
**DRAFT ANALYSIS PLAN
FOR THE FY 2013 HUDQC STUDY**

**QUALITY CONTROL FOR RENTAL ASSISTANCE
SUBSIDY DETERMINATIONS STUDY**

Prepared for:

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INTRODUCTION

The purpose of this document is to describe how analyses will be conducted for the FY 2013 HUDQC Study: Quality Control for Rental Assistance Subsidy Determinations. The Department of Housing and Urban Development (HUD) provides housing assistance through several rental assistance programs. Subsidies are based on HUD regulations defining financial need, eligibility requirements, and subsidy amounts. Generally, eligibility for a HUD-assisted housing unit requires a total income equal to or below the very-low-income standard (50% of the median family income of the area). The tenant payment is set at the higher of two amounts: 10 percent of total income, or 30 percent of adjusted income, based on certain types of deductions.

This study examines the following rent subsidy programs:¹

- PIH-administered Public Housing (i.e., Public Housing)
- PIH-administered Section 8 projects
 - Moderate Rehabilitation
 - Vouchers
- Office of Housing-administered projects (i.e., 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 HUDQC Study focuses on the nature and extent of errors in rental assistance subsidies in the assisted housing programs listed above. The overall purpose of the study is to determine the type, severity, and cost of errors associated with income certification and rent calculations. This study will produce national estimates of error with a 95 percent likelihood that estimated aggregate national rent errors for all programs are within two percentage points of the true population rent calculation error. A nationally representative sample of 2,400 households in approximately 600 projects nationwide will be selected for review and verification of information used to determine rental assistance subsidies in their most recent (re)certification.² All tables and exhibits in the analysis plan are based on estimates, and should be interpreted accordingly. In order to conduct this review and verification, we will execute the following steps:

¹ In previous studies Moving to Work Public Housing Authorities were excluded from the study. In FY 2012 they were included as requested by HUD.

² The timing of the verification information is a key aspect of the study. This study seeks to verify information as of the most recent (re)certification, or in the absence of a (re)certification, to verify information when the (re)certification was due. If the (re)certification is more than one year overdue, verification will be obtained for the month the recertification would have been effective if it had been completed on time. The fact that the study is being conducted after the (re)certification has occurred, requires more attention to obtaining accurate reports and verifications than would be needed if the study was done at the time of (re)certification. In order for the study to represent the population of assisted households, it is necessary to select all households with equal probability, even if it means that their most recent (re)certifications were performed up to a year before.

1. **Review Household File.** Study Headquarters staff will use computer-assisted data collection technology to review and extract information contained in each sampled household's file. The focus of the review is HUD's forms 50058 and 50059 which are used by housing managers to record information required for determining rental assistance eligibility and subsidy amount; and the specific pieces of information contained in the file that are used by management to verify the figures used in the 50058 or 50059. The 50058/50059 forms also contain the rent calculated by management.
2. **Determine Administrative Errors.** Using the information in the household file, ICF will re-calculate the rent on the basis of verification documentation and information contained in the file. Discrepancies between the rent recorded on the 50058/50059 and this recalculation will indicate administrative errors.
3. **Interview Households.** Each household will participate in a detailed item by item interview, capturing each element in the rent calculation. This interview will probe on all financial resources and household circumstances, including those that may not be contained in the tenant file. Household members will be asked to sign releases permitting ICF to obtain verification from relevant third parties for items lacking acceptable documentation in the household file.
4. **Conduct Enhanced Verification.** Based on new or more accurate information provided by the household, ICF will independently obtain verification from third parties regarding this new information. In addition, verification of benefits and earned income will be obtained directly from official Federal-level sources by matching household member identifying information (name, Social Security number, date of birth) with Social Security Administration files and the National Directory of New Hires.
5. **Calculate QC Rent.** A rent calculation will be performed on the basis of verified information, including that contained in the original household file and that obtained through the interview process and third-party verification.
6. **Determine Error.** Errors are defined as the difference between the rent calculation on the 50058/50059 and rent determined by the QC rent calculation.

Using the data collected in the above steps and the error determinations, the data analysis will proceed to address the study's objectives.

RENT ERROR—THE DEPENDENT VARIABLE

Rent error in this study has several dimensions and definitions. At a very basic level, an error pertains to the condition in which a tenant is receiving an incorrect amount of subsidy, based on verified information.

Rent Used in Error Determinations. Error is determined by the difference between the rent actually paid by the household and the rent that should have been paid, based on verified information obtained from the household file, verified information provided by the household, and verified information obtained from third parties:

- **Actual Rent**—the monthly tenant rent indicated on the 50058/50059 forms or, if this item is missing, this information is obtained from other sources in the household file. This is the monthly household rent for the year to follow the most recent (re)certification.
- **Quality Control (QC) Rent**—the monthly household rent calculated by ICF using the information reported by the household and verified, as well as the verified information contained in the tenant file.

Calculation of Quality Control Rent. HUD specifies the formulas for determining assisted household rent for each of its programs. These formulas generally consider adjusted annual income, which is the total of household members' earned and unearned income, less specific allowances. There are several different calculation formulas, depending on the program and the specifics of each household's situation. These formulas are defined in the HUDQC Study Standards document delivered under separate cover.

Error Definitions. Study objectives require that several different types of errors be estimated on the basis of data collected in this study. The two primary distinctions are total errors and error rates.

Total Errors

- **Dollar Rent Error**—the dollar amount of Actual Rent minus QC Rent for an individual household. A negative number indicates an underpayment, meaning the household paid less than it should and HUD's subsidy 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.
- **Total Gross Rent Error**—the weighted sum of the absolute values of positive and negative individual household Rent Dollar Errors.
- **Total Net Rent Error**—the arithmetic value of the weighted sum of individual household Rent Dollar Errors.

Error Rates

- **Dollar Error Rate**—the quotient of Total Gross Rent Error divided by the weighted sum of individual household QC rents.

- **Case Error Rate**—the quotient of the weighted sum of Dollar Rent Errors in excess of \$5 per month divided by the total weighted number of households.

Errors in rental assistance subsidies relate to both eligibility and amount of subsidy:

- **Eligibility Error**—a household may not be eligible for rental assistance, which places the entire subsidy in error.³
- **Subsidy Error**—the amount of subsidy may be too high or too low.

Error sources are classified into two broad types:

- **Rent Error**—any of the components used to determine household rent (e.g., earned income, household size, medical expenses) could be in error. These are often attributed to tenant misreporting, but they can also be due to tenant misunderstanding.
- **Administrative Error**—local housing administrative staff may make mistakes (e.g., calculation errors, transcription errors, improper application of income or allowances) or they may fail to follow HUD requirements (e.g., fail to recertify on time). Some administrative errors (e.g., not requesting a Social Security number) do not produce rent errors.

Errors may be made in either the determination of initial eligibility or in the determination of the correct household payment. Two types of payment errors may occur:⁴

- **Overpayment**—household payment is above the correct amount, and HUD's subsidy is too low.
- **Underpayment**—household payment is below the correct amount, and HUD's subsidy is too high.

Appendix A contains the definitions of all key terms used in this analysis plan.

³ Eligibility is determined at the time of initial certification; therefore, eligibility errors will be assessed only for certifications, not recertifications.

⁴ It is possible that rent or procedural errors may produce no error in rent payment or subsidy amount. Some errors may “cancel” others out, or the individual items may not be of sufficient magnitude to have an effect on rents or subsidies.

PREPARATION OF ANALYTIC DATA FILES

The main analytic data files will be based on the results of household file reviews, household interviews, and third-party verification. While we will be using the third-party verified information to determine errors, the analytic files must also contain the information collected from the household files and household interviews to address the study objectives pertaining to error sources and causes. The household file information is needed to identify the incidence of administrative errors; the household interview data is needed to determine the incidence of household misreporting; both files and the verification file are needed to determine the extent that various types of resources contribute to error.

Our core master analytic file will consist of a household record containing:

- **Household Record Review Data**—all information collected from the 50058/50059, the items that are verified and the type of verification observed; and the tenant rent.
- **Household Interview Data**—all information collected during the household interview pertaining to items needed to calculate rent and determine eligibility.
- **QC Verification Data**—all information used to calculate the QC rent, consisting of verified information obtained from the household file, verified information provided by the household, and verified information obtained from third parties.

