent of Households Within $5			Standard Error	Percent of Households Matched Exactly			Standard Error
	2003	2004	2005	2005	2003	2004	2005	2005
Public Housing	64%	70%	66%	2.16%	49%	55%	53%	2.53%
PHA-Administered Section 8	54%	64%	63%	2.27%	40%	51%	51%	2.02%
Total PHA-Administered	58%	66%	64%	1.91%	43%	53%	51%	1.69%
Owner-Administered	63%	67%	63%	1.90%	46%	53%	46%	2.23%
Total	60%	66%	64%	1.51%	44%	53%	50%	1.54%

Source: Table 2 and 2S, Appendix C

Households with QC Rent Error. Exhibit IV-3 shows the percentage of households in error, the average dollar amount in error, and error rate by program. Thirty-six percent of the households have a rent error greater than $5, up from 34 percent in FY 2004. The average gross dollars in error, calculated by dividing the sum of the dollar amount of gross error (i.e., the sum of the absolute values of under- and overpayments) by the total number of households is $19 in FY 2005. The same as in FY 2004. The gross dollar error rate, calculated by dividing the sum of the dollar amount of Gross Rent Error by the sum of the dollar amount of the QC Rent, was 9 percent in FY 2005 down from 10 percent in FY 2004.

Exhibit IV-3
Percent of Households with Error, Average Dollars in Error, and Dollar Error Rate for All Households with Error

Administration Type	Percent of Households with Error		Average Gross Dollars in Error		Gross Dollar Error Rate	
	2004	2005	2004	2005	2004	2005
Public Housing	31%	34%	$19	$19	10%	9%
PHA-Administered Section 8	36%	37%	$22	$20	12%	10%
Total PHA-Administered	34%	36%	$21	$20	11%	10%
Owner-Administered	33%	37%	$14	$16	8%	8%
Total	34%	36%	$19	$19	10%	9%

Source: Table 3, Appendix C

The rent errors are sensitive to a number of assumptions made in this study. Changes in the error threshold (i.e., $5), for example, would affect the overall dollar error estimates. Perhaps more importantly, it is likely that tenants with large rent increases resulting from corrected calculations would leave the program, reducing potential subsidy reductions. Those with decreases in their rents would be more likely to remain, increasing subsidy requirements. These corrections are desirable outcomes, but it is unclear what their net impact would be on subsidy costs. The most appropriate use of this study is as a tool for strengthening HUD's procedures for ensuring administrative compliance with regulations. The recommendations presented in this report will require greater rather than fewer resources in the short-term. Significant error reductions can only be attained through rule simplifications, additional instructions, and better forms, training, and monitoring, as discussed in the report. It is anticipated that the recommended changes will take 2 to 4 years before measurable results can be achieved.

Underpayment and Overpayment Households. Exhibits IV-4a and IV-4b show the percentage of households and average dollar amount of error for all households when errors of $5 or less are excluded from calculations. Exhibit IV-4a and IV-4b present the error for underpayment and overpayment households, respectively. Nineteen percent of all households paid in excess of $5 less than they should have in FY 2005, compared with 18 percent in FY 2004 and 23 percent in 2003. For the FY 2005 households, the average monthly payment was $63, lower than the mean of $72 in FY 2004 and the mean of $78 in 2003.

Exhibit IV-4a
Underpayment Households
Percent of Households and Average Monthly Dollar Amount of Error

Administration Type	Percent of Households In Error			Average Dollar Amount of Error: For Underpayment Households (with errors > $5)			Average Dollar Amount of Error: For All Underpayment Households		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Public Housing	21%	17%	17%	$71	$81	$59	$15	$14	$10
PHA-Administered Section 8	25%	21%	20%	$86	$74	$70	$22	$15	$14
Total PHA-Administered	24%	19%	19%	$80	$76	$67	$19	$15	$13
Owner-Administered	21%	15%	18%	$73	$59	$55	$15	$ 9	$10
Total	23%	18%	19%	$78	$72	$63	$18	$13	$12

Source: Table 3 and 4, Appendix C

Eighteen percent of all households paid in excess of $5 more than they should have in FY 2005, slightly more then the 16 percent in FY 2004, but equal to the 18 percent in FY 2003. The average monthly overpayment for households with overpayment error was $39 in FY 2005, down substantially from $57 in 2003.

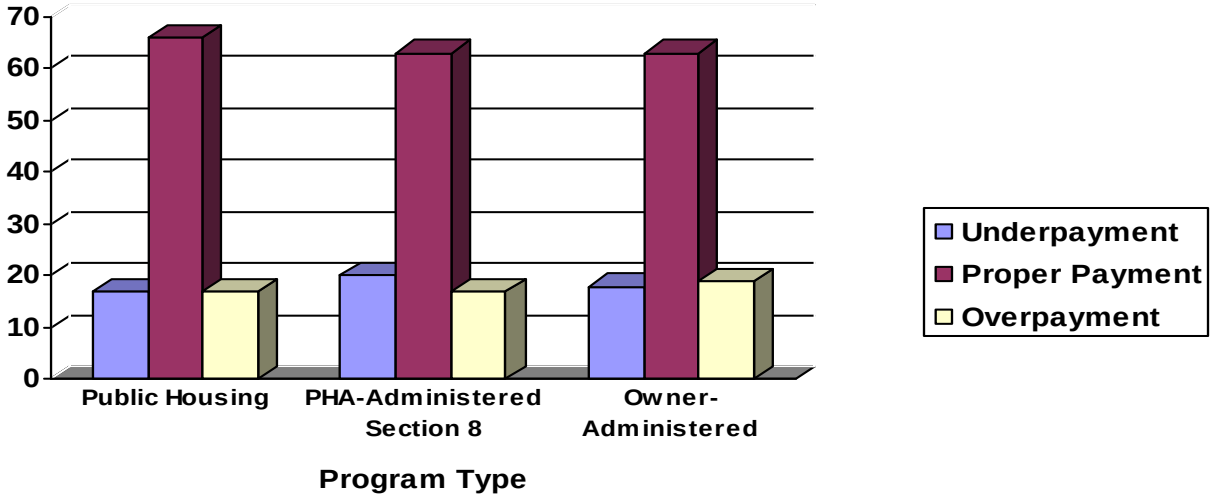
Exhibit IV-4b
Overpayment Households
Percent of Households and Average Monthly Dollar Amount of Error

Administration Type	Percent of Households In Error			Average Dollar Amount of Error: For Overpayment Households (with errors > $5)			Average Dollar Amount of Error: For All Overpayment Households		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Public Housing	15%	14%	17%	$58	$40	$53	$7	$5	$9
PHA-Administered Section 8	21%	15%	17%	$65	$42	$38	$14	$6	$7
Total PHA-Administered	19%	15%	17%	$63	$41	$43	$12	$6	$7
Owner-Administered	17%	18%	19%	$44	$29	$31	$7	$5	$6
Total	18%	16%	18%	$57	$37	$39	$10	$6	$7

Source: Table 3 and 4. Appendix C

Figure IV-1 shows the percentage of underpayments, proper payments, and overpayments by program type. Programs were grouped into three categories—Public Housing, PHA-administered Section 8, and owner-administered. Note that the majority of cases fall in the proper payment category for all program types. As indicated above, a household was considered to be correct (proper payment) if the Actual Rent and the QC Rent matched within $5.

Figure IV-1: Payment by Program Type



Gross and Net Dollars in Error. Exhibit IV-5 presents the gross and net average dollars in error and their associated standard error. To obtain the Gross and Net Rent Error, the dollar amount of overpayments is added to the dollar amount of underpayments, first using the absolute values for gross error, and then the arithmetic values for the net error. The net error measures the dollar cost of the errors and is -$5 (indicating a tenant underpayment) for FY 2005; the average gross dollar error is $19 for FY 2005 and represents the dollars associated with the errors (the magnitude of the errors).

Exhibit IV-5
Gross and Net Dollar Rent Error (Monthly) for All Households

Administration Type	Gross Rent Error				Net Rent Error			
	Average Dollars in Error		Standard Error		Average Dollars in Error		Standard Error	
	2004	2005	2004	2005	2004	2005	2004	2005
Public Housing	$19	$19	$1.99	$4.10	-$8*	-$1*	$2.03	$2.94
PHA-Administered Section 8	$22	$20	$2.07	$2.33	-$9	-$7	$1.87	$2.68
Total PHA-Administered	$21	$20	$1.57	$2.11	-$9	-$5	$1.42	$2.15
Owner-Administered	$14	$16	$1.52	$1.49	-$4	-$4	$1.57	$1.57
Total	$19	$19	$1.22	$1.66	-$7	-$5	$1.09	$1.50

Source: Table 5, Appendix C
* Difference at significance p < .05

Error Rates by Program. Differences in error rates by program were investigated and the results are summarized in Exhibit IV-6. Differences include Gross Error Rate, which is the sum dollar amount of gross error divided by the sum dollar amount of QC Rent, and the Net Error Rate, which is the sum dollar amount of net error divided again by the sum dollar amount of QC Rent. The Gross Error Rate is slightly higher for PHA-administered Section 8 programs than for either Public Housing or owner-administered programs.

Exhibit IV-6
Gross and Net Dollar Error Rates (Monthly) for All Households

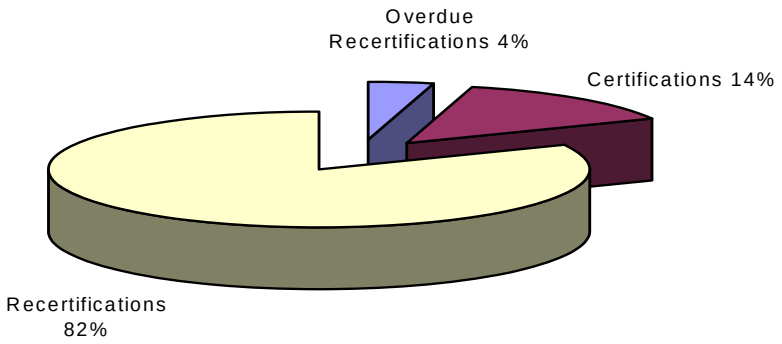
Administration Type	Error Rates	
	Gross Error Rate	Net Error Rate
Public Housing	9.2%	-.6%
PHA-Administered Section 8	9.9%	-3.5%
Total PHA-Administered	9.7%	-2.5%
Owner-Administered	8.2%	-2.2%
Total	9.2%	-2.4%

Source: Table 5, Appendix C

To determine whether error rates and error costs had statistically significant differences from program to program, pairwise comparisons using calculated variances were conducted to compare the three program types on percentages of proper payment (within $5), gross error, and net error. This analysis did not reveal significant differences between programs. In addition a general linear model was used to compare the programs on those three variables controlling for the sampling design. Again, no significant differences were found.

Certifications/Recertifications. The sample households included both certifications (i.e., newly admitted households) and recertifications. Certifications were analyzed to determine if these households were eligible for HUD housing assistance and recertifications were analyzed to determine if they were overdue. Figure IV-2 presents the breakdown of cases by case type—certifications, recertifications, and overdue recertifications.

Figure IV-2: Case Type



Source: Table 6, Appendix C

Exhibit IV-7 shows the breakdown of the percentage of certifications, recertifications not overdue, and recertifications overdue, by program type. The exhibit indicates that in FY 2005 14 percent of the households were certifications and 4 percent of the households were overdue recertifications. The findings indicate an increase in the percentage of certifications from FY 2004 (from 12 to 14%) and a decrease in the percentage of overdue certifications (from 7 to 4%).

Exhibit IV-7
Certifications and Recertifications by Administration Type

	Certifications		Timely Recertifications		Overdue Recertifications		Row Total By Year*
Administration Type	**2004**	**2005**	**2004**	**2005**	**2004**	**2005**	
Public Housing	12%	16%	79%	80%	9%	4%	100%
PHA-Administered Section 8	10%	10%	82%	85%	7%	5%	100%
Total PHA-Administered	11%	12%	81%	83%	8%	5%	100%
Owner-Administered	16%	18%	79%	81%	6%	2%	100%
Total	12%	14%	81%	82%	7%	4%	100%

Source: Table 6, Appendix C
*Rounding error may result in totals not equal to 100%.

Certifications. Exhibit IV-8a presents a summary of the findings related to eligibility criteria and Exhibit IV-8b shows the percentage of newly certified households meeting the certification criteria by program type. The results indicate general improvement since the FY 2004 estimate.

The reviewed criteria included citizenship, Social Security number, signing the appropriate consent form, and qualifying as low income or very low income households. However, only those households that did not meet the appropriate low or very low income limit were ineligible for assistance. One hundred percent of the households (according to the QC Rent calculation) fell within the low-income limit for total gross income.

A household met the citizenship or Social Security number criteria if there was evidence in the tenant file that the citizenship or Social Security number was verified. The data indicate that a citizenship code (indicating whether each household member was a citizen, eligible noncitizen, or ineligible noncitizen) and a Social Security number was available (from either the tenant file or the household interview) for each household member. All of the criteria in Exhibit 8a were higher in FY 2005, compared to FY 2004, except for citizenship. Eight percent of the households had at least one household member for whom there was no verification of citizenship. To meet the citizenship verification requirement, the file must have contained (for each household member) a signed declaration of U.S. citizenship or eligible immigration status; proof of age documentation; an INS card; or INS system verification of citizenship status, or documentation that the member was in process for verification or an INS hearing.

Five percent of the households had at least one member age six or over for whom there was no verification of their Social Security number. To meet the Social Security number verification requirements the file must have contained (for each household member six years of age or older) a copy of the Social Security card, or statement from the Social Security Administration verifying the Social Security number or a certification indicating the member does not have a Social Security number.

In 93 percent of the households, there was a signed consent form, dated within 15 months of the QCM (the date for which data were collected), for all members age 18 or over. Note that not meeting the Social Security number, citizenship, and consent form criteria may not mean the household was not eligible for assistance; rather, the project did not follow the HUD requirements in documenting the information.

Exhibit IV-8a
Percent of Newly Certified Households
Meeting Certification Criteria

Certification Criteria	Met Criterion	
	2004	2005
Citizenship	94%	92%
Social Security Number	93%	95%
Consent Form	89%	93%
Low and Very Low Income	100%	100%
Meets All Eligibility Criteria	81%	86%

Source: Table 7, Appendix C

Exhibit IV-8b
Percent of Newly Certified Households
Meeting Certification Criteria by Program Type

Certification Criteria	Percent of Households Meeting the Criteria		
	Public Housing	PHA-Administered Section 8	Owner-Administered
Citizenship	90%	91%	94%
Social Security Number	94%	94%	96%
Consent Form	93%	90%	97%
Low and Very Low Income	99%	100%	100%
Meets All Eligibility Criteria	83%	84%	89%

Source: Table 7b, Appendix C

Underpayments and Overpayments for Certifications, Recertifications, and Overdue Recertifications. Exhibit IV-9 presents a summary of the households with overpayments and underpayments by the type of case—certification, timely recertification, and overdue recertification. The Average Dollar Amounts are based on the sum of the dollar amounts for payment errors (either underpayment or overpayment) for the type of household (certification, overdue recertification, or timely recertification) divided by the number of households with that payment type (for whom a QC Rent could be calculated). For example, the sum of the dollar amounts for new certifications with monthly underpayments ($4.7M) was divided by the total number of certifications for whom QC Rent could be calculated (.56M). The result is an underpayment average dollar amount of $8.

The data indicate that the amount of underpayment and overpayment dollar error in new certifications in FY 2005 is less than the amount for recertifications. As might be expected, there is a very large difference in the underpayment error for overdue and timely recertifications ($30 and $12, respectively).

Exhibit IV-9
Average Monthly Underpayment and Overpayment Dollar Amount
Averaged Across All Households

Household Type	Underpayment Average Dollar Amount		Overpayment Average Dollar Amount	
	2004	2005	2004	2005
Certifications	$10	$8	$5	$6
Timely Recertifications	$12	$11	$6	$7
Overdue Recertifications	$24	$30	$10	$12
Total	$13	$12	$6	$7

Source: Table 8, Appendix C

Subsidies. The actual cost of errors to HUD is expressed in terms of subsidy payments. For purposes of this study, HUD subsidies for the Section 8 voucher program equal the lower of the Gross Rent or the applicable Payment Standard minus the Tenant Share. For Public Housing, the subsidy is the applicable Payment Standard minus the TTP, and for Housing programs, the subsidy is the Gross Rent minus the TTP. The subsidy is correct if the Actual Rent equals the QC Rent (within $5). A negative subsidy error occurs when the tenant pays too much rent (QC Rent < Actual Rent). A positive subsidy error occurs when the tenant pays too little rent (QC Rent > Actual Rent). These subsidy errors by program type are summarized in Exhibit IV-10a and 10b, below. The subsidy errors by certification status are summarized in Exhibit IV-11.

Exhibit IV-10a
Negative Subsidy Households (Tenant Overpayment)
Percent of Households and Average Monthly Dollar Amount of Error

Administration Type	Percent of Households in Error		Average Dollar Amount of Error: For Negative Subsidy Households (with errors > $5)		Average Dollar Amount of Error: For All Households	
	2004	2005	2004	2005	2004	2005
Public Housing	14%	17%	$40	$53	$5	$9
PHA-Administered Section 8	15%	17%	$42	$38	$6	$7
Total PHA-Administered	15%	17%	$41	$43	$6	$7
Owner-Administered	18%	19%	$29	$31	$5	$6
Total	16%	18%	$37	$39	$6	$7

Source: Tables 3 and 4. Appendix C
Note: Table results replicate Exhibit IV-4b for the convenience of the reader.

Exhibit IV-10b
Positive Subsidy Households (Tenant Underpayment)
Percent of Households and Average Monthly Dollar Amount of Error

Administration Type	Percent of Households in Error		Average Dollar Amount of Error: For Positive Subsidy Households (with errors > $5)		Average Dollar Amount of Error: For All Households	
	2004	2005	2004	2005	2004	2005
Public Housing	17%	17%	$81	$59	$14	$10
PHA-Administered Section 8	21%	20%	$74	$70	$15	$14
Total PHA-Administered	19%	19%	$76	$67	$15	$13
Owner-Administered	15%	18%	$59	$55	$9	$10
Total	18%	19%	$72	$63	$13	$12

Source: Tables 3 and 4, Appendix C
Note: Table results replicate Exhibit IV-4a for the convenience of the reader.

Exhibit IV-11
Average Monthly Dollar Amounts of Error for Negative (Tenant Overpayment) and Positive (Tenant Underpayment) Subsidies Averaged Across All Households

Household Type	Negative Subsidy Average Dollar Amount of Error		Positive Subsidy Average Dollar Amount of Error	
	2004	2005	2004	2005
Certifications	$5	$6	$10	$8
Timely Recertifications	$6	$7	$13	$11
Overdue Recertifications	$10	$12	$24	$30
Total	$6	$7	$13	$12

Source: Table 8, Appendix C
Note: Table results replicate Exhibit IV-9 for the convenience of the reader.

C. Sources of Error

Additional analyses examined which income and expense components contributed the most to rent error. It should be noted that the component dollar amounts are *annual* income and expense dollars, rather than the monthly figures used to present rent error data, and that rents are generally computed at 30 percent of adjusted income. Therefore, every $100 of income or expense error generally translates into $2.50 of rent error. In addition, the sum of the component errors is greater than net rent errors because of off-setting errors. For example, the household presented in the chart below has earned income and child care costs with errors in both components. The total component error is $1000 ($800 + $200); however, the adjusted net income error (the amount used to determine the household's rent) is only $600.

Example:

Component	File Data	QC Data	Dollar Error
Earned Income	$2,200	$3,000	$800
Child Care	$400	$600	$200
Adjusted Income	$1,800	$2,400	$600

Exhibit IV-12 presents each income and expense component included in the rent calculation and the percent of the households in error[5] where this component contributed the most to the gross error. The exhibit indicates that the largest average dollar error continues to be in earned come, with an average error of $3,895, in the 20 percent of households in error where earned income is the largest component error. Pensions and medical expenses were the largest component of error 21 percent of the time, while the average associated dollar error for these components was $2,740 and $938 respectively. In the 5 percent of households in error where child care expenses were the largest component in error, the average dollar amount of error was $2,766, while other income was the largest component of error in 12 percent of households in error with the

[5] The denominator in the percentage is the number of households with any component error, which was 34 percent of total households in FY 2005.

associated average dollar amount being $2,365. The total dollar amounts of error and the average dollars amounts associated with each rent component are down substantially for FY 2005, except for child care allowances where the average dollar amount increased from $1,813 to $2,766.

Exhibit IV-12
Rent Components Responsible for the Largest Dollar Error for Households with Rent Error

Rent Component	Percent of Households in Error		Average Dollar Amount	
	2004	2005	2004	2005
Earned Income	25%	20%	$4,302	$3,931
Other Income	12%	12%	$3,368	$2,365
Pensions	20%	21%	$3,592	$2,740
Asset Income	3%	3%	$1,181	$911
Public Assistance	8%	9%	$3,029	$2,118
Child Care Allowance	5%	5%	$1,813	$2,766
Medical Allowance	20%	21%	$1,077	$938
Dependent Allowance	4%	5%	$505	$552
Elderly/Disabled Allowance	3%	2%	$400	$400
No Rent Component Error	1%	3%	$0	$0
Total	100%*	100%*	$2,818	$2,210

Source: Table 9, Appendix C *Numbers do not add up to 100% due to rounding.

Note that for some households the rent error is not caused by one of the ten components listed. Rather, it is caused by other arithmetic errors or using the wrong rent calculation formula. The number of households in this category increased slightly from 1 percent in FY 2004 to 3 percent in FY 2005. The percent of households in error stayed the same or changed slightly for most rent components, with the largest decrease in earned income.

Total and Largest Component Dollar Error. Exhibit IV-13 shows the dollar amounts associated with the total dollars in error (the sum of the absolute value of errors in all rent components) and the largest dollars in error (the largest error attributable to a specific source for each household), by program type. There were notable decreases in Average Total Dollars in Error from FY 2004 to FY 2005, with Public Housing showing a decrease of just less than $2000 and PHA-administered Section 8 as well as owner-administered programs showing a decrease of over $500. The Average Largest Dollars in Error also showed a marked decrease, with the total for all programs decreasing over $600 between FY 2004 and FY 2005.

Exhibit IV-13
Total and Largest Component Dollars in Error
for Households with Rent Error

Administration Type	Average Total Dollars in Error		Average Largest Dollars in Error	
	2004	2005	2004	2005
Public Housing	$4,583	$2,677	$3,521	$2,197
PHA-Administered Section 8	$3,490	$2,989	$2,986	$2,512
Total PHA-Administered	$3,826	$2,889	$3,150	$2,411
Owner-Administered	$2,623	$2,072	$2,025	$1,786
Total	$3,471	$2,626	$2,818	$2,210

Source: Table 10, Appendix C

QC Rent Components by Payment Type and Administration Type. Exhibit IV-14 shows the percentage of the total number of households with (and without) component error by component type and payment type. For example, five percent of all households with underpayment rent error had errors in earned income; five percent of households with proper payment had errors in earned income and four percent of households with overpayment rent had errors in earned income. It also shows this information for PHA- and owner-administered households. This exhibit reflects component errors in proper payment households when the component dollar error results in a tenant payment error of $5 or less. The exhibit indicates that pension income is the rent component that has the highest percentage of error (13 percent = 8 percent underpayment + 5 percent overpayment), followed by medical allowances (11%) and earned income (9%). The components with the highest error remain the same.

Exhibit IV-14
Rent Component Error by Payment Type for All Households

Rent Component	Underpayment			Proper Payment			Overpayment		
	PHA	Owner	Total	PHA	Owner	Total	PHA	Owner	Total
Earned Income	6%	4%	5%	5%	2%	4%	5%	3%	4%
Pensions	8%	8%	8%	10%	14%	11%	5%	7%	5%
Public Assistance	3%	2%	3%	2%	1%	2%	2%	1%	2%
Other Income	4%	4%	4%	5%	4%	4%	3%	3%	3%
Asset Income	3%	3%	3%	6%	7%	6%	2%	4%	3%
Dependent Allowance	2%	1%	2%	2%	<1%	1%	2%	1%	2%
Elderly/Disabled Allowance	1%	1%	1%	2%	<1%	1%	1%	1%	1%
Child Care Allowance	1%	1%	1%	1%	1%	1%	2%	1%	2%
Disability Allowance	--	--	--	0%	--	0%	0%	--	0%
Medical Allowance	3%	6%	4%	5%	12%	7%	6%	10%	7%
No Rent Component Error	1%	<1%	1%	40%	37%	39%	<1%	<1%	<1%

Source: Table 11, Appendix C

Allowances. Elderly/disabled and dependent allowances were examined to determine whether these allowances were being applied correctly.[6] The findings are summarized in Exhibit IV-15.

Exhibit IV-15
Elderly/Disabled Allowances and Dependent Allowances

	Elderly Allowance			Dependent Allowance		
Allowance	Non-Elderly/ Disabled Households	Elderly/ Disabled Households	All Households	Households Without Dependents	Households With Dependents	All Households
No Allowance	100%	-	48%	100%	<1%	51%
Incorrect Allowance	<1%	6%	3%	<1%	11%	5%
Correct Allowance	-	94%	49%	-	89%	44%
Total	100%	100%	100%	100%	100%	100%

Source: Tables 12a and 12b, Appendix C

The exhibit shows the percentage of elderly/disabled and nonelderly/disabled households for which allowances were correctly or incorrectly applied. Elderly/disabled allowances were incorrectly used in three percent of the households in FY 2005. Six percent of the elderly/disabled households received an incorrect allowance, while less than one percent of non-elderly/disabled households received an allowance.

The exhibit also shows the percentage of households with and without dependents for which a dependent allowance was correctly or incorrectly applied. The dependent allowances were incorrect in five percent of the households. In less than one percent of the households, a dependent allowance was given to a household that did not have dependents. For the remainder of the households in error (11%), either a dependent allowance was not given when it should have been or the wrong allowance amount was given.

D. Errors Detected Using Information Obtained From Project Files

To respond to HUD's interest in understanding the cause of errors, tenant rent was recalculated using only income and expense items documented in the tenant file. The source of information used for this analysis only included items that were clearly documented in the tenant file in a location other than the 50058/50059 form worksheet. If an item was recorded on the 50058/50059 form worksheet but not documented elsewhere in the tenant file, it was not included when the tenant file tenant rent was calculated for this analysis. Therefore, it is possible that some of the discrepancies identified between 50058/50059 rents and rents calculated solely based on file data were not, in fact, due to incorrect determinations but rather due to program sponsor failure to maintain information supporting income or expense items. The outcome is that relying solely on information in tenant files may result in misstating the basis for the program sponsor income and rent determination and could lead to a determination that an error existed when the determination was actually correct. The fact remains that, even if a program

[6] Households with an elderly or disabled head or spouse are entitled to one $400 allowance (i.e., deduction from gross annual income) in calculating rent. Households are entitled to a $480 allowance for each dependent (defined as children under 18, full-time students, and disabled members other than the head or spouse).

sponsor made the correct income determination, failure to document the determination is and should be treated as a serious administrative problem. Also, in practice, it appears that these types of discrepancies are often suggestive of subsidy determination errors even if they cannot be assumed to prove the existence of such errors.

The findings from this analysis were compared to the quality control findings where tenant rent was calculated based on *all* the information collected during the study (including household interview data, and verification obtained by ORC Macro through third party sources). Exhibit IV-16 shows the percent of households in error and the average dollar error with and without income and expense items identified during the household interview and verified by ORC Macro through third party sources.

The data indicate that the income and expense items documented in the tenant file identify only about half of the cases with tenant underpayments (subsidy overpayments). The data regarding subsidy underpayments (tenant overpayments) indicate the tenant file closely predicts the percent of households with subsidy underpayments, but overestimates the average dollar error associated with those households.

Exhibit IV-16
Findings With and Without Information Obtained from Sources Other Than the Tenant File

Error Source	Percent of Households in Error		Average Dollar Error	
	Subsidy Overpayment	Subsidy Underpayment	Subsidy Overpayment	Subsidy Underpayment
Error Based on *All* Income and Expense Items Identified During the Study	19%	18%	$63.13	$38.92
Error *Without* Income and Expense Items Identified during the Household Interview	10%	16%	$44.74	$87.32

Source: QC Tables 2 and 4, and Tenant File Table 2 and 4, Appendix C

Analysis of the errors on the 50058/50059 Form examined whether the errors identified using the 50058/50059 Form as a sole source of information are representative of the total errors in the program. The analyses focused on calculation and consistency errors:

Calculation error was identified from income, expenses, and allowances used to calculate the rent amount and recorded on the 50058/50059 Form. This calculation did not take into account whether dollar amounts were verified or whether the recertification was conducted on time. This analysis identified errors due to arithmetic mistakes, the incorrect use of a formula, and items that were not completed but should have been. This analysis did not identify households where items were recorded in the wrong place on the 50058/50059 Form, although improper use of a field on the 50058/50059 Form can result in a calculation error. Table C-13 in Appendix C presents the number of households with 50058/50059 Form that contained calculation errors by the rent component contributing to the error. The items considered when determining calculation error, are listed in Appendix D.

Consistency errors were based on the logical conformity of elements in the 50058/50059 Form. For example, the effective date of action must be on or after the date of admission, elderly status information should be consistent with household head and spouse ages, and number of dependents should not exceed the number of household members. Table C-14 in Appendix C shows the number of households with consistency errors on the 50058/50059 Form, summarized by form subsections. Appendix D lists the data items by subsection that were included in this analysis.

Exhibit IV-17 shows the percentage of households with calculation and consistency errors by 50058/50059 Form subsections. It is important to emphasize that the 50058 Form is formatted differently and has more line items of information than the 50059 Form. Consequently, the number and types of calculation and consistency errors on the forms differ, and *findings from the two forms are not directly comparable*. The large number of calculation errors (particularly on the 50058 Forms) may be a contributing factor to QC errors, though a calculation or consistency error does not necessarily lead to a rent error. The PHA/owner may make an error when completing one section of the form, and still calculate the rent correctly.

Exhibit IV-17
Percentage of Households with Calculation and Consistency Errors

50058/50059 Item	Percentage of Households					
	Calculation Errors			Consistency Errors		
	50058	50059	Total	50058	50059	Total
General Information	n/a	n/a	n/a	1%	1%	1%
Household Composition	12%	7%	10%	13%	9%	11%
Net Family Assets and Income	12%	8%	11%	5%	0%	3%
Allowances and Adjusted Income	52%	6%	38%	7%	2%	5%
Family Rent and Subsidy Information	11%	6%	9%	8%	2%	6%

Source: Tables 13 and 14, Appendix C

Comparison of 50058/50059 Errors to QC Error. A comparison was made between the rent calculation errors on the 50058/50059 Form and errors identified through the QC Rent calculation process. The purpose of this comparison was to determine if errors identified using only the 50058/50059 Form data could predict the rent errors found in a QC review. When using only the 50058/50059 Form data to calculate the Actual Rent, errors were found in 8 percent of the households in FY 2005, a small improvement from FY 2004's figure of 9 percent. The QC error calculation found errors in 36 percent of the households in FY 2005 up slightly from FY 2004's 34 percent. The results are quite different from the individual and joint comparison methods. Error was found in both the 50058/50059 Form calculation and QC rent calculation in only 4 percent of the households. In 37 percent of the households, rent calculation error was found in either the 50058/50059 Form or the QC rent calculation, but not in both. This emphasizes that data from the 50058/50059 Form alone cannot accurately identify rent error. Exhibit IV-18 summarizes these results for FY 2004 and FY 2005.

Exhibit IV-18
50058/50059 Rent Calculation Error Compared with QC Rent Error

Rent Calculation	Percentage of Households Correct		Percentage of Households Incorrect	
	2004	2005	2004	2005
Using Information on the 50058/50059 Form	91%	92%	9%	8%
According to the QC Rent Calculation	66%	64%	34%	36%
Both 50058/50059 Form Calculation and QC Rent Calculation	61%	59%	3%	4%

Verification errors were identified by whether an item was verified by the project and, if it was, whether the correct information was transferred to the 50058/50059 Form. An error occurs when the verified amount obtained by the project is not recorded properly on the 50058/50059 Form (and, presumably, not used in the rent calculation). When determining whether a verified income or expense item matched the amount used on the 50058/50059 Form, we assumed a variance of $100 to accommodate potential rounding errors when annualizing data.

