Appendix C: Data Sources, Limitations and Advantages, and Validation

This section is organized by strategic goal, measure and program.

Strategic Goal 1: Strengthen the Nation's Housing Market To Bolster the Economy and Protect Consumers

Measure 1a: Prevent foreclosures. By September 30, 2013, assist 700,000 homeowners who are at risk of losing their homes due to foreclosure.

- **500,000 homeowners will be assisted through FHA early delinquency intervention.**
  o **Data source:** FHA Single Family Data Warehouse Meta Tables.
  o **Limitations/advantages of the data:** The data originate in the Single Family Insurance System-Claims Subsystem, and for convenience are reported from FHA Single Family Housing Enterprise Data Warehouse, Loss Mitigation Table. The resolutions that are counted as loss mitigation are forbearance agreements, loan modifications, partial claims, preforeclosure sales, and Deeds in Lieu of foreclosure. A small and decreasing number of "other" resolutions that were previously counted, along with supplemental claims, are now excluded. Total claims comprise loss mitigation plus conveyance claims.
  o **Validation, verification, and improvement of measure:** No data limitations are known to affect this indicator. The loan servicers enter the FHA data, and the FHA monitors the data entry.

- **200,000 homeowners will be assisted through FHA loss mitigation programs.**
  o **Data source:** FHA Single Family Data Warehouse Meta Tables.
  o **Limitations/advantage of the data:** The data originate in the Single Family Insurance System-Claims Subsystem, and for convenience are reported from FHA Single Family Housing Enterprise Data Warehouse, Loss Mitigation Table. The resolutions that are counted as loss mitigation are forbearance agreements, loan modifications, partial claims, preforeclosure sales, and Deeds in Lieu of foreclosure. A small and decreasing number of "other" resolutions that were previously counted, along with supplemental claims, are now excluded. Total claims comprise loss mitigation plus conveyance claims.
  o **Validation, verification, and improvement of measure:** No data limitations are known to affect this indicator. The loan servicers enter the FHA data, and the FHA monitors the data entry.

- **For all FHA borrowers that receive loss mitigation assistance, achieve a Consolidated Claims Workout (CCW) ratio of 50 percent in FY 2012.**
  o **Data source:** FHA Single Family Data Warehouse Meta Tables.
  o **Limitations/advantages of the data:** The data originate in the Single Family Insurance System-Claims Subsystem, and for convenience are reported from FHA Single Family Housing Enterprise Data Warehouse, Loss Mitigation Table. The resolutions that are counted as loss mitigation are forbearance agreements, loan modifications, partial claims, preforeclosure sales, and Deeds in Lieu of foreclosure. A small and decreasing number of "other" resolutions that were previously counted, along with supplemental claims, are now excluded. Total claims comprise loss mitigation plus conveyance claims.

- o **Validation, verification, and improvement of measure:** No data limitations are known to affect this indicator. The loan servicers enter the FHA data, and the FHA monitors the data entry.

- **For FHA borrowers receiving a CCW, achieve a 6-month re-default rate of 13 percent or less.**
  - o **Data source:** FHA Single Family Data Warehouse Meta Tables.
  - o **Limitations/advantages of the data:** The data originate in the Single Family Insurance System-Claims Subsystem, and for convenience are reported from FHA Single Family Housing Enterprise Data Warehouse, Loss Mitigation Table. The resolutions that are counted as loss mitigation are forbearance agreements, loan modifications, partial claims, preforeclosure sales, and Deeds in Lieu of foreclosure. A small and decreasing number of "other" resolutions that were previously counted, along with supplemental claims, are now excluded. Total claims comprise loss mitigation plus conveyance claims.
  - o **Validation, verification, and improvement of measure:** No data limitations are known to affect this indicator. The loan servicers enter the FHA data, and the FHA monitors the data entry.

Measure 3a: Reduce vacancy rates. By September 30, 2013, reduce average residential vacancy rate in 70 percent of the neighborhoods hardest hit by the foreclosure crisis relative to comparable areas.