We will construct a series of analytic files to address the research questions, using the data in the master analytic file. Error values (as defined by the methods described above) will be calculated and appended to the main analytic file, and identify discrepancies and dollar differences between the three sources of household data listed above. Additional variables will be constructed, including error type (e.g., transcription, calculation). Weights equal to the inverse of the sampling fractions will be appended so that national estimates can be produced. Variance estimates will be produced using a replication procedure.

We will use two additional data sources. One of the study objectives is to determine whether 50058/50059 data entered into PIC/TRACS has associated QC errors. Another objective is to determine whether errors can be predicted from household and project characteristics. To obtain information on housing project characteristics, we conduct a survey of local housing managers (i.e., Project Staff Questionnaire, PSQ) from which we obtain information on characteristics of the housing project and management practices. We will create separate analytic files to conduct the analyses associated with the PSQ. Relevant household information will be appended to the project survey file. The study sample will be matched with PIC/TRACS, and the 50058/50059 data from TRACS/PIC will be appended to the household data for analysis.

ANALYSIS PLAN BY STUDY OBJECTIVE

This section of the Analysis Plan discusses the study objectives and describes the analysis that will address each objective. Appendix B contains a summary of the objectives and the source tables that address each objective. Appendix C contains shells for the source tables. Source tables will be used to produce the analytic exhibits displayed in the body of the report. We describe specific analytic exhibits and provide shells for these in the discussion below.

Objective 1: *Identify the various types of rent errors and error rates and related estimation variances.*

This objective requires us to identify types of errors and produce national estimates of the proportion of household cases with errors, along with associated variance estimates. These errors include the percent of households paying correct and incorrect rent, average dollar rent error, and dollar error rate. Analyses will cross-tabulate national estimates to produce a series of tables as described below. To assure comparability with prior studies, the tabular displays will follow the previously used formats and will include FY 2012 study results alongside the FY 2013 study results. Variance estimates are displayed in tables discussed under Objective 3.

Exhibit 1 illustrates how we will display the percent of households with proper payments. It provides the national estimate of the proportion of households whose QC rent is exactly equal to the Actual Rent, and the proportion within \$5 of an exact match. This exhibit also provides a comparison between FY 2012 and FY 2013 results, and a comparison of results by program type.

**Exhibit 1:
Percent of Households with Proper Payments (FY 2012 and FY 2013)**

Program Type	Percent Matched Within \$5		Percent Matched Exactly	
	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing				
PHA-administered Section 8				
<i>Total PHA-administered</i>				
Total Owner-administered				
Total				

Source Tables 2 and 2(S)

Exhibit 2 provides further information on the tenant error rate, displaying the average dollars in error and gross dollar error rate for the total population in PHA-administered and owner-administered projects. It compares the FY 2012 results with the FY 2013 results.

**Exhibit 2:
Rent Error: Percent of Households in Error, Average Gross Dollars in Error, and Error Rate
(FY 2012 and FY 2013)**

Program Type	Percent of Households in Error		Average Gross Dollars in Error		Gross Dollar Error Rate	
	FY 2012	FY 2013	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing						
PHA-administered Section 8						
<i>Total PHA-administered</i>						
Total Owner-administered						
Total						

Source Tables 2 and 5

Exhibits 3a and 3b display the dollar amount of error associated with tenant over- and under-payments. Exhibit 3a displays the percent of households paying less than the proper amount and the average dollar underpayment error. Exhibit 3b displays the same information for households paying more than the proper amount.

**Exhibit 3a:
Underpayment Households: Percent of Households and Average Monthly Dollar Amount of Error
(FY 2012 and FY 2013)**

Program Type	Percent of Households with Underpayment		Average Dollar Error for Households with Underpayment	
	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing				
PHA-administered Section 8				
<i>Total PHA-administered</i>				
Total Owner-administered				
Total				

Source Tables 2 and 4

**Exhibit 3b:
Overpayment Households: Percent of Households and Average Monthly Dollar Amount of Error
(FY 2012 and FY 2013)**

Program Type	Percent of Households with Overpayment		Average Dollar Error for Households with Overpayment	
	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing				
PHA-administered Section 8				
<i>Total PHA-administered</i>				
Total Owner-administered				
Total				

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

Previous QC studies identified several types of error that can be detected using information in the household file. These errors are identified using data obtained from the 50058/50059 directly as it appears on the 50058/50059 form, and other information from files used to determine which information should be recorded on the 50058/50059. Administrative errors are detectable through the analysis of the household file data, and may or may not result in rent errors. This analysis will not use QC rent error as a standard because the QC rent will be based on information obtained during the household interview as well as verification obtained from third parties.

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

Consistency errors are identified by assessing the logical conformity between elements within the 50058 or 50059 forms. For example, the *yearly child care cost that is not reimbursed* should only be completed if any family member is less than 13 years old. Elderly status must be consistent with the age of the head of household or spouse. If two items within the 50058/50059 form contradict one another, a consistency error exists.

Transcription errors are detected by comparing 50058/50059 data with information obtained from the household file. Each type of income and expense listed on the 50058/50059 form is compared to the supporting information found in the household file. If the 50058/50059 data do not match the household file data, a transcription error occurs.

The improper application of allowances and incorrect calculation of income are a subset of transcription errors. Failure to apply allowances correctly and identify income correctly will be identified by comparing household file information to 50058/50059 data. Allowance errors will be detected by calculating the allowances based on the household file and comparing this QC allowance to the Actual Allowance on the 50058/50059. Similarly, income will be calculated based on the types and amounts of income reported in the household file.

A series of exhibits will display errors detected in household file data. Exhibit 4 presents the percent of households with calculation and consistency errors in different sections of the 50058 and 50059 forms. More detailed data will be presented in Source Tables 4 (calculation errors) and 5 (consistency errors). Note that the 50058 form is formatted differently and in some sections provides more line items of information than the 50059 form. Consequently, the number and types of calculation and consistency errors on the forms will be different, and the findings from the two forms will not be comparable.

**Exhibit 4:
Percent of Households with Calculation and Consistency Errors (FY 2013)**

50058/50059 Item	Percent of Households					
	Calculation Errors			Consistency Errors		
	50058	50059	Total	50058	50059	Total
General Information	n/a	n/a	n/a			
Household Composition						
Net Family Assets and Income						
Allowances and Adjusted Income						
Family Rent and Subsidy Information						
Total						

Source Tables 13 and 14

Overdue Recertifications also produce errors in rents because rents are calculated using old information. We will calculate the error amount due to overdue recertification, based on the difference between Actual and QC Rent. Exhibit 5 will display the percent of cases with overdue recertifications, timely recertifications, and new certifications. This exhibit will provide this information by program type.

**Exhibit 5:
Certifications and Recertifications by Program Type (FY 2012 and FY 2013)**

Program Type	New Certifications		Timely Recertifications		Overdue Recertifications	
	FY 2012	FY 2013	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing						
PHA-administered Section 8						
<i>Total PHA-administered</i>						
Total Owner-administered						
Total						

Source Table 6

Our analysis will also graphically represent the proportion of cases that are new certifications, timely recertifications, and overdue recertifications. Exhibit 6 illustrates the error associated with overdue recertifications compared to errors from certification and timely recertifications. In cases with overdue recertifications, the information at the time the recertification was due will be used to determine rent, as it was in the previous studies.

**Exhibit 6:
Average Monthly Underpayment and Overpayment Dollar Amount Averaged Across All Households
(FY 2012 and FY 2013)**

Action Type	Underpayment Average Dollar Amount		Overpayment Average Dollar Amount	
	FY 2012	FY 2013	FY 2012	FY 2013
New Certification				
Timely Recertification				
Overdue Recertification				
Total				

Source Table 8

As in FY 2012, we will conduct additional analyses to summarize the information that addresses this objective. Exhibit 7 provides the proportion of cases with administrative error, the estimated average cost of each type of error, and the standard error of the estimated average (i.e., the variance estimate of the average). That cost will be the difference between the actual rent and the QC rent, using the household file information and correcting transcription and calculation errors.

**Exhibit 7:
Administrative Error: Percent of Households, Average Dollars in Error for All Households
Recalculated Rent (FY 2013)**

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 Error					
Calculation Error—Allowances					
Calculation Error—Income					
Calculation Error—Other					
Overdue Recertifications					
Any Procedural Error					
All Households with Procedural Errors					

Source Table 18

Exhibit 8 provides a summary of the errors identified from the 50058/50059 forms. These data are produced using cross-tabulations and show the error rates and costs for households with each type of procedural error, for households without procedural errors, and for the total weighted sample. The exhibit presents the percent of households in error, the average dollar error, and the standard errors for both households with recalculated 50058/50059 error (error determined using only the 50058/50059 form), and households with QC Rent error.