Table C-15a in Appendix C shows the number of households where verification (of any type) was not obtained, where it was obtained but did not match the amount used on the 50058/50059 Form, and where the verified amount did match the 50058/50059 Form. Table C-15b provides the same information but only includes the number of households where verification was obtained from third parties in-writing (as required by the study). Tables C-15e and C-15f provide the same data by program type.

Exhibit IV-19 summarizes the findings in Table C-15a. In general, the percentage of items verified by the PHA/owner remained about the same as in FY 2004, though in 8 percent of cases child care expenses were not verified in FY 2005, down from 17 percent in FY 2004. The percentage of items where the verification matched within $100 was mixed, depending upon rent component. Child care expense increased from 68 percent in FY 2004 to 76 percent in FY 2005. Medical Expenses matched within $100 less often in FY 2005 (63 percent) than in FY 2004 (72 percent). The number of households where verification was obtained and used by the PHA/owner continues to vary greatly depending on the rent component. For example, earned income, one of the main sources of error, was verified 89 percent of the time in FY 2005, compared with 90 percent in FY 2004. However, the correct amount of earned income was only used 71 percent of the time. There were mixed results when comparing the percentage verified information was used by the PHA/owner in FY 2004 and FY 2005. Verified medical expense information was used 63 percent of the time in FY 2005, down from 72 percent of the time in FY 2004, while verified information for child care expense was used 76 percent of the time in FY 2005, up from 68 percent in FY 2004. As mentioned above, earned income was used 71 percent of the time, up from 70 percent in FY 2004, but verified information from pensions, public assistance, other income and asset income (in addition to the medical expense information mentioned above) was used less often in FY 2005 than in FY 2004.

Exhibit IV-19
Verification of 50058/50059 Rent Components by PHA/Owners

Rent Component	No Project Verification		Item Verified by Project		Verification Matched 50058/50059 within $100	
	2004	2005	2004	2005	2004	2005
Earned Income	11%	11%	90%	89%	70%	71%
Pensions	4%	6%	96%	94%	84%	79%
Public Assistance	12%	16%	88%	84%	72%	67%
Other Income	17%	21%	83%	79%	68%	64%
Asset Income	9%	7%	91%	93%	84%	83%
Child Care Expense	17%	8%	83%	92%	68%	76%
Medical Expense	12%	8%	88%	92%	72%	63%

Source: Table 15a, Appendix C

Exhibit IV-20 shows verification results by program type, again showing the verification rate for each rent component and the proportion that matched within $100 of the 50058/50059 Form amounts. When comparing the FY 2005 results to the FY 2004 findings, the following changes are of note:

- In the Public Housing program, there was a decline in the percentages of all rent components verified in FY 2005 when compared to FY 2004, with the verification of public assistance declining the largest number of percentage points from 91 percent in FY 2004 to 79 percent in FY 2005. In addition, the percentage of rent components *used* in the rent calculation declined, with asset income showing the largest decline from 89 percent in FY 2004 to 62 percent in FY 2005. Child care expense was the only rent component that showed an increase in the percentage used in rent calculation from FY 2004 to FY 2005 (60 percent and 62 percent respectively).
- In the PHA-administered Section 8 programs, there were mixed results in comparing FY 2004 and FY 2005 percentages. Earned income, pensions, public assistance, and other income showed a small decline in components verified when comparing FY 2005 to FY 2004. However, the verification of medical expense showed an improvement of 11 percent in FY 2005, asset income showed an improvement of 14 percent, and child care expense showed an improvement of 15 percent. The percentage of asset income and child care expense actually *used* in the calculation of rent also increased (7 percent and 14 percent respectively) while the percentage of medical expense *used* in rent calculation declined from 73 percent in FY 2004 to 59 percent in FY 2005.
- In the owner-administered programs, the findings were mixed but generally positive. All rent components showed a slight increase in percentages verified when compared to FY 2004, with public assistance verification showing the greatest increase (75 percent in FY 2004 compared to 84 percent in FY 2005. The percentage of verification actually *used* in rent calculation for pensions, other income, child care expense and medical expense declined slightly when compared to FY 2004, however earned income, public assistance, and asset income increased, with public assistance having the largest increase of 12 percentage points (60 percent in FY 2004 compared to 72 percent in FY 2005).

Exhibit IV-20
Verification of 50058/50059 Rent Components by PHA/Owner Staff by Program*

Rent Component	Public Housing		PHA-Administered Section 8		Owner-Administered	
	Verified	Matched**	Verified	Matched**	Verified	Matched**
Earned Income	84% (88%)	64% (64%)	90% (91%)	74% (74%)	91% (88%)	72% (67%)
Pensions	94% (94%)	76% (77%)	93% (96%)	81% (86%)	96% (96%)	80% (85%)
Public Assistance	79% (91%)	65% (73%)	86% (90%)	66% (75%)	84% (75%)	72% (60%)
Other Income	74% (77%)	56% (59%)	83% (89%)	70% (75%)	75% (73%)	56% (59%)
Asset Income	85% (94%)	62% (89%)	94% (80%)	83% (76%)	95% (95%)	91% (85%)
Child Care Expense	87% (92%)	62% (60%)	92% (77%)	78% (64%)	96% (91%)	78% (83%)
Medical Expense	90% (88%)	56% (70%)	96% (85%)	59% (73%)	91% (89%)	68% (73%)

Source: Table 15e, Appendix C

* Findings from FY 2004 are in parentheses.
** Matched within $100

Tenant File Verification Compared with QC Error. Errors identified through the QC process were investigated to determine whether they were associated with sources of income and expenses. Exhibit IV-21 presents the percentage of households with QC error for which verification was missing in the tenant file. Each error is presented by rent component. The data indicate that missing verification does have a major impact on error. Verification for most rent components was missing in at least 67 percent of all households with QC error. Missing verification for public assistance was an exception, with 56 percent of households with missing public assistance verification also having QC errors. There were small changes in these findings when compared with the FY 2004 findings. The exceptions were in the owner-administered program where other income verification that was *used* in rent calculation showed a decrease from 93 percent in FY 2004 to 79 percent in FY 2005 and child care expenses which decreased from 77 percent in FY 2004 to 63 percent in FY 2005.

Exhibit IV-21
QC Error Households with Missing Verification in the Tenant File

Rent Component	50058				50059			
	Households with QC Error		Households with QC Errors and Missing Verification		Households with QC Error		Households with QC Errors and Missing Verification	
	2004	2005	2004	2005	2004	2005	2004	2005
Earned Income	12%	11%	69%	67%	6%	7%	66%	62%
Pensions	12%	13%	89%	85%	13%	15%	90%	85%
Public Assistance	4%	6%	68%	56%	3%	3%	77%	78%
Other Income	6%	7%	75%	67%	5%	7%	93%	79%
Asset Income	2%	5%	72%	80%	6%	7%	64%	73%
Child Care Expense	3%	3%	79%	78%	2%	2%	77%	63%
Disability Expense	<1%	<1%	100%	100%	<1%	<1%	100%	100%
Medical Expense	8%	9%	90%	88%	16%	16%	90%	92%
No Component Error	68%	67%	--	--	68%	66%	--	--

Source: Tables 16a and 16b, Appendix C

Summary of 50058/50059 Form Errors. Exhibit IV-22 provides a summary of the errors identified from the 50058/50059 Form. These include consistency errors, calculation errors, and overdue recertifications. The exhibit shows the percentage of households in error, the average dollar error, and the standard errors for both households with recalculated 50058/50059 Form error (error determined using only the 50058/50059 Form), and households with QC Rent error. This information is provided for households with error for each error type. For the FY 2005 study, transcription error for any household was added to this exhibit and the data that was described as an unduplicated count of 50058/50059 Form error has been revised to an unduplicated count of any type of administrative error. The exhibit shows that individual types of 50058/50059 Form errors are not closely associated with QC rent error. However, 50058/50059 Forms with transcription error are associated with QC rent error in 63 percent of households and any type of administrative error (transcription, consistency, calculation, or overdue recertifications) are associated with QC Rent Error in 74 percent of the households.

When the findings in this exhibit are compared with the FY 2004 findings, the major changes in percentage of households in error are a reduction in households with consistency error both for recalculated 50058/50059 form error (42 percent in FY 2004 and 34 percent in FY 2005) and those with QC rent error (30 percent in FY 2004 and 23 percent in FY 2005). There is also a decrease in error associated with overdue recertifications in households with recalculated 50058/50059 Form error, from 13 percent in FY 2004 to 6 percent in FY 2005.

The average dollar error for household with QC rent error shows a small decline from the FY 2004 figures, while the average dollar error for recalculated 50058/50059 error is mixed. In households with recalculated 50058/50059 error, the average dollar error was higher for

households with consistency error ($172 in FY 2005 and $119 in FY 2004), income calculation error ($152 in FY 2005 and $129 in FY 2004), other calculation error ($154 in FY 2005 and $74 in FY 2004) and overdue recertifications ($75 in FY 2005 and $48 in FY 2004). To understand the reason for the change in the average dollar error for households with recalculated 50058/59 error, it is important to review how this number is calculated. It is the average dollar rent error for all cases (based on recalculated 50058/50059 Form rent error—not QC rent error) that have error in the category identified in the row header. So for example, the average rent error dollars for households with allowance calculation errors is $173 (it was $210 in FY 2004). Because many of these cases have a large rent error (which may have nothing to do with the allowances) and the number of cases with allowance calculation error is small (13%) the average dollar error is large.

Exhibit IV-22
50058/50059 Administrative Error: Percent of Households, Average Dollars in Error

Error Type Based on 50058/59 Recalculation	Households with Recalculated 50058/9 Error				Households with QC Rent Error			
	Percent of Households in Error	Standard Error of Percent	Average Dollar Error	Standard Error of Mean	Percent of Households in Error	Standard Error of Percent	Average Dollar Error	Standard Error of Mean
Households with Transcription error	51%	4.4%	$85	$29.77	63%	2.0%	$45	$3.07
Households with Consistency Error	34%	5.8%	$172	$52.39	23%	3.8%	$58	$10.23
Households with Allowance Calculation Error	13%	2.8%	$173	$39.74	7%	1.6%	$65	$15.21
Households with Income Calculation Error	6%	2.0%	$152	$109.17	3%	0.6%	$33	$7.23
Households with Other Calculation Error	16%	4.1%	$154	$43.49	15%	2.7%	$65	$8.62
Overdue Recertifications	6%	2.6%	$75	$63.83	7%	1.6%	$63	$9.46
Unduplicated Count, Any Type of Administrative Error	67%	4.8%	$99	$33.74	74%	2.5%	$51	$4.05
Total Households	100%		$70	$24.76	100%		$51	$3.71

Source: Table 17, Appendix C

Summary of Administrative Errors. As outlined in the study objectives, calculation errors, consistency errors, transcription errors, failure to recertify on time, and failure to apply allowances appropriately produce administrative errors. Exhibit IV-23 shows the Gross and Net Rent Errors for households with each type of administrative error. For FY 2005 two major changes were made to this exhibit. First, the category of consistency errors was added to illustrate inconsistencies found within the 50058/50059 Form. Second, the findings are based on QC error rather than recalculated 50058/59 error. These changes will allow for more useful information in the future; however, because of these changes the findings in this exhibit can not be compared with the FY 2004 findings.

Exhibit IV-23
Administrative Error: Percent of Households, Average Dollars in Error
For All Households

Error Type	Percent of Households in Error	Gross Rent Error		Net Rent Error	
		Average Dollars in Error	Standard Error of Mean	Average Dollars in Error	Standard Error of Mean
Transcription Errors	44%	$23	$1.74	-$4	$2.06
Consistency Errors	20%	$25	$4.93	-$2	$3.58
Calculation Errors—Allowances	5%	$36	$9.47	$13	$8.30
Calculation Errors—Income	3%	$13	$3.58	-$1	$4.06
Calculation Errors—Other	10%	$35	$5.55	-$9	$6.35
Overdue Recertifications	4%	$42	$7.19	-$18	$9.67
Any Administrative Errors	56%	$24	$2.19	-$4	$2.17
Total	100%	$19	$1.66	-$5	$1.50

Source: Table 18, Appendix C

E. Occupancy Standards

Exhibit IV-24 presents a summary of the analysis that determined whether households are assigned units with the correct number of bedrooms. It shows the percentage of households by actual number of bedrooms and correct number of bedrooms according to the guidelines used in the study. Note that the guidelines used in this study are generally acceptable HUD guidelines. All programs allow exceptions to HUD's rules. The Section 8 Voucher program sometimes allows households to rent units with fewer or more bedrooms than specified by the guidelines.

Exhibit IV-24
Percentage of Households in Units with the Correct Number of Bedrooms According to Study Guidelines

Number of Bedrooms	PHA-Administered				Owner-Administered		Total	
	Public Housing		HCVP					
	2004	2005	2004	2005	2004	2005	2004	2005
0	100%	99%	90%	95%	98%	96%	98%	97%
1	100%	100%	98%	97%	99%	99%	99%	99%
2	83%	78%	78%	76%	78%	82%	79%	78%
3	86%	75%	85%	84%	94%	92%	87%	83%
4	62%	52%	55%	60%	60%	56%	57%	57%
5+	20%	64%	78%	35%	--	--	61%	45%
All Units	89%	85%	84%	83%	93%	93%	88%	87%

Source: Table 19a, Appendix C

Thirteen percent of all households occupied a unit with too many or too few bedrooms in FY 2005, according to the guidelines used for this study. This number is up slightly from FY 2004, where twelve percent of all households occupied a unit with an incorrect number of bedrooms. Fifteen percent of Public Housing households, seven percent of owner-administered households, and seventeen percent of Housing Choice voucher program households were over- or under-housed in FY 2005.

Exhibits IV-24a and IV-24b show the percentage of households that met these guidelines for each bedroom size for FY 2004 and FY 2005, respectively. The shaded cells indicate the percentage of households that fall within study guidelines.

Exhibit IV-24a
Percentage of All Households in FY 2004 by Number of Bedrooms and Number of Household Members

Number of Bedrooms	FY 2004 Number of Household Members							
	1	2	3	4	5	6	7	8+
0	98%	3%	--	--	--	--	--	--
1	90%	9%	1%	<1%	<1%	--	--	--
2	19%	46%	26%	7%	1%	<1%	1%	--
3	2%	10%	32%	33%	16%	5%	<1%	<1%
4	--	7%	8%	26%	29%	16%	11%	5%
5	--	--	12%	17%	--	10%	--	61%

Exhibit IV-24b
Percentage of All Households in FY 2005 by
Number of Bedrooms and Number of Household Members

Number of Bedrooms	FY 2005 Number of Household Members							
	1	2	3	4	5	6	7	8+
0	97%	2%	1%	1%	--	--	--	--
1	90%	9%	1%	--	--	--	--	--
2	20%	46%	25%	7%	2%	1%	--	--
3	4%	10%	34%	32%	14%	4%	2%	<1%
4	2%	2%	13%	24%	25%	19%	11%	5%
5+	16%	--	5%	--	18%	17%	8%	37%

Source: Table 19b, Appendix C

F. Project Staff Questionnaire Analysis

The purpose of the Project Staff Questionnaire (PSQ) was to obtain information on project and PHA practices and procedures, in order to better understand how work is carried out in projects and PHAs, and to identify difficulties and potential areas for improvement. The executive directors or managers of the PHA/projects in the FY 2005 study were surveyed, using a self-administered, paper questionnaire that examined in detail such topics as the number and type of PHA/project staff, training received by staff on how to conduct (re)certifications, communicating information about changes in HUD policies to the staff, quality control monitoring of work done by (re)certification staff, difficulties in administering tenant interviews, automation of (re)certifications via computer software use, various verification procedures employed in the process of (re)certifications, and difficulties in verifying tenants' information. The results were analyzed separately for three major program types: Public Housing, PHA-administered Section 8, and owner-administered.

A brief summary of the key findings from this analysis are presented below. A more detailed summary of the Project Staff Questionnaire information and the source tables reflecting the responses to the questions in the questionnaire are found in Appendix E.

- Number and Type of Staff. Overall, PHA/projects indicated an average of 59 units per each staff member and 158 units per each full-time (re)certification staff. However, there was a wide diversity of responses with respect to the ratio of staff per unit within, as well as between, different types of PHA/projects. PHA Section 8 reported the highest number of units per staff (103 units per staff member, on average) and highest number of units per full-time (re)certification staff (226 on average). Owner-administered projects had the lowest number of units per staff (32) and units per full-time (re)certification staff (92).

- New (Re)Certification Staff. About 36 percents of PHA/projects had new staff assigned to conduct (re)certifications in the past 12 months. These PHA/projects reported 3 new staff members being assigned to conduct (re)certifications in the past 12 months, on

average. More PHA Section 8 projects assigned new staff to (re)certifications compared to Public Housing and owner-administered projects (55% versus 30% and 27%, respectively). PHA-administered Section 8 projects also assigned the most new staff to conduct (re)certifications (5 new staff, on average). Fewer owner-administered projects assigned new staff members to (re)certifications, compared to projects in the other programs. They also assigned the fewest new staff to (re)certifications (2 staff, on average).

- New (Re)Certification Staff Training. PHA/projects provided on average 106 training hours to new (re)certification staff in the past 12 months. Most PHA/projects usually or always used experienced staff to conduct one-on-one training, self-training, and training sessions conducted by the supervisor to train their new staff. PHA-administered Section 8 projects provided the most hours of training (151 hours, on average). Owner-administered projects provided the fewest hours of training (52 hours, on average).

- Training of Experienced (Re)Certification Staff. About 75 percent of PHA/projects trained experienced staff in the past 12 months. PHA-adminstered Section 8 projects provided more training to experienced staff, compared to projects in the other two programs. Among all projects, an average of 6 experienced staff members received an average of 31 training hours. Most PHA/projects usually or always trained using self-training, training sessions conducted by the supervisor, and training conducted by other experienced staff.

- Communicating Information about Changes in HUD Policies. PHA/projects used a variety of methods to communicate with staff about changes in HUD PHA/Owner policies affecting eligibility or rent calculations. Oral communication was used most frequently, followed by distributing copies of HUD announcements to staff and distributing a memo that describes the changes and provides instructions for implementation. PHA/projects found answers to staff questions by referring to HUD PHA/owner memos or manuals, asking HUD field office or other HUD staff, and asking questions at a HUD training session. Many PHA/projects reported that they had to figure out the answers themselves by conducting internal meetings, talks, or training with supervisors, directors, or other senior staff.

- Quality Control via Work Monitoring. PHA/projects conduct quality control monitoring of (re)certification work. PHA/projects typically have the supervisor conduct work monitoring. Many also were audited in the past year by HUD or a HUD contractor. PHA/projects most frequently randomly spot checked a percent of all cases, but other methods were also used, such as reviewing cases of new staff and reviewing cases with anomalies. PHA/projects usually conducted quality control reviews after the (re)certification process and used forms, notes, and computer programs to aid the monitoring process. Section 8 PHAs were more likely than the other two program types to report utilizing various work monitoring techniques.

- Issues in Conducting Tenant Interviews. The average duration of the typical initial certification interview was slightly over 40 minutes, while the average duration of a typical recertification interview was 30 minutes. Owner-administered projects reported

longer initial and recertification interviews, while public housing projects reported the shortest. Tenants had difficulties in answering recertification interview questions about sporadic or intermittent income, income from self-employment, income from absent family members, and medical expenses.

- Using Computers and Software Programs. Almost all PHA/projects are using computers to support processing (re)certifications, as well as a wide variety of purposes. The most frequently reported uses for the computers were to calculate rent, print 50058/50059 forms, submit tenant information to HUD, and print letters to the tenants. Interestingly, one of the least frequently reported use of computers was to interview tenants and record answers.

- Use of PIC/TRACS. Virtually all PHA/projects transmit 50058/50059 data via PIC/TRACS, and about 96 percent of all 50058/50059 data were transmitted to HUD via PIC/TRACS. Owner-administered projects transmitted only about a half of their 50058/50059 data to HUD directly and slightly less than a half through an agency.

- Verification Procedures. More than 90 percent of PHA/projects verify the components of tenant information at least occasionally, and more than 75 percent always verify tenant information. (Re)certification staff are usually responsible for keeping track of verification requests and returns. Most PHA/projects keep verification records in the tenant file. However, only about a third of the PHA/projects indicated using a computer to keep track of verifications. PHA/projects reported that the most difficult information to verify included sporadic, infrequent, or seasonal employment; sources of income other than employment; value of assets; and medical expenses. Most PHA/projects use various procedures to get verification information, including calling the third party, sending letters to the third party, calling the tenants, and sending letters to the tenants. When none of these procedures produced the verification information, most PHA/projects resorted to accepting other, less preferred verification information.

G. The Relationship between Characteristics and Practices, and Error

Multivariate analyses were conducted at the household and project level to explore whether tenant characteristics, project characteristics, and project practices contribute to administrative and rent errors (Research Objectives 6, 8, and 13). A brief summary of these analyses is provided below. A more detailed description of the analysis is found in Appendix F.

Household Characteristics. Separate models were constructed for administrative errors and gross rent error. Five household characteristics were found to be significantly related to administrative errors and gross rent error—

- *Household size.* Not surprisingly, larger households are more likely to have calculation errors, transcription errors, and verification errors associated with their case files, and are more likely to have gross rent errors, even after controlling for other household characteristics. Household size was not directly related to overdue recertification.

- *Household annual income.* Also not surprisingly, households with higher annual income had more consistency errors, calculation errors, transcription errors, and verification errors than their counterparts with lower annual income. Higher household income was also associated with higher gross rent error. Household income was not directly related to overdue recertification.

- *Household allowances.* The number of household allowances was associated with higher levels of transcription errors and verification errors, but it was not directly related to gross rent error.

- *Elderly/disabled households.* These households are less likely to have calculation errors but more likely to have consistency errors and verification errors, compared to other households. In one model of gross rent error, elderly-disabled households had lower rent errors. Elderly-disabled household was not associated with overdue recertification.

- *Minority-headed households.* Minority households had more consistency errors, compared to other households. Minority headed households also had higher gross rent error, compared to other households.

Project Characteristics. Two project characteristics were associated with administrative error and gross rent error—

- *Program Type.* Households receiving assistance through the Public Housing and PHA-administered Section 8 programs were more likely to have consistency and calculation errors, compared to households receiving assistance through the owner-administered program. This finding must be interpreted with caution, however. Public Housing projects and PHAs administering the Section 8 voucher program use the 50058 form, while owner-administered projects use the simpler 50059 form. We would expect that households in owner-administered projects would be less likely to have consistency errors on their 50059 form because there are fewer items to be in error. Public Housing households had more transcription errors compared to households in other programs, while households receiving assistance through the PHA-administered Section 8 program had fewer transcription errors. Public Housing households were also more likely to have overdue recertifications, even controlling for other characteristics. Rent program type was not directly associated with gross rent error.

- *Project size.* Project size was associated with consistency errors and calculation errors, but not with gross rent error.

Project Practices. We examined the relationship between a variety of project practices, and administrative error and gross rent error, by creating indexes related to the practices. We did not find any significant associations between these practices and administrative errors or gross rent error. The practices examined included:

- Using computers for multiple tasks
- Hours of training for new and experienced staff
- Training strategies for new and experienced staff

- Techniques to monitor certifications
- Perception of tenant difficulties in answering interview questions
- Frequency of verifying tenant information
- Difficulty in verifying tenant information
- Cooperativeness of sources of verification information
- Average duration of initial and recertification interviews

Automated Rent Calculation Systems. Objective 12 asks whether error rates in projects that use an automated rent calculation system differ from errors in those that do not. To respond to this objective, we conducted separate analyses to determine whether use of automated rent calculation systems was associated with rent error. We did not find a statistically significant relationship between automated rent calculation systems and errors, among all projects or among projects of different program types. This is not surprising because nearly 95 percent of all projects use an automated rent calculation system.

H. Rent Reasonableness

The Housing Choice Voucher Program (HCVP) assists low-income families in obtaining housing in the private market. Public housing authorities are responsible for administering the program and ensuring that the rents paid for dwellings leased by participants in the HCVP are reasonable in comparison with rental units in the private, unassisted local market. High rents can waste government funds and inadvertently raise private market rents.

HUD regulations require PHAs to conduct a rent reasonableness determination before units are leased, before rent increases are granted to owners, and when Fair Market Rents decrease by at least 5 percent. This analysis examines whether PHAs fulfilled the requirement for documenting rent reasonableness determinations, but does not investigate whether rents were in fact reasonable.

Methodology. Field interviewers were instructed to review case files for a rent reasonableness certification. For new certifications, field interviewers searched the file for the initial rent reasonableness certification and recorded its date. For annual recertifications, field interviewers examined case files for evidence of when the current rent-to-owner became effective. If the rent became effective within the past two years, the case file was searched for a rent reasonableness certification and the date of certification. The owner's rent certification on the Request for Tenancy Approval (RTA) form was considered a rent reasonableness certificate.

Findings. The most common method of determining rent reasonableness is the unit-to-unit comparison (see Exhibit IV-25). Sixty-seven percent of the housing authorities reported using this method. The unit-to-unit method is similar to the standard real estate appraisal technique of comparing a unit to similar private, unassisted units. Rent amounts are sometimes modified for differences in unit characteristics, such as size, age, amenities, housing services, maintenance, and utilities.

The unit-to-market comparison approach estimates the average and/or range of "market" rents for units with similar characteristics in the private, unassisted market. Valuation adjustments are based on typical units in the private market. Seventeen percent of housing authorities reported using this method.

Ten housing authorities (8%) indicated that their rent reasonableness determinations were calculated on the basis of a point system. Using this system, units are assigned points based on their condition and attributes and comparisons are made to unassisted units.

Exhibit IV-25
PHAs by Rent Reasonableness Method (unweighted)

Method	Number	Percent
Unit-to-Unit Comparison	81	67%
Unit-to-Market Comparison	20	17%
Point System	10	8%
Other or Rent Control	4	3%
No Information Provided	6	5%
Total	121	100%

In FY 2005, 80 percent of new admission files contained rent reasonableness documents compared to 83 percent in FY 2004 (see Exhibit IV-26a). However, the absence of documentation does not necessarily indicate a determination was not completed, only that it was not properly documented. Of those files that had documentation, more than 80 percent contained a statement signed by the PHA staff certifying that the rent is reasonable (see Exhibit IV-26b).

Exhibit IV-26a
Rent Reasonableness Documentation for New Admissions

Status	2004	2005
Determination Documented	83%	80%
No Determination Documented	17%	20%
Total	100%	100%

Exhibit IV-26b
Type of Rent Reasonableness Documentation for New Admissions

Type	2004	2005
A signed statement certifying that the rent is reasonable	61%	81%
Comparable units documented by the property owner in section 12a of HUD 52517	14%	4%
Comparable units documented on other documents	17%	11%
Any other reference to rent reasonableness	8%	4%
Total	100%	100%

HUD requires that rent reasonableness determinations be conducted before signing the contract and lease. The timeliness of the rent reasonableness determination was evaluated by comparing the lease date with the rent reasonable certification date in the case file. Exhibit IV-27 provides a summary of how the date of the rent reasonableness determination relates to the initial lease date for those households where reference to the rent reasonableness determination was found in the file. If the lease effective date occurred before the determination, the rent reasonableness determination had no impact on the rent charged. The percent of rent reasonable determinations made after the rent had been established as part of the initial lease agreement decreased slightly from FY 2004 (from 9%) to FY 2005 (7%).

Exhibit IV-27
Timing of Most Recent Rent Reasonableness Determination—New Admissions

Determination-Certification Chronology	2004	2005
More than 4 months before lease date	4%	2%
Up to 4 months before lease date	84%	85%
After lease date—up to 2 months	5%	3%
After lease date—greater than 2 months	4%	4%
Date missing	4%	6%
Total	100%	100%

Annual recertifications require rent reasonableness documents only when owners increased rental rates. We examined case files to determine when the current rent-to-owner first became effective. The case file was searched for the rent reasonableness determination when rent reasonableness determinations were performed in the previous two years. About 65 percent of these case files had certified rent reasonableness documents in FY 2005 compared to 69 percent in FY 2004 (see Exhibit IV-28a).

Exhibit IV-28a
Rent Reasonableness Documentation for Annual Recertifications

Status	2004	2005
Determination Documented	69%	65%
No Determination Documented	31%	35%
Total	100%	100%

Type of reference to rent reasonableness documentation was recorded only for households where the rent reasonableness determination was made within four months before or two months after the effective date of the rent-to-owner (this occurred in 68 percent of the annual recertifications). For the remaining households (32%) no type of reference was provided. Exhibit IV-28b provides information on the type of rent reasonableness determination found in the tenant file.

Exhibit IV-28b
Type of Rent Reasonableness Documentation for Annual Recertifications Where the Rent Reasonableness Determination Was Made Within Four Months Before Or Two Months After The Effective Date of the Rent-To-Owner

Type	2004	2005
A signed statement certifying that the rent is reasonable	58%	64%
Comparable units documented by the property owner in section 12a of HUD 52517	10%	8%
Comparable units documented on other documents	25%	21%
Any other reference to rent reasonableness	7%	7%
Total	100%	100%

The current rents-to-owner in the lease agreements were compared with the dates of the rent reasonable documents. If the lease effective date occurred before the determination, the rent reasonableness determination had no impact on the rent charged. In FY 2005, about 16 percent of the rent reasonable determinations were made after rents had been established, compared with 13 percent in FY 2004 (see Exhibit IV-29).

Exhibit IV-29
Timing of Most Recent Rent Reasonableness Determination—Annual Recertifications

Determination-Certification Chronology	2004	2005
More than 4 months before lease date	15%	11%
Up to 4 months before lease date	44%	42%
After lease date—up to 2 months	3%	3%
After lease date—greater than 2 months	10%	13%
Date missing	28%	31%
Total	100%	100%

Conclusion. PHAs are not fully documenting rent reasonableness determinations as required by HUD regulations, and a large percentage of existing rent determinations have been made on the basis of less formal means of evaluating rents. These findings may be partially attributable to the PIH notice issued May 16, 2003 (notice PIH 2003-12) that supports a more streamlined rent reasonable process. For example, a PHA need not consider all nine criteria cited in 24 CFR 982.507(b) to fully comply with the regulation. PIH 2003-12 also asserts that "each PHA should use appropriate and practical procedures for determining rental values in the local market." This statement may also be intended to justify less formal methods of rent determination.

I. Utility Allowance Analysis

As part of the FY 2005 HUDQC study, an analysis was conducted of the Utility Allowances assigned to Section 8 Voucher households in the study sample. The purpose of this analysis was to report on whether there was documentation in the tenant file indicating how the utility allowance used in the rent determination was calculated; and identify discrepancies between the utility allowance on the 50058 Form (AC), and the utility allowance determined by using the utility allowance schedules provided by the PHA staff (QC). The QC utility allowance was calculated by using the PHA utility allowance worksheet found in the tenant file to identify the utilities for which the tenant was responsible; using the utility allowance schedule provided by the PHA to identify the values for the utilities for which the tenant was responsible; and summing those values.

To support this analysis, field interviewers were asked to copy the utility allowance worksheet found at the PHA office, and indicate whether the Housing Assistance Payment contract was found in the tenant file. PHAs provided utility allowance schedules used for actions effective in FY 2005 and answered questions regarding how the utility allowance was calculated.

One hundred and twenty one PHAs administering the Section 8 Voucher program participated in the HUDQC study. According to information provided by the PHAs, most (87%) used either the HUD Form 52667 – Allowances for Tenant Furnished Utilities and Other Services – or a PHA created worksheet (in many cases similar to the HUD 52667) to record and calculate the utility allowance for the tenant. Exhibit IV-30a below provides the information on the type of form used to calculate the utility allowance value.

Exhibit IV-30a
Type of Document Used by the PHA to Calculate the Utility Allowance Value

Type of Document	Number of PHAs	Percent of PHAs
HUD Form 52667	58	48%
HUD Form 52641 – HAP contract	1	1%
PHA Created Form	47	39%
HUD Form 52517 – Tenancy Approval	6	5%
Combination of Above	9	7%
Total	121	100%

Data in this section are not weighted.