- o **Data source:** Disaster Recovery and Grants Reporting System.
- o **Limitations/advantages of the data:** As activities are completed, grantees enter the data.
- o **Validation, verification, and improvement of measure:** Grantee-entered data are subject to review and verification by HUD staff as part of quarterly performance report reviews.

Strategic Goal 2: Meet the Need for Quality Affordable Rental Homes

Measure 5a: Preserve affordable rental housing. By September 30, 2013, preserve affordable rental housing by continuing to serve 5.4 million total families and serve an additional 61,000 families through HUD's affordable rental housing programs.

Community Planning and Development

HOME Investment Partnerships

- o **Data source:** Integrated Disbursement and Information System.
- o **Limitation/advantages of the data:** Data reliability has been enhanced by the re-engineering of the system at the end of FY 2009 into FY 2010.
- o **Validation, verification, and improvement of measure:** The Office of Community Planning and Development field staff verifies program data when monitoring grantees.

Housing Opportunities for Persons With AIDS

- o **Data source:** Annual performance reports and Integrated Disbursement and Information System.
- o **Limitation/advantages of the data:** Data are reported by formula and competitive grantees through the Consolidated Annual Performance and Evaluation Report and the Annual Progress Report, respectively. These reports reflect annual data collection with limited use of

information management technology systems, pending further upgrades. The Housing Opportunity for Persons With AIDS program collects performance outcomes on housing stability, access to care, and prevention of homelessness. These performance reports completed by grantees provide the program with insights into client demographics, expenditures for eligible activities, and the number of households served. At this time, the program does not have a client-level data system that provides site-specific information on performance outcomes. Pending enhancements to the Integrated Disbursement and Information System, however, will help support data quality and reduce the grantees' burden.

o **Validation, verification, and improvement of measure:** Performance reporting information is reviewed by Housing Opportunities for Persons With AIDS technical assistance providers and recorded in grant profiles and national summaries on the program's website (HUDHRE.info). HUD guidance and technical assistance assists grantees in verifying data quality and completing reports.

Homeless Assistance Grants

o **Data source:** The Housing Inventory Count, as submitted through the Homelessness Data Exchange.

o **Limitations/advantages of the data:** The data are collected only annually, and it takes nearly a year from the date they are collected to the date they are received at HUD as a clean product. The advantages are that they are a comprehensive source of data and they specifically record the number of new beds in the year preceding the night of the annual homeless inventory.

o **Validation, verification, and improvement of measure:** Grantees perform an annual housing inventory and report the number of homeless shelters in their communities to HUD as a requirement of their homeless assistance grant applications. The data are collected in a database that has several validations built into it. Subsequently, the Office of Special Needs Assistance Programs performs data-quality reviews by calling grantees about suspect data to either get corrected data or an explanation for the data. The Office of Special Needs Assistance Programs annually assesses the data quality and revisits the validations to see if more can be included in the database to reduce the number of callbacks and thus reduce the turnaround time of the data.

Neighborhood Stabilization Program

o **Data source:** Disaster Recovery Grant Reporting System.

o **Limitations/advantages of the data:** As activities are completed, grantees enter the data.

o **Validation, verification, and improvement of measure:** Grantee-entered data are subject to review and verification by HUD staff as part of quarterly performance report reviews.

Tax Credit Assistance Program

o **Data source:** Integrated Disbursement and Information System.

o **Limitations/advantages of the data:** Data reliability has been enhanced by the re-engineering of the system at the end of FY 2009 into FY 2010.

o **Validation, verification, and improvement of measure:** Program staff reviews weekly reports to ensure data validity and resolve identified data problems.

Gulf Coast Disaster

- o **Data source:** Disaster Recovery Grant Reporting System.
- o **Limitations/advantages of the data:** As activities are completed, grantees enter the data.
- o **Validation, verification, and improvement of measure:** Grantee-entered data are subject to review and verification by HUD staff as part of quarterly performance report reviews.