**Exhibit 8a:
Form HUD-50058/50059 Administrative Error: Percent of Households, Average Dollars in Error for Non-MTW Households with Recalculated Form HUD-50058/50059 Error (FY 2013)**

Error Type Based on 50058/50059 Recalculation	Households with Recalculated 50058/50059 Form Error			
	Percent of Households in Error	(Standard Error of Percent)	Average Dollar Error	(Standard Error of Mean)
Households with Consistency Error				
Households without Consistency Error				
Households with Allowance Calculation Error				
Households without Allowance Calculation Error				
Households with Income Calculation Error				
Households without Income Calculation Error				
Households with Other Calculation Error				
Households without Other Calculation Error				
Overdue Recertifications				
On-time Recertifications				
Certifications				
Unduplicated Count, Any Type of 50058/50059 Error				
Unduplicated Count, No 50058/50059 Error				
Total				

Source Tables 17

**Exhibit 8b:
Form HUD-50058/50059 Administrative Error: Percent of Households, Average Dollars in Error for Households with QC Rent Error (FY 2013)**

Error Type Based on 50058/50059 Recalculation	Households with QC Rent Error			
	Percent of Households in Error	(Standard Error of Percent)	Average Dollar Error	(Standard Error of Mean)
Households with Consistency Error				
Households without Consistency Error				
Households with Allowance Calculation Error				
Households without Allowance Calculation Error				
Households with Income Calculation Error				
Households without Income Calculation Error				
Households with Other Calculation Error				
Households without Other Calculation Error				
Overdue Recertifications				
On-time Recertifications				
Certifications				
Unduplicated Count, Any Type of 50058/50059 Error				
Unduplicated Count, No 50058/50059 Error				
Total				

Source Tables 17

Incorrectly applied flat rent schedule will be identified by obtaining flat rent schedules from PHAs and comparing them to the actual rent amount recorded on the 50058. This examination only applies to public housing program tenants. HUD policy requires that “for families who choose flat rents, the PHA must conduct a reexamination of family composition at least annually, and must conduct a reexamination of family income at least once every three years.” [24 CFR 960.257 (a)(2)]. Therefore, multiple flat rent schedules to cover the three year period prior to the data collection effort must be obtained and documented as to when they became effective. The correct flat rent for a particular case will vary depending on when the last annual recertification was conducted. The examination of flat rents and schedules will be accompanied by a discussion of the issues identified during the analysis.

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

This analysis will replicate the cross-tabulations developed in the previous studies that address error dollars. Results from FY 2012 and FY 2013 will be presented for comparison. The gross rent error is obtained by adding together the absolute values of the dollar amount of overpayments to the dollar amount of underpayments. The net cost for total errors is an arithmetic calculation of the sum of positive and negative nationally weighted error costs. This sum represents the net amount of tenant payments in error and will be displayed by program type. Exhibit 9 provides this information with its associated standard error.

**Exhibit 9:
Gross and Net Dollar Rent Error (Monthly) for All Households
(FY 2012 and FY 2013)**

Program Type	Average Dollars in Error							
	Gross Rent Error				Net Rent Error			
	FY 2012	(Standard Error)	FY 2013	(Standard Error)	FY 2012	(Standard Error)	FY 2013	(Standard Error)
Public Housing								
PHA-administered Section 8								
<i>Total PHA-administered</i>								
Owner-administered								
Total								

Source Table 5

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

Objective 2 estimates *procedural error* that can be attributed to mistakes made by the housing management staff. Except for overdue recertifications, it does not estimate QC error detected through the verification process. The purpose of Objective 4 is to determine the relationship between those procedural errors detected from the 50058/50059 forms and the total error found after all information was verified in the study. Exhibit 10 illustrates this analysis.

**Exhibit 10:
50058/50059 Rent Calculation Error Compared to QC Rent Error
(FY 2012 and FY 2013)**

Rent Calculation Method	Percent of Households with Correctly Calculated Rent		Percent of Households with Incorrectly Calculated Rent	
	FY 2012	FY 2013	FY 2012	FY 2013
Using Information on the 50058/50059 Form				
According to the QC Rent Calculation				
Both 50058/50059 calculation and QC Rent calculation				

Source QC Table 2 and Tenant File Table 2

Since HUD collects 50058/50059 forms centrally on the TRACS/PIC System, it may be beneficial for the agency to re-calculate information on the 50058/50059 forms to help identify cases likely to be in error. This decision could be made on the basis of the results of the descriptive analysis, or HUD may choose to use more sophisticated techniques. Additional discussion of the use of PIC and TRACS data to predict error is found under Objective 14.

Exhibit 11 presents the percent of households in error and the total annual program dollar errors, comparing error obtained from all sources identified during the study to error obtained from the tenant file alone.

**Exhibit 11:
Findings With and Without Information Obtained from Sources Other Than the Tenant File
(FY 2012 and FY 2013)**

Error Basis	Percent of Households in Error		Total Annual Dollar Errors	
	FY 2012	FY 2013	FY 2012	FY 2013
Error based on all income, asset, and expense items identified during the study				
Error based on tenant file without income, asset, and expense items identified during the household interview and verification obtained by ICF through third-party sources				

Source QC Tables 2 and 4 and Tenant File Tables 2 and 4

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

We plan to tabulate the household/tenant data to generate mean error rates and mean dollar costs for each program type (Public Housing, PHA-administered Section 8, and owner administered) and perform two-tailed t-tests to determine statistical significance of the differences across programs. Specifically, we will compare program means of gross error rate, gross dollar error, net error rate, and net dollar error. 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, which is the sum dollar amount of net error divided again by the sum dollar amount of QC Rent. We will also aggregate the data to generate total gross and net dollar errors for each program type by summing up, respectively, the two measures for the sampled projects under each program type. Again, statistical significance of

program differences will be tested by two-tailed t-tests. Sampling weights and replicate weights will be used in variance estimation for program differences in both means and aggregated measures. Exhibits 12a and 12b illustrate how these results might be displayed.

**Exhibit 12a:
Gross and Net Dollar Error (Monthly) for All Households (FY 2012 and FY 2013)**

Program Type	Gross Rent Error				Net Rent Error			
	Average Dollars in Error		Standard Error		Average Dollars in Error		Standard Error	
	2012	2013	2012	2013	2012	2013	2012	2013
Public Housing								
PHA-administered Section 8								
Owner-administered								
Total								

Source Table 5
* Difference at significance $p < .05$

**Exhibit 12b:
Gross and Net Dollar Error Rates (Monthly) for All Households (FY 2012 and FY 2013)**

Program Type	Gross Error Rate				Net Error Rate			
	2012	2013	2012	2013	2012	2013	2012	2013
Public Housing								
PHA-administered Section 8								
Owner-administered								
Total								

Source Table 5

Objective 6: 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 standards⁵ specifying the appropriate size unit for PHA-administered Section 8 households are shown in Exhibit 21 below.

**Exhibit 21:
PHA 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

⁵ Local projects have discretion in determining unit size, and may determine unit size differently than shown.

4	4	8
5	5	10

There are exceptions to these guidelines. If a tenant is elderly, disabled, pregnant, or meets other criteria, they may be allowed a larger bedroom unit. There are also circumstances when households are allowed smaller bedroom units. The determination of appropriate bedroom size is locally based. For this study it will be based on the *Data Collection Standards*, delivered under separate cover, which specify rules for bedroom size.

Overhousing refers to tenants occupying units that exceed the bedroom size allowed by HUD regulation for their actual household size. This study will replicate the analysis completed in previous studies, identifying by bedroom size and program, the proportion of households in compliance with and in violation of occupancy standards. This analysis will be conducted with national estimates of proportions in tabular displays showing the results for FY 2012 and FY 2013.

Exhibit 22 presents the percent of households in units with the correct number of bedrooms by program type with information for both the FY 2012 and FY 2013 study. Exhibit 23 presents the overall findings. The shaded cells generally indicate incorrect unit assignments. Exhibit 23a will show the findings from FY 2012 for comparison.