Field interviewers were able to locate worksheets documenting how the utility allowance was calculated for 93 percent of the Section 8 Voucher households in the sample. For the households for whom a worksheet was available, the utility allowance from the 50058 Form was matched with the QC utility allowance. For 8 percent of the households we were unable to calculate the QC utility allowance because the worksheet did not include utility or other critical information, or the schedule for the appropriate period of time was not available. For 6 percent of the households where the AC and QC utility allowance values did not match, we were unable to determine the reason for the discrepancy. We were able to determine the actual cause of the discrepancy in less than 2 percent of the households. Exhibit IV-30b below presents the findings from this analysis.

Exhibit IV-30b
QC Utility Allowance Comparison Findings

Number	Percent	Outcome
56	7%	No Worksheet Was Available
597	77%	QC UA Matched Amount on 50058
62	8%	Worksheet Missing Critical Information or Schedule Unavailable
4	<1%	Discrepancy in Number of Bedrooms
10	1%	Discrepancy Due to Math Error
2	<1%	Discrepancy – Incorrect Schedule Used
45	6%	Discrepancy – Unable to Determine Reasons
776	100%	Total

Data in this section are not weighted.

J. Payment Standard Analysis

As part of the FY 2005 HUDQC study, a special analysis was conducted to determine if PHAs are using correct Payment Standards. This analysis consisted of two parts. First, the Payment Standard on the 50058 Form was compared to the Payment Standard schedules provided by the

PHA. Second, the Payment Standard on the 50058 Form (AC) was compared to Fair Market Rents for the appropriate geographical area. The findings from these two comparisons are presented below.

Background. Payment Standards are used in the Section 8 Voucher Program when determining the tenant's portion of the rent-to-owner. They must be kept current and set between 90 and 110 percent of the Fair Market Rent (FMR). If a PHA does not ensure that their payment standards are within this range, or they misunderstand how new FMRs affect exception payment standards, errors in tenant rent determinations will result.

PHAs may apply payment standards incorrectly resulting in errors in tenant rents. A PHA may have several Payment Standard areas with complex borders, sometimes making it difficult to select the correct Payment Standard for any given address within the jurisdiction. PHAs may also err by applying the family-size Payment Standard (the size authorized for the family as shown on the voucher) in lieu of the lesser of either the family-size Payment Standard or the Payment Standard for the unit size (number of bedrooms in the unit). Other potential areas for error include whether a PHA has been authorized to use FMRs based on the 50th percentile of rents in the area; whether the PHA has been authorized to use success rate payment standards based on the 50^{th} percentile of rents; and whether the PHA continues to be eligible for these higher subsidy standards. Another complication allows PHAs to change the Payment Standard only at the time of the annual recertification or before moving to a new address. Thus, even if a change in family composition requires an interim recertification with several family members moving in or out, the Payment Standard used in determining the rent should not be changed at the interim recertification. The complexity of the Payment Standard guidelines increases errors, but most of the errors found were not due to complex circumstances.

Comparison of the Payment Standard on the 50058 Form to the Payment Standard Schedules Provided by the PHA. The first analysis consisted of comparing the Payment Standard on the 50058 Form (AC) to the Payment Standard schedules provided by the PHA (QC). For all voucher household in the study, the appropriate QC payment standard was selected and compared to the AC payment standard. The selection of the QC payment standard from the schedules provided by the PHA was based on:

- the lower of either the number of bedrooms in the unit, or the number of authorized bedrooms for the household on the voucher,
- the effective Date of Action, and
- determining and applying any exception listed on the information provided by PHA staff.

For every household where the AC and QC Payment Standard did not match, a call was placed to the PHA staff for clarification and if appropriate to gather Payment Standard schedules for previous years. Through the calls, often other complications were discovered and taken into consideration when selecting the QC Payment Standard. Types of complications included:

- A decrease in the Payment Standards for units, requiring the PHA and ORC Macro to use the previous (higher) Payment Standard for the first recertification after the decrease.

Many PHAs only sent the Payment Standards for a specific time period. Calls were made to get the historical Payment Standard Schedules.

- Households that were granted exceptions for special circumstances such living in a house with additional amenities, or setting the Payment Standard to the gross rent for Enhanced Vouchers

- Housing Authorities using Payment Standards from adjoining PHAs if the tenant lived closer to that PHA.

- Housing Authorities using Payment Standards from a previous Housing Authority for Port-in households understanding the rates would be adjusted at the next annual re-certification.

- PHAs whose computer software systems filled the Payment Standard field with the lesser of the gross rent or the Payment Standard.

There were 771 Housing Choice Vouchers households in the study. For the majority (89%) of the households, the AC Payment Standard matched the QC Payment Standard. Seven of the Housing Choice Vouchers were Enhanced Vouchers. The rules for calculating rent for Enhanced Vouchers are different than for standard Housing Choice Voucher households. For Enhanced Vouchers the Payment Standard is the Gross Rent. For four of the Enhanced Voucher households the standard Payment Standard did not apply. Therefore, there were 79 households (11%) with discrepant Payment Standards. Twenty-six (40%) of these households were elderly or disabled households. Elderly/disabled households are identified separately because they are often entitled to individual exemptions to the Payment Standard rules. Exhibit IV-31 below summarizes the number and percent of household where the QC and AC Payment Standard did not match by reason.

Exhibit IV-31
Number and Percent of Households with Payment Standard Discrepancies

Reason	Number of Households (Elderly /Disabled)	Number of Households (Non-Elderly /Disabled)	Percent of Households
Wrong Number of Bedrooms was Used	5	17	27.8%
Gross Rent instead of the Payment Standard was Used	9	21	38%
Old Payment Standard Amount was Used	4	5	11.4%
Other Reasons; Decrease in Payment Standard, Typos, Used the FMR, Limitation of the Computer Software System	8	10	22.8%
Total	**26**	**53**	**100%**

*Data provided in this section are not weighted.

Comparison of the Payment Standard on the 50058 Form to the Fair Market Rents for the Appropriate Geographical Area. The second analysis consisted of comparing the AC (50058) Payment Standard to the Fair Market Rents for the appropriate area. The Payment Standard for 79 percent of the households fell within the 90 to 110 percent FMR band; 7 percent of the Payment Standards were lower than 90 percent of the FMR; and 14 percent were higher than 110 percent of the FMR. Exhibit IV-32 below summarizes the number and percent of households by the relationship of the Payment Standard to the acceptable FMR rental rate.

Exhibit IV-32
Percent of Households by Fair Market Rent Category
After Comparing Payment Standard to Fair Market Rent

	Payment Standard as a Percent of Fair Market Rent		
Fair Market Rent Category	**Under 90%**	**90–110 %**	**Over 110%**
Less than $500	4%	75%	22%
$500–$599	13%	82%	6%
$600–$799	7%	85%	8%
$800–$999	7%	82%	11%
$1,000–$1,199	4%	82%	14%
$1,200–or Higher	10%	65%	25%
All Voucher Households	7%	79%	14%

*Data provided in this section are not weighted.

The analysis of the households that fell outside the 90 to 110 percent Fair Market Rent band (see Exhibit IV-33) indicated that 12.7 percent were either assisted by a PHA that was granted an exemption by HUD, consisted of an elderly or disabled household member, or were entitled to a higher older Payment Standard amount. Since some households met more than one of these criteria, they were categorized into groups using the following guidelines. If the household was entitled to a higher older Payment Standard amount, it was placed in that category. If the household received assistance through a PHA that was granted an exemption by HUD, but not entitled to a higher older Payment Standard amount, it was identified as a household receiving assistance through a PHA granted an exemption. If the household consisted of an elderly or disabled household member, but did not meet one of the other two criteria, it was categorized as an elderly/disabled household.

Of the households that did not fall within the 90 to 110 percent Fair Market Rent band, 1.8 percent of the households were assisted by a PHA granted an exemption by HUD; 5.1 percent included an elderly or disabled household member, and 5.8 percent were households where a previous years Payment Standard was used because there was a decrease in the amount of the Payment Standard for the appropriate year. Therefore, 4.5 percent of the population with a Payment Standard exceeding 110 percent of the Fair Market Rent, and 4 percent of the population with a Payment Standard less than 90 percent of the Fair Market Rent (for a total of 8.5%) did not meet HUD's Payment Standard requirements.

Exhibit IV-33
Percentage of Households Meeting Payment Standard Requirements

	Fair Market Rent			Cases Outside the 90–110% Band
	Under 90%	90–110 %	Over 110%	
Payment Standard Compared with Fair Market Rent	7.1%	78.7%	14.1%	21.2%
Households Where an Older Payment Standard Amount Was Correctly Used on the 50058 Form	0%	N/A	5.8%	5.8%
Households Assisted by a PHA Granted an Exemption	.9%		.9%	1.8%
Households (without exemptions) with Elderly or Disabled Members	2.2%		2.9%	5.1%
Households Not Meeting Requirements	4.0%		4.5%	8.5%

*Data provided in this section are not weighted.

K. PIC/TRACS Analysis

The households included in this study were matched against the PIC/TRACS data files using identifying information (a combination of the Social Security Number, name, and date of birth) for the head of each household. Because this study covers FY 2005, historical PIC/TRACS files were used to identify the 50058/59 data for the specific effective date and type of action for which study data were collected. PIC/TRACS data were received for the households that matched these criteria. PIC records were found for 68 percent of the households in PHA-administered projects. TRACS records were found for 96 percent of the households in owner-administered projects. Of the 2412 households sampled 1829 households (or 76%) were matched against PIC/TRACS.

Analysis was conducted to compare the average dollars in gross rent error for households that matched PIC/TRAC with those that did not. Exhibit IV-34a provides the percentage of households in each of the three program types by presence or absence in PIC/TRACS, and the average dollars in error based on all households in the study. Exhibit IV-34b provides the same information, but uses only households with rent error as its base. These exhibits demonstrate that proportionally an equal number of households in error matched against PIC/TRACS data.

As presented in Exhibit IV-34b the average dollars in error for household in error is larger when PIC/TRACS data is absent for PHA-administered Section 8 households, but smaller for owner-administered households.

Exhibit IV-34a
PIC/TRACS Data by Program Type
and Average Dollars in Error for all Households

Administration Type	PIC/TRACS PRESENT		PIC/TRACS ABSENT	
	Percent of Households	Average Dollars in Error	Percent of Households	Average Dollars in Error
Public Housing	66%	$19	34%	$20
PHA-administered Section 8	65%	$20	35%	$22
Total PHA-administered	65%	$19	35%	$21
Total Owner-administered	96%	$16	4%	$ 9
Total	75%	$18	25%	$21

Source: Tables 20a

Exhibit IV-34b
PIC/TRACS Data by Program Type
and Average Dollars in Error for Households in Error

Administration Type	PIC/TRACS PRESENT		PIC/TRACS ABSENT	
	Percent of Households	Average Dollars in Error	Percent of Households	Average Dollars in Error
Public Housing	63%	$57	37%	$55
PHA-administered Section 8	69%	$50	31%	$66
Total PHA-administered	67%	$52	33%	$62
Total Owner-administered	96%	$43	4%	$30
Total	77%	$49	23%	$60

Source: Table 20b

Exhibit IV-35 presents the percentage of households and average dollars in error for households matched/not-matched with PIC/TRACS by payment type. A slightly lower proportion of households with matched PIC/TRACS data had proper payments (63% vs. 65%).

Exhibit IV-35
Average Dollars in Error by Payment Type and PIC/TRACS Data

Payment Type	PIC/TRACS PRESENT		PIC/TRACS ABSENT	
	Percent of Households	Average Dollars in Error[1]	Percent of Households	Average Dollars in Error[1]
Underpayment	19%	$58	18%	$79
Overpayment	18%	$38	17%	$40
Proper Payment	63%	n/a	65%	n/a
Total	100%	$18	100%	21

[1]Average dollar error per under- and overpayment subgroups.

Exhibit IV-36 examines net and gross errors by program type and matched PIC/TRACS data. This table provides no new insights about the impact of matching PIC/TRACS data but highlights the importance of reviewing both gross and net rent errors.

Exhibit IV-36
Average Net and Gross Dollars in Error by Payment Type and PIC/TRACS Data

Payment Type	Average Net Rent Error		Average Gross Rent Error	
	PIC/TRACS Present	PIC/TRACS Absent	PIC/TRACS Present	PIC/TRACS Absent
Public Housing	-$.78	-$2	$19	$20
PHA-administered Section 8	-$5	-$11	$20	$22
Total PHA-administered	-$5	-$8	$19	$21
Total Owner-administered	-$4	$2	$16	$9
Total	-$4	-$7	$18	$21

For Households where PIC/TRACS data were found, further analysis was conducted to determine if certain key variables matched. The key variables included gross income, net income, and total tenant payment. Exhibit IV-37 provides the percentage of households where the data gathered through the QC process matched that in PIC/TRACS. Overall TRACS data had a lower match percentage on the key variables. The tenant rent on the 50058/59 collected through the QC data process matched in 71 percent of the households in PICS (PHA administered projects) and 63 percent of households in TRACS (owner-administered).

Exhibit IV-37
Percentage of Matched and Non-Matched Dollar Amounts for Key Variables
Matching Variables from the 50058/59 Form and PIC/TRACS

Match Status	Gross Income		Net Income		Total Tenant Payment		Tenant Rent	
	PIC	TRACS	PIC	TRACS	PIC	TRACS	PIC	TRACS
No Match	15.7%	22.2%	19.3%	22.9%	19.9%	27.4%	29.0%	37.1%
Match	84.3%	77.0%	80.7%	76.9%	80.1%	72.6%	71.0%	62.9%
Total	100%	100%	100%	100%	100%	100%	100%	100%

An analysis of the households for which the PIC/TRACS data were not available indicated that all study households in seven PHAs and five owner-administered projects had no matches with the PIC/TRACS data. A similar analysis was conducted for households where PIC/TRACS data were available, but the key variables did not match. There were nine owner-administered projects and 20 PHAs where 75 percent or more of the households had errors in all four of the key variables.

V. Recommendations

This section discusses recommended changes to the study that will improve the data collection process or the quality of the data used in the analysis, as well as policy actions that could be taken to reduce error. Section A discusses changes to the quality control process itself. Section B addresses policy recommendations.

A. Modifying the Quality Control Process

The current methodology used by ORC Macro to conduct its quality control study is based on the successes and failures of previous studies, and meets the established objectives. However, there are some recommendations that would be helpful for expanding the utility of data products as well as improving the overall efficiency of ongoing quality control studies. These include the following:

1) *Continue the HUD quality control studies as a regular, ongoing effort to monitor and manage HUD rent determination processes.* A wise strategy of managing rent errors is administering an ongoing evaluation program that measures rent errors, tests alternatives to reduce rent errors, and better manages current and changing conditions at PHAs/projects. Such an evaluation program would have scheduled annual or biannual rent error data collection efforts for assessing current rent error issues. An ongoing evaluation program would also facilitate more accurate cross-year comparisons of rent errors. It also allows for data collection and analysis staff to develop specific expertise with HUD policy areas, and develop tailored solutions for improving data quality. Further, other HUD-related topics could be investigated (e.g., the changing demographics of HUD tenants) and piggybacked on to the rent error data collection processes. Finally, with highly trained staff and automated data systems, HUD could achieve greater cost efficiencies at this and other field tasks.

   Data collected through the quality control studies provides detail not available through other HUD sources (e.g. PIC/TRACS) that could be used to track such trends as the extent to which income and expense items are verified, or the number of sources of employment income received by a particular household or household member.

2) *Expand contractor access to verification obtained through inter-agency agreements.* Despite increasing rates of third-party verification, a large proportion of tenant income and expenses are not being verified. This is especially important given that the study results indicate a significant relationship between third-party verification of certain types of income and rent errors.

   During the current study, household-level information was used to match sample household members with Social Security data files through the Enterprise Income Verification (EIV) system. Through this electronic match, verification was obtained for most sample household members' Social Security and Supplemental Security Income (SSA/SSI) benefits. However, there were many household members where a match between the study electronic files and the SSA/SSI electronic files was not found when expected and other situations where irresolvable discrepancies were identified. If ORC Macro as the contractor for the HUDQC

study could have access to the SSA/SSI database, these mismatches and discrepancies could be investigated further.

3) *Collect more information regarding PHA/project policies and practices.* Each PHA establishes its own policies, procedures, and forms for collecting the information that is ultimately used to calculate tenant rent. The differentiation in these practices should have some (possibly major) impact on the rent error, yet the analysis of the project practices and characteristics collected in the Project Staff Questionnaire designed for this study does not demonstrate the expected impact. Therefore, we recommend that the Project Staff Questionnaire be revised to include questions focused on the specific practices that we expect, on the basis of our recent analysis of project-level data, to influence errors. We should also consider the method in which the questionnaire is administered and how responses are recorded. As the rent error decreases, it will become increasingly difficult for HUD and PHA/project staff to continue to make changes that will reduce the error. Analysis of more detailed project-level data will assist in this process.

4) *Continue to investigate PIC/TRACS data for sampling and other purposes*. Ideally PIC/TRACS data would be used to select the quality control sample, and provide the actual data used by the PHA/project staff when calculating rent (in place of abstracting 50058/50059 Form data from the tenant file). However, the most recent match of the study sample households (using FY 2005 data) with PIC/TRACS data indicated that only 76 percent of the sample households are included in the PIC/TRACS databases. This is strikingly different then the findings from the match using 2003 study sample households which indicated that 97 percent of the sample households were included in the PIC/TRACS databases. Given this information, consideration should *not* be given to using these data for selecting the household sample until there is some assurance that the databases are all inclusive. Even if it is determined that PIC/TRACS data include all households receiving assistance, using the PIC/TRACS data for selecting the household sample may not be appropriate unless the data are available for the specific period of time covered by the study.

5) *Continue to expand existing computer systems and processes that further automate data collection, processing, and reporting functions*. Most of the data for the current study were collected using an automated data collection system. This system simplified the data collection process, reduced the number of data collection errors, and eliminated the need to code the data after data collection. While the existing systems work well, there are many improvements that can be made to the data collection software, the field monitoring software, and the processing and tracking of third-party verifications. Consideration should be given to developing systems that would allow for calculating rent as the data are collected and comparing the QC-calculated rent to the rent identified on the 50058/50059 Form. Expanding and investing in better automated systems will yield large dividends in terms of costs, time required to collect and process data, as well as the breadth, depth, and quality of data.

B. Policy Actions

This study was not designed to provide recommendations regarding basic program objectives and policies. However, the findings from this study suggest that some major procedural changes should be considered when establishing and revising policy.

1) *HUD should continue its plans to implement use of the Department of Health and Human Services' "New Hires" income matching database as quickly as possible.* The Congressional authorization giving HUD access to HHS' "New Hires" income matching database provides the opportunity to correct errors associated with reported and unreported income. The majority of subsidy overpayment errors are associated with earned income determination errors, and the large majority of tenant income underreporting also relates to earned income. However, our experience working with the "New Hires" data indicates that caution needs to be taken when estimating the level of effort involved in the implementation of an income matching system. The data are extremely helpful in identifying unreported sources of income. However, the data are not current and often contain errors. Great care needs to be taken when using these data to insure that income is only counted when it is clear that it received by the tenant and not simply because it is identified through the New Hires database.

2) *HUD should continue expanding support of the occupancy function and conducting outreach campaigns to PHAs and owners informing them of the Department's occupancy-related resources.* Provision of detailed, current occupancy handbooks is essential in addition to providing a mechanism for answering questions as they surface. Specifically, HUD should develop a nationwide, consistent, reliable approach to providing guidance and support to both PHAs and owners.

   It is also critical that there be a close link between the team that responds to field concerns and the staff responsible for writing HUD notices and guidance documents. The team responding to field questions and concerns knows what the problems are that face the field. These problems should be the subject of the guidance that comes from HUD.

3) *HUD should provide the PHA/owners with the forms, training, and other tools needed to determine rent correctly.* Rent calculation error could be reduced if HUD would provide structured forms for interviewing tenants, obtaining verifications, and calculating rent. Ideally, these tools would be provided in the form of computer-assisted interview software that minimizes the number of questions that need to be asked. Such systems would ensure that tenants are asked about all income sources and expenses that affect their rent. Manuals and training materials explaining how to implement requirements correctly and calculate rent accurately should be provided. To the extent that HUD program rules can be simplified, provision of automated and manual tools would be easier.

   HUD experts and local housing staff should be given an opportunity to work together to develop these tools and systems needed to reduce rent error. Many local PHA/owners have already developed forms, training materials, manuals, automated systems, and monitoring processes that have enabled them to provide accurate efficient service to the tenants they

serve. HUD should learn from these PHA/owners and develop materials that will help those PHA/owners who for one reason or another have not been as successful.

4) *HUD should continue to implement its on-site monitoring program, and PHA/owners should be held accountable for implementing HUD regulations and calculating rent accurately.* An on-site monitoring system that includes reviews at both the local and Federal level is essential to improving accountability. PHA/owners with excessive errors should be required to develop corrective action plans and show improvement within specified time periods. HUD has initiated extensive on-site monitoring efforts since the 2000 QC study, in contrast with its policies of most of the previous two decades. The most obvious explanation for the magnitude of error reductions in subsidy determinations between 2000 and 2004 is improved HUD monitoring and the expectation of such monitoring. However, as the number of errors stops declining, further action will be needed to help the PHAs and owners focus on policies and procedures that lead to error.

   Monitoring can be conducted at a variety of different levels. We recommend that HUD require PHA/owners to perform their own quality control reviews on a percentage of income determinations and rent calculations. Agencies that have aggressively sought to improve performance of their programs have had some significant successes, and one of the most frequently used error reduction strategies includes the establishment of internal quality control review procedures. In addition to agency monitoring, HUD Field Offices and/or other national-level well-trained staff should conduct a re-review of a percentage of the cases reviewed at the local level to ensure that the quality control reviews are being conducted correctly, or select their own random sample of files for review. This type of oversight not only identifies errors, but also prevents them. In addition, it demonstrates HUD's concern and focuses PHA/owner attention on tenant income and rent.

5) *Federal laws, regulations, and HUD requirements should be simplified to the extent possible.* The current statutory environment poses substantial obstacles to efficient, accurate income and rent calculations. It contains dozens of requirements that may all be well-intentioned and have potentially desirable impacts but which, taken as a whole, make the income and rent determination process extremely complex. HUD has sought to issue guidance on virtually all aspects of current income and rent determination requirements, but some of the legislative provisions were written without any thought as to implications for their administrative complexity. While determining which income to count, which expenses to allow, and annualizing that information in a program with multiple objectives may always be complicated, the various specialized provisions that relate to small subparts of the population could be eliminated or simplified.

   A recent example of such policies is the new policy related to students. PHA and project staff are now required to gather a series of information to determine whether a student who is the head of the household is eligible to receive assisted housing. For students who do not meet certain criteria, PHA/project staff are required to determine the eligibility of the student's parents. This new policy, while well intentioned, just adds to the complex rules PHA/project staff are required to implement when determining eligibility and calculating rent for assisted households.

6) *HUD should consider requiring some reexaminations to be completed less often than annually.* Many years ago, the reexaminations for elderly and disabled families were conducted biannually rather than annually. HUD should consider implementing this policy again or possibly conducting reexaminations for selected populations every 3 years. To remove the issues related to incorrect subsidies because of the annual increase in Social Security benefits, the policy *could* require adding the annual SSA COLA to the total annual income for the households included in this group. With the time-savings made available by this change in policy, PHA/project staff could spend more time conducting required reexaminations, following up on suspected cases of fraud, and conducting more internal monitoring of tenant files.

Appendix A—Rent Calculations

Appendix A—Rent Calculations

A. Rent Calculations by Program

1. Public Housing

a. Obtain the Total Tenant Payment (TTP).

b. Determine if the family includes any ineligible noncitizens. IF YES, **continue**. If NO, **go to d.**

c. Determine if the family includes any citizens or eligible noncitizens. IF YES, **go to #3 (continuation).** IF NO, **go to #4 (temporary deferral).**

MARKER (marks the return point after determining continuation of assistance status)

d. Obtain the Utility Allowance.

e. Determine if the tenant selected the Flat Rent. IF NO, **go to** f. IF YES, the QC RENT equals the Flat Rent. **Go to g.**

f. The amount of the tenant's rent (QC RENT) is the lower of: a. (TTP), minus d. (Utility Allowance), or the Flat Rent*.

g. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

*Note: If there is no Flat Rent, the QC rent will be capped with the Ceiling Rent to determine the dollar amount of error.

2. Section 8 Vouchers

a. Obtain TTP.

b. Obtain the Gross Rent.

c. Obtain Utility Allowance.

d. If TTP is greater than Gross Rent, then set TTP to Gross Rent.

e. Obtain Payment Standard[1] (the Payment Standard is based on the lower of the Unit (actual) Bedroom Size, and Family (eligible) Bedroom Size).

f. Obtain the household's Adjusted Monthly Income.

g. Subtract e. (Payment Standard) from b. (Gross Rent). If the Payment Standard is higher than the Gross Rent, use 0.

h. Add a. (TTP) to g. (Gross Rent minus Payment Standard).

i. Determine if this is the initial occupancy for this dwelling unit. (Item 12b on the 50058 is yes). IF YES, **continue.** IF NO, **the Family Share = h. Go to l.**

j. Calculate 40 percent of the household's Adjusted Monthly Income (f.).

k. Determine if j. (40 percent of Adjusted Monthly Income) is equal to or greater than h. (TTP plus Gross Rent minus Payment Standard). IF YES, **the Family Share = h. Go to l.** IF NO, **procedural error. Family Share = h. Go to l.**

l. Determine if the family includes any ineligible noncitizens. IF YES, **continue.** If NO, **go to n.**

m. Determine if the family includes any citizens or eligible noncitizens. IF YES**, go to #3 (continuation).** IF NO, **go to #4 (temporary deferral).**

MARKER (marks the return point after determining continuation of assistance status)

n. Subtract c. (Utility Allowance) from the Family Share (h.). This is the QC RENT.

o. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

[1] For Project Based Vouchers, the Payment Standard equals the Gross Rent.

3. Section 8 Enhanced Voucher

a. Determine if household is receiving an Enhanced Voucher. If YES, **continue**. If NO, **use regular Voucher formula.**

b. Obtain the Total Tenant Payment.

c. Obtain the Gross Rent.

d. Determine the lesser of b. (TTP) or c. (Gross Rent).

e. Determine if the family includes any ineligible noncitizens. IF YES, **continue.** If NO, **go to g.**

f. Determine if the family includes any citizens or eligible noncitizens. IF YES, **go to #3 (continuation).** IF NO, **go to #4 (temporary deferral).**

MARKER (marks the return point after determining continuation of assistance status)

g. Obtain the Utility Allowance.

h. Subtract g. (Utility Allowance) from d. (the lesser of TTP or Gross Rent). This is the Family Rent to Owner (QC RENT).

i. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

4. Section 8 Project-Based, Section 202, Section 811, Section 8 Moderate Rehabilitation

a. Obtain the Gross Rent (Gross Rent equals the Contract Rent plus the Utility Allowance).

b. Obtain the TTP.

c. Determine if the family includes any ineligible noncitizens. IF YES, **continue.** If NO, **go to f.**

d. Determine if the family includes any citizens or eligible noncitizens. IF YES, **go to #3 (continuation).** IF NO, **go to #4 (temporary deferral).**

MARKER (marks the return point after determining continuation of assistance status)

e. Obtain the Utility Allowance.

f. If Subsidy Type on 50059 = 7 or 8 (PRAC), **go to h.**

g. Subtract e. (Utility Allowance) from b. (TTP) or a. (Gross Rent) whichever is lower. This is the QC RENT. **Go to i.**

h. Subtract e. (Utility Allowance) from b. (TTP). This is the QC RENT.

i. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

5. Manufactured Home Space Rental for Section 8 Vouchers

a. Obtain the Rent to Owner.

b. Obtain the owner maintenance and management charges for the space.

c. Obtain the Utility Allowance

d. Add together a. (Rent to Owner), b. (owner maintenance and management charges), and c. (utility allowance). This is the Space Rent.

e. Obtain the TTP.

f. Obtain the Payment Standard.

g. Subtract f. (Payment Standard) from d. (Space Rent).

h. Add e. (TTP) to g. (the amount by which the Space Rent exceeds the Payment Standard). This is the Family Share.

i. Determine if this is the initial occupancy for this dwelling unit. (Item 12b on the 50058 is yes). IF YES, **continue**. IF NO, **the Family Share = h. Go to m.**

j. Obtain the household's Adjusted Monthly Income.

k. Calculate 40 percent of the household's Adjusted Monthly Income.

l. Determine if k. (40 percent of Adjusted Monthly Income) is equal to or greater than h. (TTP plus Space Rent minus Payment Standard). If YES, **the Family Share = h.; go to m**. If NO, **Procedural Error. The family is not entitled to assistance in this unit.**

m. Determine if the family includes any ineligible noncitizens. IF YES, **continue.** If NO, **go to o.**

n. Determine if the family includes any citizens or eligible noncitizens. IF YES, **go to #3 (continuation).** IF NO, **go to #4 (temporary deferral).**

MARKER

o. Subtract c. (Utility Allowance) from h. (Family Share) to determine QC Rent (Family Rent to Owner).

p. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

B. Special Calculations for Household with Ineligible Noncitizens

1. Continuation of Assistance

a. Determine if the family was receiving assistance on June 19, 1995. IF YES, **continue**. IF NO, the FAMILY is eligible for prorated assistance; **go to #5 (proration formula).**

b. Determine if the FAMILY head or spouse is a citizen or eligible noncitizen. IF YES, **continue**. IF NO, the FAMILY is eligible for prorated assistance; **go to #5 (proration formula).**

c. Determine if the FAMILY includes any ineligible members other than the head, spouse, and child or parent of the head or spouse. IF NO, **continue.** IF YES, the FAMILY is eligible for prorated assistance; **go to #5 (proration formula).**

d. Determine if the FAMILY was granted continuation of assistance before November 29, 1996. IF YES, the FAMILY is eligible for full continuation of assistance. **Return to MARKER.** IF NO, the FAMILY is eligible for prorated assistance; **go to #5 (proration formula).**

2. Temporary Deferral of Termination of Assistance

a. Determine if Temporary Deferral of Termination of Assistance has been granted. If YES, **continue.** If NO, **go to d.**

b. Determine the date Temporary Deferral of Assistance was granted.

c. Determine if more than 18 months have passed since Temporary Deferral of Termination of Assistance was granted. IF YES, **go to d.** IF No, the FAMILY is entitled to Temporary Deferral of Termination of Assistance; **go to MARKER.**

d. Determine if the FAMILY includes a refugee under Section 207 of the Immigration and Naturalization Act or an individual seeking asylum under Section 208 of that Act. IF YES, **the Family is entitled to ongoing Deferral of Termination of Assistance; go to MARKER**. IF NO, **continue.**

e. Determine if the FAMILY was receiving assistance on June 19, 1995. If YES, **the Family is eligible for Temporary Deferral of Termination of Assistance; go to MARKER.**

f. Determine if the FAMILY is exercising its hearing rights (waiting for a decision from an INS or PHA/owner appeal). If **YES, go to MARKER.** IF NO, **continue.**

g. Determine if the PHA is making reasonable efforts to evict. IF YES, **go to MARKER.** IF NO, **Procedural Error,** HOUSEHOLD IS INELIGIBLE**.**

3. Proration Formula for Public Housing

a. Determine if this is a Public Housing case? IF YES, **continue.** IF NO, **go to #4.**

b. Determine the number of FAMILY members.

c. Determine the number of eligible FAMILY members.

d. Obtain the TTP.

e. Obtain the 95th percentile of Gross Rents for similarly sized public housing units in order to determine the public housing maximum rent.

f. Determine if the Family pays a Flat Rent. IF NO, **go to i.** IF YES, **continue.**

g. Obtain the Flat Rent.

h. If g. (Flat Rent) is greater than or equal to e. (Maximum Rent), there is no prorated rent. Use the Flat Rent; **go to n.** If g. (Flat Rent) is less than the e. (Maximum Rent), subtract the Flat Rent from the Maximum Rent. This is the Family's Maximum Subsidy. **Go to j.**

i. Subtract d. (TTP) from e. (Maximum Rent) to determine Maximum Subsidy.

j. Divide h. or i. (Maximum Subsidy) by b. (number of FAMILY members) and multiply by c. (number of eligible members) to determine the Eligible Subsidy for the FAMILY.

k. Subtract j. (Eligible Subsidy) from e. (Maximum Rent) to obtain the prorated TTP.

l. Obtain the Utility Allowance.

m. The amount of the tenant's rent (QC RENT) is k. (prorated TTP) minus l. (Utility Allowance).

n. Did the Family accept the prorated rent? Y/N. IF NO, **go to #4.**

o. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error**

4. Proration Formula for All Section 8 Programs

a. Obtain the Rent to Owner (voucher).

b. Obtain the Utility Allowance

c. Obtain the Gross Rent.