<u>**Multifamily Housing**</u>

Project-Based Rental Assistance

- o **Data source:** Tenant Rental Assistance Certificate System and Integrated Real Estate Management System.
- o **Limitations/advantages of data:** The Tenant Rental Assistance Certificate System and Integrated Real Estate Management System have more than 6,000 business rules to ensure data validation. The applications are working with clean, accurate, and meaningful data. Data fields are required for property and project management purposes. These systems serve two primary customers: HUD staff and business partners called performance-based contract administrators.
- o **Validation, verification, and improvement of measure:** The system business rules and operating procedures are defined in HUD Occupancy Handbook 4350.3; HUD's IT system security protocols; and financial requirements established in the Office of Management & Budget's Circular A-127. Often referenced as validation rules, these business rules check for data accuracy, meaningfulness, and security of access logic and controls. The primary data element for the Tenant Rental Assistance Certificate System is the HUD 50059 tenant certification, which originates from owner/agents, performance-based contract administrators, and traditional contract administrators. HUD's 50059 transmissions are processed via secure system access and a predetermined system script. Invalid data are identified by an error code and are returned to the sender with a descriptive message and procedures to correct the error. This electronic process approximates that of the paper Form HUD 50059. The Tenant Rental Assistance Certificate System edits every field, according to the HUD rental assistance program policies. The Integrated Real Estate Management System uploads data from the Tenant Rental Assistance Certificate System nightly. These data are used exclusively for project management purposes. Thus, the data edits retain the currency of the source system. The nightly updates ensure data accuracy for reporting in these systems. The Integrated Real Estate Management System was certified and accredited by the Chief Information Security Officer on March 12, 2010, and the Tenant Rental Assistance Certificate System was certified and accredited on June 25, 2008. This system is currently undergoing the certification and accreditation review again, which will be completed in FY 2011.

Project Rental Assistance Contract (Sections 202 Elderly and 811 Persons with Disabilities)

- o **Data source:** Tenant Rental Assistance Certificate System and Integrated Real Estate Management System.
- o **Limitations/advantages of the data:** The Tenant Rental Assistance Certificate System and Integrated Real Estate Management System have more than 6,000 business rules to ensure data validation. The applications are working with clean, accurate, and meaningful data.

Data fields are required for property and project management purposes. These systems serve two primary customers: HUD staff and business partners called performance-based contract administrators.

- o **Validation, verification, and improvement of measure:** The system business rules and operating procedures are defined in HUD Occupancy Handbook 4350.3; HUD's IT system security protocols; and financial requirements established in the Office of Management & Budget's Circular A-127. Often referenced as validation rules, these business rules check for data accuracy, meaningfulness, and security of access logic and controls. The primary data element for the Tenant Rental Assistance Certificate System is the HUD 50059 tenant certification, which originates from owner/agents, performance-based contractor administrators, and traditional contract administrators. HUD's 50059 transmissions are processed via secure system access and a predetermined system script. Invalid data are identified by an error code and are returned to the sender with a descriptive message and procedures to correct the error. This electronic process approximates that of the paper Form HUD 50059. The Tenant Rental Assistance Certificate System edits every field, according to the HUD rental assistance program policies. The Integrated Real Estate Management System uploads data from the Tenant Rental Assistance Certificate System nightly. These data are used exclusively for project management purposes. Thus, the data edits retain the currency of the source system. The nightly updates ensure data accuracy for reporting in these systems. The Integrated Real Estate Management System was certified and accredited by the Chief Information Security Officer on March 12, 2010, and the Tenant Real Assistance Certificate System was certified and accredited on March 9, 2011.

Insured Tax Exempt/Low-Income Housing Tax Credit

- o **Data source:** Office of Housing Development Management Action Plan goals SharePoint site
- o **Limitations/advantages of the data:** Completed new LIHTC/TE units are posted on the SharePoint site based on data provided by the HUD Project Managers who have worked on these projects. The data are judged to be reliable for this measure.
- o **Validation, verification, and improvement of measure:** HUD field staff provide the data which is reviewed and verified by Multifamily Hub and Headquarters staff.