**Exhibit 22:
Percent of Households in Units with Correct Number of Bedrooms (According to Study Guidelines)
(FY 2012 and FY 2013)**

Number of Bedrooms	PHA-administered				Owner-Administered		Total	
	Public Housing		Section 8		FY 2012	FY 2013	FY 2012	FY 2013
	FY 2012	FY 2013	FY 2012	FY 2013				
0								
1								
2								
3								
4								
5								
All Units								

Source Table 19

**Exhibit 23:
Percent of All Households by
Number of Bedrooms and Number of Household Members (in thousands) (FY 2013)**

Number of Bedrooms	Number of Household Members									
	1	2	3	4	5	6	7	8	9	10
0										
1										
2										
3										
4										
5										

Source Table 19a

**Exhibit 23a:
Percent of All Households by
Number of Bedrooms and Number of Household Members (in thousands) (FY 2012)**

Number of Bedrooms	Number of Household Members									
	1	2	3	4	5	6	7	8	9	10
0										
1										
2										
3										
4										
5										

Source Table 19a

Objective 7: Provide information on the extent to which errors are concentrated in projects and programs.

We will determine the degree to which errors are concentrated in certain projects, as opposed to randomly distributed across the sample. On the one hand, if most errors are caused by the project staff, we would expect to find errors clustered in certain projects. On the other hand, if errors are mostly caused by the tenant, we would expect to find errors randomly distributed among projects. We will explore the application of the hierarchical linear modeling (HLM) technique to partition the variance of rent error and estimate the proportion of variance at the project level. Given the nested data structure (household/tenants within the project), HLM allows us to formally estimate the variance at the two levels and model the variance with predictor variables if the project level variance is substantially large.

Using information obtained from the Project Staff Questionnaire in combination with household/tenant data, we will conduct multivariate analyses to explore the association between project characteristics (e.g., program type, staff training practices, percent of elderly tenants, management practices) and error rates. This analysis will identify how each of these variables contributes to differences in error. The results will provide HUD with information to guide the management of error rates, and will elaborate relationships between management practices and project/tenant characteristics associated with error rates.

Objective 8: Estimate 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. It is key to prudent housing management practices to correctly determine initial eligibility criteria. Eligibility for housing assistance is based on five certification criteria: family composition, citizenship, verification of Social Security numbers, signed consent forms, and low and very low income limits. This study will examine eligibility criteria and verify the accuracy of collected information. We will examine citizenship, Social Security number, consent form and low income criteria, and present results as shown in Exhibit 24, and by program type, as in Exhibit 25.

**Exhibit 24:
Percent of Newly Certified Households Meeting Certification Criteria (FY 2012 and FY 2013)**

Certification Criteria	Met Criterion	
	FY 2012	FY 2013
Citizenship		
Social Security Number		
Consent Form		
Low and Very Low Income		
Meets All Eligibility Criteria		

Source Table 7

**Exhibit 25:
Percent of Newly Certified Households Meeting Certification Criteria (FY 2013)**

Certification Criteria	Percent of Households Meeting the Criteria		
	Public Housing	PHA-administered Section 8	Owner-administered Section 8
Citizenship			
Social Security Number			
Consent Form			
Low and Very Low Income			
Meets All Eligibility Criteria			

Source Table 7b

Objective 9: *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 applied.*

Objective 10 examines several issues related to the Section 8 Voucher program that have important but indirect influences on rent errors.

RENT REASONABLENESS ANALYSIS

To comply with the rent reasonableness requirement, housing authorities must determine that Section 8 Voucher rents are reasonable in comparison to rents for similar housing in the private, unassisted market. We will determine, based on information obtained from PHAs, their usual method for assessing rent reasonableness. Exhibit 26 illustrates these results and compares them to FY 2012.

**Exhibit 26:
Rent Reasonableness Determination Methods (FY 2012 and FY 2013)**

Method for Assessing Rent Reasonableness	PHAs Using Method FY 2012		PHAs Using Method FY 2013	
	Number	Percent	Number	Percent
Unit-to-Unit Comparison				
Unit-to-Market Comparison				
Point System				
Other or Rent Control				
No Information Provided				
Total				

Using information collected from household files, we will estimate the proportion of new admission Section 8 Voucher recipients with rent reasonableness documentation. We will also determine the timing of their most recent determination, and compare this to the results from FY 2012. Exhibits 27 and 28 illustrate these results. **Annual recertifications** require rent reasonableness documents only when owners increased rental rates. We will examine case files to determine when the current rent first became effective, and whether rent reasonableness documentation is present in the files. This analysis is also displayed in Exhibit 27. We will also compare timing of determinations from FY 2012 and FY 2013, as Exhibit 28 illustrates.

**Exhibit 27:
Rent Reasonableness Documents in Files for New Admissions and Annual Recertifications
(FY 2012 and FY 2013)**

Status	FY 2012		FY 2013	
	Units in 1,000s	Percent	Units in 1,000s	Percent
Determination documented				
A signed statement certifying that the rent is reasonable				
Comparable units documented by the property owner in section 12a of HUD 52517				
Comparable units documented on other documents				
Any other reference to rent reasonableness				
Missing reference				
No determination documented				
Total				

**Exhibit 28:
Timing of Most Recent Rent Reasonableness Determination—New Admissions and Annual Recertifications
(FY 2012 and FY 2013)**

Determination-Certification Chronology	FY 2012		FY 2013	
	Units in 1000s	Percent	Units in 1000s	Percent
More than 4 months before lease date				
Up to 4 months before lease date				
After lease date—up to 2 months				
After lease date—greater than 2 months				
Date missing				
Total				

PAYMENT STANDARDS ANALYSIS

HUD will supply the published Fair Market Rents (FMR) to ICF. This information will be compared to payment standard data from the Form HUD-50058, which will be captured during the data collection process. As Exhibit 29 indicates, payment standard discrepancies will be tabulated by reason for the discrepancy. Household rents outside of the 90–110 percent band of the FMR will be appropriately flagged. The comparison of FMRs and payment standard data will result in a table that summarizes the number and percent of households below, in, and above the 90–110 percent band. Exhibit 30 displays this. Exhibit 31 shows the breakdown of why households in Exhibit 30 fell outside 90 to 110 percent of the Fair Market Rent.

**Exhibit 29:
Number and Percent of Households with Payment Standard Discrepancies (FY 2013)**

Reason	Number of Households (Elderly/ Disabled)	Number of Households (Non-Elderly/ Disabled)	Total Percent of Households with Discrepancies
Incorrect Number of Bedrooms/Household Member was Used			
Incorrect Payment Standard Schedule Was Used			
Fair Market Rent Was Used Instead of the Payment Standard			
Gross Rent instead of the Payment Standard was Used			
Project Staff Used Enhanced Rate for Disabled/Elderly Tenant			
Project Staff Made a Typographical Error			
Project Based Voucher & Pre-Merger Certificate: No Payment Standard (Section 11 of the Form HUD-50058 Filled Out)			
Enhanced Voucher			
Other Reasons; Decrease in Payment Standard, Typographical Errors, Used the FMR, Limitation of the Computer Software System			
Total			

Data in this exhibit are not weighted.

**Exhibit 30:
Number of Households Meeting Payment Standard Requirements**

Characteristics	Fair Market Rent			Percent of Cases Outside the 90 to 110% Band
	Under 90%	90-110%	Over 110%	
Non-Elderly or Disabled				
Elderly or Disabled				
Payment Standard Compared with Fair Market Rent				

Data in this exhibit are not weighted.

**Exhibit 31:
Details of Cases Falling Outside 90–110 Percent of the Fair Market Rent**

Reason	Fair Market Rent	Percent of Cases Outside

	Under 90%	Over 110%	the 90 to 100% Band
Incorrect Number of Bedrooms/Household Member was Used			
Incorrect Payment Standard was Used			
Fair Market Rent was Used Instead of the Payment Standard			
Gross Rent was Used Instead of the Payment Standard			
Project Staff Used Enhanced Rate for Disabled/Elderly Tenant			
Enhanced Voucher			
Other Reasons—Overdue Recertification, 105% of Fair Market Rent Used, Software Limitations, Original Payment Standard Over 110%			
Total			

Data in this exhibit are not weighted

Exhibit 32 shows the number of projects that fell outside the 90–100 percent band of the Fair Market rent, while Exhibit 33 compares the results from FY 2012 and FY 2013.