Voucher Gross Rent = Rent to Owner plus the Utility Allowance.

d. Obtain the TTP.

e. Obtain the Payment Standard (Voucher).

f. Obtain the HAP.
Owner Administered: HAP = Gross Rent minus TTP.
Voucher: HAP = Gross Rent or Payment Standard (whichever is less) minus the TTP.
Enhanced Voucher: HAP = Gross Rent minus the Payment Standard.

g. Record the number of FAMILY members.

h. Record the number of eligible FAMILY members.

i. Divide f. (HAP) by g. (total number of FAMILY members), and then multiply the result by h. (number of eligible FAMILY members) to obtain the prorated HAP.

j. If Manufactured Home Space Rental, return to MARKER.

k. Subtract i. (prorated HAP) from c. (Gross Rent) to obtain the prorated Family Share.

l. Subtract b. (Utility Allowance) from k. (Prorated Family Share) to determine the prorated QC RENT.

m. Determine if the QC RENT equals the ACTUAL RENT. IF YES, **no error.** IF NO, **dollar error.**

Appendix B—Weighting Procedures

Appendix B—Weighting Procedures

This appendix describes the procedures followed in weighting the sample data.

Study Population. The universe under study includes all projects and tenants located in the continental United States, Alaska, Hawaii, and Puerto Rico.

The following programs are included in the sample:

- PIH-administered Public Housing projects (Public Housing)

- PIH-administered Section 8 projects (PHA-administered Section 8)
  - Moderate Rehabilitation
  - Section 8 Voucher program

- Office of Housing-administered projects (owner-administered)
  - Section 8 New Construction/Substantial Rehabilitation
  - Section 8 Loan Management
  - Section 8 Property Disposition
  - Section 202 Project Rental Assistance Contracts (PRAC)
  - Section 202/162 Project Assistance Contracts (PAC)
  - Section 811 PRAC

The frames used to draw the sample include many out-of-scope projects such as projects in the Move-to-Work program and projects that have been demolished or that are no longer assisted housing. Many of these projects were identified before the sample was drawn, but others were not and had to be replaced. In addition, at times projects resulting from a merger of two or more projects or that were split into two or more were identified, resulting in difficult sampling decisions.

Weighting Strategy. The weighting procedure usually begins with the determination of the probability of selection of every unit in the sample. The use of purposive replacement for out-of-scope projects for any of several reasons makes the sample weight calculations complicated. The determination of an actual probability of selection for a replacement is impossible to make. A sampling weight proportional to what the probability would have been if the project had been selected originally is a reasonable estimate.

The probability of selection of a tenant was thus the product of the following combinations:

1) The probability of selection of the Primary Sampling Unit (PSU)
2) The probability of selection of a sub-PSU if the PSU was split
3) The probability of selection of the project from the PSU
4) The probability of selection of the tenant from the project.

The four probabilities were multiplied together and formed the preliminary weights. The weights were then adjusted to be added to estimates of the national total of tenants in each program. The weights summed to 1,320,000 for the owner-administered programs, 955,000 for Public Housing, and 1,858,000 for the PHA-administered Section 8 programs.

Primary Sampling Unit Probabilities. Each PSU was sampled with probabilities proportional to size. The size measure used was the number of tenants adjusted to obtain equal expectation for the three major types of programs in the study. The number of tenants of each kind in a PSU was multiplied by an inflation factor to make all three numbers equal. The size measures were then added; the PSU probability of selection was its size measure divided by the sum of the size measures nationwide, multiplied by the number of PSUs to be selected (60). PSUs with probabilities greater than 1 could be selected more than once (Sampling with Minimal Replacement). For weighting purposes, probabilities greater than 1 were set to 1.0. Some PSUs were divided into multiple geographic areas and one of these smaller geographic areas was selected with probabilities proportional to size. This resulted in the same probability that would have ensued had the division taken place before the sample was drawn.

Project Probabilities. The projects were selected independently for each of the three programs. The probability of selection used a size measure equal to the number of tenants divided by the probability of selection of the PSU. The sizes were added by program type and the probability of selection was 201t/T where t is the size measure for the project and T is the sum of the size measures for all the projects of that program type that are in sampled PSUs and 201 reflects the number of projects that were to be drawn. The PHA-administered Section 8 projects could have a probability greater than 1 for sampling purposes (meaning they could be sampled more than once) but for the other two major program types, if the calculated probability exceeded one, it was set to one and all the other probabilities were readjusted so they added to 201. For weighting purposes probabilities greater than one among PHA-administered Section 8 projects were set to one.

Tenant Probabilities. This is the total number of tenants sampled from the project divided by the estimated number of tenants whose annual recertifications were conducted during the study period. The estimate was obtained by multiplying the total number of tenants by the proportion of tenants selected who were in scope for the study (i.e., who were subsidized by one of the programs). For example, if six tenants were reviewed to find four tenants who were both in scope and available for interviewing, one who was out of town, and one who was not subsidized, from a list of 120 tenants, then the estimate would be 120 x (5/6) = 100 tenants.

Post-Stratification. The sample was designed to obtain similar numbers of tenants in each of the following three categories of projects:

- Public Housing projects
- PHA-administered Section 8 projects
- Owner-administered projects

HUD provided approximate totals for each of the three categories. The sampling frame totals did not correspond exactly to these numbers and required extensive adjustments. This was in part because the numbers were approximations; but also in part because the geographic areas affected by the hurricanes were excluded from the frame, but included during the weighting process. To recapitulate, the weights were adjusted so that they add up to the totals provided by the external source, so the sum of the weights would have been the same had a different sample been selected.

Trimming the Weights. The final step was the trimming of the weights. Weights more than three times the median weight were set to three times the median weight and all the weights were readjusted. Large weights usually resulted from incorrect frame information.

Effective Sample Size. The weights led to an effective sample size (because of the weighting) of 771 (down from an actual size of 804) for the Office of Housing-administered projects, 751 for the Public Housing projects, and 735 for the PHA-administered Section 8 projects.

Variance Estimation. Standard errors were obtained for a number of estimates using the SURVEYMEANS procedure in SAS. This procedure uses Taylor Series to estimate standard errors, confidence intervals, and coefficients of variation.

Taylor Series estimation of variances requires identification of PSUs. The one PSU selected more than once was divided into sub-PSUs for variance estimation purposes. In addition, the sampling approach makes the allocation of projects per PSU and program variable. The net result is that the variance estimates presented in this report are conservative. If it were possible to measure the standard errors directly, they would in all likelihood be slightly smaller than the ones presented in this report.

Variances were used to determine if there were significant differences between FY 2004 and FY 2005. The variance of the differences was estimated as the sum of the variances for the two years. The differences in means were divided by the square root of the sum of the variances of the mean and the results were considered significant (two-tailed test) at the .05 level if the result was greater than 1.95. Gross rent error and net rent error were compared for each program type, for all PHA-administered projects and for all projects. The only significant difference was in net rent error for Public Housing.

Appendix C—Source Tables

Appendix C—Source Tables Based on Quality Control Data

HUDQC FY 2005

Table C-1a.
Verification of QC Rent Components, Third-Party, Verbal or In-Writing, or Documentation

	NOT VERIFIED		PARTIALLY VERIFIED		FULLY VERIFIED	
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	86	(6.3%)	45	(3.3%)	1,226	(90.3%)
Pension, Etc.	5	(.2%)	23	(1.0%)	2,298	(98.8%)
Public Assistance	50	(8.4%)	1	(.2%)	549	(91.4%)
Other Income	111	(12.4%)	26	(3.0%)	754	(84.6%)
Asset Income	17	(2.4%)	44	(6.0%)	674	(91.7%)
Child Care Expense	72	(23.8%)	7	(2.2%)	223	(74.0%)
Disability Expense	5	(60.0%)			4	(40.0%)
Medical Expense	91	(8.2%)	185	(16.8%)	828	(75.0%)

HUDQC FY 2005

Table C-1b.
Verification of QC Rent Components, Third-Party, In-Writing

	NOT VERIFIED		PARTIALLY VERIFIED		FULLY VERIFIED	
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	266	(19.1%)	64	(4.6%)	1,066	(76.3%)
Pension, Etc.	45	(1.9%)	100	(4.3%)	2,189	(93.8%)
Public Assistance	183	(28.5%)	3	(.5%)	455	(70.9%)
Other Income	312	(31.7%)	35	(3.6%)	635	(64.7%)
Asset Income	98	(13.2%)	163	(22.0%)	480	(64.7%)
Child Care Expense	89	(29.5%)	5	(1.8%)	207	(68.8%)
Disability Expense	5	(60.0%)			4	(40.0%)
Medical Expense	159	(14.4%)	359	(32.5%)	586	(53.1%)

Appendix C—Source Tables Based on Quality Control Data

HUDQC FY 2005

Table C-1c.
Verification of QC Rent Components, Third Party, Verbal

	NOT VERIFIED		PARTIALLY VERIFIED		FULLY VERIFIED	
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	1,388	(99.4%)			8	(.6%)
Pension, Etc.	2,331	(99.9%)	2	(.1%)		
Public Assistance	631	(98.3%)			11	(1.7%)
Other Income	972	(99.0%)	4	(.4%)	5	(.6%)
Asset Income	739	(99.6%)	2	(.2%)	1	(.1%)
Child Care Expense	301	(100.0%)				
Disability Expense	9	(100.0%)				
Medical Expense	1,094	(99.1%)	8	(.8%)	2	(.2%)

HUDQC FY 2005

Table C-1d.
Verification of QC Rent Components, Documentation

	NOT VERIFIED		PARTIALLY VERIFIED		FULLY VERIFIED	
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	1,236	(88.6%)	29	(2.1%)	131	(9.4%)
Pension, Etc.	2,222	(95.2%)	79	(3.4%)	32	(1.4%)
Public Assistance	558	(87.0%)	2	(.3%)	81	(12.6%)
Other Income	870	(88.6%)	11	(1.1%)	101	(10.3%)
Asset Income	538	(72.6%)	133	(17.9%)	70	(9.5%)
Child Care Expense	284	(94.3%)	1	(.4%)	16	(5.3%)
Disability Expense	9	(100.0%)				
Medical Expense	821	(74.4%)	226	(20.5%)	57	(5.1%)

HUDQC FY 2005

Table C-2.
Percentage of Households by Payment Type and Program Type

		UNDERPAYMENT			PROPER PAYMENT			OVERPAYMENT			TOTAL		
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases
PHA ADMINISTERED	**Public Housing**	166	(17.3%)	(21.5%)	628	(65.7%)	(23.9%)	162	(16.9%)	(22.1%)	955	(100.0%)	(23.1%)
	Section 8	368	(19.8%)	(47.7%)	1,167	(62.8%)	(44.4%)	323	(17.4%)	(44.2%)	1,858	(100.0%)	(45.0%)
	Total	533	(19.0%)	(69.2%)	1,795	(63.8%)	(68.2%)	484	(17.2%)	(66.4%)	2,813	(100.0%)	(68.1%)
OWNER ADMINISTERED		238	(18.0%)	(30.8%)	837	(63.4%)	(31.8%)	245	(18.6%)	(33.6%)	1,320	(100.0%)	(31.9%)
TOTAL		771	(18.7%)	(100.0%)	2,632	(63.7%)	(100.0%)	730	(17.7%)	(100.0%)	4,133	(100.0%)	(100.0%)

HUDQC FY 2005

Table C-2(S).
Percentage of Households by Payment Type and Program Type
(Proper payment based on exact match of Actual and QC Rent)

		UNDERPAYMENT			PROPER PAYMENT			OVERPAYMENT			TOTAL		
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases
PHA ADMINISTERED	**Public Housing**	221	(23.2%)	(21.6%)	509	(53.3%)	(24.6%)	225	(23.5%)	(21.7%)	955	(100.0%)	(23.1%)
	Section 8	460	(24.8%)	(44.9%)	949	(51.1%)	(45.8%)	448	(24.1%)	(43.3%)	1,858	(100.0%)	(45.0%)
	Total	682	(24.2%)	(66.5%)	1,458	(51.8%)	(70.4%)	673	(23.9%)	(65.0%)	2,813	(100.0%)	(68.1%)
OWNER ADMINISTERED		344	(26.0%)	(33.5%)	613	(46.4%)	(29.6%)	363	(27.5%)	(35.0%)	1,320	(100.0%)	(31.9%)
TOTAL		1,025	(24.8%)	(100.0%)	2,071	(50.1%)	(100.0%)	1,037	(25.1%)	(100.0%)	4,133	(100.0%)	(100.0%)

Appendix C—Source Tables Based on Quality Control Data

HUDQC FY 2005

Table C-3.
Dollar Rent Error by Program Type

		ACTUAL RENT (MONTHLY)				QC RENT (MONTHLY)				GROSS RENT ERROR (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	198,336	207.68	955	(23.1%)	199,593	209.00	955	(23.1%)	18,372	19.24
	Section 8	1,858	(45.0%)	369,694	198.97	1,858	(45.0%)	383,262	206.28	1,858	(45.0%)	38,020	20.46
	Total	2,813	(68.1%)	568,030	201.93	2,813	(68.1%)	585,856	207.20	2,813	(68.1%)	56,392	20.05
OWNER ADMINISTERED		1,320	(31.9%)	248,260	188.08	1,320	(31.9%)	253,884	192.34	1,320	(31.9%)	20,714	15.69
TOTAL		4,133	(100.0%)	816,290	197.51	4,133	(100.0%)	836,740	202.45	4,133	(100.0%)	77,106	18.66

HUDQC FY 2005

Table C-4.
Dollar Error Amount by Payment Type and Program Type

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	166	(21.5%)	9,746	58.86	162	(22.1%)	8,626	53.39	955	(23.1%)	199,593	209.00
	Section 8	368	(47.7%)	25,800	70.13	323	(44.2%)	12,220	37.86	1,858	(45.0%)	383,262	206.28
	Total	533	(69.2%)	35,546	66.63	484	(66.4%)	20,846	43.04	2,813	(68.1%)	582,856	207.20
OWNER ADMINISTERED		238	(30.8%)	13,153	55.27	245	(33.6%)	7,562	30.80	1,320	(31.9%)	253,884	192.34
TOTAL		771	(100.0%)	48,699	63.13	730	(100.0%)	28,407	38.92	4,133	(100.0%)	836,740	202.45

HUDQC FY 2005

Table C-4(S).
Dollar Error Amount by Payment Type and Program Type
(Proper payment based on exact match of Actual and QC Rent)

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	221	(21.6%)	9,906	44.73	225	(21.7%)	8,775	39.02	955	(23.1%)	199,593	209.00
	Section 8	460	(44.9%)	26,083	56.67	448	(43.3%)	12,514	27.91	1,858	(45.0%)	383,262	206.28
	Total	682	(66.5%)	35,989	52.79	673	(65.0%)	21,290	31.62	2,813	(68.1%)	582,856	207.20
OWNER ADMINISTERED		344	(33.5%)	13,451	39.14	363	(35.0%)	7,826	21.54	1,320	(31.9%)	253,884	192.34
TOTAL		1,025	(100.0%)	49,439	48.22	1,037	(100.0%)	29,116	28.09	4,133	(100.0%)	836,740	202.45

Appendix C—Source Tables Based on Quality Control Data

HUDQC FY 2005

Table C-5.
Gross and Net Rent Error by Program Type

		GROSS RENT ERROR (MONTHLY)				NET RENT ERROR (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	18,372	19.24	955	(23.1%)	-1,120	-1.17	955	(23.1%)	199,593	209.00
	Section 8	1,858	(45.0%)	38,020	20.46	1,858	(45.0%)	-13,580	-7.31	1,858	(45.0%)	383,262	206.28
	Total	2,813	(68.1%)	56,392	20.05	2,813	(68.1%)	-14,701	-5.23	2,813	(68.1%)	582,856	207.20
OWNER ADMINISTERED		1,320	(31.9%)	20,714	15.69	1,320	(31.9%)	-5,591	-4.24	1,320	(31.9%)	253,884	192.34
TOTAL		4,133	(100.0%)	77,106	18.66	4,133	(100.0%)	-20,292	-4.91	4,133	(100.0%)	836,740	202.45

HUDQC FY 2005

Table C-5(S).
Gross and Net Rent Error by Program Type
(Proper payment based on exact match of Actual and QC Rent)

		GROSS RENT ERROR (MONTHLY)				NET RENT ERROR (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	18,681	19.56	955	(23.1%)	-1,131	-1.18	955	(23.1%)	199,593	209.00
	Section 8	1,858	(45.0%)	38,597	20.77	1,858	(45.0%)	-13,568	-7.30	1,858	(45.0%)	383,262	206.28
	Group Total	2,813	(68.1%)	57,278	20.36	2,813	(68.1%)	-14,699	-5.23	2,813	(68.1%)	582,856	207.20
OWNER ADMINISTERED		1,320	(31.9%)	21,277	16.12	1,320	(31.9%)	-5,625	-4.26	1,320	(31.9%)	253,884	192.34
TOTAL		4,133	(100.0%)	78,555	19.01	4,133	(100.0%)	-20,324	-4.92	4,133	(100.0%)	836,740	202.45

HUDQC FY 2005

Table C-6.
Case Type by Program Type

		CERTIFICATIONS			RECERTIFICATIONS/ NON-OVERDUE			RECERTIFICATIONS/ OVERDUE			TOTAL		
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases
PHA ADMINISTERED	**Public Housing**	151	(15.8%)	(26.9%)	762	(79.8%)	(22.4%)	42	(4.4%)	(25.6%)	955	(100.0%)	(23.1%)
	Section 8	179	(9.6%)	(31.8%)	1,579	(85.0%)	(46.4%)	100	(5.4%)	(60.7%)	1,858	(100.0%)	(45.0%)
	Total	330	(11.7%)	(58.7%)	2,341	(83.2%)	(68.7%)	142	(5.1%)	(86.3%)	2,813	(100.0%)	(68.1%)
OWNER ADMINISTERED		232	(17.6%)	(41.3%)	1,065	(80.7%)	(31.3%)	23	(1.7%)	(13.7%)	1,320	(100.0%)	(31.9%)
TOTAL		562	(13.6%)	(100.0%)	3,406	(82.4%)	(100.0%)	165	(4.0%)	(100.0%)	4,133	(100.0%)	(100.0%)

Appendix C—Source Tables Based on Quality Control Data

HUDQC FY 2005

Table C-7a.
Percentage of Newly Certified Households Meeting Certification Criteria

	MET CRITERION		DID NOT MEET CRITERION	
	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
Citizenship	517	(91.9%)	46	(8.1%)
Social Security Number	533	(94.9%)	29	(5.1%)
Consent Form	525	(93.4%)	37	(6.6%)
Low and Very Low Income	561	(99.8%)	1	(.2%)
Meets All Eligibility Criteria	482	(85.8%)	80	(14.2%)

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Table C-7b.
Percentage of Newly Certified Households Meeting Certification Criteria by Program Type

		MET CRITERION		DID NOT MEET CRITERION	
		# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
PUBLIC HOUSING	**Citizenship**	136	(90.2%)	15	(9.8%)
	Social Security Number	142	(93.8%)	9	(6.2%)
	Consent Form	140	(92.9%)	11	(7.1%)
	Low and Very Low Income	150	(99.2%)	1	(.8%)
	Meets All Eligibility Criteria	125	(82.9%)	26	(17.1%)
PHA-ADMINISTERED SECTION 8	**Citizenship**	162	(90.5%)	17	(9.5%)
	Social Security Number	168	(94.1%)	11	(5.9%)
	Consent Form	160	(89.7%)	18	(10.3%)
	Low and Very Low Income	179	(100.0%)		
	Meets All Eligibility Criteria	150	(83.8%)	29	(16.2%)
OWNER-ADMINISTERED	**Citizenship**	219	(94.1%)	14	(5.9%)
	Social Security Number	223	(96.2%)	9	(3.8%)
	Consent Form	225	(96.6%)	8	(3.4%)
	Low and Very Low Income	232	(100.0%)		
	Meets All Eligibility Criteria	207	(89.2%)	25	(10.8%)

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Table C-8.
Dollar Error Amount by Payment Type and Case Type

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
CERTIFICATION		95	(12.3%)	4,743	50.06	101	(13.9%)	3,459	34.14	562	(13.6%)	91,192	162.22
RECERTIFICATION	**Non-Overdue**	614	(79.6%)	38,988	63.52	580	(79.5%)	22,963	39.57	3,406	(82.4%)	710,573	208.63
	Overdue	63	(8.2%)	4,968	78.91	48	(6.6%)	1,985	41.18	165	(4.0%)	34,976	212.07
	Total	677	(87.7%)	43,956	64.96	629	(86.1%)	24,948	39.70	3,571	(86.4%)	745,548	208.79
TOTAL		771	(100.0%)	48,699	63.13	730	(100.0%)	28,407	38.92	4,133	(100.0%)	836,740	202.45

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Table C-8(S).
Dollar Error Amount by Payment Type and Case Type
(Proper payment based on exact match of Actual and QC Rent)

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				QC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
CERTIFICATION		126	(12.3%)	4,818	38.21	131	(12.6%)	3,521	26.92	562	(13.6%)	91,192	162.22
RECERTIFICATION	**Non-Overdue**	826	(80.5%)	39,609	47.96	851	(82.1%)	23,591	27.71	3,406	(82.4%)	710,573	208.63
	Overdue	73	(7.2%)	5,012	68.33	54	(5.2%)	2,004	36.85	165	(4.0%)	34,976	212.07
	Total	899	(87.7%)	44,621	49.62	906	(87.4%)	25,595	28.26	3,571	(86.4%)	745,548	208.79
TOTAL		1,025	(100.0%)	49,439	48.22	1,037	(100.0%)	29,116	28.09	4,133	(100.0%)	836,740	202.45

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Table C-9.
Largest Component Error for Households with Rent Error (Annual Dollars)

	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
Earned Income	295	(19.6%)	1,157,879	3,931
Pension, Etc.	310	(20.6%)	848,091	2,740
Public Assistance	134	(8.9%)	283,325	2,118
Other Income	177	(11.8%)	417,560	2,365
Asset Income	42	(2.8%)	37,950	911
Dependent Allowance	72	(4.8%)	39,577	552
Elderly HH Allowance	30	(2.0%)	11,990	400
Child Care Allowance	80	(5.3%)	220,193	2,766
Disability Allowance	3	(.2%)	1,660	640
Medical Allowance	319	(21.3%)	299,276	938
No Error	42	(2.8%)	0	0
TOTAL	1,501	(100.0%)	3,317,500	2,210

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Table C-10.
Total and Largest Dollar Error by Program Type for Households with Rent Errors

		TOTAL DOLLAR IN ERROR				LARGEST DOLLAR ERROR			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Average Dollar Amount
PHA ADMINISTERED	**Public Housing**	327	(21.8%)	875,859	2,677.47	327	(21.8%)	718,738	2,197.15
	Section 8	691	(46.0%)	2,064,753	2,989.44	691	(46.0%)	1,735,177	2,512.27
	Total	1,018	(67.8%)	2,940,612	2,889.17	1,018	(67.8%)	2,453,915	2,410.99
OWNER ADMINISTERED		483	(32.2%)	1,001,627	2,071.70	483	(32.2%)	863,585	1,786.18
TOTAL		1,501	(100.0%)	3,942,239	2,625.91	1,501	(100.0%)	3,317,500	2,209.77

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Table C-11.
QC Rent Components by Payment Type and Administration Type

		PHA ADMINISTERED			OWNER ADMINISTERED			TOTAL		
		# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases
UNDER-PAYMENT	Earned Income	157	(5.6%)	(73.5%)	57	(4.3%)	(26.5%)	214	(5.2%)	(100.0%)
	Pension, Etc.	234	(8.3%)	(68.7%)	106	(8.1%)	(31.3%)	340	(8.2%)	(100.0%)
	Public Assistance	95	(3.4%)	(77.4%)	28	(2.1%)	(22.6%)	123	(3.0%)	(100.0%)
	Other Income	110	(3.9%)	(69.2%)	49	(3.7%)	(30.8%)	158	(3.8%)	(100.0%)
	Asset Income	74	(2.6%)	(65.6%)	39	(2.9%)	(34.4%)	112	(2.7%)	(100.0%)
	Dependent Allowance	55	(1.9%)	(83.2%)	11	(.8%)	(16.8%)	66	(1.6%)	(100.0%)
	Elderly HH Allowance	21	(.7%)	(64.1%)	12	(.9%)	(35.9%)	33	(.8%)	(100.0%)
	Child Care Allowance	30	(1.0%)	(70.2%)	13	(1.0%)	(29.8%)	42	(1.0%)	(100.0%)
	Disability Allowance				3	(.2%)	(100.0%)	3	(.1%)	(100.0%)
	Medical Allowance	93	(3.3%)	(53.8%)	80	(6.1%)	(46.2%)	173	(4.2%)	(100.0%)
	NO ERROR	22	(.8%)	(83.0%)	5	(.3%)	(17.0%)	27	(.7%)	(100.0%)
PROPER PAYMENT	Earned Income	152	(5.4%)	(82.7%)	32	(2.4%)	(17.3%)	184	(4.4%)	(100.0%)
	Pension, Etc.	272	(9.7%)	(59.8%)	183	(13.8%)	(40.2%)	454	(11.0%)	(100.0%)
	Public Assistance	45	(1.6%)	(73.8%)	16	(1.2%)	(26.2%)	62	(1.5%)	(100.0%)
	Other Income	128	(4.6%)	(70.5%)	54	(4.1%)	(29.5%)	182	(4.4%)	(100.0%)
	Asset Income	167	(5.9%)	(63.3%)	97	(7.3%)	(36.7%)	264	(6.4%)	(100.0%)
	Dependent Allowance	43	(1.5%)	(95.9%)	2	(.1%)	(4.1%)	45	(1.1%)	(100.0%)
	Elderly HH Allowance	48	(1.7%)	(90.3%)	5	(.4%)	(9.7%)	53	(1.3%)	(100.0%)
	Child Care Allowance	18	(.6%)	(62.4%)	11	(.8%)	(37.6%)	29	(.7%)	(100.0%)
	Disability Allowance	1	(.0%)	(100.0%)				1	(.0%)	(100.0%)
	Medical Allowance	141	(5.0%)	(48.3%)	151	(11.5%)	(51.7%)	293	(7.1%)	(100.0%)
	NO ERROR	1,122	(39.9%)	(69.8%)	486	(36.8%)	(30.2%)	1,608	(38.9%)	(100.0%)
OVER-PAYMENT	Earned Income	139	(4.9%)	(78.0%)	39	(3.0%)	(22.0%)	178	(4.3%)	(100.0%)
	Pension, Etc.	126	(4.5%)	(59.3%)	87	(6.6%)	(40.7%)	213	(5.1%)	(100.0%)
	Public Assistance	63	(2.2%)	(82.2%)	14	(1.0%)	(17.8%)	76	(1.8%)	(100.0%)
	Other Income	92	(3.3%)	(69.4%)	40	(3.1%)	(30.6%)	132	(3.2%)	(100.0%)
	Asset Income	63	(2.2%)	(54.8%)	52	(3.9%)	(45.2%)	114	(2.8%)	(100.0%)
	Dependent Allowance	56	(2.0%)	(88.8%)	7	(.5%)	(11.2%)	64	(1.5%)	(100.0%)
	Elderly HH Allowance	32	(1.1%)	(68.4%)	15	(1.1%)	(31.6%)	46	(1.1%)	(100.0%)
	Child Care Allowance	57	(2.0%)	(77.4%)	17	(1.3%)	(22.6%)	74	(1.8%)	(100.0%)
	Disability Allowance	2	(.1%)	(100.0%)				2	(.1%)	(100.0%)
	Medical Allowance	157	(5.6%)	(53.8%)	134	(10.2%)	(46.2%)	291	(7.0%)	(100.0%)
	NO ERROR	13	(.4%)	(81.9%)	3	(.2%)	(18.1%)	15	(.4%)	(100.0%)
TOTAL w/Rent Error Calc		2,813	(100.0%)	(68.1%)	1,320	(100.0%)	(31.9%)	4,133	(100.0%)	(100.0%)

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Table C-12a.
Elderly/Disabled Allowances

	NON-ELDERLY/DISABLED HH			ELDERLY/DISABLED HH			TOTAL		
	# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases
No Allowance	1,968	(99.6%)	(100.0%)				1,968	(47.6%)	(100.0%)
Incorrect Allowance	8	(.4%)	(6.0%)	130	(6.0%)	(94.0%)	138	(3.3%)	(100.0%)
Correct Allowance				2,027	(94.0%)	(100.0%)	2,027	(49.1%)	(100.0%)
TOTAL	1,976	(100.0%)	(47.8%)	2,157	(100.0%)	(52.2%)	4,133	(100.0%)	(100.0%)

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Table C-12b.
Dependent Allowances

	HH W/OUT DEPENDENT			HH W/DEPENDENT			TOTAL		
	# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases	# of Cases (in 1,000)	Col % of Cases	Row % of Cases
No Allowance	2,109	(99.6%)	(99.8%)	3	(.2%)	(.2%)	2,112	(51.1%)	(100.0%)
Incorrect Allowance	8	(.4%)	(3.7%)	215	(10.7%)	(96.3%)	223	(5.4%)	(100.0%)
Correct Allowance				1,797	(89.2%)	(100.0%)	1,797	(43.5%)	(100.0%)
TOTAL	2,118	(100.0%)	(51.2%)	2,015	(100.0%)	(48.8%)	4,133	(100.0%)	(100.0%)

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Table C-13.
Calculation Errors on Form 50058/59

	50058		50059		TOTAL	
	# of Errors (in 1,000)	# of Cases (in 1,000)	# of Errors (in 1,000)	# of Cases (in 1,000)	# of Errors (in 1,000)	# of Cases (in 1,000)
Household Composition	340	326	96	93	435	419
Net Family Assets and Income	483	333	169	108	653	441
Allowances and Adjusted Income	1,987	1,469	201	84	2,188	1,553
Family Rent and Subsidy Information	490	309	128	82	618	391

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Table C-14.
Consistency Errors on Form 50058/59

	50058		50059		TOTAL	
	# of Errors (in 1,000)	# of Cases (in 1,000)	# of Errors (in 1,000)	# of Cases (in 1,000)	# of Errors (in 1,000)	# of Cases (in 1,000)
General Information	36	36	22	19	57	55
Household Composition	1,122	355	176	118	1,298	472
Net Family Assets and Income	149	133	.	0	149	133
Allowances and Adjusted Income	212	191	23	20	235	211
Family Rent and Subsidy Information	221	221	30	30	250	250

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Table C-15a.
Verification of Form 50058/59 Rent Components, Third Party, Verbal or In-Writing, or Documentation

	NO VERIFICATION		VERIFICATION				TOTAL	
			Dollar Amount Not Matched		Dollar Amount Matched			
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	148	(11.0%)	237	(17.6%)	962	(71.4%)	1,347	(100.0%)
Pension, Etc.	130	(5.7%)	346	(15.2%)	1,805	(79.2%)	2,281	(100.0%)
Public Assistance	94	(16.1%)	100	(17.2%)	388	(66.7%)	581	(100.0%)
Other Income	190	(21.0%)	140	(15.5%)	574	(63.5%)	903	(100.0%)
Asset Income	47	(7.4%)	63	(9.8%)	528	(82.8%)	638	(100.0%)
Child Care Expense	17	(7.6%)	38	(16.9%)	172	(75.5%)	228	(100.0%)
Medical Expense	66	(8.3%)	224	(28.3%)	503	(63.4%)	793	(100.0%)