Public and Indian Housing

Indian Housing Block Grant

- o **Data source:** The Office of Native American Programs Performance Tracking Database.
- o **Limitation/advantages of data:** The Performance Tracking Database is populated by information reported in the Annual Performance Reports submitted within 90 days of the end of each recipient's program year. Occupied units are not counted, only "completed units."
- o **Validation, verification, and improvement of measure:** The last Indian Housing Block Grant program evaluation found that "Tribes have very low vacancy rates (half of the 28 tribes report vacancy rates less than 1.4 percent), and three-fourths of the tribes reported turning over a vacant unit within a month." In addition, The Office of Native American Programs performs routine monitoring and oversight of tribes' overall program management.

Public Housing

- o **Data source:** HUD's Inventory Management System/Public and Indian Housing Information Center System.
- o **Limitations/advantages of the data:** Public housing agencies self-report the data. Public housing agencies annually certify to the accuracy of the building and unit counts as required by the Office of Capital Improvements. Public housing agencies certify to the accuracy of the data submitted to HUD in the Inventory Management System/Public Housing Information Center system that the Department uses to calculate the formula for allocating Capital Fund and Operating Fund grants.
- o **Validation, verification, and improvement of measure:** With the annual recertification process, data inconsistencies are identified in the Inventory Management System/Public Housing Information Center system. Public housing agencies correct errors in the data displayed on the Capital Fund Building and Unit Data Certification tab page and the Development Details web page. These data corrections are required before certifying the accuracy of the data for that development. When a public housing agency encounters errors that the public housing agency or field office staff cannot correct, the public housing agency is required to inform the Real Estate Assessment Center Technical Assistance Center Help Desk. This center assigns a Help Ticket number to the public housing agency, and the public housing agency enters the number on the Development Details web page. Finally, the public housing agency must also provide a comment that indicates what data elements are wrong, what the correct data are, and why the data cannot be corrected through the normal procedures.

Tenant Based Rental Assistance Vouchers

- o **Data source:** HUD's Voucher Management System.
- o **Limitations/advantages of the data:** The Voucher Management System captures information related to the leasing and Housing Assistance Payment expenses for the Housing Choice Voucher Program. The public housing agencies enter the information, which provides the latest available leasing and expense data. The data, therefore, are subject to human (data-entry) error. The Department, however, has instituted "hard edits" for entries in the system.
- o **Validation, verification, and improvement of measure:** A "hard edit" is generated when a public housing agency enters data that are inconsistent with prior months' data input. When a hard edit is generated, a financial analyst reviews the data and, if necessary, contacts the public housing agency to resolve differences. If the issue cannot be resolved successfully, the transaction is rejected and the public housing agency is required to re-enter the correct information. This process provides additional assurance that the reported data are accurate. The Housing Choice Voucher Program uses four other means to ensure the accuracy of the data:
  1. HUD has developed a voucher utilization projection tool, which will enable the Department and public housing agencies to forecast voucher utilization and better manage the Voucher program.
  2. The Housing Choice Voucher Financial Management Division performs data-validation checks of the Voucher Management System data after the monthly database has been submitted to HUD Headquarters for management reporting purposes. Data that appear

to be inconsistent with prior months' data are resolved with the public housing agency. Corrections are entered directly into the Voucher Management System to ensure that the data are accurate.

3. The Public and Indian Housing Quality Assurance Division, using onsite and remote Voucher Management System reviews, validates the data. The division staff reviews source documents on site at the public housing agency to determine if the leasing, Housing Assistance Program expenses, and Net Restricted Assets are consistent with data reported in the Voucher Management System. REAC also compares VMS to FASS data and rejects it if it is materially different.