**Exhibit 32:
Details of Projects Falling Outside 90–110 Percent of the Fair Market Rent**

Characteristics	Number	Percent
Projects using less than 90% of the Fair Market Rent for their Payment Standard (no approval document found)		
Projects using less than 90% of the Fair Market Rent for their Payment Standard (approval document found)		
Projects using more than 110% of the Fair Market Rent for their Payment Standard (no approval document found)		
Projects using more than 110% of the Fair Market Rent for their Payment Standard (approval document found)		
Projects using between 90% to 110% correctly		
Total		

Data in this exhibit are not weighted

**Exhibit 33:
Comparison of the FY 2012 to FY 2013 Payment Standard Analysis**

Characteristic	FY 2012		FY 2013	
	Number	Percent	Number	Percent
Housing Choice Voucher Sample				
Households Where the AC and QC Payment Standard Did Not Match				
Households Where the AC Payment Standard Did Not Meet the 90% to 110% of Fair Market Rent Threshold				
Households That Were Not Exempt from the 90% to 110% of Fair Market Rent Threshold and Did Not Meet HUD's Payment Standard Requirements				

Data in this exhibit are not weighted

ICF will also obtain payment standard schedules from the PHAs included in the study. We will determine the correct payment standard for each household, using the PHA schedules, and compare this amount to the payment standard data from the Form HUD-50058. Where discrepancies are found, we will attempt to determine the reason for the discrepancy. This analysis will be summarized and presented with the above analysis.

UTILITY SCHEDULES

The types of documents used by PHAs to identify and calculate utility allowance values will be tabulated. Voucher utility allowances will also be evaluated by comparing the utility allowance amount recorded in the household file utility worksheet to the utility allowance recorded on the 50058/50059 form, and to the amount calculated using the PHA utility allowance schedule. ICF will obtain utility schedules in use by the PHAs and the utility allowance worksheet from the household file. We will compare the total utility allowance amount, the number of bedrooms, and the address. Exhibits 34 and 35 illustrate this analysis.

**Exhibit 34:
Types of Documents Used by the PHA to Identify Utilities and Calculate the Utility Allowance Value
(FY 2012 and FY 2013)**

Type of Document Used for	Identifying Utilities				Calculating the Utility Allowance Value			
	FY 2012		FY 2013		FY 2012		FY 2013	
	Number of PHAs	Percent of PHAs	Number of PHAs	Percent of PHAs	Number of PHAs	Percent of PHAs	Number of PHAs	Percent of PHAs
HUD Form 52667—Allowance Schedule								
HUD Form 52641—HAP contract								
HUD Form 52517—Tenancy Approval								
Other (Lease, Reports, Comparisons, etc.)								
Combination of Above								
Total								

Data in this exhibit are not weighted.

**Exhibit 35:
QC Utility Allowance Comparison Findings (FY 2013)**

Outcome	Percent	Number
No Worksheet Was Available		
QC Utility Allowance Matched Amount on Form HUD-50058		
Worksheet Was Missing Critical Information		
Discrepancy in Number of Bedrooms		
Discrepancy Due to Math Error		
Discrepancy—Incorrect Schedule Used		
Discrepancy—Unable to Determine Reasons		
Total		

Data in this exhibit are not weighted.

Exhibit 36 differentiates between cases in which the QC allowance amount was able to be calculated and lists the reasons and number of cases in which the QC utility allowance amount was not able to be calculated. For the cases where the QC utility allowance amount was calculated, Exhibit 37 compares the QC utility allowance to the Form HUD-50058 Form utility allowance amounts.

**Exhibit 36:
Availability of All Information to Enable QC Utility Allowance Calculation (FY 2013)**

Outcome	QC UA Amount Calculated	Number	Percent
Appropriate worksheet and schedule available			
UA worksheet or other comparable document not available			
Appropriate UA schedule not available			
Worksheet was missing critical information			
Total			

Data in this exhibit are not weighted.

**Exhibit 37:
QC Utility Allowance compared to Form HUD-50058 Form Utility Allowance**

Outcome	Number	Percent
QC UA matched amount on Form HUD-50058 Form		
Discrepancy due to math error/transfer error		
Discrepancy—unable to determine reasons		
Total		

Data in this exhibit are not weighted

Objective 10: Estimate total positive and negative errors in terms of HUD subsidies.

The actual cost of errors to HUD is expressed in terms of subsidy payments. HUD subsidies for assisted housing programs equal the allowed expense level or payment standard minus the tenant rent. In the previous study, proper payments were defined as those in which the Actual Rent equals the QC Rent (i.e., there is no dollar error in the tenant payment). Errors can be either overpayments (Actual Rent greater than QC Rent) or tenant underpayments (Actual Rent less than QC Rent). Overpayment error rates are computed by dividing the total amount of overpayment by the total Actual Rent; underpayment error rates are calculated by dividing the total amount of underpayments by the total Actual Rent. Tenant overpayments are negative subsidy errors; tenant underpayments are positive subsidy errors. Tables as shown in Exhibits 38, 39, and 40 below will illustrate the results of these comparisons.

**Exhibit 38:
Negative Subsidy Households (Tenant Overpayment)
Percent of Households and Average Monthly Dollar Amount of Error
(FY 2012 and FY 2013)**

Program Type	Percent of Households in Error		Average Dollar Amount of Error			
			Negative Subsidy Households (with errors > \$5)		All Households	
	FY 2012	FY 2013	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing						
PHA-administered Section 8						
<i>Total PHA-administered</i>						
Total Owner-administered						
Total						

Source Tables 2 and 4

**Exhibit 39:
Positive Subsidy Households (Tenant Underpayment)
Percent of Households and Average Monthly Dollar Amount of Error
(FY 2012 and FY 2013)**

Administration Type	Percent of Households in Error		Average Dollar Amount of Error			
			Positive Subsidy Households (with errors > \$5)		All Households	
	FY 2012	FY 2013	FY 2012	FY 2013	FY 2012	FY 2013
Public Housing						
PHA-administered Section 8						
<i>Total PHA-administered</i>						
Total Owner-administered						
Total						

Source Tables 2 and 4

**Exhibit 40:
Average Monthly Dollar Amounts of Error for Negative (Tenant Overpayment) and
Positive (Tenant Underpayment) Subsidies Averaged Across All Households
(FY 2012 and FY 2013)**

Household Type	Negative Subsidy Average Dollar Amount of Error		Positive Subsidy Average Dollar Amount of Error	
	FY 2012	FY 2013	FY 2012	FY 2013
Certifications				
Non-overdue Recertifications				
Overdue Recertifications				
Total				

Source Table 8

Objective 11: *Determine the extent to which error rates in projects that use an automated rent calculation system differ from errors in those that do not.*

In previous studies we found that the vast majority of projects used computers for various administrative processes. For the FY 2013 study, we will augment these findings by examining the data to measure the sophistication of computer and information technology use by projects. We will build a scale to gauge the extent to which project personnel use computer technologies in information collection/integration, rent calculation, verification, and database management. Exhibit 41 displays some possible administrative tasks for which projects may use computer technology.

**Exhibit 41:
Percent of Projects Using Computer Software for Administrative Tasks in the Past 12 Months (FY 2013)**

Administrative Tasks	Percent Using Computer Software			
	Public Housing Projects	PHA- Administered Section 8 Projects	Owner- Administered Projects	All Projects
Interview tenants and record answers				
Input verified information				
Calculate rent				
Print the Form HUD-50058/50059				
Print letters to the tenants				
Submit tenant information to HUD				
Conduct rent reasonableness comparisons				
Maintain demographics on the population				
Keep other types of statistics				
Do not use computers				
Total Number of PHA/Projects				

We will also examine use of computers by project size, as illustrated by Exhibit 42.

**Exhibit 42:
Percent of Projects Using Computer Software Uses in the Past 12 Months, by Project Size (FY 2013)**

Administrative Tasks	Percent Using Computer Software		
	Projects with <150 Units	Projects with 150 to 500 Units	Projects with >500 Units
Interview tenants and record answers			
Input verified information			
Calculate rent			
Print the Form HUD-50058/50059			
Print letters to the tenants			
Submit tenant information to HUD			
Conduct rent reasonableness comparisons			
Maintain demographics on the population			
Keep other types of statistics			
Do not use computers			
Total Number of PHA/Projects			

Objective 12: *Determine whether other tenant or project characteristics on which data are available are correlated with higher or low error rates.*

Prior HUDQC studies have identified a number of tenant and project variables that accounted for rent errors. We will build upon the information to further examine household/tenant and project characteristics that are potentially related to errors. Multiple regression with combined project and household data will be conducted to examine this issue.

Many Federal and state agencies use error-prone modeling techniques to identify cases with a high probability of being in error. These techniques are often used in welfare, Medicaid, student aid, food assistance, and tax compliance programs. A variety of tools have been used, including regression analysis, sequential search techniques, discriminant analysis, correlation and regression trees (CART), and other statistical methods, depending on the nature of the available data. Ideally, these methods are used to develop equations that predict the likelihood a case is in error or an administrative unit is making errors.