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Table C-15b.
Verification of Form 50058/59 Rent Components, Third Party, In-Writing

	NO VERIFICATION		VERIFICATION				TOTAL	
			Dollar Amount Not Matched		Dollar Amount Matched			
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	395	(29.3%)	170	(12.6%)	783	(58.1%)	1,347	(100.0%)
Pension, Etc.	555	(24.3%)	255	(11.2%)	1,470	(64.5%)	2,281	(100.0%)
Public Assistance	207	(35.6%)	63	(10.8%)	312	(53.6%)	581	(100.0%)
Other Income	339	(37.6%)	112	(12.4%)	452	(50.0%)	903	(100.0%)
Asset Income	266	(41.8%)	28	(4.3%)	344	(53.9%)	638	(100.0%)
Child Care Expense	34	(15.0%)	31	(13.7%)	162	(71.3%)	228	(100.0%)
Medical Expense	358	(45.2%)	124	(15.6%)	311	(39.2%)	793	(100.0%)

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Table C-15c.
Verification of Form 50058/59 Rent Components, Third Party, Verbal

	NO VERIFICATION		VERIFICATION				TOTAL	
			Dollar Amount Not Matched		Dollar Amount Matched			
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	1,337	(99.2%)	2	(.1%)	9	(.6%)	1,347	(100.0%)
Pension, Etc.	2,279	(99.9%)			2	(.1%)	2,281	(100.0%)
Public Assistance	572	(98.4%)			9	(1.6%)	581	(100.0%)
Other Income	895	(99.1%)			8	(.9%)	903	(100.0%)
Asset Income	638	(100.0%)					638	(100.0%)
Child Care Expense	228	(100.0%)					228	(100.0%)
Medical Expense	793	(100.0%)					793	(100.0%)

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Table C-15d.
Verification of Form 50058/59 Rent Components, Documentation

	NO VERIFICATION		VERIFICATION				TOTAL	
			Dollar Amount Not Matched		Dollar Amount Matched			
	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
Earned Income	1,118	(83.0%)	64	(4.8%)	165	(12.3%)	1,347	(100.0%)
Pension, Etc.	1,967	(86.2%)	49	(2.1%)	265	(11.6%)	2,281	(100.0%)
Public Assistance	477	(82.0%)	37	(6.4%)	67	(11.5%)	581	(100.0%)
Other Income	774	(85.7%)	23	(2.6%)	106	(11.8%)	903	(100.0%)
Asset Income	477	(74.8%)	19	(2.9%)	142	(22.2%)	638	(100.0%)
Child Care Expense	211	(92.6%)	7	(3.2%)	10	(4.3%)	228	(100.0%)
Medical Expense	690	(87.0%)	36	(4.6%)	67	(8.4%)	793	(100.0%)

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Table C-15e.
Verification of Form 50058/59 Rent Components,
Third Party, Verbal or In-Writing, or Documentation by Program Type

		NO VERIFICATION		VERIFICATION				TOTAL	
				Dollar Amount Not Matched		Dollar Amount Matched			
		# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
PUBLIC HOUSING	**Earned Income**	47	(16.2%)	59	(20.2%)	185	(63.6%)	291	(100.0%)
	Pension, Etc.	33	(5.9%)	102	(18.2%)	426	(75.9%)	561	(100.0%)
	Public Assistance	27	(20.6%)	19	(14.2%)	86	(65.2%)	132	(100.0%)
	Other Income	52	(26.4%)	34	(17.6%)	109	(56.0%)	195	(100.0%)
	Asset Income	19	(14.9%)	30	(23.5%)	77	(61.6%)	126	(100.0%)
	Child Care Expense	4	(13.5%)	8	(24.9%)	20	(61.6%)	33	(100.0%)
	Medical Expense	19	(10.2%)	63	(33.4%)	107	(56.4%)	189	(100.0%)
PHA-ADMINISTERED SECTION 8	**Earned Income**	72	(9.6%)	121	(16.2%)	555	(74.1%)	748	(100.0%)
	Pension, Etc.	61	(7.0%)	108	(12.4%)	702	(80.6%)	870	(100.0%)
	Public Assistance	49	(14.4%)	68	(19.9%)	225	(65.7%)	342	(100.0%)
	Other Income	83	(17.0%)	64	(13.1%)	342	(69.9%)	490	(100.0%)
	Asset Income	11	(6.0%)	20	(11.4%)	147	(82.5%)	178	(100.0%)
	Child Care Expense	10	(7.7%)	19	(14.6%)	102	(77.7%)	131	(100.0%)
	Medical Expense	7	(4.1%)	60	(37.2%)	95	(58.7%)	162	(100.0%)
OWNER-ADMINISTERED	**Earned Income**	29	(9.3%)	57	(18.5%)	222	(72.2%)	308	(100.0%)
	Pension, Etc.	36	(4.3%)	135	(15.9%)	678	(79.8%)	849	(100.0%)
	Public Assistance	17	(16.0%)	13	(12.4%)	77	(71.7%)	108	(100.0%)
	Other Income	55	(25.2%)	41	(18.8%)	122	(56.0%)	218	(100.0%)
	Asset Income	18	(5.3%)	13	(3.8%)	303	(90.9%)	334	(100.0%)
	Child Care Expense	3	(4.3%)	11	(17.4%)	50	(78.3%)	64	(100.0%)
	Medical Expense	40	(9.0%)	101	(22.8%)	301	(68.1%)	441	(100.0%)

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Table C-15f.
Verification of Form 50058/59 Rent Components,
Third Party, In-Writing by Program Type

		NO VERIFICATION		VERIFICATION				TOTAL	
				Dollar Amount Not Matched		Dollar Amount Matched			
		# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
PUBLIC HOUSING	**Earned Income**	97	(33.3%)	45	(15.4%)	149	(51.3%)	291	(100.0%)
	Pension, Etc.	163	(29.0%)	73	(12.9%)	326	(58.1%)	561	(100.0%)
	Public Assistance	61	(46.2%)	11	(8.1%)	60	(45.7%)	132	(100.0%)
	Other Income	99	(50.5%)	20	(10.4%)	76	(39.1%)	195	(100.0%)
	Asset Income	67	(53.3%)	15	(11.7%)	44	(35.0%)	126	(100.0%)
	Child Care Expense	7	(20.6%)	6	(17.8%)	20	(61.6%)	33	(100.0%)
	Medical Expense	87	(46.1%)	39	(20.6%)	63	(33.4%)	189	(100.0%)
PHA-ADMINISTERED SECTION 8	**Earned Income**	205	(27.5%)	87	(11.6%)	456	(61.0%)	748	(100.0%)
	Pension, Etc.	194	(22.3%)	82	(9.5%)	594	(68.2%)	870	(100.0%)
	Public Assistance	113	(33.2%)	39	(11.3%)	190	(55.5%)	342	(100.0%)
	Other Income	160	(32.6%)	56	(11.3%)	275	(56.1%)	490	(100.0%)
	Asset Income	93	(52.4%)	7	(3.7%)	78	(43.9%)	178	(100.0%)
	Child Care Expense	18	(13.7%)	16	(12.2%)	97	(74.1%)	131	(100.0%)
	Medical Expense	54	(33.5%)	43	(26.3%)	65	(40.3%)	162	(100.0%)
OWNER-ADMINISTERED	**Earned Income**	92	(29.9%)	39	(12.5%)	177	(57.6%)	308	(100.0%)
	Pension, Etc.	198	(23.3%)	101	(11.8%)	551	(64.8%)	849	(100.0%)
	Public Assistance	33	(30.5%)	13	(12.4%)	62	(57.2%)	108	(100.0%)
	Other Income	81	(37.2%)	36	(16.5%)	101	(46.3%)	218	(100.0%)
	Asset Income	106	(31.7%)	6	(1.9%)	222	(66.4%)	334	(100.0%)
	Child Care Expense	9	(14.9%)	9	(14.6%)	45	(70.5%)	64	(100.0%)
	Medical Expense	217	(49.1%)	42	(9.5%)	183	(41.4%)	441	(100.0%)

HUDQC FY 2005

Table C-15g.
Verification of Form 50058/59 Rent Components,
Third Party, Verbal by Program Type

		NO VERIFICATION		VERIFICATION				TOTAL	
				Dollar Amount Not Matched		Dollar Amount Matched			
		# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
PUBLIC HOUSING	**Earned Income**	290	(99.5%)			1	(.5%)	291	(100.0%)
	Pension, Etc.	561	(99.8%)			1	(.2%)	561	(100.0%)
	Public Assistance	131	(99.1%)			1	(.9%)	132	(100.0%)
	Other Income	194	(99.4%)			1	(.6%)	195	(100.0%)
	Asset Income	126	(100.0%)					126	(100.0%)
	Child Care Expense	33	(100.0%)					33	(100.0%)
	Medical Expense	189	(100.0%)					189	(100.0%)
PHA-ADMINISTERED SECTION 8	**Earned Income**	744	(99.4%)			4	(.6%)	748	(100.0%)
	Pension, Etc.	870	(100.0%)					870	(100.0%)
	Public Assistance	336	(98.2%)			6	(1.8%)	342	(100.0%)
	Other Income	485	(99.0%)			5	(1.0%)	490	(100.0%)
	Asset Income	178	(100.0%)					178	(100.0%)
	Child Care Expense	131	(100.0%)					131	(100.0%)
	Medical Expense	162	(100.0%)					162	(100.0%)
OWNER-ADMINISTERED	**Earned Income**	303	(98.4%)	2	(.6%)	3	(1.0%)	308	(100.0%)
	Pension, Etc.	848	(99.8%)			1	(.2%)	849	(100.0%)
	Public Assistance	106	(98.3%)			2	(1.7%)	108	(100.0%)
	Other Income	216	(99.2%)			2	(.8%)	218	(100.0%)
	Asset Income	334	(100.0%)					334	(100.0%)
	Child Care Expense	64	(100.0%)					64	(100.0%)
	Medical Expense	441	(100.0%)					441	(100.0%)

HUDQC FY 2005

Table C-15h.
Verification of Form 50058/59 Rent Components,
Documentation by Program Type

		NO VERIFICATION		VERIFICATION				TOTAL	
				Dollar Amount Not Matched		Dollar Amount Matched			
		# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases	# of Cases (in 1,000)	Row % of Cases
PUBLIC HOUSING	**Earned Income**	247	(84.8%)	13	(4.4%)	31	(10.8%)	291	(100.0%)
	Pension, Etc.	477	(85.0%)	10	(1.8%)	74	(13.2%)	561	(100.0%)
	Public Assistance	99	(75.4%)	8	(6.1%)	25	(18.6%)	132	(100.0%)
	Other Income	151	(77.2%)	13	(6.5%)	32	(16.3%)	195	(100.0%)
	Asset Income	94	(74.7%)	8	(6.0%)	24	(19.3%)	126	(100.0%)
	Child Care Expense	31	(92.9%)	2	(7.1%)			33	(100.0%)
	Medical Expense	166	(87.5%)	9	(4.9%)	14	(7.6%)	189	(100.0%)
PHA-ADMINISTERED SECTION 8	**Earned Income**	622	(83.1%)	35	(4.7%)	92	(12.3%)	748	(100.0%)
	Pension, Etc.	747	(85.8%)	24	(2.7%)	100	(11.4%)	870	(100.0%)
	Public Assistance	284	(83.0%)	29	(8.6%)	29	(8.4%)	342	(100.0%)
	Other Income	426	(87.0%)	9	(1.8%)	55	(11.2%)	490	(100.0%)
	Asset Income	106	(59.2%)	9	(5.2%)	63	(35.6%)	178	(100.0%)
	Child Care Expense	123	(94.0%)	3	(2.4%)	5	(3.6%)	131	(100.0%)
	Medical Expense	142	(87.3%)	4	(2.5%)	17	(10.2%)	162	(100.0%)
OWNER-ADMINISTERED	**Earned Income**	249	(81.0%)	17	(5.4%)	42	(13.6%)	308	(100.0%)
	Pension, Etc.	743	(87.5%)	15	(1.8%)	91	(10.7%)	849	(100.0%)
	Public Assistance	94	(87.1%)			14	(12.9%)	108	(100.0%)
	Other Income	197	(90.3%)	2	(.8%)	19	(8.9%)	218	(100.0%)
	Asset Income	278	(83.3%)	2	(.5%)	54	(16.2%)	334	(100.0%)
	Child Care Expense	57	(89.4%)	2	(2.8%)	5	(7.8%)	64	(100.0%)
	Medical Expense	383	(86.7%)	23	(5.2%)	36	(8.1%)	441	(100.0%)

HUDQC FY 2005

Table C-16a.
QC Rent Component for Households with QC Rent Error (>$5)

		50058		50059		TOTAL	
		# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
Earned Income	**No Error**	2,517	(89.5%)	1,224	(92.7%)	3,741	(90.5%)
	w/Error	296	(10.5%)	96	(7.3%)	392	(9.5%)
Pensions, Etc.	**No Error**	2,453	(87.2%)	1,127	(85.4%)	3,580	(86.6%)
	w/Error	360	(12.8%)	193	(14.6%)	553	(13.4%)
Public Assistance	**No Error**	2,655	(94.4%)	1,279	(96.9%)	3,934	(95.2%)
	w/Error	158	(5.6%)	41	(3.1%)	199	(4.8%)
Other Income	**No Error**	2,612	(92.8%)	1,231	(93.2%)	3,843	(93.0%)
	w/Error	201	(7.2%)	89	(6.8%)	290	(7.0%)
Asset Income	**No Error**	2,677	(95.2%)	1,230	(93.2%)	3,906	(94.5%)
	w/Error	136	(4.8%)	90	(6.8%)	227	(5.5%)
Child Care Allowance	**No Error**	2,734	(97.2%)	1,298	(98.4%)	4,032	(97.6%)
	w/Error	79	(2.8%)	22	(1.6%)	101	(2.4%)
Disability Allowance	**No Error**	2,808	(99.8%)	1,318	(99.8%)	4,126	(99.8%)
	w/Error	5	(.2%)	2	(.2%)	7	(.2%)
Medical Allowance	**No Error**	2,568	(91.3%)	1,114	(84.4%)	3,682	(89.1%)
	w/Error	245	(8.7%)	206	(15.6%)	451	(10.9%)
All Components	**No Error**	1,885	(67.0%)	869	(65.8%)	2,754	(66.6%)
	w/Error	928	(33.0%)	451	(34.2%)	1,379	(33.4%)
TOTAL		2,813	(100.0%)	1,320	(100.0%)	4,133	(100.0%)

HUDQC FY 2005

Table C-16b.
QC Error Cases with Missing Verification in Tenant File

		50058		50059		Total	
		# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
Earned Income	**Verified**	99	(33.3%)	37	(38.2%)	135	(34.5%)
	Not Verified	197	(66.7%)	59	(61.8%)	257	(65.5%)
Pension, Etc.	**Verified**	54	(15.0%)	29	(15.0%)	83	(15.0%)
	Not Verified	306	(85.0%)	164	(85.0%)	470	(85.0%)
Public Assistance	**Verified**	69	(43.6%)	9	(21.8%)	78	(39.1%)
	Not Verified	89	(56.4%)	32	(78.2%)	122	(60.9%)
Other Income	**Verified**	66	(33.0%)	19	(21.0%)	85	(29.3%)
	Not Verified	135	(67.0%)	71	(79.0%)	205	(70.7%)
Asset Income	**Verified**	27	(19.5%)	24	(26.5%)	51	(22.3%)
	Not Verified	110	(80.5%)	66	(73.5%)	176	(77.7%)
Child Care Expense	**Verified**	18	(22.2%)	8	(36.9%)	25	(25.3%)
	Not Verified	62	(77.8%)	14	(63.1%)	75	(74.7%)
Disability Expense	**Not Verified**	5	(100.0%)	2	(100.0%)	7	(100.0%)
Medical Expense	**Verified**	28	(11.5%)	17	(8.2%)	45	(10.0%)
	Not Verified	217	(88.5%)	189	(91.8%)	406	(90.0%)

HUDQC FY 2005

Table C-17.
50058/59 Administrative Error: Number and Percentage of Households, Average Dollars in Error for Households With Recalculated 50058/59 Rent Error, and Households with QC Rent Error by Administrative Error Type

	HOUSEHOLDS WITH RECALCULATED 50058/59 ERROR			HOUSEHOLDS WITH QC RENT ERROR		
	# of Households in Error (in 1,000)	% of Households in Error	Average Gross Dollar Error	# of Households in Error (in 1,000)	% of Households in Error	Average Gross Dollar Error
Transcription Error	165	(51.3%)	85.29	942	(62.8%)	45.05
No Transcription Error	156	(48.7%)	54.74	559	(37.2%)	62.00
Consistency Error	108	(33.7%)	171.93	344	(22.9%)	58.07
No Consistency Error	213	(66.3%)	18.77	1,157	(77.1%)	49.36
Allowances Calculation Error	41	(12.6%)	172.73	112	(7.4%)	64.62
No Allowances Calculation Error	281	(87.4%)	55.64	1,390	(92.6%)	50.29
Income Calculation Error	20	(6.3%)	152.10	48	(3.2%)	33.02
No Income Calculation Error	301	(93.7%)	64.93	1,453	(96.8%)	51.96
Other Calculation Error	51	(15.8%)	154.46	227	(15.1%)	64.76
No Other Calculation Error	270	(84.2%)	54.62	1,274	(84.9%)	48.97
Overdue Recertification	18	(5.6%)	74.66	111	(7.4%)	62.55
On-time Recertification	247	(76.9%)	83.55	1,194	(79.5%)	51.88
Certification	56	(17.5%)	11.54	196	(13.1%)	41.83
Any Form 50058/59 Error	216	(67.2%)	98.55	1,105	(73.6%)	50.57
No Form 50058/59 Error	105	(32.8%)	12.69	396	(26.4%)	53.55
Total Households	321	(100.0%)	70.42	1,501	(100.0%)	51.36

HUDQC FY 2005

Table C-18.
Administrative Error: Number and Percentage of Households, Average Dollars in Error
For All Households by Administrative Error Type

	GROSS RENT ERROR			NET RENT ERROR		
	# of Households (in 1,000)	% of Households	Average Dollar Error	# of Households (in 1,000)	% of Households	Average Dollar Error
Transcription Error	1,820	(44.0%)	23.82	1,820	(44.0%)	-3.83
No Transcription Error	2,313	(56.0%)	15.22	2,313	(56.0%)	-5.77
Consistency Error	814	(19.7%)	24.91	814	(19.7%)	-1.92
No Consistency Error	3,319	(80.3%)	17.56	3,319	(80.3%)	-5.65
Allowances Calculation Error	202	(4.9%)	36.03	202	(4.9%)	13.20
No Allowances Calculation Error	3,931	(95.1%)	18.13	3,931	(95.1%)	-5.85
Income Calculation Error	121	(2.9%)	13.38	121	(2.9%)	-.69
No Income Calculation Error	4,012	(97.1%)	19.18	4,012	(97.1%)	-5.05
Other Calculation Error	419	(10.1%)	35.46	419	(10.1%)	-9.14
No Other Calculation Error	3,714	(89.9%)	17.15	3,714	(89.9%)	-4.44
Overdue Recertification	165	(4.0%)	42.54	165	(4.0%)	-18.24
On-time Recertification	3,406	(82.4%)	18.56	3,406	(82.4%)	-4.70
Certification	562	(13.6%)	14.83	562	(13.6%)	-2.31
Any Administration Error	2,292	(55.4%)	24.82	2,292	(55.4%)	-3.70
No Administration Error	1,841	(44.6%)	11.77	1,841	(44.6%)	-6.43
TOTAL	4,133	(100.0%)	19.01	4,133	(100.0%)	-4.92

HUDQC FY 2005

Table C-19a.
Occupancy Standards on Form 50058/59

		PUBLIC HOUSING		PHA-ADMINISTERED SECTION 8		OWNER-ADMINISTERED		Total	
		# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
UNDER-HOUSED	0	1	(1.1%)	3	(5.4%)	2	(3.9%)	5	(3.0%)
	1			12	(2.8%)	5	(.7%)	17	(1.1%)
	2	7	(2.3%)	17	(2.7%)	1	(.4%)	25	(2.0%)
	3	8	(3.8%)	10	(1.6%)	2	(1.2%)	19	(2.0%)
	4			4	(4.0%)			4	(2.3%)
	All Units	15	(1.6%)	46	(2.5%)	10	(.7%)	71	(1.7%)
CORRECT	0	78	(98.9%)	44	(94.6%)	45	(96.1%)	168	(97.0%)
	1	322	(100.0%)	423	(97.2%)	736	(99.3%)	1,482	(98.9%)
	2	225	(78.0%)	485	(76.0%)	301	(82.2%)	1,011	(78.2%)
	3	153	(75.4%)	520	(84.1%)	132	(91.5%)	806	(83.4%)
	4	27	(52.0%)	60	(60.0%)	12	(56.3%)	99	(57.2%)
	5	6	(64.2%)	6	(34.5%)			13	(44.7%)
	All Units	812	(85.1%)	1,539	(82.8%)	1,226	(92.9%)	3,578	(86.6%)
OVER-HOUSED	2	57	(19.7%)	136	(21.3%)	64	(17.4%)	257	(19.8%)
	3	42	(20.8%)	88	(14.3%)	11	(7.3%)	141	(14.6%)
	4	24	(48.0%)	36	(36.1%)	10	(43.7%)	70	(40.5%)
	5	4	(35.8%)	12	(65.5%)			16	(55.3%)
	All Units	127	(13.3%)	273	(14.7%)	84	(6.4%)	484	(11.7%)

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Table C-19b.
Frequency and Percentage of All Households by Number of Bedrooms and Number of Household Members

	NUMBER OF HOUSEHOLD MEMBERS (IN 1,000)																					
	1		2		3		4		5		6		7		8		9		10		11	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0	168	97.0%	3	1.6%	1	.7%	1	.7%														
1	1346	89.8%	136	9.1%	17	1.1%																
2	257	19.8%	599	46.3%	327	25.3%	84	6.5%	19	1.5%	6	.5%										
3	41	4.3%	100	10.3%	324	33.5%	308	31.8%	138	14.2%	36	3.8%	16	1.6%	4	.4%						
4	3	1.6%	4	2.0%	23	13.3%	41	23.6%	44	25.3%	32	18.6%	18	10.6%	5	2.6%					4	2.3%
5	4	15.6%			1	4.6%			5	18.0%	5	17.0%	2	7.5%	5	18.8%	1	4.5%	4	13.9%		

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Table C – 20a.
Average (Gross) Dollar in Error by Program and PIC/TRACS Data
[For all Households]

		PIC/TRACS PRESENT				PIC/TRACS ABSENT				TABLE TOTAL			
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row% of Cases	Col % of Cases	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	629	(65.8%)	(20.3%)	18.67	326	(34.2%)	(31.6%)	20.33	955	(100%)	(23.1%)	19.24
	Section 8	1,210	(65.1%)	(39.0%)	19.74	648	(34.9%)	(62.8%)	21.82	1,858	(100%)	(45.0%)	20.46
	Total	1,839	(65.4%)	(59.3%)	19.37	974	(34.6%)	(94.4%)	21.32	2,813	(100%)	(68.1%)	20.05
OWNER ADMINISTERED		1,263	(95.6%)	(40.7%)	15.98	57	(4.4%)	(5.6%)	9.38	1,320	(100%)	(31.9%)	15.69
TABLE TOTAL		3,101	(75.0%)	(100%)	17.99	1,032	(25.0%)	(100%)	20.66	4,133	(100.0%)	(100%)	18.66

HUDQC FY 2005

Table C – 20b.
Average (Gross) Dollar in Error by Program and PIC/TRACS Data
[QC RENT ERROR CASES ONLY]

		PIC/TRACS PRESENT				PIC/TRACS ABSENT				TABLE TOTAL			
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row% of Cases	Col % of Cases	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	206	(63.0%)	(18.0%)	56.94	121	(37.0%)	(34.2%)	54.83	327	(100%)	(21.8%)	56.16
	Section 8	476	(68.9%)	(41.5%)	50.18	215	(31.1%)	(60.7%)	65.85	691	(100%)	(46.0%)	55.05
	Total	682	(67.0%)	(59.4%)	52.22	336	(33.0%)	(95.0%)	61.88	1,018	(100%)	(67.8%)	55.41
OWNER ADMINISTERED		466	(96.3%)	(40.6%)	43.32	18	(3.7%)	(5.0%)	30.31	483	(100%)	(32.2%)	42.84
TABLE TOTAL		1,148	(76.5%)	(100%)	48.61	353	(23.5%)	(100%)	60.29	1,501	(100%)	(100%)	51.36

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Table C - 21.
Average (Gross) Dollar in Error by Payment Type and PIC/TRACS Data

		PIC/TRACS PRESENT				PIC/TRACS ABSENT				TABLE TOTAL			
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	Ave. Dollar Amount	# of Cases (in 1,000)	Row % of Cases	Col% of Cases	Ave. Dollar Amount
	UNDERPAYMENT	589	(76.3%)	(19.0%)	58.23	183	(23.7%)	(17.7%)	78.90	771	(100%)	(18.7%)	63.13
	PROPER PAYMENT	1,954	(74.2%)	(63.0%)	.00	678	(25.8%)	(65.7%)	.00	2,632	(100%)	(63.7%)	.00
	OVERPAYMENT	559	(76.6%)	(18.0%)	38.48	171	(23.4%)	(16.6%)	40.38	730	(100%)	(17.7%)	38.92
TABLE TOTAL		3,101	(75.0%)	(100%)	17.99	1,032	(25.0%)	(100%)	20.66	4,133	(100%)	(100%)	18.66

Source Tables Based on Tenant File Information

HUDQC FY 2005

Table C-2. [Tenant File]
Percentage of Households by Payment Type and Program Type

		UNDERPAYMENT			PROPER PAYMENT			OVERPAYMENT			TOTAL		
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases
PHA ADMINISTERED	Public Housing	99	(10.4%)	(23.6%)	712	(74.5%)	(23.3%)	144	(15.1%)	(21.9%)	955	(100.0%)	(23.1%)
	Section 8	185	(9.9%)	(44.0%)	1342	(72.3%)	(43.9%)	331	(17.8%)	(50.4%)	1,858	(100.0%)	(45.0%)
	Total	284	(10.1%)	(67.6%)	2,054	(73.0%)	(67.2%)	475	(16.9%)	(72.3%)	2,813	(100.0%)	(68.1%)
OWNER ADMINISTERED		136	(10.3%)	(32.4%)	1,002	(75.9%)	(32.8%)	182	(13.8%)	(27.7%)	1,320	(100.0%)	(31.9%)
TOTAL		420	(10.2%)	(100.0%)	3,057	(74.0%)	(100.0%)	657	(15.9%)	(100.0%)	4,133	(100.0%)	(100.0%)

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Table C-2(S). [Tenant File]
Percent of Households by Payment Type and Program Type
(Proper Payment based on exact match of Actual and DC Rent)

		UNDERPAYMENT			PROPER PAYMENT			OVERPAYMENT			TOTAL		
		# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases	# of Cases (in 1,000)	Row % of Cases	Col % of Cases
PHA ADMINISTERED	Public Housing	125	(13.1%)	(23.0%)	623	(65.2%)	(23.5%)	207	(21.7%)	(22.2%)	955	(100.0%)	(23.1%)
	Section 8	238	(12.8%)	(43.5%)	1,169	(62.9%)	(44.0%)	451	(24.3%)	(48.4%)	1,858	(100.0%)	(45.0%)
	Total	363	(12.9%)	(66.5%)	1,792	(63.7%)	(67.5%)	658	(23.4%)	(70.6%)	2,813	(100.0%)	(68.1%)
OWNER ADMINISTERED		183	(13.9%)	(33.5%)	863	(65.4%)	(32.5%)	274	(20.7%)	(29.4%)	1,320	(100.0%)	(31.9%)
TOTAL		546	(13.2%)	(100.0%)	2,655	(64.2%)	(100.0%0	932	(22.5%)	(100.0%)	4,133	(100.0%)	(100.0%)

HUDQC FY 2005

Table C-3. [Tenant File]
Dollar Rent Error by Program Type (Tenant File)

		ACTUAL RENT (MONTHLY)				DC RENT (MONTHLY)				GROSS RENT ERROR (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	198,336	207.68	955	(23.1%)	188,840	197.74	955	(23.1%)	19,369	20.28
	Section 8	1,858	(45.0%)	369,694	198.97	1,858	(45.0%)	349,480	188.09	1,858	(45.0%)	35,486	19.10
	Total	2,813	(68.1%)	568,030	201.93	2,813	(68.1%)	538,320	191.37	2,813	(68.1%)	54,856	19.50
OWNER ADMINISTERED		1,320	(31.9%)	248,260	188.08	1,320	(31.9%)	239,271	181.27	1,320	(31.9%)	21,263	16.11
TOTAL		4,133	(100.0%)	816,290	197.51	4,133	(100.%)	777,591	188.14	4,133	(100.0%)	76,119	18.42

HUDQC FY 2005

Table C-4. [Tenant File]
Dollar Error Amount by Payment Type and Program Type

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				DC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	99	(23.6%)	4,918	49.55	144	(21.9%)	14,451	100.33	955	(23.1%)	188,840	197.74
	Section 8	185	(44.0%)	7,694	41.64	331	(50.4%)	27,792	84.01	1,858	(45.0%)	349,480	188.09
	Total	284	(67.6%)	12,612	44.41	475	(72.3%)	42,244	88.96	2,813	(68.1%)	538,320	191.37
OWNER ADMINISTERED		136	(32.4%)	6,174	45.42	182	(27.7%)	15,090	83.04	1,320	(31.9%)	239,271	181.27
TOTAL		420	(100.0%)	18,786	44.74	657	(100.0%)	57,333	87.32	4,133	(100.0%)	777,591	188.14

HUDQC FY 2005

Table C-4(S). [Tenant File]
Dollar Error Amount by Payment Type and Program Type
(Proper Payment based on exact match of Actual and DC Rent)

		UNDERPAYMENT (MONTHLY)				OVERPAYMENT (MONTHLY)				DC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	125	(23.0%)	4,981	39.73	207	(22.2%)	14,604	70.58	955	(23.1%)	188,840	197.74
	Section 8	238	(43.5%)	7,823	32.91	451	(48.4%)	28,037	62.15	1,858	(45.0%)	349,480	188.09
	Total	363	(66.5%)	12,804	35.26	658	(70.6%)	42,641	64.80	2,813	(68.1%)	538,320	191.37
OWNER ADMINISTERED		183	(33.5%)	6,303	34.43	274	(29.4%)	15,292	55.86	1,320	(31.9%)	239,271	181.27
TOTAL		546	(100.0%)	19,107	34.99	932	(100.0%)	57,932	62.17	4,133	(100.0%)	777,591	188.14

HUDQC FY 2005

Table C-5. [Tenant File]
Gross and Net Rent Error by Program Type

		GROSS RENT ERROR (MONTHLY)				NET RENT ERROR (MONTHLY)				DC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	19,369	20.28	955	(23.1%)	9,533	9.98	955	(23.1%)	188,840	197.74
	Section 8	1,858	(45.0%)	35,486	19.10	1,858	(45.0%)	20,098	10.82	1,858	(45.0%)	349,480	188.09
	Total	2,813	(68.1%)	54,856	19.50	2,813	(68.1%)	29,632	10.53	2,813	(68.1%)	538,320	191.37
OWNER ADMINISTERED		1,320	(31.9%)	21,263	16.11	1,320	(31.9%)	8,916	6.75	1,320	(31.9%)	239,271	181.27
TOTAL		4,133	(100.0%)	76,119	18.42	4,133	(100.0%)	38,547	9.33	4,133	(100.0%)	777,591	188.14

HUDQC FY 2005

Table C-5(S). [Tenant File]
Gross and Net Rent Error by Program Type
(Proper Payment based on exact match of Actual and DC Rent)

		GROSS RENT ERROR (MONTHLY)				NET RENT ERROR (MONTHLY)				DC RENT (MONTHLY)			
		# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount	# of Cases (in 1,000)	Col % of Cases	Sum Dollar Amount (in 1,000)	Ave. Dollar Amount
PHA ADMINISTERED	**Public Housing**	955	(23.1%)	19,584	20.51	955	(23.1%)	9,623	10.08	955	(23.1%)	188,840	197.74
	Section 8	1,858	(45.0%)	35,861	19.30	1,858	(45.0%)	20,214	10.88	1,858	(45.0%)	349,480	188.09
	Total	2,813	(68.1%)	55,445	19.71	2,813	(68.1%)	29,836	10.61	2,813	(68.1%)	538,320	191.37
OWNER ADMINISTERED		1,320	(31.9%)	21,594	16.36	1,320	(31.9%)	8,989	6.81	1,320	(31.9%)	239,271	181.27
TOTAL		4,133	(100.0%)	77,039	18.64	4,133	(100.0%)	38,825	9.39	4,133	(100.0%)	777,591	188.14

Appendix D—Consistency and Calculation Errors

Appendix D—Consistency/Calculations

50058—Consistency Errors

50058 ITEM	ERROR
General Information:	
1c. Program	Must equal P, V, VO, or MR
2a. Type of Action	Must equal 1 through 15
2b. Effective Date of Action	Cannot be earlier than Date of Admission to the Program (2h)
Household Composition:	
3g. Sex	Must equal M or F
3h. Relationship	Must equal H, S, K, F, Y, E, L, or A
3i. Citizenship	Must equal EC, EN, IN, PV, or XX
3k. Race	Must equal 1 through 4
3m. Ethnicity	Must equal 1 or 2
3u. Family Subsidy Status	Must equal C, E, F, P, or blank
3v. Effective Date	Should not be blank if 3u equals C
Net Family Assets and Income	
6a. Family Member No.	Must equal a number used in Section 3. Household.
7a. Family Member No.	Must equal a number used in Section 3. Household.
7b. Income Code	Must equal B, F, HA, M, W, G, IW, T, P, S, SS, C, E, I, N, or U
8a. Total Annual Income	Must equal Total Annual Income recorded in 7i
8i. Earnings Made Possible by Disability Assistance Expense	Must be <= the sum of Dollars per Year (7d) for Income Codes (7b) HA, F, W, B, or M
Allowances and Adjusted Income	
8h. Maximum Disability Allowance	Should only be completed if any member is disabled
8j. Allowable Disability Assistance Expense	• Should be <= Maximum Disability Allowance (8h) • Should be 0 if Medical/Disability Threshold (8f) is > Maximum Disability Allowance (8h) • Should be 0 or blank if Maximum Disability Allowance (8h) is 0 or blank
8k. Total Medical Expenses	Should only be completed if the head, spouse, or co-head is 62 or over, or disabled; otherwise it should be blank

8n. Medical/Disability Assistance Allowance	• Should equal Total Annual Disability Assistance and Medical Expense (8m) minus Medical/disability Threshold (8f) if Allowable Disability Expense (8j) is blank or Total Annual Unreimbursed Disability Assistance Expense (8g) is less than Medical /disability Threshold (8f) • Should equal Total Annual Disability Assistance and Medical Expense (8m) if 8 Total Annual Unreimbursed Disability Assistance Expense (8g) and Allowable Disability Expense (8j) is >= Medical/disability Threshold (8f)
8p. Elderly/Disabled Allowance	Should be $400 if head, spouse or co-head is 62 or over, or disabled; otherwise it should be 0 or blank
8s. Dependent Allowance	Must be completed if the household contains a member under age 18, disabled, or a full-time student (excluding the head, spouse, foster child or adult, or live-in attendant)
8t. Yearly Child Care Cost That Is Not Reimbursed (Child Care Allowance)	Should only be completed if any member is less than 13 years old

Family Rent and Subsidy Information

10a. 11q, 12r, 13j, 14s TTP	Must equal TTP (9j) or blank
10a. through 14ag. Rent Calculations	• If Program (1c) = P: - TTP (10a), must be completed; - Flat Rent (10b), or Tenant Rent (10f), or Mixed Family Tenant Rent (10s) must be completed; - Section 11 through 14 must be blank. • If Program (1c) = VO or C: - Section 11, or 12 must be completed - Tenant Rent (11s or 12k), or Mixed Family Tenant Rent (11ak, or 12 ai) must be completed; - Section 10, 13, and 14 must be blank • If Program (1c) = MR: - Tenant Rent (13k), or Mixed Family Tenant Rent (13x) must be completed; - Sections 10, 11, 12, and 14 must be blank.