PIH Moderate Rehabilitation

o **Data source:** Each year, public housing agencies provide data to the Public and Indian Housing field offices, including which Moderate Rehabilitation contracts will be renewed. The field offices calculate renewal rents and forward all data to the Financial Management Center, which confirms the data and also calculates and requests total required renewal and replacement funding. After funding has been received, the Financial Management Center obligates and disburses funding for Moderate Rehabilitation Renewals or Replacement vouchers with Housing Choice Vouchers funds.

o **Limitations/advantages of the data:** Timeliness and validity of data are dependent on multiple entities, including the Moderate Rehabilitation project owners, Public and Indian Housing field offices, and the Financial Management Center. It is primarily a detailed, time-consuming, manual process.

o **Validation, verification, and improvement of measure:** The Financial Management Center reviews the data provided by the field offices and follows-up on incorrect or suspect data before submitting funding requests. A Financial Management Center division director or team leader must approve funding obligation and disbursement. The Office of Housing Voucher Programs is currently working to develop a more streamlined and automated process to validate and improve the validation.

Strategic Goal 3: Utilize Housing as a Platform for Improving Quality of Life

Measure 6: Reduce homelessness. By September 30 2013, in partnership with the VA, reduce the number of homeless Veterans to 35,000 by serving 35,500 additional homeless Veterans. HUD is also committed to making progress towards reducing family and chronic homelessness and is working towards milestones to allow for tracking of these populations.

Continuums of Care

o **Data source:** The point-in-time data are used as the baseline and the Annual Performance Report shows incremental changes annually.

o **Limitations/advantages of the data:** The Annual Performance Report is reported throughout the year and each grantee is required to submit its APR 90 days after the end of its operating year, which creates a 90-day time lag for HUD to receive a full year of data. HUD needs additional time to ensure the data's accuracy. HUD has implemented greater quality checks in the reporting database and a uniform review process for its field office staff to ensure greater consistency of review.

o **Validation, verification, and improvement of measure:** The Office of Special Needs Assistance Programs has several validation checks on the data. The Office does some extrapolation of the Annual Performance Report data to account for the missing data submissions. HUD has implemented a minimum standard review process for all of its field offices to use when reviewing an APR. Additionally, due to changes under the HEARTH Act, HUD is able to prevent renewal grants from receiving renewal funds until the APR is submitted. The point-in- time data are based on an annual count performed by all Continuums of Care in the last week of January. These data are entered into a database, where they are analyzed for accuracy and callbacks are performed. A point-in-time count is required biennially for both sheltered and unsheltered homeless people. These data are different from the Annual Performance Report data, which have only sheltered data.

Homelessness Prevention and Rapid Re-housing Program

o **Data source:** Homelessness Prevention and Rapid Re-housing Annual Performance Reports.
o **Limitations/advantages of the data:** These data are all required to come from the Homeless Management Information System (HMIS), which provides a more accurate means for collecting the data as compared to other forms of data collection, because HMIS allows a longitudinal history of clients with the ability to de-duplicate across programs within a single HPRP jurisdiction.
o **Validation, verification, and improvement of measure:** The Office of Special Needs Assistance Programs performs data analysis and verification when the data are received. The database for the HPRP Annual Performance Report has several validations to improve data quality.

HUD-VASH

o **Data source:** The Department of Veterans Affairs sends monthly field reports to HUD. HUD reviews the data and then converts them to a PHA-specific format. These monthly data include the number of Veterans referred to public housing agencies, the number of vouchers issued, and the number of Veterans who have leased units.
o **Limitations/advantages of the data:** The data quality and accuracy of VA data are deemed high because of the numerous levels of oversight by VA (including senior staff at local, regional, and national levels) and HUD's review of data for quality-control purposes. Under HUD's systems, the Public and Indian Housing Information Center and Voucher Management System, HUD is not able to collect information on referrals, and the data on voucher issuance, although improving, are still not as reliable as the data reported by VA.
o **Validation, verification, and improvement of measure:** HUD routinely compares the data reported by VA with data in HUD's systems. In addition, HUD and VA recently executed a data-sharing agreement, signed by both agencies in June 2012, which enables the comparison of records from both agencies' systems on HUD-VASH participants. HUD and VA have started generating discrepancy reports, which then are sent to PHAs and VAMCs in order for them to correct errors identified in participants' records.