Error prone models provide a cost-effective means to target quality control monitoring efforts by identifying specific types of households and projects likely to exhibit high error rates. We will use multivariate regression techniques, path analysis, and CART to develop error-prone models. The dependent variable in these analyses will be rent errors.

Project characteristics (e.g., PHA/project size; staff training methods) and tenant characteristics (e.g., number of sources of income; type of expenses) will be used as independent variables. Where possible, we will incorporate data from PIC/TRACS into the models to provide HUD

with more information for identifying projects and households likely to exhibit high error rates. Although the explanatory findings of error-prone models are important, we believe that such models will be most useful to HUD if its analysts can combine the findings from program data (e.g., PIC/TRACS) to target projects and households likely to exhibit high error rates. In this proposed study, our error-prone modeling efforts will focus on producing practical tools that HUD analysts can use in ongoing quality control efforts.

Objective 13: Determine whether cases for which HUD-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.

A national database of tenant 50058/50059s is maintained by HUD on the PIC/TRACS system. However, not all tenants are on the system. There are concerns about projects that fail to routinely transmit information to PIC/TRACS, and it is hypothesized that a reason for this failure is that recertifications are not performed on a timely basis. The existence of PIC/TRACS in concert with the QC study provides the opportunity to investigate the relationship between PIC/TRACS reporting and rent accuracy.

ICF will compare QC error rates for sampled tenants who appear on PIC/TRACS with those who do not. Any difference that is greater than sampling error would be considered significant. The results will be presented, as shown in Exhibits 43 and 44, for program type and payment type. The total population will be used to determine the average dollars in error. Exhibit 43 will show the percentage of households in error for each of the program types by presence or absence in PIC/TRACS, and the average dollars in error for these households. Exhibit 44 will show the same information, but for all households.

**Exhibit 43:
PIC/TRACS Data by Program Type and Average Gross Dollars in for Households in Error (FY 2013)**

Administration Type	PIC/TRACS Present		PIC/TRACS Absent	
	Percent of All Households in Error	Average Dollars in Error	Percent of All Households in Error	Average Dollars in Error
Public Housing				
PHA-administered Section 8				
<i>Total PHA-administered</i>				
Total Owner-administered				
Total				

**Exhibit 44:
Presence and Absence of PIC/TRACS Data by Program Type and
Average Gross Dollars in for All Households (FY 2013)**

Payment Type	PIC/TRACS Present		PIC/TRACS Absent	
	Percent of Households in PIC/TRACS	Average Dollars in Error	Percent of Households Not in PIC/TRACS	Average Dollars in Error
Overpayment				
Underpayment				
Proper Payment				
Total				

Analyses will identify the number of households where the effective date of action on the 50058/50059 used in the study matches the effective date of action in the PIC/TRACS file. For those households that match on effective date of action, we will determine whether certain key variables match. Variables included in this analysis will be gross income, net income, tenant rent, and total tenant payment (TTP). Exhibit 45 provides the percent of households where key variables on the 50058/50059 forms matched the PIC/TRACS data.

**Exhibit 45:
Percent of Matched and Non-Matched Dollar Amounts for Key Variables
Matching Variables from the 50058/50059 Form and PIC/TRACS Data Files (FY 2013)**

	Gross Income		Net Income		Total Tenant Payment*		Tenant Rent
	PIC	TRACS	PIC	TRACS	PIC	TRACS	PIC
No Match							
Match							
Subtotal							
Missing							
Total							

* Note: Total Tenant Payment PIC results exclude MTW households.

Exhibit 46 examines net and gross errors by program type and matched PIC/TRACS data. This exhibit illustrates that it is important to review net error and gross error separately as their average dollar errors may be substantially different.

Exhibit 46:
Average Net and Gross Dollars in Error by Program Type and PIC/TRACS Data for All Households

Administration Type	Average Net Rent Error		Average Gross Rent Error	
	PIC/TRACS Present	PIC/TRACS Absent	PIC/TRACS Present	PIC/TRACS Absent
Public Housing				
PHA-Administered Section 8				
<i>Total PHA-Administered</i>				
Total Owner-administered				
Total				

FINAL REPORT OUTLINE

The final report will communicate all study findings and recommendations to HUD, the assisted housing community, Congress, and other interested parties. As such, it must provide accurate and clear findings in a fashion that is easy to read and understand. While many of the overall goals of the project are straightforward, the processes for addressing them may be analytically complex. The challenge in preparing the report is to present important findings without burdening the reader with all of the complexity that went into conducting the analysis. Our approach to report preparation is to use simple tabular and graphical displays that illustrate key findings.

The final report outline is presented below.

Executive Summary

- I. Introduction** (Purpose, background, and organization of the report)
- II. Methodology** (Requirements and study standards, sample description, data collection process, data sources, and analysis processes)
- III. Study Objectives** (Discussion of each of the study's analytic objectives)
- IV. Findings** (Narrative, tabular, and graphical presentations of the findings)
 - A. Overview
 - B. Rent Error
 - C. Sources of Error
 - D. Errors Detected Using Information Obtained from Project Files
 - E. Occupancy Standards Analysis
 - F. Rent Reasonableness Analysis
 - G. Utility Allowance Analysis
 - H. Payment Standards Analysis
 - I. PIC/TRACS Analysis
 - J. Project Staff Questionnaire Analysis
 - K. Multivariate Analysis
 - L. The 20 Largest PHAs Study
- V. Recommendations** (Policy implications, and a discussion of how study methodologies can be improved)
- VI. Appendices**
 - A. Rent Calculations
 - B. Weighting Procedures
 - C. Source Tables
 - D. Consistency and Calculation Errors
 - E. Project Staff Questionnaire Analysis
 - F. Multivariate Analysis

**APPENDIX A:
DEFINITIONS OF KEY TERMS**

DEFINITIONS

Actual TTP—actual Total Tenant Payment obtained from the 50058/50059.

Actual Rent—the monthly tenant rent indicated on the 50058/50059 forms or, if this item is missing, this information is obtained from other sources in the household file. This is the monthly tenant rent for the year to follow the most recent (re)certification.

Administration Type—PHA or Owner.

Aggregate Error—the difference between the actual rental payment and the QC rental payment.

Case Type—certification, recertification, and overdue recertification.

Case Error Rate—the quotient of dividing the sum of the weights of tenant cases with dollar error rates in excess of \$5 per month by the total sum of the weights of tenant cases.

Dollar Error Rate—the quotient of dividing the Total Gross Rent Error by the weighted sum of the QC rents.

Dollar Rent Error—the dollar amount of Actual Rent minus QC Rent for an individual household. A negative number indicates an underpayment, meaning the household paid less than it should and HUD's subsidy 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.

Eligibility Error—a household may not be eligible for rental assistance, which places the entire subsidy in error.⁶

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

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

Overpayment—results when the tenant paid more than he/she 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 Vouchers, Section 8 Moderate Rehabilitation, Section 8 Substantial Rehabilitation and New Construction, Section 8 Loan Management, Section 8 Property Disposition, Section 202 PRAC/PAC, and Section 811 PRAC/PAC.

⁶ Eligibility is determined at the time of initial certification; therefore, eligibility errors will be assessed only for certifications, not recertifications.

Administrative Error—local housing administrative staff may make mistakes (e.g., calculation errors, transcription errors, improper application of income or allowances) or they may fail to follow HUD requirements (e.g., fail to recertify on time). Some administrative errors (e.g., not requesting a Social Security number) do not produce rent errors.

Quality Control Month (QCM)—the effective date of the most recent action in the file.

Quality Control (QC) Total Tenant Payment (TTP)—calculated value using both household interview and QC Verification Data.

Quality Control (QC) Rent—the monthly tenant rent calculated by ICF using the verified information contained in the tenant file, verified information reported by the household and verified information obtained from third parties,

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

Rent Dollar Error—the dollar amount of the Actual Rent minus the QC Rent for an individual household. A negative number indicates an underpayment, meaning the household paid less than it should and HUD's subsidy 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.

Subsidy Error—the amount of subsidy may be too high or too low.

Total Gross Rent Error—the weighted sum of the absolute values of positive and negative individual household Rent Dollar Errors.

Total Net Rent Error—the arithmetic value of the weighted sum of individual household Rent Dollar Errors.

Underpayment—results when the tenant paid less than he/she should have paid; HUD's contribution was higher than it should have been.