50059 - Consistency Errors

50059 ITEM	ERROR
General Information:	
1. Effective Date	Cannot be earlier than Date Tenant Moved into Project (2.)
6a. Action Processed	Must equal 1 through 5
6b. Action Processed	Must equal 1 through 4, or blank
7. Type of Subsidy	Must equal 1 through 9
9a. Race of Head of Household	Must equal 1 through 4
9b. Ethnicity of Head of Household	Must equal 1 or 2
Household Composition	
16. Sex	Must equal M or F
19. Special Status Code	Must equal E, S, H, F, J, or blank; should be E if Age > 61
21. Eligibility Code (Citizenship)	Must equal EC, EN, IC, IN, IP, PV, or XX
Net Family Assets and Income	
28. Family Member No.	Should not be greater than the total number of members listed in item 13 (Family Member Number)
Allowances and Adjusted Income	
36. Dependent Allowance	Must be completed if Number of Dependents (25) is greater than 0
37. Child Care Allowance	Should only be completed if any member is less than 13 years old
39b. Disability Allowance	• Should be <= Disability Expenses (39a) • Should be 0 if 3% of Annual Income (38) is > Total Disability Assistance Expenses (39a) • Should be 0 or blank if Total Disability Assistance Expenses (39a) is 0 or blank
40a. Total Medical Expenses	Should only be completed if the head or spouse or co-head = H or E, or age 62 years old or older
41. Elderly/Disabled Allowance	Should be $400 if the Special Status Code for the head or spouse or co-head = H or E; otherwise it should be 0 or blank
Family Rent and Subsidy Information:	
51. Tenant Rent	Should equal the maximum of TTP (50) minus Utility Allowance (45) or 0; or be blank if Utility Reimbursement (52) is greater than 0
52. Utility Reimbursement	Should be blank if Item 45 < Item 50

50058 - Calculation Errors

50058 ITEM	ERROR CALCULATION
Household Composition:	
3f. Age	Must equal the age calculated based on Date of Birth (3e) and Effective Date of Action (2b)
8q. Number of Dependents	Must equal the number of household members under 18, with a disability, or a full-time student (other than head, spouse co-head, foster child/adult, or live-in aide)
Net Family Assets and Income	
6f. Total Asset Value	Must equal the sum of all values in Cash Value of Asset (6d)
6i. Imputed Asset Income	Must equal Total Cash Value of Asset (6f) * Passbook Rate (6h) if Total Value of Assets (6f) is > $5,000. If Total Value of Assets (6f) is <= $5,000 Imputed Asset Income (6i) = 0
6j. Income from Asset	Must equal the larger of Total Anticipated Income (6g) or Imputed Asset Income (6i)
7g. Total Non Asset Income	Must equal the sum of all values in Income After Exclusions (7f)
7i. Total Annual Income	Must equal (Final Asset Income (6j) + Total Income Other Than Assets (7g)
Allowances and Adjusted Income	
8e. Total Permissible Deductions	Must equal the sum of all values in Amount of Permissible deduction (8d)
8f. 3% of Annual Income	Must equal 3% * Total Annual Income (8a)
8h. Disability Allowance	Must equal Total Annual Unreimbursed Disability Assistance Expense (8g) minus Medical/Disability Threshold (8f) if there is a disabled household member, and if there is earned income greater than or equal to the disability expense
8n. Medical Allowance	Must equal: Total Annual Disability Assistance and Medical Expense (8m) minus Medical/disability Threshold (8f) if Allowable Disability Assistance Expense (8j) is blank or Total Annual Unreimbursed Disability Assistance Expense (8g) is less than Medical/disability Threshold (8f); or equal Total Annual Disability Assistance and Medical Expense (8m) if Total Annual Unreimbursed Disability Assistance Expense (8g) and Allowable Disability Assistance Expense (8j) is >= Medical/Disability Threshold (8f); if the head, spouse, or co-head is elderly or disabled
8p. Elderly/Disabled	Must equal $400 if head, spouse, or co-head is elderly or disabled
8s. Dependent Allowance	Must equal Number of Dependents (8q) * $480
8t. Child Care Costs	Must be 0 or blank, if no household member under age 13

50058 ITEM	ERROR CALCULATION
8x. Total Allowance	Must equal Total Permissible Deductions (8e) + Medical /Disability Assistance Allowance (8n) + Elderly/Disability Allowance (8p) + Dependent Allowance (8s) + Total Annual Unreimbursed Childcare Costs (8t) + Total Annual Travel Cost to Work/School (8u)
8y. Adjusted Annual Income	Must equal Total Annual Income (8a) minus Total Allowances (8x)
Family Rent and Subsidy Information	
9j. Total Tenant Payment	Must equal the highest of TTP if Based on Annual Income (9c), TTP if Based on Adjusted Annual Income (9f), Welfare Rent (9g), Minimum Rent (9h), or Enhanced Voucher Minimum Rent (9i).
12p. Gross Rent	Must equal Rent to Owner (12k) + Utility Allowance (12m)
Tenant Rent (item number varies by program)	Tenant Rent must equal the recalculated tenant rent based on the Rent Calculation rules provided in Appendix A

Note: With the exception of tenant rent, negative numbers are always converted to 0.

50059 - Calculation Errors

50059 ITEM	ERROR CALCULATION
Household Composition:	
18. Age	Must equal age calculated based on Date of Birth (17) and Effective Date of Action (1)
24a. Number of Family Members	Must equal the number of family members listed
24b. Number of Foster Children and Live in Aides	Must equal the number of family members listed with a relationship code of "L" or "F"
25. Number of Dependents	Must equal the number of household members under 18, with a disability, or a full-time student (other than head, spouse co-head, foster child/adult, or live-in aide)
Net Family Assets and Income	
26c. Total Asset Value	Must equal the sum of the asset values in Cash Value of Assets (26c)
26d. Asset Income Sum	Must equal the sum of the income values in Actual Yearly Income From Assets (26d)
27. Imputed Asset Income	Must equal Total Asset Value (26c) * 2%, if Total Value of Assets is > $5,000
28b. Earned Income Sum	Must equal the sum of income values in Employment or Business (28b)
28c. Pension Income Sum	Must equal the sum of the income values in Social Security/Pension (28c)
28d. Public Assistance Income Sum	Must equal the sum of the income values in Public Assistance (28d)
28e. Other Income Sum	Must equal the sum of the income values in Other Income (28e)
29. Total Non Asset Income	Must equal Earned Income Sum (28b) + Pension Income Sum (28c) + Public Assistance Income Sum (28d) + Other Income Sum (28e)
30. Income from Asset	Must equal the greater of Imputed Asset Income (27) or Total Asset Income (26d)
31. Total Annual Income	Must equal Total Non Asset Income (29) + Income from Asset (30)
Allowances and Adjusted Income	
36. Dependent Allowance	Must equal Number of Dependents (25) * $480
37. Child Care Allowance	Must be 0 or blank, if no household member under age 13
38. 3% of Annual Income	Must equal Total Annual Income (31) * .03
39b. Disability Allowance	Must equal Total Disability Expenses (39a) minus 3% of Annual Income (38) if there is a disabled household member, and if there is earned income greater than or equal to the disability expense

50059 ITEM	ERROR CALCULATION
40b. Medical Allowance	Must equal Total Medical Expenses (40a) minus 3% of Annual Income (38) if Total Handicapped Assistance Expense (39a) = 0; **or** if (Disability Allowance (39b) = 0, then Medical Allowance (40b) = Total Medical Expenses (40a) + Total Handicapped Assistance Expenses (39a) –3% of Annual Income (38), if the head, spouse, or co-head is elderly or disabled
41. Elderly/Disabled	Must equal $400 if head, spouse, or co-head is elderly or disabled
42. Total Allowance	Must equal Allowance for Dependents (36) + Child Care Allowance (37) + Allowance for Disability Expenses (39b) + Allowance for Medical Expenses (40b) + Elderly Household Allowance (41)
43. Adjusted Annual Income	Must equal Total Annual Income (31) minus Total Allowances (42)
Family Rent and Subsidy Information	
46. Gross Income	Must equal Contract Rent (44) + Utility Allowance (45)
50. Total Tenant Payment	Must equal the higher of 30% of Adjusted Income (43), 10% of Total Annual Income (31), Welfare Rent (47), or $50 (Minimum Rent).
51. Tenant Rent	Tenant Rent must equal the recalculated tenant rent based on the Rent Calculation rules provided in Appendix A

Note: With the exception of tenant rent, negative numbers are always converted to 0.

Appendix E—Project Staff Questionnaire Analysis

Appendix E—Project Staff Questionnaire Analysis

To obtain information on project characteristics and practices, we surveyed the project managers and executive directors of the PHA/projects included in the FY2005 study. Questions covered the number and type of PHA/project staff, training received by staff on how to conduct (re)certifications, communicating information about changes in HUD policies to the staff, quality control monitoring procedures of work done by (re)certification staff, difficulties in administering tenant interviews, automation of (re)certifications via computer software use, various verification procedures employed in the process of (re)certifications, and difficulties in verifying various tenants' information. The overall goal of the questionnaire was to describe PHA/Project procedures and practices that promote accurate (re)certifications, and identify difficulties experienced by PHA/projects.

A. Methodology

The Project Staff Questionnaire (PSQ), a self-administered survey, was mailed in April 2006 to the executive director or manager of each PHA/Project, and respondents mailed their completed questionnaires back to ORC Macro headquarters. Data were entered into an electronic data base via an automated tool that programmed in skip patterns, missing items, and range of valid responses. PSQs with questionable responses or skip patterns were individually investigated and all of the data issues were resolved.

Of the 544 individual surveys originally distributed, we received 509 completed surveys for a response rate of better than 93 percent. In some instances where PHAs had multiple projects included in the overall study, a single person completed the survey multiple times, once for each included project. We eliminated the "duplicates" from the analysis dataset for reporting purpose, to avoid biasing the results towards PHAs with multiple projects. The final analysis dataset included 460 cases after removing 49 duplicate surveys.

B. Results

Number and Type of Staff. PHA/projects had on average 59 units per staff member, counting all full-time and part-time staff members at the PHA/Project (e.g., administrative staff; maintenance staff). PHA-Administered Section 8 projects had the highest unit to staff ratio (103, on average) compared to Public Housing projects and owner-administered projects (53 and 32 units per staff member, respectively). Half of all projects had a ratio of 31 or fewer units per staff member. Exhibit 1 displays these results.

(Re)certification staff are those who interview the tenants, gather information from them, calculate rents, track verifications, and supervise other staff in performing move-in certifications and annual recertifications. PHA/projects had on average 158 units per each full-time (re)certification staff,[1] but projects varied widely in this ratio. Half of all PHA/projects had a ratio of 107.4 or less. These results are also displayed in Exhibit E-1.

[1] Number of (re)certification staff was weighted to reflect full-time staff equivalence.

Exhibit E-1
Number of Units per Staff Member, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Units per total staff				
Average ratio	52.9	102.9	32.3	58.6
Median ratio	27.5	99.1	24.8	30.9
Units per full-time equivalent (re)certification staff				
Average ratio	178.4	225.7	91.7	157.6
Median ratio	122.0	189.0	68.5	107.4
TOTAL NUMBER OF PHA/PROJECTS	155	126	179	460

Note 1: Source – Table 1 PSQ Appendix.

Training of New (Re)Certification Staff. PHA/projects train both new and experienced (re)certification staff. New staff was defined as those newly assigned to conduct (re)certifications in the past 12 months. Only 36 percent of PHA/projects assigned new staff to conduct (re)certifications in the past 12 months. Among those that did, on average 3 new staff members were assigned to (re)certification. About 50 percent reported only one new (re)certification staff member. PHA/projects provided an average of 106 training hours to new (re)certification staff. Exhibit E-2a displays these results.

Exhibit E-2a
New (Re)Certification Staff Training, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average number of new staff assigned to conduct (re)certifications	1.8	5.0	1.7	3.1
Average number of training hours received by each new (re)certification staff	91.6	150.9	52.4	105.6
PERCENT OF PHA/PROJECTS WITH NEW (RE)CERTIFICATION STAFF	30.3%	54.8%	26.8%	35.7%

Note 1: Averages were calculated for PHA/projects that assigned new staff to conduct (re)certifications in the past 12 months.
Note 2: Source – Table 2 PSQ Appendix.

Among the three program types, the PHA-Administered Section 8 program reported the largest proportion of new (re)certification staff members (55%), the highest number of new staff assigned to conduct (re)certifications (5 staff, on average), and the highest training hours, on average, for new (re)certification staff (151 hours). By comparison, only 27 percent of owner-administered projects had new (re)certification staff, and these projects also assigned the fewest new staff to conducting (re)certifications (2) as well as the fewest hours of training for new (re)certification staff (52). It's likely that the relatively small number of staff and units in owner-administered projects contributed to their low number of training hours.

Most PHA/projects reported that they usually or always had experienced staff conduct one-on-one training with new (re)certification staff (93% of PHA/projects). Other training methods included self-training (85% of PHA/projects) and training sessions with the supervisor (82% of PHA/projects). These results are displayed in Exhibit E-2b.

Exhibit E-2b
Three Most Frequently Used Trainings Types for New (Re)Certification Staff, by Program Type

Training Methods Usually or Always Used by PHA/projects:	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
New staff worked one-on-one with experienced staff during the conduct of (re)certifications	89.4%	95.7%	93.8%	93.3%
Read HUD/PHA/Owner-Administered manual, watched videos, or asked informal questions	85.1%	92.8%	72.9%	84.8%
Supervisor/senior staff held training sessions with new staff explaining procedures	66.0%	87.0%	89.6%	81.7%

Note 1: Percentages were calculated for PHA/projects that assigned new staff to conduct (re)certifications in the past 12 months.
Note 2: Source – Table 3 PSQ Appendix.

Training For Experienced (Re)Certification Staff. About 75 percent of PHA/projects provided training to their experienced (re)certification staff in the past 12 months. PHA/projects trained an average of 6 experienced staff members for an average of 31 hours during the year. Among three program types, more PHA-Administered Section 8 projects reported training experienced staff in the past 12 months (83%), relative to projects of the other two program types. PHA-Administered Section 8 projects also provided training to more experienced staff (13 staff, on average) for more hours (44 hours, on average) compared to public housing and owner-administered projects. These results are displayed in Exhibit E-3a.

Exhibit E-3a
Experienced Staff Training, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average number of experienced staff receiving training	3.6	12.8	2.1	5.8
Average number of training hours received by each experienced (re)certification staff	27.6	43.8	24.6	31.2
PERCENT OF PHA/PROJECTS THAT TRAINED EXPERIENCED (RE)CERTIFICATION STAFF	63.9%	83.3%	78.2%	74.8%

Note 1: Averages were calculated for PHA/projects that provided training to experienced staff.
Note 2: Source – Table 4 PSQ Appendix.

The most common methods PHA/projects usually or always used for training experienced staff included self-training (74% of PHA/projects) training sessions conducted by the supervisor (63% of PHA/projects), and training conducted by other experienced staff (56% of PHA/projects). These results are illustrated by Exhibit E-3b.

Exhibit E-3b
Methods for Training Experienced (Re)Certification Staff, by Program Type

PHA/projects usually or always:	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Read HUD/PHA/Owner-Administered manual, watched videos, or asked informal questions	73.7%	76.2%	72.8%	74.1%
Supervisor/senior staff held training sessions with new staff explaining procedures	61.7%	71.4%	57.9%	63.1%
Experienced staff worked one-on-one with other experienced staff to conduct (re)certifications	52.5%	59.1%	55.0%	55.6%

Note 1: Percentages were calculated for PHA/projects that provided training to experienced staff.
Note 2: Source – Table 5 PSQ Appendix.

The most frequently reported training topic for experienced staff involved changes in HUD or PHA/project policies or procedures related to (re)certifications. Over 96 percent trained on this topic, as Exhibit E-4 indicates. Other key training topics included HUD policies and rules for conducting (re)certifications (95% of PHA/projects) and tools available in the PHA/project to help in conducting (re)certifications (83% of PHA/projects). PHA/projects in different programs did not differ consistently on experienced (re)certification staff training topics.

Exhibit E-4
Experienced Staff Training Topics in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Changes in HUD or PHA/project policies or procedures related to (re)certifications	92.9%	97.1%	97.9%	96.2%
HUD policies and rules for conducting (re)certifications	91.9%	97.1%	96.4%	95.3%
Tools available in the PHA/project (e.g., software, forms) to help in conducting (re)certifications	83.8%	87.6%	78.6%	82.8%

Note 1: Percentages were calculated for PHA/projects that provided training to experienced staff.
Note 2: Source – Table 6 PSQ Appendix.

Transfer of Information about Changes in HUD Policies. PHA/projects used a variety of methods to inform staff about changes in HUD eligibility and rent calculation policies, as Exhibit E-5 illustrates. Oral communication from supervisors to staff was the most common method (86%), followed by distributing copies of HUD announcement to staff (80%) and providing staff with detailed memo describing changes and providing implementation instructions (60%). Section 8 PHAs reported a wider variety of methods compared to the other two program types. These results are displayed in Exhibit E-5.

Exhibit E-5
Methods to Communicate Changes in HUD/PHA/Owner-Administered Policies to Staff in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Oral communication from supervisors to staff (informal staff meetings, discussions, or one-on-one communications)	86.5%	90.5%	82.1%	85.9%
Copies of HUD announcement distributed to staff	79.4%	83.3%	77.1%	79.6%
Detailed staff memo describing the changes and providing instructions for implementation	52.9%	65.9%	62.0%	60.0%

Note 1: Source – Table 7 PSQ Appendix.

PHA/projects used a variety of approaches to get answers to questions about HUD Policies. The most prevalent method was to refer to HUD/PHA/Owner-Administered memo or manual, used by 83 percent of PHA/projects. Asking HUD field office or other HUD staff (75% of PHA/projects), and asking questions at a HUD training session (52% of PHA/projects) were also commonly used. Nearly half of PHA/projects figured out the answers themselves by conducting internal meetings, talks, or training with supervisors, directors, or other senior staff.

Exhibit E-6
Methods for Getting Answers to Questions about HUD Policies in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Referred to HUD/PHA/Owner-Administered memo or manual	74.8%	86.5%	87.2%	82.8%
Asked HUD field office or other HUD staff	63.2%	90.5%	74.9%	75.2%
Asked questions at a HUD training session	46.5%	62.7%	49.7%	52.2%
Figured out the answer for themselves	44.5%	48.4%	43.0%	45.0%

Note 1: Source – Table 8 PSQ Appendix.

Quality Control via Work Monitoring. PHA/projects use multiple techniques to monitor the quality of work being performed by (re)certification staff. More than 72 percent of PHA/projects usually or always have the supervisor monitor (re)certification work. In addition, over 84 percent were audited by HUD, a HUD contractor, or an auditor. These results are detailed in Table E-9 found at the end of this appendix. PHA/projects most frequently selected cases for monitoring using random spot checks of a percent of all cases (75% of PHA/projects), but other methods typically used included reviewing (re)certifications conducted by new staff (35% of PHA/projects) and reviewing cases with certain characteristics or anomalies (32% of PHA/projects). These results are detailed in Table E-11.

About 77 percent of PHA/projects usually or always review files after the (re)certification process and use forms, notes, or computer programs to aid the monitoring process, as Exhibit E-7 illustrates. More than 68 percent use a pre-designed form to check key steps, while roughly 63 percent use a computer program

Exhibit E-7
Techniques Used to Monitor (Re)Certifications, in the Past 12 Months, by Program Type

	PROGRAM TYPE			
PHA/projects usually or always:	**Public Housing**	**PHA-Administered Section 8**	**Owner-Administered**	**TOTAL**
Review files after completion	73.5%	84.9%	75.4%	77.4%
Use pre-designed form to check key steps	58.7%	76.1%	70.4%	68.1%
Use computer program	62.5%	69.1%	59.8%	63.3%
Make individualized notes for each case reviewed	45.8%	61.1%	53.1%	52.9%
Discuss (re)certification with staff after completion	52.9%	54.8%	49.2%	51.9%

Note 1: Source – Table 10 PSQ Appendix.

Conducting Tenant Interviews. In the past 12 months, a typical initial certification interview required slightly over 40 minutes to complete, on average, while a typical recertification interview required 30 minutes (see Table E-12). In general, owner-administered projects reported the longest interviews, while Public Housing projects reported the shortest.

PHA/projects rated the difficulty tenants had with answering various parts of the recertification interview. Questions about sporadic or intermittent income was most frequently rated as somewhat or very difficult for the tenants to answer (71% of PHA/projects), followed by income from self-employment (62% of PHA/projects), income from absent family members (57% of PHA/projects) and medical expenses (56% of PHA/projects). These results are depicted by Exhibit E-8.

Exhibit E-8
Tenants' Difficulties in Answering Questions During the (Re)Certification Interview in the Past 12 Months, by Program Type

Interview Questions that Were Somewhat or Very Difficult for Tenants to Answer:	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Sporadic or intermittent income	72.2%	78.5%	63.1%	70.5%
Income from self-employment	70.3%	69.8%	49.1%	62.0%
Income received from absent family members	58.7%	70.6%	45.3%	56.8%
Medical expenses	51.6%	56.3%	59.3%	55.9%

Note 1: Source – Table 13 PSQ Appendix.

Computers and Software Program Use. Practically all PHA/projects use computers to assist with (re)certification and other administrative tasks. The four most frequently reported uses were to print the 50058/50059 forms (97% of PHA/projects), to calculate rent (94%), to submit tenant information to HUD (93%), and to print letters to the tenants (92%). Interestingly, one of the least frequently reported use of the computers was to interview tenants and record answers (34% of PHA/projects). Owner-administered projects were less likely to use computers for most purposes, compared to projects in the other two program types. These results are displayed in Exhibit E-9.

Exhibit E-9
Computer Software Uses in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Calculate rent	94.8%	97.6%	91.1%	94.1%
Print the 50058/50059 form	98.7%	96.8%	94.4%	96.5%
Submit tenant information to HUD	93.5%	96.0%	90.5%	93.0%
Print letters to the tenants	95.5%	92.9%	88.3%	92.0%
Interview tenants and record answers	48.4%	34.1%	21.8%	34.1%

Note 1: Source – Table 14 PSQ Appendix.

Virtually all PHA/projects (97%) transmitted 50058/50059 data via PIC/TRACS, as Exhibit E-10 indicates, and an average of 96 percent of 50058/50059 data was transmitted to HUD in this way. Only about 48 percent of owner-administered projects transmitted their 50058/50059 data directly, and another 46 percent transmitted their data through another agency, while most of their public housing and PHA-Administered Section 8 counterparts transmitted their data directly.

Exhibit E-10
Transmission of 50058/50059 Data to HUD via PIC/TRACS in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Transmitted directly	87.1%	87.3%	48.6%	72.2%
Transmitted through another agency	8.4%	7.9%	45.8%	22.8%
Transmitted by other methods	5.2%	4.0%	8.4%	6.1%
Average percentage of 50058/50059 data transmitted via PIC/TRACS	96.0%	95.4%	95.6%	95.6%
PERCENT OF PHA/PROJECTS TRANSMITTING 50058/50059 DATA VIA PIC/TRACS	97.4%	97.6%	96.1%	97.0%

Note 1: Source – Table 15 PSQ Appendix.

Verification Procedures. Although PHA/projects used a variety of staff members to keep track of verification requests and returns in the past 12 months, most frequently this was accomplished by the staff who actually did the (re)certifications (92% of PHA/projects). The next most frequently used persons were supervisors (26% of PHA/projects) and other clerical staff (25% of PHA/projects). These results are detailed in Table E-17.

Methods used for tracking verifications included maintaining a record in the tenant file (70% of PHA/projects), keeping files with outstanding verifications in a separate location or folder (68% of PHA/projects), and using a paper tracking sheet, monitoring form, checklist, or log (52% of PHA/projects). Only about a third of the PHA/projects used a computer to keep track of verifications (37% of PHA/projects). Exhibit E-11 displays these results.

Exhibit E-11
Methods for Keeping Track of Verification Information, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Kept record in tenant file	67.1%	77.8%	66.5%	69.8%
Kept files with outstanding verification in separate location or folder	69.7%	72.2%	64.2%	68.3%
Marked on a paper list/tickler file (tracking sheet, monitoring form, checklist, or log)	45.2%	51.6%	57.5%	51.7%

Note 1: Source – Table 16 PSQ Appendix.

More than 90 percent of PHA/projects verify all of the components of tenant information at least occasionally, and more than 75 percent always verify tenant information. These components include income from employment (always verified 91% of PHA/projects), TANF/Welfare benefits (85% of PHA/projects), and Social Security benefits (83% of PHA/projects). Components that were not always verified components included child support payments (79% of

PHA/projects), child care expenses (75% of PHA/projects), and full-time student status (73% of PHA/projects). These results are detailed in Table E-18.

Sporadic, infrequent, or seasonal employment was most frequently rated as difficult or somewhat difficult to verify (75% of PHA/projects), followed by sources of income other than employment (65% of PHA/projects), value of assets (59% of PHA/projects), and medical expenses (53% of PHA/projects). Exhibit E-12 provides these finding.

Exhibit E-12
Difficulties in Verifying Tenant Information in the Past 12 Months, by Program Type

Tenant Information Very or Somewhat Difficult to Verify:	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Sporadic/infrequent/seasonal employment	78.0%	86.5%	64.8%	75.2%
Other sources of income	69.0%	73.0%	56.4%	65.2%
Value of assets	66.5%	61.1%	52.0%	59.3%
Medical expenses	46.4%	57.1%	54.7%	52.6%

Note 1: Source – Table 19 PSQ Appendix.

PHA/projects also rated the cooperativeness of various individuals and institutions with verifying tenant information. Exhibit E-13 summarizes the sources most frequently rated as being usually uncooperative in this. These sources included financial institutions (rated as uncooperative by 14% of PHA/projects), followed by health care providers (12% of PHA/projects) and social services (8% of PHA/projects).

Exhibit E-13
Uncooperativeness of People in Obtaining Verification Information, in the Past 12 Months, by Program Type

Usually uncooperative:	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Financial institutions (e.g. banks, investment firms)	14.8%	14.3%	11.7%	13.5%
Health care providers (e.g. doctors, physicians, pharmacies)	9.7%	8.7%	15.1%	11.5%
Social services (e.g. Social Security, TANF, Food Stamps)	7.7%	5.6%	8.9%	7.6%

Note 1: Source – Table 20 PSQ Appendix.

When verification information was not received, PHA/projects used multiple procedures to get the information needed. Most frequently cited procedures included calling the third party (91% of PHA/projects), sending letters to the third party (90%), calling the tenants (81%), and sending letters to the tenants (78%). When none of these procedures produced the required information, 69 percent of PHA/projects resorted to accepting other, less preferred verification information. By employing various procedures, PHA/projects were able to receive at least some verification

of the tenant information. In addition, owner-administered projects were slightly less likely to report using follow-up procedures, compared to the other two program types.

Exhibit E-14
Procedures Used When Verification Was Not Provided As Requested in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Called third party	92.3%	92.9%	88.8%	91.1%
Sent follow-up letter to third party	89.0%	92.9%	89.9%	90.4%
Called tenant	81.3%	77.0%	83.8%	81.1%
Sent follow-up letter to tenant	83.2%	78.6%	72.6%	77.8%
Accepted other/less preferred verification	69.0%	76.2%	64.2%	69.1%

Note 1: Source – Table 21 PSQ Appendix.

Conclusions. Overall the PSQ analyses portrayed a complex and interesting picture of PHA/Project practices and procedures. Most PHA/projects train (re)certification staff, transfer information about changes in HUD policies to their staff, monitor (re)certification work quality, use computer software for various purposes, and verify most (re)certification information. Some findings differed by program type. Owner-administered PHAs had the fewest staff, fewest (re)certification staff, and fewest units supported by the (re)certification staff, on average. Owner-administered projects also trained the fewest staff for the fewest hours.