Strategic Goal 4: Build Inclusive and Sustainable Communities Free From Discrimination

Measure 13: Increase the energy efficiency and health of the nation's housing stock. By September 30, 2013, HUD will enable a total of 159,000 cost effective energy efficient and healthy housing units, as a part of a joint HUD-DOE goal of 520,000.

<u>**Community Planning and Development**</u>

Community Development Block Grant

- o **Data source:** Aggregated (summed) raw data on accomplishments reported by Community Development Block Grant grantees in the Integrated Disbursement and Information System.
- o **Limitation/advantages of the data:** Data reliability has been enhanced by the re-engineering of the system at the end of FY 2009 into FY 2010.
- o **Validation, verification, and improvement of measure:** When monitoring grantees, Community Planning and Development field staff verifies program data.

HOME Investment Partnerships

- o **Data source:** HUD's Integrated Disbursement and Information System.
- o **Limitation/advantages of the data:** Data reliability has been enhanced by the re-engineering of the system at the end of FY 2009 into FY 2010.
- o **Validation, verification, and improvement of measure:** When monitoring grantees, Community Planning and Development field staff verifies program data.

Tax Credit Assistance Program

- o **Data source:** HUD's Integrated Disbursement and Information System.
- o **Limitations/advantages of the data:** Data reliability has been enhanced by the re-engineering of the system at the end of FY 2009 into FY 2010.
- o **Validation, verification, and improvement of measure:** Program staff reviews weekly reports to ensure data validity and resolve identified data problems.

<u>**Multifamily Housing**</u>

Sections 202 Elderly and 811 Persons with Disabilities

- o **Data source:** The source of construction-start data is the Office of Housing Development Application Processing System.
- o **Limitations/advantages of data:** The data, in general, are considered to be reliable.
- o **Validation, verification, and improvement of measure:** HUD field staff reviews, verifies, and approves the data. The Office of Housing receives copies of the closing documents that are used to verify data system entries.

Mark-to-Market

- o **Data source:** The Rehabilitation Escrow Administration database, a system maintained to track and approve retrofit schedules, costs, and specifications, and used to review and approve funding draws on completion and verification of work completion.
- o **Limitations/advantages of data:** The Agency has a high degree of confidence in the accuracy of the data. Basic transaction parameters are derived from official record sources—Mark-to-Market system and Rehabilitation Escrow Administrations database—and locked down in the independently maintained database.

- o **Validation, verification, and improvement of measure:** Limited and finite number of properties being tracked; independently maintained database; accessible only by a limited number of highly trained professionals, minimizing the opportunity for user input errors or data corruption; regular reports from the database allow for a reality check period over period; Approved Funds Control Plans and Front End Risk Assessments require a high degree of review and approval for accuracy (that is, the process ensures quality data).

Green Retrofit

- o **Data source:** The Rehabilitation Escrow Administration database, a system maintained to track and approve retrofit schedules, costs, and specifications and used to review and approve funding, draws on completion and verification of work completion.
- o **Limitations/advantages of data:** The Agency has a high degree of confidence in the accuracy of the data. Basic transaction parameters are derived from official record sources—Mark-to-Market system and Rehabilitation Escrow Administrations database—and locked down in the independently maintained database.
- o **Validation, verification, and improvement of measure:** Limited and finite number of properties being tracked; independently maintained database; accessible only by a limited number of highly trained professionals, minimizing the opportunity for user input errors or data corruption; regular reports from the database allow for a reality check period over period; Approved Funds Control Plans and Front End Risk Assessments require high degree of review and approval for accuracy (that is, the process ensures quality data); expenditure information is cross-checked to another official source—LOCCS—at the time of each disbursement for grants. The greatest potential exposure regarding erroneous reporting is likely to be contained in RA/PAE reporting of loan disbursements. See clause 3 above, plus strict procedural requirements for regular updating by our highly trained professional staff and contractors. Database reports contain mathematical checks of PAE-provided numbers. Management review of those reports provides logical checks of reported data, that is, prevents a report that indicates spending above total authorized amounts.