**APPENDIX B:
SOURCE TABLES RESPONDING TO EACH
OBJECTIVE**

Tables Responding to Objective(s)

OBJECTIVE	SOURCE TABLE
<p>Objective 1: Identify the various types of errors and error rates and related estimated variances.</p>	<p>2. Percent of Households by Payment Type and Program Type 2. Proper Payment Based on a Match of Actual and QC Rent Within \$5 2(S). Proper Payment Based on Exact Match of Actual and QC Rent 3. Dollar Rent Error by Program Type 4. Dollar Error Amount by Payment Type and Program Type 4. Proper Payment Based on a Match of Actual and QC Rent Within \$5 4(S). Proper Payment Based on Exact Match of Actual and QC Rent 5. Gross and Net Rent Error, by Program Type 5. Proper Payment Based on a Match of Actual and QC Rent Within \$5 5(S). Proper Payment Based on Exact Match of Actual and QC Rent</p>
<p>Objective 2: Identify the dollar costs of the various types of errors.</p>	<p>6. Case Type by Program Type 8. Dollar Error Amount by Payment Type and Case Type 8. Proper Payment Based on a Match of Actual and QC Rent Within \$5 8(S). Proper Payment Based on Exact Match of Actual and QC Rent 13. Calculation Errors on Form HUD-50058/50059 14. Consistency Errors on Form HUD-50058/50059 17a. Administrative Error: Number and Percent of Households, Average Dollars in Error For Non-MTW Households with Recalculated 50058/50059 Rent Error by Administrative Error Type 17b. Administrative Error: Number and Percent of Households, Average Dollars in Error For Households with QC Rent Error by Administrative Error Type 18. Administrative Error: Number and Percent of Households, Average Dollars in Error for All Households by Administrative Error Type</p>
<p>Objective 3: Estimate national-level net costs for total errors and major error types.</p>	<p>5. Gross and Net Rent Error by Program Type</p>
<p>Objective 4: Determine the relationship between errors detectable using the HUD 50058 and HUD 50059 forms and total errors found in the study.</p>	<p>2. Percent of Households by Payment Type and Program Type (based on QC Rent and the Tenant File) 2. Proper Payment Based on a Match of Actual and QC Rent Within \$5 2(S). Proper Payment Based on Exact Match of Actual and QC Rent 4. Dollar Error Amount by Payment Type and Program Type (based on QC Rent and the Tenant File) 4. Proper Payment Based on a Match of Actual and QC Rent Within \$5 4(S). Proper Payment Based on Exact Match of Actual and QC Rent</p>

OBJECTIVE	SOURCE TABLE
Objective 5: Determine whether error rates and error costs have statistically significant differences from program to program.	5. Gross and Net Rent Error by Program Type
Objective 6: Determine the extent to which households are overhoused relative to HUD's occupancy standards.	19. Occupancy Standards on Form HUD-50058/50059 19a. Frequency and Percent of All Households by Number of Bedrooms and Number of Household Members
Objective 7: Provide information on the extent to which errors are concentrated in projects and programs.	3. Dollar Rent Error by Program Type These data are from the Project Staff Questionnaire
Objective 8: Estimate the percentage of newly certified tenants who were incorrectly determined eligible for program admission.	7. Percent of Newly Certified Households Meeting Certification Criteria 7b. Percent of Newly Certified Households Meeting Certification Criteria by Program Type
Objective 9: 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.	Source tables are not used for rent comparability reporting.
Objective 10: Estimate total positive and negative errors in terms of HUD subsidies.	2. Percent of Households by Payment Type and Program Type 2. Proper Payment Based on a Match of Actual and QC Rent Within \$5 2(S). Proper Payment Based on Exact Match of Actual and QC Rent 4. Dollar Error Amount by Payment Type and Program Type (based on QC Rent and the Tenant File) 4. Proper Payment Based on a Match of Actual and QC Rent Within \$5 4(S). Proper Payment Based on Exact Match of Actual and QC Rent 8. Dollar Error Amount by Payment Type and Case Type 8. Proper Payment Based on a Match of Actual and QC Rent Within \$5 8(S). Proper Payment Based on Exact Match of Actual and QC Rent
Objective 11: Determine the extent to which error rates in projects that use an automated rent calculation system differ from error rates in those that do not.	2. Percent of Households by Payment Type and Program Type 2. Proper Payment Based on a Match of Actual and QC Rent Within \$5 2(S). Proper Payment Based on Exact Match of Actual and QC Rent 4. Dollar Error Amount by Payment Type and Program Type (based on QC Rent and the Tenant File) 4. Proper Payment Based on a Match of Actual and QC Rent Within \$5 4(S). Proper Payment Based on Exact Match of Actual and QC Rent These data are from the Project Staff Questionnaire

OBJECTIVE	SOURCE TABLE
Objective 12: Determine whether other tenant or project characteristics on which data are available are correlated with high or low error rates.	Multivariate error prone analysis using tenant and project characteristics as independent variables and QC error as the dependent variable.
Objective 13: Determine whether cases for which HUD-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.	Source tables are not used for rent comparability reporting.

**APPENDIX C:
NATIONAL ESTIMATE SOURCE TABLES**

**SOURCE TABLES BASED ON QUALITY CONTROL
DATA**

HUD QC FY 2013
Table 1a. Verification of QC Rent Components
Third-Party Verbal or in Writing, Documentation, or EIV/UIV

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
Table 1b. Verification of QC Rent Components
Third Party in Writing

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
 Table 1c. Verification of QC Rent Components
 Third Party in Writing or EIV/UIV

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
 Table 1d. Verification of QC Rent Components
 Third Party Verbal

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
Table 1e. Verification of QC Rent Components
Documentation

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
Table 1f. Verification of QC Rent Components
EIV (Enterprise Income Verification)

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
Table 1g. Verification of QC Rent Components
UIV (Upfront Income Verification)

Rent Component	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						
Pension, Etc.						
Public Assistance						
Other Income						
Asset Income						
Child Care Expense						
Disability Expense						
Medical Expense						

HUD QC FY 2013
Table 2. Percent of Households by Payment Type and Program Type

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												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 2(S). Percent of Households by Payment Type and Program Type
(Proper Payment Based on Exact Match of Actual and QC Rent)

Program Type		Payment Type									Total		
		Underpayment			Proper Payment			Overpayment			# 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												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 3. Dollar Rent Error by Program Type

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)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 4. Dollar Error Amount by Payment Type and Program Type

Program Type		Underpayment (Monthly)				Overpayment (Monthly)				QC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 4(S). Dollar Error Amount by Payment Type and Program Type
(Proper Payment Based on Exact Match of Actual and QC Rent)

Program Type		Underpayment (Monthly)				Overpayment (Monthly)				QC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 5. Gross and Net Rent Error by Program Type

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)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 5(S). Gross and Net Rent Error by Program Type
(Proper Payment based on Exact Match of Actual and QC Rent)

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)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 6. Case Type by Program Type

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												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013
Table 7. Percent of Newly Certified Households Meeting Certification Criteria

Certification Criteria	Met Criterion		Did Not Meet Criterion	
	# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
Citizenship				
Social Security Number				
Consent Form				
Low and Very Low Income				
Meets All Eligibility Criteria				

HUD QC FY 2013
Table 7b. Percent of Newly Certified Households Meeting Certification Criteria by Program Type

Certification Criteria		Met Criterion		Did Not Meet Criterion	
		# of Cases (in 1,000)	% of Cases	# of Cases (in 1,000)	% of Cases
Public Housing	Citizenship				
	Social Security Number				
	Consent Form				
	Low and Very Low Income				
	Meets All Eligibility Criteria				
PHA-Administered Section 8	Citizenship				
	Social Security Number				
	Consent Form				
	Low and Very Low Income				
	Meets All Eligibility Criteria				
Owner-Administered	Citizenship				
	Social Security Number				
	Consent Form				
	Low and Very Low Income				
	Meets All Eligibility Criteria				

HUD QC FY 2013
Table 8. Dollar Error Amount by Payment Type and Case Type

Case Type		Underpayment (Monthly)				Overpayment (Monthly)				QC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
Certification	Total												
Recertification	Non-Overdue												
	Overdue												
	Total												
Total													

HUD QC FY 2013
Table 8(S). Dollar Error Amount by Payment Type and Case Type
(Proper Payment based on Exact Match of Actual and QC Rent)

Case Type		Underpayment (Monthly)				Overpayment (Monthly)				QC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
Certification	Total												
Recertification	Non-Overdue												
	Overdue												
	Total												
Total													