For the future studies, it would be helpful to develop and validate additional items specifically targeting potential difficulties in conducting training, using computer software, and getting support from various sources in verifying tenants' information. Focus groups and cognitive interviewing might aid in revision of the PSQ items by focusing attention on the specific circumstances and issues faced by the PHA/projects. Having detailed indicators of the positive, as well as negative aspects the (re)certification process, defined by the PHA/Project staff, would provide a more complete picture of the issues faced by the PHA/project, as well as may provide a better link between PSQ information and the estimation of payment and income errors.

Project Staff Questionnaire Source Tables

Number and Type of Staff

Table 1
Ratios of Staff per Units and Units per Staff, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average ratio of units per total staff	52.5 (72.9)	102.9 (71.4)	32.3 (31.5)	58.4 (66.1)
Minimum	1.0	2.8	.9	.9
Median	27.5	99.1	24.8	30.9
Maximum	455.0	326.0	263.0	455.0
Average ratio of units per full-time (re)certification staff	178.4 (218.6)	225.7 (202.1)	91.7 (104.2)	157.6 (185.7)
Minimum	1.1	9.9	.0	.0
Median	122.0	189.0	68.5	107.4
Maximum	1790.0	1948.0	752.0	1948.0
TOTAL NUMBER OF PHA/PROJECTS	155	126	179	460

Note 1: The averages were calculated for all PHA/Projects.
Note 2: Standard deviations for the averages are in parenthesis.

Training for New (Re)Certification Staff

Table 2
New (Re)Certification Staff Training in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average number of new staff assigned to conduct (re)certifications	1.8 (1.1)	5.0 (6.8)	1.7 (1.8)	3.1 (4.8)
Average number of training hours received by each new (re)certification staff	91.6 (201.4)	150.9 (233.6)	52.4 (36.5)	105.6 (190.7)
All new (re)certification staff received the same training	87.2%	84.1%	87.5%	86.0%
NUMBER OF PHA/PROJECTS WITH NEW STAFF	**47**	**69**	**48**	**164**
PERCENT OF PHA/PROJECTS WITH NEW STAFF	30.3%	54.8%	26.8%	35.7%

Note 1: Averages and percentages were calculated for PHA/Projects that assigned new staff to conduct (re)certifications in the past 12 months.
Note 2: Standard deviations for the averages are in parenthesis.
Note 3: Averages were calculated for PHA/Projects with valid responses.

Table 3
Types of Training Conducted in the Past 12 Months for New (Re)Certification Staff, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Read HUD/PHA/Owner-Administered manual, watched videos, or asked informal questions				
Never	8.5%	2.9%	8.3%	6.1%
Occasionally	6.4%	4.3%	18.8%	9.1%
Usually	44.7%	20.3%	33.3%	31.1%
Always	40.4%	72.5%	39.6%	53.7%
Used tele-course or Internet/web-based training				
Never	70.2%	50.7%	72.9%	62.8%
Occasionally	23.4%	31.9%	20.8%	26.2%
Usually	.0%	4.3%	2.1%	2.4%
Always	6.4%	13.0%	4.2%	8.5%
Supervisor/senior staff held training sessions with new staff explaining procedures				
Never	8.5%	5.8%	4.2%	6.1%
Occasionally	25.5%	7.2%	6.3%	12.2%
Usually	21.3%	11.6%	18.8%	16.5%
Always	44.7%	75.4%	70.8%	65.2%
New staff worked one-on-one with experienced staff during the conduct of (re)certifications				
Never	2.1%	.0%	4.2%	1.8%
Occasionally	8.5%	4.3%	2.1%	4.9%
Usually	21.3%	14.5%	12.5%	15.9%
Always	68.1%	81.2%	81.3%	77.4%
Attended training conducted by outside organization (e.g. HUD, NAHRO)				
Never	42.6%	29.0%	27.1%	32.3%
Occasionally	23.4%	23.2%	22.9%	23.2%
Usually	12.8%	27.5%	27.1%	23.2%
Always	21.3%	20.3%	22.9%	21.3%
Other training activity				
Never	85.1%	79.7%	70.8%	78.7%
Occasionally	6.4%	4.3%	4.2%	4.9%
Usually	2.1%	2.9%	2.1%	2.4%
Always	6.4%	13.0%	22.9%	14.0%

Note: Percentages were calculated for PHA/Projects that assigned new staff to conduct (re)certifications in the past 12 months.

Training for (Re)Certification Staff With Some Experience

Table 4
Experienced (Re)Certification Staff Training in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average number of experienced staff who received training to change or improve the way they conduct (re)certifications	3.6 (7.2)	12.8 (30.8)	2.1 (2.6)	5.8 (18.1)
Average number of training hours received by each experienced (re)certification staff	27.6 (36.1)	43.8 (75.7)	24.6 (19.3)	31.2 (48.1)
All experienced (re)certification staff received the same training	80.8%	77.1%	85.0%	81.4%

Note 1: Percentages and averages were calculated for PHA/Projects that provided training to experienced staff to change or improve the way they conduct (re)certifications.
Note 2: Standard deviations for the averages are in parenthesis.
Note 3: Averages were calculated for PHA/Projects with valid responses.

Table 5
Types of Training Conducted in the Past 12 Months for Each Experienced (Re)Certification Staff, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Read HUD/PHA/Owner-Administered manual, watched videos, or asked informal questions				
Never	9.1%	6.7%	5.0%	6.7%
Occasionally	17.2%	17.1%	22.1%	19.2%
Usually	40.4%	23.8%	36.4%	33.7%
Always	33.3%	52.4%	36.4%	40.4%
Used tele-course or Internet/web-based training				
Never	52.5%	38.1%	68.6%	54.7%
Occasionally	33.3%	40.0%	21.4%	30.5%
Usually	9.1%	11.4%	6.4%	8.7%
Always	5.1%	10.5%	3.6%	6.1%
Supervisor/senior staff held training sessions with experienced staff explaining procedures				
Never	11.1%	8.6%	20.7%	14.2%
Occasionally	27.3%	20.0%	21.4%	22.7%
Usually	25.3%	23.8%	24.3%	24.4%
Always	36.4%	47.6%	33.6%	38.7%
Experienced staff worked one-on-one with other experienced staff to conduct (re)certifications				
Never	20.2%	17.1%	17.1%	18.0%
Occasionally	27.3%	23.8%	27.9%	26.5%
Usually	23.2%	26.7%	27.1%	25.9%
Always	29.3%	32.4%	27.9%	29.7%
Attended training conducted by outside organization				
Never	24.2%	10.5%	10.7%	14.5%
Occasionally	29.3%	42.9%	36.4%	36.3%
Usually	30.3%	21.9%	25.7%	25.9%
Always	16.2%	24.8%	27.1%	23.3%
Other training activity				
Never	78.8%	82.9%	76.4%	79.1%
Occasionally	8.1%	4.8%	7.1%	6.7%
Usually	8.1%	3.8%	7.1%	6.4%
Always	5.1%	8.6%	9.3%	7.8%

Note: Percentages were calculated for PHA/Projects that provided training to experienced staff.

Table 6
Topics Covered in Experienced Staff Trainings in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
HUD policies and rules for conducting (re)certifications	91.9%	97.1%	96.4%	95.3%
Tools available in the PHA/project (e.g., software, forms) to help in conducting (re)certifications	83.8%	87.6%	78.6%	82.8%
How to conduct interviews	57.6%	61.9%	67.9%	63.1%
Changes in HUD or PHA/project policies or procedures related to (re)certifications	92.9%	97.1%	97.9%	96.2%
Other topics	22.2%	25.7%	22.1%	23.3%

Note: Percentages were calculated for PHA/Projects that provided training to experienced staff to change or improve the way they conduct (re)certifications.

Communicating HUD Information

Table 7
Methods to Communicate Information to Staff About Changes in HUD/PHA/Owner-Administered Policies Affecting Eligibility or Rent Calculations, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Formal training session is held (in-house or via outside organization)	49.7%	65.9%	50.3%	54.3%
Detailed staff memo describing the changes and providing instructions for implementation	52.9%	65.9%	62.0%	60.0%
Brief staff memo describing the change in regulation without instructions for implementation	27.1%	31.7%	27.4%	28.5%
Oral communication from supervisors to staff (informal staff meetings, discussions, or one-on-one communications)	86.5%	90.5%	82.1%	85.9%
Copies of HUD announcement distributed to staff	79.4%	83.3%	77.1%	79.6%
Word of mouth between workers	41.9%	41.3%	39.7%	40.9%
Other methods	14.2%	27.0%	18.4%	19.3%

Table 8
Methods for Getting Answers to Questions about HUD Policies in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Asked HUD field office or other HUD staff	63.2%	90.5%	74.9%	75.2%
Held meetings or talks with other PHAs/Owner-Administereds (e.g., round tables, regional meetings)	50.3%	58.7%	31.8%	45.4%
Used contractors/consulting services	28.4%	34.9%	28.5%	30.2%
Asked questions at a HUD training session	46.5%	62.7%	49.7%	52.2%
Used internet/web-based information/training	41.9%	60.3%	42.5%	47.2%
Referred to HUD/PHA/Owner-Administered memo or manual	74.8%	86.5%	87.2%	82.8%
Watched training videos	14.2%	27.0%	5.0%	14.1%
Figured out the answers themselves (meetings, talks, or training with supervisors, directors, or senior staff)	44.5%	48.4%	43.0%	45.0%
Other methods	17.4%	10.3%	22.9%	17.6%

Quality Control

Table 9
Persons who Monitored (Re)Certification Work, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Team leader or supervisor				
Never	11.0%	4.8%	11.7%	9.6%
Occasionally	20.6%	15.9%	17.3%	18.0%
Usually	22.6%	32.5%	22.3%	25.2%
Always	45.8%	46.8%	48.6%	47.2%
Co-worker				
Never	47.1%	44.4%	49.7%	47.4%
Occasionally	25.2%	35.7%	19.0%	25.7%
Usually	13.5%	10.3%	15.1%	13.3%
Always	14.2%	9.5%	16.2%	13.7%
Staff auditor				
Never	52.9%	44.4%	47.5%	48.5%
Occasionally	21.9%	15.1%	22.3%	20.2%
Usually	8.4%	15.1%	10.1%	10.9%
Always	16.8%	25.4%	20.1%	20.4%
Someone else				
Never	81.9%	72.2%	64.2%	72.4%
Occasionally	7.1%	11.1%	14.5%	11.1%
Usually	2.6%	7.1%	7.3%	5.7%
Always	8.4%	9.5%	14.0%	10.9%
HUD, HUD contractor, or auditor conducted an audit of tenant files in past 12 months	74.8%	84.9%	92.7%	84.6%

Table 10
Techniques Used to Monitor (Re)Certifications, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Sitting in on the interview with the client				
Never	42.6%	32.5%	39.1%	38.5%
Occasionally	39.4%	52.4%	45.8%	45.4%
Usually	8.4%	7.9%	7.3%	7.8%
Always	9.7%	7.1%	7.8%	8.3%
Reviewing files while in process				
Never	26.5%	13.5%	20.7%	20.7%
Occasionally	31.0%	52.4%	30.7%	36.7%
Usually	16.8%	15.9%	24.0%	19.3%
Always	25.8%	18.3%	24.6%	23.3%
Reviewing files after completion				
Never	7.7%	2.4%	7.3%	6.1%
Occasionally	18.7%	12.7%	17.3%	16.5%
Usually	30.3%	37.3%	22.3%	29.1%
Always	43.2%	47.6%	53.1%	48.3%
Discussing (re)certification with staff while in process				
Never	20.6%	14.3%	23.5%	20.0%
Occasionally	41.3%	39.7%	37.4%	39.3%
Usually	25.8%	34.9%	26.3%	28.5%
Always	12.3%	11.1%	12.8%	12.2%
Discussing (re)certification with staff after completion				
Never	12.9%	9.5%	14.5%	12.6%
Occasionally	34.2%	35.7%	36.3%	35.4%
Usually	34.2%	31.0%	30.2%	31.7%
Always	18.7%	23.8%	19.0%	20.2%
Using pre-designed form to check key steps				
Never	27.7%	16.7%	19.6%	21.5%
Occasionally	13.5%	7.1%	10.1%	10.4%
Usually	11.0%	19.0%	17.9%	15.9%
Always	47.7%	57.1%	52.5%	52.2%
Making individualized notes for each case reviewed				
Never	27.7%	14.3%	20.1%	21.1%
Occasionally	26.5%	24.6%	26.8%	26.1%
Usually	15.5%	19.8%	19.6%	18.3%
Always	30.3%	41.3%	33.5%	34.6%
Re-interviewing the household				
Never	58.1%	46.0%	53.1%	52.8%
Occasionally	32.9%	47.6%	40.2%	39.8%
Usually	3.2%	4.0%	3.4%	3.5%
Always	5.8%	2.4%	3.4%	3.9%
Using computer program				
Never	23.2%	23.8%	32.4%	27.0%
Occasionally	14.2%	7.1%	7.8%	9.8%
Usually	9.0%	16.7%	11.2%	12.0%
Always	53.5%	52.4%	48.6%	51.3%

Table 11
Methods Used to Select Cases for Monitoring Review in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Randomly spot checked a percent of all cases	73.5%	87.3%	66.5%	74.6%
Checked cases on certain dates or times of year	25.2%	23.8%	32.4%	27.6%
Checked certain cases completed within a given period	27.1%	35.7%	30.7%	30.9%
(Re)certifications conducted by new staff	24.5%	51.6%	32.4%	35.0%
Files with certain characteristics or anomalies	34.2%	34.1%	27.9%	31.7%
(Re)certifications made by staff who had past performance problems	22.6%	47.6%	24.0%	30.0%
Other methods	7.1%	9.5%	5.6%	7.2%
Check all cases	6.5%	6.3%	10.6%	8.0%

Conducting Tenant Interviews

Table 12
Duration of Typical (Re)Certification Interviews in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Average number of minutes spent on a typical initial certification interview	37.2 (21.1)	43.5 (23.8)	46.1 (31.0)	42.4 (26.4)
Average number of minutes spent on a typical annual recertification interview	29.3 (17.9)	30.4 (17.2)	30.8 (27.1)	30.2 (21.9)

Note 1: Averages were calculated for all PHA/Projects.
Note 2: Standard deviations for the averages are in parenthesis.

Table 13
Tenants' Difficulties in Answering Questions During the (Re)Certification Interview in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Earned income:				
Very difficult	6.0%	6.8%	2.9%	5.0%
Somewhat difficult	38.7%	33.9%	24.7%	31.9%
Not at all difficult	55.3%	59.3%	72.4%	63.1%
Sporadic or intermittent income:				
Very difficult	22.7%	23.1%	13.4%	19.2%
Somewhat difficult	52.0%	58.7%	52.3%	54.0%
Not at all difficult	25.3%	18.2%	34.3%	26.9%
Income received from absent family members:				
Very difficult	18.8%	24.6%	9.3%	16.8%
Somewhat difficult	42.3%	50.8%	41.0%	44.2%
Not at all difficult	38.9%	24.6%	49.7%	39.0%
Income from self-employment:				
Very difficult	27.2%	23.7%	13.7%	21.0%
Somewhat difficult	46.9%	50.8%	38.7%	44.8%
Not at all difficult	25.9%	25.4%	47.6%	34.2%
Other income (e.g. Social Security, retirement, TANF):				
Very difficult	2.0%	.8%	1.1%	1.3%
Somewhat difficult	14.5%	17.4%	15.9%	15.8%
Not at all difficult	83.6%	81.8%	83.0%	82.9%
Child support:				
Very difficult	8.7%	11.4%	7.4%	9.0%
Somewhat difficult	34.0%	49.6%	35.1%	39.0%
Not at all difficult	57.3%	39.0%	57.4%	52.0%
Training program participation:				
Very difficult	11.3%	10.5%	9.7%	10.5%
Somewhat difficult	41.5%	44.7%	32.4%	39.2%
Not at all difficult	47.2%	44.7%	57.9%	50.4%
Household composition:				
Very difficult	2.6%	.0%	2.3%	1.8%
Somewhat difficult	28.1%	35.0%	12.1%	23.8%
Not at all difficult	69.3%	65.0%	85.6%	74.4%
Child care expenses:				
Very difficult	2.7%	1.7%	3.4%	2.7%
Somewhat difficult	30.9%	28.9%	20.7%	26.7%
Not at all difficult	66.4%	69.4%	75.9%	70.6%
Medical expenses:				
Very difficult	7.2%	12.2%	10.2%	9.7%
Somewhat difficult	45.1%	45.5%	50.0%	47.1%
Not at all difficult	47.7%	42.3%	39.8%	43.1%
Other questions (assets, investment income):				
Very difficult	60.0%	75.0%	40.0%	56.5%
Somewhat difficult	40.0%	25.0%	60.0%	43.5%
Not at all difficult	.0%	.0%	.0%	.0%

Automation

Table 14
Uses for Computer Software in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Interview tenants and record answers	48.4%	34.1%	21.8%	34.1%
Keep track of pending verifications	62.6%	58.7%	61.5%	61.1%
Input verified information	89.0%	90.5%	80.4%	86.1%
Calculate rent	94.8%	97.6%	91.1%	94.1%
Print the 50058/50059 form	98.7%	96.8%	94.4%	96.5%
Conduct accounting tasks	83.2%	80.2%	76.0%	79.6%
Track maintenance activities	83.9%	42.1%	44.7%	57.2%
Print letters to the tenants	95.5%	92.9%	88.3%	92.0%
Assign recertification dates/appointments	78.7%	80.2%	66.5%	74.3%
Print checks	71.0%	87.3%	41.3%	63.9%
Submit tenant information to HUD	93.5%	96.0%	90.5%	93.0%
Conduct rent reasonableness comparisons	51.0%	62.7%	17.3%	41.1%
Maintain demographic information about the residents	65.8%	69.8%	57.5%	63.7%
Keep other types of statistics (waiting lists, vacancies, inspections)	6.5%	17.5%	12.8%	12.0%

Table 15
Methods Used to Transmit 50058/50059 Data to HUD via PIC/TRACS in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Directly	87.1%	87.3%	48.6%	72.2%
Through another agency	8.4%	7.9%	45.8%	22.8%
Other methods	5.2%	4.0%	8.4%	6.1%
Average percentage of 50058/50059 data transmitted via PIC/TRACS	96.0 (16.2)	95.4 (17.2)	95.6 (19.8)	95.6 (17.9)
PHA/Projects transmitting all of the 50058/50059 data via PIC/TRACS	75.5%	65.1%	91.6%	78.9%
PHA/PROJECTS NOT TRANSMITTING 50058/50059 DATA VIA PIC/TRACS	2.6%	2.4%	3.9%	3.0%

Note 1: Standard deviations for the averages are in parenthesis.

Verification Procedures

Table 16
Methods Used to Track Verification Information Receipt in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Kept files with outstanding verification in separate location or folder	69.7%	72.2%	64.2%	68.3%
Marked on calendar	25.2%	31.0%	25.1%	26.7%
Marked on a paper list/tickler file (tracking sheet, monitoring form, checklist, or log)	45.2%	51.6%	57.5%	51.7%
Kept record in tenant file	67.1%	77.8%	66.5%	69.8%
Tracked by computer	37.4%	38.9%	34.6%	36.7%
Other methods	4.5%	1.6%	4.5%	3.7%

Table 17
Staff Members Responsible for Tracking Verification Requests and Returns in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Project (re)certification staff	91.6%	92.1%	91.1%	91.5%
Supervisor/Manager/Director	23.2%	20.6%	31.3%	25.7%
Clerical staff	27.1%	26.2%	21.8%	24.8%
Other staff	3.2%	3.2%	5.6%	4.1%

Table 18
Items Verified in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Age of household members				
Never	3.9%	6.3%	5.0%	5.0%
Occasionally	12.3%	14.3%	7.3%	10.9%
Usually	10.3%	6.3%	8.4%	8.5%
Always	73.5%	73.0%	79.3%	75.7%
Social Security numbers				
Never	1.9%	4.8%	2.8%	3.0%
Occasionally	7.7%	7.9%	5.6%	7.0%
Usually	9.7%	6.3%	5.6%	7.2%
Always	80.6%	81.0%	86.0%	82.8%
Income from employment				
Never	.6%	.8%	1.7%	1.1%
Occasionally	5.2%	1.6%	5.0%	4.1%
Usually	6.5%	1.6%	2.2%	3.5%
Always	87.7%	96.0%	91.1%	91.3%
Sporadic/infrequent/seasonal employment				
Never	2.6%	.0%	10.1%	4.8%
Occasionally	10.3%	4.8%	6.1%	7.2%
Usually	15.5%	5.6%	6.1%	9.1%
Always	71.6%	89.7%	77.7%	78.9%
TANF/Welfare benefits				
Never	3.9%	.8%	12.3%	6.3%
Occasionally	5.2%	2.4%	5.6%	4.6%
Usually	5.2%	2.4%	3.4%	3.7%
Always	85.8%	94.4%	78.8%	85.4%
Social Security benefits				
Never	.6%	.0%	.6%	.4%
Occasionally	1.9%	3.2%	1.7%	2.2%
Usually	7.7%	.8%	2.2%	3.7%
Always	89.7%	96.0%	95.5%	93.7%
Child support payments				
Never	7.1%	.8%	22.3%	11.3%
Occasionally	3.9%	3.2%	4.5%	3.9%
Usually	10.3%	3.2%	2.2%	5.2%
Always	78.7%	92.9%	70.9%	79.6%
Other sources of income				
Never	.6%	.8%	3.9%	2.0%
Occasionally	5.8%	3.2%	3.9%	4.3%
Usually	10.3%	3.2%	5.0%	6.3%
Always	83.2%	92.9%	87.2%	87.4%
Value of assets				
Never	5.8%	3.2%	1.7%	3.5%
Occasionally	9.7%	4.8%	3.4%	5.9%
Usually	14.8%	6.3%	6.1%	9.1%
Always	69.7%	85.7%	88.8%	81.5%

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Table 18
Continued

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Medical expenses				
Never	1.9%	.8%	1.7%	1.5%
Occasionally	5.8%	4.8%	3.9%	4.8%
Usually	11.6%	8.7%	4.5%	8.0%
Always	80.6%	85.7%	89.9%	85.7%
Child care expenses				
Never	8.4%	.8%	24.6%	12.6%
Occasionally	5.8%	4.0%	5.0%	5.0%
Usually	11.0%	8.7%	3.4%	7.4%
Always	74.8%	86.5%	67.0%	75.0%
Disability expenses				
Never	3.9%	2.4%	3.9%	3.5%
Occasionally	9.0%	7.1%	6.1%	7.4%
Usually	11.6%	9.5%	5.0%	8.5%
Always	75.5%	81.0%	84.9%	80.7%
Citizenship				
Never	5.8%	4.8%	3.9%	4.8%
Occasionally	12.9%	7.1%	6.1%	8.7%
Usually	8.4%	4.8%	7.3%	7.0%
Always	72.9%	83.3%	82.7%	79.6%
Disability status				
Never	1.3%	3.2%	3.9%	2.8%
Occasionally	10.3%	9.5%	9.5%	9.8%
Usually	9.0%	9.5%	6.1%	8.0%
Always	79.4%	77.8%	80.4%	79.3%
Full time student status				
Never	6.5%	2.4%	24.0%	12.2%
Occasionally	7.7%	5.6%	7.3%	7.0%
Usually	12.3%	7.1%	5.0%	8.0%
Always	73.5%	84.9%	63.7%	72.8%

Table 19
Difficulty in Verifying Information in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Age of household members				
Very difficult	.0%	.8%	.6%	.4%
Somewhat difficult	6.6%	12.3%	10.1%	9.5%
Not at all difficult	93.4%	86.9%	89.3%	90.0%
Social Security numbers				
Very difficult	1.3%	1.6%	.0%	.9%
Somewhat difficult	19.7%	22.4%	11.2%	17.1%
Not at all difficult	78.9%	76.0%	88.8%	82.0%
Income from employment				
Very difficult	1.9%	.8%	1.7%	1.6%
Somewhat difficult	46.8%	51.2%	35.5%	43.7%
Not at all difficult	51.3%	48.0%	62.8%	54.8%
Sporadic/infrequent/seasonal employment				
Very difficult	13.6%	23.0%	14.9%	16.7%
Somewhat difficult	64.9%	63.5%	54.2%	60.5%
Not at all difficult	21.4%	13.5%	31.0%	22.8%
TANF/Welfare benefits				
Very difficult	2.0%	4.1%	3.1%	3.0%
Somewhat difficult	20.4%	17.1%	22.5%	20.2%
Not at all difficult	77.6%	78.9%	74.4%	76.8%
Social Security benefits				
Very difficult	1.3%	.0%	.6%	.7%
Somewhat difficult	14.9%	19.0%	18.0%	17.2%
Not at all difficult	83.8%	81.0%	81.5%	82.1%
Child support payments				
1 = Very difficult	8.1%	13.6%	6.1%	9.0%
2 = Somewhat difficult	46.3%	40.8%	45.3%	44.3%
3 = Not at all difficult	45.6%	45.6%	48.6%	46.7%
Other sources of income				
Very difficult	16.7%	13.1%	7.0%	11.9%
Somewhat difficult	54.7%	62.3%	51.7%	55.6%
Not at all difficult	28.7%	24.6%	41.3%	32.4%
Value of assets				
Very difficult	12.5%	14.4%	5.7%	10.4%
Somewhat difficult	55.3%	47.2%	47.2%	49.9%
Not at all difficult	32.2%	38.4%	47.2%	39.7%
Medical expenses				
Very difficult	5.8%	12.7%	6.2%	7.9%
Somewhat difficult	40.9%	44.4%	48.9%	45.0%
Not at all difficult	53.2%	42.9%	44.9%	47.2%
Child care expenses				
Very difficult	1.4%	3.2%	.7%	1.7%
Somewhat difficult	32.2%	36.0%	32.0%	33.3%
Not at all difficult	66.4%	60.8%	67.3%	65.1%

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Table 19
Continued

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Disability expenses				
Very difficult	3.9%	6.5%	1.2%	3.6%
Somewhat difficult	39.2%	40.3%	39.2%	39.5%
Not at all difficult	56.9%	53.2%	59.6%	56.9%
Citizenship				
Very difficult	3.3%	3.2%	3.4%	3.3%
Somewhat difficult	22.4%	23.4%	19.0%	21.3%
Not at all difficult	74.3%	73.4%	77.6%	75.3%
Disability status				
Very difficult	3.3%	.8%	.6%	1.6%
Somewhat difficult	35.3%	31.7%	28.8%	31.8%
Not at all difficult	61.4%	67.5%	70.6%	66.6%
Full time student status				
Very difficult	4.0%	.8%	.7%	1.9%
Somewhat difficult	24.8%	33.6%	29.2%	28.9%
Not at all difficult	71.1%	65.6%	70.1%	69.1%

Table 20
Cooperativeness with Providing Verification Information, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Tenants				
Usually cooperative	63.2%	62.4%	79.8%	69.4%
Sometimes cooperative	32.9%	35.2%	16.9%	27.3%
Usually NOT cooperative	3.9%	2.4%	3.4%	3.3%
Employers				
Usually cooperative	45.2%	48.4%	50.9%	48.2%
Sometimes cooperative	50.3%	47.6%	44.5%	47.4%
Usually NOT cooperative	4.5%	4.0%	4.6%	4.4%
Financial institutions (e.g. banks, investment firms)				
Usually cooperative	45.5%	42.4%	44.8%	44.4%
Sometimes cooperative	39.6%	43.2%	43.1%	41.9%
Usually NOT cooperative	14.9%	14.4%	12.1%	13.7%
Social services (e.g. Social Security, TANF, Food Stamps)				
Usually cooperative	57.9%	68.0%	57.1%	60.4%
Sometimes cooperative	34.2%	26.4%	33.7%	31.9%
Usually NOT cooperative	7.9%	5.6%	9.1%	7.7%
Health care providers (e.g. doctors, physicians, pharmacies)				
Usually cooperative	49.7%	43.5%	41.2%	44.7%
Sometimes cooperative	40.5%	47.6%	43.5%	43.6%
Usually NOT cooperative	9.8%	8.9%	15.3%	11.7%
Others				
Usually cooperative	12.5%	16.7%	8.3%	11.5%
Sometimes cooperative	62.5%	16.7%	41.7%	42.3%
Usually NOT cooperative	25.0%	66.7%	50.0%	46.2%

Table 21
Procedures Used When Verification Was Not Provided As Requested in the Past 12 Months, by Program Type

	PROGRAM TYPE			
	Public Housing	PHA-Administered Section 8	Owner-Administered	TOTAL
Sent follow-up letter to third party	89.0%	92.9%	89.9%	90.4%
Called third party	92.3%	92.9%	88.8%	91.1%
Sent follow-up letter to tenant	83.2%	78.6%	72.6%	77.8%
Called tenant	81.3%	77.0%	83.8%	81.1%
Accepted other/less preferred verification	69.0%	76.2%	64.2%	69.1%
Other procedures	7.1%	8.7%	6.7%	7.4%

Appendix F—Multivariate Analysis

Appendix F. Multivariate Analysis

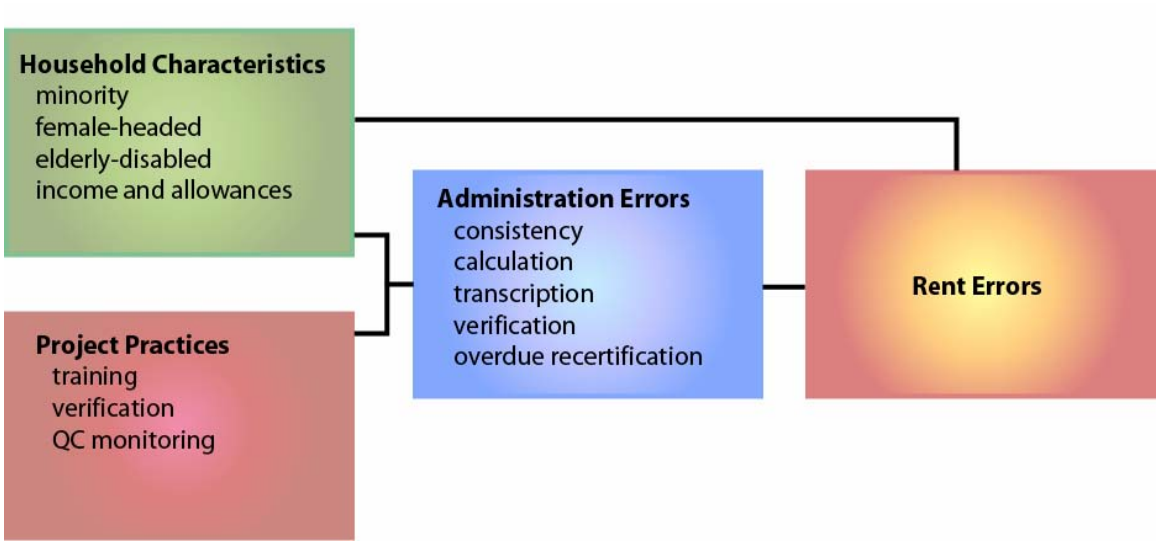
Introduction

The objective of this analysis was to determine whether tenant characteristics, project characteristics, and project practices contribute to administrative and rent errors (Research Objectives 6, 8, and 13). Tenant characteristics may directly affect rent errors, or they may indirectly affect rent errors by affecting project administrative errors. In the same way, project characteristics may have a direct and indirect effect on rent errors. For example, the size of a project may contribute to a higher level of verification errors, while verification errors in turn may contribute to rent errors. This analysis investigated these direct and indirect pathways leading from project and tenant characteristics through project practices and administrative errors to rent error, using a series of ordinary least squares (OLS) and logistic regressions. Analyses were conducted at both the tenant and project level. In this chapter, we discuss first the tenant-level analyses, followed by the project-level analyses. Generally, we found that similar relationships between explanatory variables and gross rent error in the tenant-level and project-level analyses.

A. Tenant-Level Analysis

A general model of the relationship between tenant characteristics and error is displayed in Figure F-1. Generally, we expect that tenant characteristics such as household size and complexity of financial situation (e.g., number of income sources) will be associated with both administrative errors and rent errors.

Figure F-1
Conceptual Framework for Modeling the Relationships Between Household Characteristics, Project Practices, and Rent Error



Measures. Measures used for the tenant-level analysis included household demographic and financial characteristics, program type and project size, case file administrative errors, and gross rent error.