Public and Indian Housing

Public Housing Capital Fund/Indian Housing Block Grant

- o **Data source:** PIH has created the Energy and Performance Information Center (EPIC) which collects information on energy conservation measures implemented by housing authorities. Using a checklist, public housing agencies also report on all units that include 1 or more of 39 Energy Conservation Measures, as well as on new or substantial rehabilitation projects that meet ENERGY STAR for New Homes or one or more green standards.
- o **Limitations/advantages of the data:** The energy data collected is self-reported and limited; each Energy Conservation Measure is reported separately for each unit (by project) but not bundles so as to report on which bundle of Energy Conservation Measures was installed in a particular unit. A "unit equivalent" method was developed to address these data limitations, using the top 10 most cost-effective measures. Other data limitations are that HUD does not collect pre- and post-retrofit consumption data for these measures, or Energy Conservation Measure costs, so determinations of cost effectiveness for these investments must be estimates, using recognized engineering or costs methods.

o **Validation, verification, and improvement of measure:** Public and Indian Housing staff validates the data entered into the system in terms of completeness of information. Public and Indian Housing staff also provides information to grantees to ensure that the definitional boundaries of data prompts are fully understood. Data may also be confirmed through remote and onsite reviews of public housing agencies.

Energy Performance Contracts

o **Data source:** The data used for reporting for the Energy Performance Contract program were gathered through the Energy Performance Contract Inventory, which all Public and Indian Housing field offices are required to complete annually.

o **Limitations/advantages of the data:** For the first time, during FY 2010, the Energy Performance Contract Inventory was restructured to gather data at the asset management project level rather than at the contract level. Training was provided to the field offices to increase the reporting accuracy and completeness. Despite this effort, the Energy Performance Contract Inventory frequently contains missing or erroneous data.

o **Validation, verification, and improvement of measure:** The data are reviewed for suspected inaccuracies. When reporting data, the Office of Public and Indian Housing makes a strong effort to confirm the data are valid and makes corrections as noted. The Office of Public and Indian Housing is endeavoring to improve the Energy Performance Contract Inventory to make it easier to complete, thus improving accuracy and completeness. At the same time, the Office of Public and Indian Housing is working to integrate the Energy Performance Contract Inventory with its existing reporting systems, which tend to be more sophisticated, yet easier to use.

HOPE VI

o **Data source:** The HOPE VI Grants Management System.

o **Limitations/advantages of the data:** For the first time, during FY 2010, the Grants Management System was expanded to collect information on whether the HOPE VI units being built were achieving a comprehensive green standard (for example, LEED for Homes), a non-comprehensive energy-efficiency standard (for example, ENERGY STAR for New Homes), or meeting the local building code. The Grants Management System has some limitations. In particular, the data are self-reported. The data collected through the system are limited in scope to the achievement of green standards. Although these standards are the highest ideal, no data are collected about building practices that are better than the minimum, but yet, the practices do not reach the level of a green standard.

o **Validation, verification, and improvement of measure:** Grantees are required to use the data system quarterly. Each quarter, the grants manager in charge of each project checks the data for reasonableness. In addition, the HOPE VI program has a data collection contractor on staff to provide technical assistance to grantees that are completing their reporting requirements.

Lead and Healthy Homes

Lead Hazard Control

- o **Data source:** Office of Healthy Homes and Lead Hazard Control's web-based Grantee Quarterly Progress Reporting System.
- o **Limitations/advantages of the data:** The data represent direct accomplishments as reported by grantees and confirmed by HUD staff through monitoring. The data do not include housing units that are indirectly made lead safe through leveraged private sector investment, state and local programs, and other federal housing programs.
- o **Validation, verification, and improvement of measure:** A rigorous scientific evaluation of the program indicates that the program is effective in achieving its goals. The study, conducted by the National Center for Healthy Housing in conjunction with the University of Cincinnati, found that the lead hazard control methods used by grantees reduce the blood lead levels of children occupying treated units and also significantly reduce lead dust levels in the treated homes. The number of units made lead safe is validated by both Office of Healthy Homes and Lead Hazard Control data and data from HUD's National Lead-Based Paint Survey. The Office of Healthy Homes and Lead Hazard Control reviews data provided through its web-based Quarterly Progress Reporting System. HUD grant staff performs both onsite and remote monitoring of grant files and unit completion progress.