Rent Component		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
Overpayment	Earned Income									
	Pension, Etc.									
	Public Assistance									
	Other Income									
	Asset Income									
	Dependent Allowance									
	Elderly HH Allowance									
	Child Care Allowance									
	Disability Allowance									
	Medical Allowance									
No Error										
Total with Rent Error Calculated										

HUD QC FY 2013
Table 12a. Elderly/Disabled Allowances

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									
Incorrect Allowance									
Correct Allowance									
Total									

HUD QC FY 2013
Table 12b. Dependent Allowances

Allowances	Households Without Dependent(s)			Households With Dependent(s)			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									
Incorrect Allowance									
Correct Allowance									
Total									

HUD QC FY 2013
Table 13. Calculation Errors on Form HUD-50058/50059

Items	Form HUD-50058		Form HUD-50059		Total	
	# of Errors	# of Cases (in 1,000)	# of Errors	# of Cases (in 1,000)	# of Errors	# of Cases (in 1,000)
Household Composition						
Net Family Assets and Income						
Allowances and Adjusted Income						
Family Rent and Subsidy Information						

HUD QC FY 2013
Table 14. Consistency Errors on Form HUD-50058/50059

Items	Form HUD-50058		Form HUD-50059		Total	
	# of Errors	# of Cases (in 1,000)	# of Errors	# of Cases (in 1,000)	# of Errors	# of Cases (in 1,000)
General Information						
Household Composition						
Net Family Assets and Income						
Allowances and Adjusted Income						
Family Rent and Subsidy Information						

HUD QC FY 2013
Table 15a. Verification of Form HUD-50058/50059 Rent Components
Third-Party Verbal or in Writing, Documentation, or EIV/UIV

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 15b. Verification of Form HUD-50058/50059 Rent Components
Third Party in Writing

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 15c. Verification of Form HUD-50058/50059 Rent Components
Third Party in Writing or EIV/UIV

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 15d. Verification of Form HUD-50058/50059 Rent Components
Third Party Verbal

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 15e. Verification of Form HUD-50058/50059 Rent Components
Documentation

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 15f. Verification of Form HUD-50058/50059 Rent Components
EIV (Enterprise Income Verification)

Rent Component	No Verification		Verification				Total	
	# of Cases (in 1,000)	Row % of Cases	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		
Earned Income								
Pension, Etc.								
Public Assistance								
Other Income								
Asset Income								
Child Care Expense								
Medical Expense								

HUD QC FY 2013
Table 16a. QC Rent Component for Household With QC Rent Error (>\$5)

Rent Component		Form HUD-50058		Form HUD-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						
	With Error						
Pensions, Etc.	No Error						
	With Error						
Public Assistance	No Error						
	With Error						
Other Income	No Error						
	With Error						
Asset Income	No Error						
	With Error						
Child Care Expense	No Error						
	With Error						
Disability Expense	No Error						
	With Error						
Medical Expense	No Error						
	With Error						
All Components	No Error						
	With Error						
Total							

HUD QC FY 2013
 Table 16b. QC Error Cases With Missing Verification in Tenant File

Rent Component		Form HUD-50058		Form HUD-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						
	Not Verified						
Pension, Etc.	Verified						
	Not Verified						
Public Assistance	Verified						
	Not Verified						
Other Income	Verified						
	Not Verified						
Asset Income	Verified						
	Not Verified						
Child Care Expense	Verified						
	Not Verified						
Disability Expense	Not Verified						
Medical Expense	Verified						
	Not Verified						

HUD QC FY 2013
Table 17a. Administrative Error: Number and Percent of Households, Average Dollars in Error
For Non-MTW Households With Recalculated Form HUD-50058/50059 Rent Error by Administrative Error Type

Error Type	Non-MTW Households with Recalculated Form HUD-50058/50059 Rent Error		
	# of Households in Error	% of Households in Error	Average Gross Dollar Error
Transcription Error			
No Transcription Error			
Consistency Error			
No Consistency Error			
Allowances Calculation Error			
No Allowances Calculation Error			
Income Calculation Error			
No Income Calculation Error			
Other Calculation Error			
No Other Calculation Error			
Overdue Recertification			
On-time Recertification			
Certification			
Any Administrative/Procedural Error			
No Administrative/Procedural Error			
Total Households			

HUD QC FY 2013
Table 17b. Administrative Error: Number and Percent of Households, Average Dollars in Error
For Non-MTW Households With QC Rent Error by Administrative Error Type

Error Type	Households with QC Rent Error		
	# of Households in Error	% of Households in Error	Average Gross Dollar Error
Transcription Error			
No Transcription Error			
Consistency Error			
No Consistency Error			
Allowances Calculation Error			
No Allowances Calculation Error			
Income Calculation Error			
No Income Calculation Error			
Other Calculation Error			
No Other Calculation Error			
Overdue Recertification			
On-time Recertification			
Certification			
Any Administrative/Procedural Error			
No Administrative/Procedural Error			
Total Households			

HUD QC FY 2013
Table 18. Administrative Error: Number and Percent of Households, Average Dollars in Error
For All Households by Administrative Error Type

Error Type	Gross QC Rent Error			Net QC Rent Error		
	# of Households	% of Households	Average Dollar Error	# of Households	% of Households	Average Dollar Error
Transcription Error						
No Transcription Error						
Consistency Error						
No Consistency Error						
Allowances Calculation Error						
No Allowances Calculation Error						
Income Calculation Error						
No Income Calculation Error						
Other Calculation Error						
No Other Calculation Error						
Overdue Recertification						
On-time Recertification						
Certification						
Any Administrative/Procedural Error						
No Administrative/Procedural Error						
Total						

HUD QC FY 2013
 Table 19a. Frequency and Percent of All Households
 by Number of Bedrooms and Number of Household Members

Number of Bedrooms	Number of Household Members																						
	1		2		3		4		5		6		7		8		9		10		11		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
0																							
1																							
2																							
3																							
4																							
5+																							

SOURCE TABLES BASED ON TENANT FILE DATA

HUD QC FY 2013 [Tenant File]
Table 2. Percent of Households by Payment Type and Program Type

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												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013 [Tenant File]
Table 2(S). Percent of Households by Payment Type and Program Type
(Proper Payment based on Exact Match of Actual and QC Rent)

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												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

Note: These tables reflect analysis using only the information found in the tenant file. The analysis does not include income and expense items identified during the household interview or verified by the contractor through third-party sources. The term DC Rent (instead of QC Rent) indicates the rent was calculated using only documents found in the tenant file.

HUD QC FY 2013 [Tenant File]
Table 3. Dollar Rent Error by Program Type

Program Type		Actual Rent (Monthly)				DC Rent (Monthly)				Gross Rent Error (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013 [Tenant File]
Table 4. Dollar Error Amount by Payment Type and Program Type

Program Type		Underpayment (Monthly)				Overpayment (Monthly)				DC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

Note: These tables reflect analysis using only the information found in the tenant file. The analysis does not include income and expense items identified during the household interview or verified by the contractor through third-party sources. The term DC Rent (instead of QC Rent) indicates the rent was calculated using only documents found in the tenant file.

HUD QC FY 2013 [Tenant File]
Table 4(S). Dollar Error Amount by Payment Type and Program Type
 (Proper Payment Based on Exact Match of Actual and QC Rent)

Program Type		Underpayment (Monthly)				Overpayment (Monthly)				DC Rent (Monthly)			
		# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

HUD QC FY 2013 [Tenant File]
Table 5. Gross and Net Rent Error by Program Type

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)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

Note: These tables reflect analysis using only the information found in the tenant file. The analysis does not include income and expense items identified during the household interview or verified by the contractor through third-party sources. The term DC Rent (instead of QC Rent) indicates the rent was calculated using only documents found in the tenant file.

HUD QC FY 2013 [Tenant File]
Table 5(S). Gross and Net Rent Error by Program Type
(Proper Payment Based on Exact Match of Actual and QC Rent)

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)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount	# of Cases (in 1,000)	Col. % of Cases	Sum Dollar Amount (in 1,000)	Avg. Dollar Amount
PHA-Administered	Public Housing												
	Section 8												
	Total												
Owner-Administered	Owner-Administered												
	Total												
Total													

Note: This table reflects analysis using only the information found in the tenant file. The analysis does not include income and expense items identified during the household interview or verified by the contractor through third-party sources. The term DC Rent (instead of QC Rent) indicates the rent was calculated using only documents found in the tenant file.