Measures of *household demographics* derived from tenant case records included the following:

- Minority-headed household: the head of household's race/ethnicity was either non-white or Hispanic, or both.
- Female-headed household: the sex of head of household was female.
- Elderly or disabled household: the head of household, spouse, or co-head 62 years of age or older, disabled, or both.
- Household size: a count of the number of household members.

The following measures of *household financial characteristics* were also derived from tenant case records:

- Household annual income: total annual income for the whole household as determined by the QC process.
- Number of allowances: a count of the number of allowances for the household, as determined by the QC process.

Project characteristics used in the tenant-level analysis included the following:

- Project type: projects were classified as Public Housing, PHA-administered Section 8 housing, or owner-administered housing, as determined by study sampling information.
- Project size: a count of the number of eligible units, based on information provided by the PHA/projects to the study.

Several types of a*dministrative errors* were calculated, based on the review of tenant case files. These included:

- Proportion of consistency errors: based on examination of 50058/50059 information for internal consistency (e.g., child care allowance is only completed if a household member is less than 13 years old), we calculated the proportion of five categories of case characteristics that had a consistency error. Consistency categories included general information; household composition; net family assets and income; allowance and adjusted income; and family rent and subsidy information. Specific details about how we assessed consistency errors are provided in Appendix D.
- Proportion of calculation errors: of four types of calculation errors (i.e., household composition; net family assets and income; allowances and adjusted income; and family rent and subsidy information), the proportion that were calculated incorrectly. Additional detail about how we assessed calculation errors is provided in Appendix D.
- Proportion of transcription errors: the total number of relevant income and expense components for the household was determined, as well as whether each of those components was transcribed correctly. Then the number of transcription errors was divided by the total number of relevant components to compute the proportion of

components that were transcribed in error. For example, if a household's income and expense components included earned income, pension income, and medical expenses, the denominator of this measure was 3. If income and expense components were transcribed correctly but medical expenses were not, then the numerator was 1, and the proportion of transcription errors was 33 percent.

- Proportion of verification errors: calculated in the same manner as transcription errors, verification errors comprised the number of components verified incorrectly divided by the total number of relevant components.

- Overdue recertification: the household's recertification for FY 2005 did not occur within the required time frame.

We used *gross rent error* as the outcome measure.

Model Construction. Two series of models were estimated. First, regression equations estimated the beta coefficients for household and project characteristics as explanatory variables for each of the administrative error types as dependent variables. Linear regression was used for continuous measures (e.g., proportion of verification errors). Logistic regression was used for modeling overdue recertification as the dependent, since as a dichotomous measure, it would have violated some of the assumptions of linear regressions.[1] A second set of linear regressions estimated beta coefficients for household and project characteristics and administrative errors against gross rent error.

We report standardized betas for linear regression results so that the size of effect can be compared among the different kinds of factors. Estimated odds ratios are reported for the logistic regression results. The odds ratio indicates significant evidence of a relationship, and can be interpreted as the variable's effect (increase or decrease) on the likelihood that the household's recertification is overdue.

To assess the impact of project program type (i.e., Public Housing, PHA-administered Section 8, owner-administered), the models include two dummy variables for program type: Public Housing project, and PHA-administered Section 8 housing project. Generally, if a qualitative variable has *m* categories, the model must contain only *m-1* dummy variables to represent the qualitative variable in order to avoid having a model with perfect collinearity.[2]

Because the data were collected based on a probability sample that relied on a two-stage design, it is possible that even using the tenant weights developed for the main report (described in greater detail in Appendix B), the results of these analyses may be biased by the fact that we sampled projects from 59 clusters, rather than from the entire universe of projects. Therefore, we also included in the linear regressions dummy variables for clusters 1 through 58 (leaving out one in order to avoid the collinearity problem described above). In some cases the coefficients for the cluster identification variables are statistically significant, indicating that our results would be biased if we did not include them in the model. We have not interpreted these coefficients, however, since our purpose here is to explore household and project characteristics associated with administrative and rent error.

[1] Gujarati, D.N., 1988. *Basic Econometrics,* second edition. New York: McGraw-Hill Books.
[2] ibid.

We did not include the cluster identification variables in the logistic regression model of overdue recertifications, because they prevented the model from converging. Therefore, the logistic regression coefficients should be interpreted with caution, as they are almost certainly affected by the underlying sample design.

Results of Household Level Analyses. Separate models were constructed for each type of error. These models indicate that some household and project characteristics are associated with administrative errors, and that some of these characteristics, as well as some administrative errors, are also associated with gross rent error. Exhibits F-1 through F-7 display the modeling results. Asterisks indicate the standardized coefficients or odds ratios that are significant at the .05 level or higher (two-tailed test).

Consistency Errors and Gross Rent Errors. Percent of consistency errors was higher among minority-headed households, elderly and disabled households, and households with higher annual incomes, on average and holding all other variables constant, as Exhibit F-1 indicates. Percent of consistency errors was not related to whether the household was overdue for recertification. Both Public Housing projects and PHA-administered Section 8 housing projects were associated with higher proportion of consistency errors. Being in a Public Housing project had the greatest impact on consistency errors, as indicated by the standardized beta of .21 for that variable; the effect was about twice that of being in PHA-administered Section 8 housing (.08) or that of being in an elderly/disabled household (.09). These variables accounted for about 40 percent of the variance in consistency error, as indicated by the adjusted R^2 value for this model.

Exhibit F-1.
Regression Results: Tenant and Project Characteristics Associated with Consistency Errors and Gross Rent Errors

Variables	Standardized Betas	
	Consistency Errors	Gross Rent Error
Minority-headed household	0.08*	0.03
Female-headed household	0.00	0.03
Elderly/disabled household	0.09*	-0.03
Household size	0.03	0.06*
Total household allowances	-0.00	0.03
Household annual income	0.06*	0.17*
Overdue recertification	-0.00	0.07*
Public Housing project	0.21*	-0.04
PHA-administered Section 8 project	0.08*	-0.00
Project size	-0.09*	0.00
Percent of consistency categories in error	na	-0.01
Adjusted R^2	0.40	0.06

* coefficient is significant at the .05 level or greater (two-tailed test)

When we modeled gross rent error, however, the percent of consistency errors was not significantly related to gross rent error. Gross rent error was higher among larger households, households with higher annual income, and households with overdue recertifications. Household income had the largest effect on gross rent error, as indicated by the size of its standardized coefficient relative to those of other significant variables. These variables accounted for only

about 6 percent of the variance in gross rent error, as indicated by the adjusted R^2 value for this model.

The significant relationships found between program type and consistency errors must be interpreted with caution. Public Housing projects and PHA-administered Section 8 projects use the 50058 form, while owner-administered projects use the simpler 50059 form. We would expect that households in owner-administered projects would be less likely to have consistency errors on their 50059 form because there are fewer items to be in error.

Calculation Errors and Gross Rent Error. In this set of models, illustrated in Exhibit F-2, more calculation errors were found in larger households, households with higher annual income, and in households with overdue recertifications, on average. A lower proportion of calculation errors was found in minority-headed and elderly/disabled households. In terms of project characteristics, households in both Public Housing projects and PHA-adminstered Section 8 housing projects had more calculation errors, on average, but project size was negatively related to calculation errors. These variables accounted for about 35 percent of the variance in percent of calculation errors, as determined by the adjusted R^2 value for this model. Calculation errors were not found to be significantly related to gross rent error.

Exhibit F-2.
Regression Results: Tenant and Project Characteristics Associated with Calculation Errors and Gross Rent Errors

Variables	Standardized Betas: Calculation Errors	Standardized Betas: Gross Rent Error
Minority-headed household	-0.02	0.03
Female-headed household	0.02	0.03
Elderly/disabled household	-0.25*	-0.03
Household size	0.05*	0.06*
Total household allowances	0.03	0.03
Household annual income	0.08*	0.16*
Overdue recertification	0.21*	0.07*
Public Housing project	0.29*	-0.04
PHA-administered Section 8 project	0.27*	-0.00
Project size	-0.09*	0.01
Percent of calculation items in error	na	0.01
Adjusted R^2	0.35	0.06

* coefficient is significant at the .05 level or greater (two-tailed test)

Transcription Errors and Gross Rent Error. As Exhibit F-3 displays, households with more allowances, and those with higher annual income, had, on average, a higher proportion of items with transcription errors. Households with an overdue recertification also had a higher proportion of transcription errors. Larger households, conversely, had a lower proportion of transcription errors, on average. Project size was not related to a household's proportion of transcription errors. These variables jointly accounted for about 13 percent of the variation in proportion of transcription errors.

Exhibit F-3.
Regression Results: Tenant and Project Characteristics Associated with Transcription Errors and Gross Rent Errors

Variables	Standardized Betas	
	Transcription Errors	Gross Rent Error
Minority-headed household	-0.01	0.03
Female-headed household	0.01	0.02
Elderly/disabled household	0.02	-0.04
Household size	-0.15*	0.08*
Total household allowances	0.16*	0.02
Household annual income	0.07*	0.16*
Overdue recertification	0.10*	0.06*
Public Housing project	0.04	-0.04
PHA-administered Section 8 project	-0.03	-0.00
Project size	0.02	0.01
Percent of transcription items in error	na	0.10*
Adjusted R^2	0.13	0.07

* coefficient is significant at the .05 level or greater (two-tailed test)

Unlike calculation and consistency errors, transcription errors are significantly related to gross rent errors. Transcription errors' relative effect is a little more than half that of household annual income (.10 versus .16, respectively). All of the variables accounted for only about 7 percent of the variance in gross rent error, so these findings should be interpreted with caution.

Verification Errors and Gross Rent Error. The tenant characteristics associated with verification errors are similar to the ones associated with transcription errors—number of household allowances, household annual income, and overdue recertifications were all positively related to the proportion of verification errors in the case files, on average, and household size was negatively related to verification error. Elderly/disabled households also had a higher proportion of verification errors, compared to other households, on average. These variables all together only explained about 10 percent of the variation in percent of verification errors. These results are displayed in Exhibit F-4.

Exhibit F-4.
Regression Results: Tenant and Project Characteristics Associated with Verification Errors and Gross Rent Errors

Variables	Verification Errors (standardized betas)	Gross Rent Error (standardized betas)
Minority-headed household	-0.04	0.04
Female-headed household	-0.02	0.03
Elderly/disabled household	0.12*	-0.06*
Household size	-0.10*	0.09*
Total household allowances	0.11*	0.00
Household annual income	0.06*	0.15*
Overdue recertification	0.15*	0.03
Public Housing project	0.01	-0.04
PHA-administered Section 8 project	-0.01	0.00
Project size	-0.01	0.01
Percent of verification items in error	na	0.24*
Adjusted R^2	0.10	0.11

* coefficient is significant at the .05 level or greater (two-tailed test)

Verification errors had a positive association with gross rent error, and in fact had the largest impact on gross rent error among all factors significantly related to gross rent error in this model. As in the previous models of gross rent error, household characteristics were also associated with gross rent error. Elderly/disabled households had lower gross rent error on average, compared to other households.

Overdue Recertifications and Gross Rent Error. Because overdue recertifications were found to be significantly related to all other administrative errors as well as gross rent error in some models, we conducted additional analyses to explore the factors that were associated with it. As Exhibit F-5 illustrates, households in Public Housing projects had increased odds of being overdue for recertification, as did those in larger projects. Further, overdue recertifications were associated with a higher gross rent error, on average and holding constant all other variables. However, the effect of overdue recertification in this model was about half the effect of household income on gross rent error.

Exhibit F-5.
Regression Results: Tenant and Project Characteristics Associated with Overdue Recertifications and Gross Rent Errors

Variables	Overdue Recertifications (odds ratios)	Gross Rent Error (standardized betas)
Minority-headed household	1.65	0.03
Female-headed household	0.96	0.03
Elderly/disabled household	0.77	-0.04
Household size	1.01	0.06*
Total household allowances	1.00	0.03
Household annual income	1.00	0.17*
Public Housing project	2.65*	-0.04
PHA-administered Section 8 project	2.09	-0.00
Project size	1.00*	0.00
Overdue recertification	na	0.07*
Adjusted R^2	na	0.08

* coefficient is significant at the .05 level or greater (two-tailed test)

Direct and Net Effects On Gross Rent Error. Using the unstandardized coefficients from the model results, it is possible to calculate the likely amount of error for households of different characteristics. We used verification error as an example. Exhibit F-6 displays the unstandardized coefficients for the verification error and gross error models, and the resulting amounts (percent of verification in error and dollar error) predicted for an elderly or disabled household of one individual, with one allowance, median annual income, and a timely recertification. As Exhibit F-6 illustrates, this household would have, on average, 29 percent of verification items in error, and a gross rent error of $16. Exhibit F-7 illustrates the results for a similar household with an overdue recertification. In this case, verification would be in error for 52 percent of items, on average, and the gross rent error for this household would be $26. So in this case, the overdue recertification would produce on average an additional $10 error in gross rent, over and above the error expected based on household characteristics alone.

Exhibit F-6.
Regression Results: Net Effect of Verification Error on Gross Rent Error
(Elderly household, one member, one allowance, median income, timely recertification)

	Verification Error Model			Gross Rent Error Model		
Independent variables[1]	**Unstandardized Coefficients**	**Value of Variable**	**Calculated Effect of Variable**	**Unstandardized Coefficients**	**Value of Variable**	**Calculated Effect of Variable**
Constant	0.220	1	22.0%	-3.958	1	-$4
Elderly/disabled household	0.069	1	6.9%	-6.760	1	-$7
Household size	-0.019	1	-1.9%	3.081	1	$3
Total household allowances	0.000	1	0.0%	*non-significant*		
Household annual income	0.000	$9,635	1.9%	0.001	$9,635	$10
Overdue recertification	0.227	0	0.0%	*non-significant*		
Percent of verification items in error	na		na	44.452	0	
	Total percent of verification items in error:		28.9%	Net effect on gross rent error:		$16

1. Includes only significant variables

$13

Exhibit F-7.
Net Effect of Verification Error and Overdue Recertification on Gross Rent Error
(Elderly household, one member, one allowance, median income, overdue recertification)

	Verification Error Model			Gross Rent Error Model		
Independent variables[1]	**Unstandardized Coefficients**	**Value of Variable**	**Calculated Effect of Variable**	**Unstandardized Coefficients**	**Value of Variable**	**Calculated Effect of Variable**
Constant	0.220	1	22.0%	-3.958	1	-$4
Elderly/disabled household	0.069	1	6.9%	-6.760	1	-$7
Household size	-0.019	1	-1.9%	3.081	1	$3
Total household allowances	0.000	1	0.0%	*non-significant*		
Household annual income	0.000	$9,635	1.9%	0.001	$9,635	$10
Overdue recertification	0.227	1	22.7%	*non-significant*		
Percent of verification items in error	na		na	44.452	1	
	Total percent of verification items in error:		51.7%	Net effect on gross rent error:		$26

1. Includes only significant variables

$23

B. Project-Level Analyses

Project level analyses took two forms. First, we conducted exploratory analyses of the relationships among project-level characteristics and practices as reported in the Project Staff Questionnaire. We also conducted regression analyses parallel to the household-level analyses, looking at the relationships between project characteristics and practices, administrative errors, and gross rent error, measured at the project level.

Exploratory Analysis of Project Staff Questionnaire (PSQ) Measures. The data from the PSQ was combined for several questions with multiple items to provide the overall scores for these constructs (Table F-1 at the end of this chapter describes these constructs). Most of the PSQ questions with multiple items evidenced an adequate internal consistency, suggesting that the items are correlated and can be combined for the calculation of the overall scores for these items. Internal consistency of the responses to questions with multiple items means that responding in one way to a particular item is strongly associated with a similar response to other items. For example, respondents rating the tenants' ease in answering one interview question as "very difficult" are likely to report similar rating for the difficulty of other interview questions. Furthermore, conducting analyses using the overall scores, rather than individual items, minimizes the finding of spurious results, increases the ability to detect significant results, and allows for the easier interpretation of the results by examining the findings for the overall constructs, rather than a large number of individual items that might obscure the interpretation.

The exploratory analyses began with examining bivariate correlations of the PSQ constructs, which describe the relationships among the constructs and assist in identifying variables that would be useful for additional exploratory and predictive analyses. These correlations are displayed in Table F-2 at the end of this chapter. The most interesting and relevant correlations emerged with respect to the size of the PHA/project. The ratio of units per full-time (re)certification staff is significantly positively correlated with the sum of the various uses of the computers, suggesting that larger PHA/projects are more likely to utilize computers for a wider diversity of purposes than the smaller PHA/projects. Furthermore, number of units and number of full-time (re)certification staff at the PHA/project are negatively correlated with the average ratings of tenants' ease in answering interview questions and the average ratings of easiness in verifying tenant information. Thus, larger PHA/projects are more likely to report difficulties in administering tenant interviews and verifying tenant information than the smaller PHA/projects. In addition, number of units and number of (re)certification staff are correlated positively with the average rating of frequency of using various training types for new and experienced staff, suggesting that larger PHA/projects more frequently utilize a wider variety of training modalities than the smaller PHA/projects.

The results of the bivariate correlations also indicate that some internal procedures of the PHA/projects are positively related to the verification procedures. Specifically, the average rating of using various techniques to monitor (re)certifications is positively related to the average rating of frequency of verifying various tenant information. This suggests that PHA/projects that report using a greater variety of monitoring techniques are also more likely to report more frequently verifying a greater variety of tenant information. The average rating of using various training types and the average number of training hours are positively related to more frequent verification of a greater variety of tenant information, suggesting that PHA/projects that report employing a wider variety of training types and conducting more training hours are more likely

to indicate more frequent verification of a greater variety of tenant information. Similarly, the sum of the various computer uses is positively related to the average rating of frequency of verifying pieces of tenant information, suggesting that PHA/projects that report using computers for a wider variety of purposes are also more likely to indicate more frequently verifying a greater variety of pieces of tenant information.

Associations Between Project Characteristics, Project Practices, Administrative Errors, and Gross Rent Error. We modeled the relationship between project practice constructs (described above), administrative errors, and total gross error at the project level, using ordinary least squares regression. Unfortunately, none of the project practices emerged as significantly predicting administrative or total gross errors. We also explored the significance of individual project practice items and their combinations in predicting errors. None of the individual items or combinations of items evidenced any significant robust relationships to administrative or total gross errors. However, some tenant characteristics significantly predicted verification errors and gross error over and above the effects of PSQ constructs and other tenant level variables. Exhibits F-8 and F-9 present these results, which duplicate the results of the household level analyses.

With respect to the average proportion of verification errors for all sampled tenants at a project, the overall model accounted for 16 percent of the variance in the outcome, as Exhibit F-8 illustrates. Factors significantly associated with the average proportion of verification errors were: the average number of household members, the average total annual household income, the average number of total allowances, and the proportion of households at a project with overdue recertification. The results indicate that PHA/projects that have households with more family members, smaller household incomes, smaller number of total allowances, and without overdue recertifications have significantly smaller average proportions of verification errors, controlling for the effects of all other variables in the model. However, none of the project practices measures were associated with the average proportion of verification errors over and above the effects of the tenant level variables.

Exhibit F-8.
Regression Results: Project Characteristics and Practices Associated with Verification Errors

Variables	Standardized Betas
Project size	-.007
PHA-administered Section 8 housing project	-.025
Public Housing project	.034
Average number of household members	-.229*
Average total annual household income	.177*
Proportion of female headed households	-.034
Proportion of minority headed households	-.048
Proportion of elderly/disabled households	.068
Average number of total allowances	.121*
Proportion of households with overdue recertification	.203*
Experienced staff hours of training	-.029
Project uses computers to keep track of verifications	.058
Project has to figure out answers to HUD related questions for themselves	.041
Adjusted R^2	.16

* coefficient is significant at the .05 level or greater (two-tailed test)

Similar results emerged with respect to the total gross error averaged for all tenants sampled at a project. Exhibit F-9 displays the results. The overall model accounted for 11 percent of the variance in the outcome. The significant project characteristics associated with average total gross error were: the average number of household members, the average total annual household income, and the average proportion of verification errors. This suggests that PHA/projects with smaller households, households with smaller annual incomes, and households with fewer verification errors exhibit significantly smaller average total gross error, while controlling for the effects of all other variables in the model. However, none of the project practices measures were significantly related to the average total gross error, over and above the effects of the tenant level variables.

Exhibit F-9.
Regression Results: Relationships Between Project Characteristics, Practices, Verification Errors, and Average Total Gross Error

Variable	Standardized Betas
Total # of eligible units	.007
Section 8	-.057
Public Housing	-.054
Average number of household members	.247*
Average total annual household income	.137*
Proportion of female headed HH	.054
Proportion of minority headed HH	.077
Proportion of elderly/disabled HH	-.004
Average number of total allowances	-.030
Proportion of HH with overdue recertification	.018
On average, how many hours of training did each experienced (re)certification staff receive?	.000
Used computer software to: Keep track of pending verifications.	-.011
How get answers to staff questions: Figured the answer out for yourself.	-.060
Average proportion of verification errors	.206*
Adjusted R^2	.11

* coefficient is significant at the .05 level or greater (two-tailed test)

PHA/Project Use of Computers to Calculate Rent. We used analysis of variance to explore the relationship between PHA/project use of computers to calculate rent, and the average total gross error at the PHA/project level. Exhibit F-10 displays these results. Results were not significant, possibly because more than 94 percent of PHA/projects use computers to calculate rent. Similar results emerged when we compared computer use within each program type, as Exhibit F-11 indicates. None of the main effects of program type and the computer use or the interaction effect of program type by computer use were significant, most likely due to the very small cell sizes for the PHA/projects that reported not using computers to calculate rent (5.2% of Public Housing; 2.4% of PHA-administered Section 8; and 8.9% of owner-administered PHA/projects).

Exhibit F-10.
Analyses of Variance Results: Relationship Between Use of Computers to Calculate Rent and Average Total Gross Error

Projects' Use of Computers	Average Total Gross Error
Projects that Used Computers to Calculate Rent	18.70 (s.d.=29.48)
Projects that Did Not Use Computers to Calculate Rent	15.25 (s.d.=19.21)
Overall F Test	**.360 (n.s.)**

Exhibit F-11.
Analyses of Variance Results: Relationship Between Use of Computers to Calculate Rent and Average Total Gross Error, by Program Type

Projects' Use of Computers	Average Total Gross Error		
	Public Housing	PHA-Administered Section 8	Owner-Administered
Projects that Used Computers to Calculate Rent	19.44 (s.d.= 40.10)	20.51 (s.d.= 22.64)	16.68 (s.d.= 21.79)
Projects that Did Not Use Computers to Calculate Rent	23.06 (s.d.= 24.94)	11.04 (s.d.= 9.76)	12.14 (s.d.= 17.04)

Significance test for Program type: .559 (n.s.)
Significance test for Computer use: .236 (n.s.)
Significance test for the interaction effect of Program type by Computer use: .288 (n.s.)

C. Discussion

The results of these multivariate analyses support the findings presented in the main body of this report. At the household level, several characteristics were found to be significantly related to administrative errors and gross rent error. In four out of five models of administrative error, we found significant relationships with household race/ethnicity, size, annual income, and overdue recertification. Elderly/disabled household status was also related to four out of five measures of administrative error. Household characteristics associated with gross rent error included some of the same variables associated with administrative errors: minority-headed household, household size, annual income, and overdue recertifications.

At the household level, project program type and size was related to administrative errors in the case files, but only for consistency and calculation errors, which both occur within the 50058/50059 form. Unlike previous years, we found that project size was negatively related to these two administrative errors. None of the project characteristics were significantly related to gross rent error.

Project-level analyses also found little relationship between project practices and errors of any type. Several conceptual and methodological issues might explain the failure to find significant relationships between project practices and errors. The PSQ measures and error calculations occurred at the different levels of measurement and at different points in time. PSQ items and constructs were assessed via the self-report survey of the PHA/project managers and executive directors, while errors were determined using a wide variety of objective information collected and verified at the tenant level. Aggregating the tenant level variables and errors to the project level, by averaging these variables for all tenants sampled at a project, reduces the variables' variance and makes their distributions cluster closer to the mean, which in turn reduces the ability of the multivariate analyses to detect significant results. More concretely, PHA/project managers and executive directors might not have a precise awareness of how PHA/project staff members really conduct their day to day affairs, and as a result, might have responded to the

PSQ questions with a bias by presenting the information on how things *should* be done – not how they are *actually* done.

Unfortunately, we have no simple solutions to these issues. The discrepancy in the level of measurement could not be easily resolved without revising the sampling approach to increase the number of tenants sampled at the PHA/project. Increasing the number of sampled tenants per PHA/project would allow the combination of the tenant level variables and the PSQ items into the overall multilevel modeling. However, the sample size required for such an approach would increase the cost of the study. The only feasible recommendation at this time is to conduct additional item development and validation for the PSQ to improve its measurement of project practices. Focus groups and cognitive interviewing might aid in revision of the PSQ items by focusing attention on the specific circumstances and issues faced by the PHA/projects. Further, it would be beneficial to develop and validate some items on the potential difficulties in conducting training, using computer software, and getting support from various sources in verifying tenants' information. Having detailed indicators of the positive, as well as negative aspects the (re)certification process at the PHA/projects level would provide a more complete picture of the issues faced by the PHA/projects, reduce the positive bias, and possibly provide a better link between PSQ information and errors.

Appendix F. Multivariate Analysis

Table F-1
Constructs Used in the Project Level Analyses

Measured Constructs		Survey Questions	Descriptive Statistics
Block I ***Internal characteristics/ Control variables***	**Units per full-time certification staff ratio**	As of today, how many occupied or leased units does your PHA/project administer? As of today, please record the number of (re)certification staff working in each of the following categories. Ratio of the two numbers.	Average = 157.63 S.D. = 185.69
	Total # of eligible units	Based on administrative data from PSI.	Average = 826.93 S.D. = 2977.73
	Program type	Based on administrative data. Public Housing Section 8 Owner	(N=155, 33.70%) (N=126, 27.39%) (N=179, 38.91%)
	Average number of household members	Based on tenant data file, averaged for all sampled households at the project.	Average = 2.09 S.D. = .93
	Average total annual household income	Based on tenant data file, averaged for all sampled households at the project.	Average = 11897.56 S.D. = 5448.27
	Proportion of female headed HH	Based on tenant data file. Proportion of the sampled households at each project that were female headed.	Average = .79 S.D. = .22
	Proportion of minority headed HH	Based on tenant data file. Proportion of the sampled households at each project that were minority headed.	Average = .61 S.D. = .39
	Proportion of Elderly/Disabled HH	Based on tenant data file. Proportion of the sampled households at each project that were elderly/disabled.	Average = .57 S.D. = .35
	Proportion of HH with overdue recertification	Based on tenant data file. Proportion of the sampled households at each project that had an overdue recertification.	Average = .03 S.D. = .10
	Average number of total allowances	Based on tenant data file, averaged for all sampled households at the project.	Average = 1264.06 S.D. = 853.60
Block II ***Internal Procedures***	**Sum of the various uses of the computers**	In the past 12 months, did your PHA/project use computer software to do any of the following? (including using for verifications and QC monitoring) Sum of the 14 items (Alpha = .77) on the 2-point scale from 0 "No" to 1 "Yes"	Average = 9.73 S.D. = 2.85
	Average number of training hours for new and experienced staff	Average of the following two items (zero if no training was conducted): In the past 12 months, on average about how many hours of training did each new (re)certification staff receive? In the past 12 months, on average about how many hours of training did experienced (re)certification staff receive?	Average = 37.89 S.D. = 71.39
	Average rating of frequency of using various training types for new and experienced staff	For new staff trainings conducted in the past 12 months, how often did your PHA/project use the following training activities? For experienced staff trainings conducted in the past 12 months, how often did your PHA/project use the following training activities? Average of the 10 items (Alpha = .85) on the 4-point scale from 1 "Never" to 4 "Always"	Average = 1.92 S.D. = .72
	Average rating of frequency of using various techniques to monitor certifications	In the past 12 months, how often did reviewers use the following techniques to monitor (re)certifications? Average of the 9 items (Alpha = .78) on the 4-point scale from 1 "Never" to 4 "Always"	Average = 2.50 S.D. = .62
Block III ***Client Procedures***	**Average of the ratings of tenants easiness in answering interview questions**	In the past 12 months, how difficult was it for tenants to answer questions about the following? Average of the 10 items (Alpha = .81) on the 3-point scale from 1 "Very difficult" to 3 "Not at all difficult"	Average = 2.44 S.D. = .37

Measured Constructs		Survey Questions	Descriptive Statistics
	Average of the ratings of frequency of verifying tenant information	In the past 12 months, how often did you verify the following? Average of the 15 items (Alpha = .90) on the 4-point scale from 1 "Never" to 4 "Always"	Average = 3.66 S.D. = .51
	Average duration of initial and (re)certification interviews	An average of the following two items: In the past 12 months, how many minutes did a typical initial certification interview take? In the past 12 months, how many minutes did a typical annual recertification interview take?	Average = 36.30 S.D. = 21.63
	Average of the ratings of easiness in verifying tenant information	In the past 12 months, how difficult was it to verify the following? Average of the 15 items (Alpha = .86) on the 3-point scale from 1 "Very difficult" to 3 "Not at all difficult"	Average = 2.56 S.D. = .31
	Average of the ratings of uncooperativeness of people in verifying tenant information	In the past 12 months, how cooperative were the following people in obtaining verification information? Average of the 5 items (Alpha = .71) on the 3-point scale from 1 "Usually cooperative" to 3 "Usually not cooperative"	Average = 1.55 S.D. = .42
Block IV *Administrative errors*	**Average proportion of transcription errors**	Based on tenant data file. Average proportion of the endorsed components that were in error, averaged for all sampled households at the project.	Average = .25 S.D. = .18
	Average proportion of verification errors	Based on tenant data file. Average proportion of the endorsed components that were in error, averaged for all sampled households at the project.	Average = .25 S.D. = .16
	Average proportion of consistency errors	Based on tenant data file. Average proportion of the endorsed components that were in error, averaged for all sampled households at the project.	Average = .11 S.D. = .26
	Average proportion of calculation errors	Based on tenant data file. Average proportion of the endorsed components that were in error, averaged for all sampled households at the project.	Average = .59 S.D. = .54
	Average proportion of QC errors	Based on tenant data file. Average proportion of the endorsed components that were in error, averaged for all sampled households at the project.	Average = .36 S.D. = .19
OUTCOME	**Average total gross error**	Based on tenant data file. Gross error amount, averaged for all sampled households at the project	Average = 18.50 S.D. = 28.97

Note: Alpha is a measure of the internal consistency of the scale based on the intercorrelations of the scale's items (A scale with Alpha of .70 is typically considered to have an adequate internal consistency)

Table F-2.
Correlations Between Project-Level Measures

(A)	CONSTRUCTS	1	2	3	4	5	6	7	8	9	10	11
1	Sum of the various uses of the computers	1										
2	Average of the ratings of tenants easiness in answering interview questions	-.126**	1									
3	Average duration of initial and (re)certification interviews	-.008	-.076	1								
4	Average of the ratings of frequency of verifying tenant information	.194***	.016	.044	1							
5	Average of the ratings of easiness in verifying tenant information	-.072	.644***	-.044	.058	1						
6	Average of the ratings of uncooperativeness of people in verifying tenant information	.018	-.343***	.074	-.023	-.389***	1					
7	Average number of training hours for new and experienced staff	.132**	-.049	.035	.140**	-.026	.008	1				
8	Average rating of frequency of using various training types for new and experienced staff	.150**	-.094*	.131**	.226***	-.113*	.083	.474***	1			
9	Average rating of frequency of using various techniques to monitor certifications	.310***	-.113*	.112*	.225***	-.002	.114*	.222***	.356***	1		
10	Number of units reported by the PHA/Project	.114*	-.133**	.024	.080	-.166***	.076	.103*	.211***	.075	1	
11	Number of full-time (re)certification staff	.090	-.123**	.022	.089	-.130**	.059	.091*	.182***	.104*	.658***	1
12	Units per full-time certification staff ratio	.250***	-.067	-.033	.042	-.042	.094*	.080	.047	.042	.240***	.025

Note: *** p<.001; ** p<.01; * p<.