Healthy Homes

- o **Data source:** Office of Healthy Homes and Lead Hazard Control's web-based Grantee Quarterly Progress Reporting System.
- o **Limitations/advantages of the data:** The data represent direct accomplishments as reported by grantees and confirmed by HUD staff through monitoring. The data do not include housing units that are indirectly made lead safe through leveraged private sector investment, state and local programs, and other federal housing programs.
- o **Validation, verification, and improvement of measure:** The Healthy Homes program builds on the Department's existing activities in housing-related environmental health and safety issues—including lead hazard control, building structural safety, electrical safety, and fire protection—to address multiple childhood diseases and injuries in the home. The program takes a holistic approach to these activities by addressing housing-related hazards in a coordinated fashion, rather than addressing a single hazard at a time. An evaluation of the program that was completed in 2007 indicated that grantees were successful in achieving the objectives of the program as identified in the Notice of Funding Availability and the program's strategic plan. Grantees had conducted assessments and low cost interventions that addressed priority hazards and conditions in 9,700 homes in high-risk neighborhoods, and healthy homes outreach efforts had reached approximately 2.8 million people. Program-supported research was successful in improving our understanding of residential hazards and documenting the effectiveness of interventions to reduce children's asthma symptoms. The Office of Healthy Homes and Lead Hazard Control reviews data provided through its web-based Quarterly Progress Reporting System. HUD grant staff performs both onsite and remote monitoring of grant files and unit completion progress.

The Green and Healthy Homes Initiative

- o **Data source:** A centralized Green and Healthy Homes Initiative database of assessments and interventions was established to collect data from the pilot cities.

- o **Limitations/advantages of the data:** The data represent direct accomplishments as reported by the Green and Healthy Homes Initiative pilot cities and confirmed by HUD and the Green and Healthy Homes Initiative contractor through monitoring. The data include housing units that are made energy efficient and healthy through leveraged private sector investment, state and local programs, and other federal housing programs.
- o **Validation, verification, and improvement of measure:** Data collection relies on remote monitoring of Green and Healthy Homes Initiative sites by the contractor; results are verified through on-site monitoring. In early FY 2012, responding to the increasing amount of data, the contractor implemented a new, comprehensive data collection system using a web-based platform. This system is accessible from each site, is updated by each site's Green and Healthy Homes Initiative coordinator, and downloads all data to a central database. The system enables partners to track data on measurable cost efficiencies through leveraging, energy consumption per unit, cost savings per unit, health outcomes for residents, direct and secondary green job creation and retention, and worker training.

Strategic Goal 5.   Transform the Way HUD Does Business

Measure 27: Improve program effectiveness by awarding funds fairly and quickly. By September 30, 2013, HUD will improve internal processes to ensure that we can obligate 90 percent of NOFA programs within 180 calendar days from budget passage.

- o **Data source:** Office of Strategic Planning and Management's Bi-Weekly NOFA tracking reports (until such time as an automated system for tracking is implemented).
- o **Limitations/advantages of the data:** As discussed for Measure 27, the NOFA processes are not automated and procedures are lacking. Because of this, all tracking as a NOFA moves through different stages is done effectively by hand. Many individuals are involved; therefore, the data are subject to several forms of error or omission such as simple miscommunication, transcription errors, and the unavailability of responsible parties having needed information when requested. Additionally, due to limitations in the financial systems, a lag can exist between the time funds are obligated in the field offices to when they are reflected in HUD's central accounting system.
- o **Validation, verification, and improvement of measure:** Developing standardized procedures, centralized communications portals, and automated workflows will greatly improve the quality of the measures. Until such time, several levels of reviews exist to identify discrepancies and errors.