

## HUD Master Models (2009 Recovery)

### Healthy Homes Technical Studies Program – HHTS

To improve the efficacy and cost-effectiveness of methods for the evaluation and/or control of housing related health hazards.

### Need Statement

There is a need for more efficient, effective and less costly methods to evaluate (test for, identify) and control (mitigate) housing related health hazards.

### Activities and Outputs

Employment Opportunities-Other-Persons placed	Persons
Employment Opportunities-Section 3-Persons placed	Persons
Housing-Housing assessment	Assessments
Housing-Housing inspection	Inspections
Housing-Housing interventions completed	Units
Housing-Housing interventions completed-Lead	Units
Housing-Housing interventions completed-Other healthy homes	Units
Outreach-Community participants meetings for input/feedback-Meetings	Meetings
Outreach-Community participants meetings for input/feedback-Participants	Participants
Outreach-Outreach and education-Participants	Participants
Outreach-Outreach and education-Sessions	Sessions
Research-Development of alternative or improved clearance methods	Methods
Research-Development of alternative or improved clearance methods-Lead	Methods
Research-Presentation at professional meeting prepared	Presentation
Research-Samples analyzed	Samples analyzed
Research-Samples collected	Samples
Research-Scientific manuscript submitted to HUD	Manuscript
Training-Participants recruited	Participants
Training-Staff trained	Staff trained
Other	Other

### Outcomes and Indicators

Employment Opportunities-Other-Green Jobs created	Jobs
Employment Opportunities-Other-Green Jobs retained	Jobs
Employment Opportunities-Other-Jobs created	Jobs
Employment Opportunities-Other-Jobs retained	Jobs
Employment Opportunities-Section 3-Green Jobs created	Jobs
Employment Opportunities-Section 3-Green Jobs retained	Jobs
Employment Opportunities-Section 3-Jobs created	Jobs
Employment Opportunities-Section 3-Jobs retained	Jobs
Health-Reduction in housing related health hazards-Improved health	Persons
Health-Reduction in housing related health hazards-Improved safety	Avg. Hazard Score
Health-Reduction in housing related health hazards-reduced allergens-cockroach-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-cockroach-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-cockroach-Other	Avg. Other
Health-Reduction in housing related health hazards-reduced allergens-dust mite-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-dust mite-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-dust mite-Other	Avg. Other

Health-Reduction in housing related health hazards-reduced allergens-mice-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-mice-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-mice-Other	Avg. Other
Health-Reduction in housing related health hazards-reduced allergens-mold-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-mold-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-mold-CFU/m <sup>3</sup>	Avg. CFU/m <sup>3</sup>
Health-Reduction in housing related health hazards-reduced allergens-mold-Other	Avg. Other
Health-Reduction in housing related health hazards-reduced allergens-other-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-other-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-other-Other	Avg. Other
Health-Reduction in housing related health hazards-reduced allergens-rat-Load	Avg. Floor Loading
Health-Reduction in housing related health hazards-reduced allergens-rat-Conc	Avg. Concentration
Health-Reduction in housing related health hazards-reduced allergens-rat-Other	Avg. Other
Health-Reduction in housing related lead hazards-Persons	Persons
Health-Reduction in housing related lead hazards-reduced Pb-change above EPA standard-floor dust	% above standard
Health-Reduction in housing related lead hazards-reduced Pb-change above EPA standard-sill dust	% above standard
Health-Reduction in housing related lead hazards-reduced Pb-change above EPA standard-average soil	% above standard
Health-Reduction-incidence/severity-asthma exacerbation	Physician visits
Health-Reduction-incidence/severity-asthma-Emergency Room (ER) visits	ER visits
Health-Reduction-incidence/severity-asthma-Hospitalization days	Hospitalization days
Health-Reduction-incidence/severity-asthma-Other	Other
Health-Reduction-incidence/severity-asthma-Sick days	Sick days
Health-Reduction-incidence/severity-asthma-Symptom days	Symptom days
Health-Reduction-Incidence/severity-blood lead level-% >= 10µg/dL	% >= 10µg/dL
Health-Reduction-Incidence/severity-blood lead level-Avg. blood-Pb (µg/dL)	Avg. blood-Pb(µg/dL)
Health-Reduction-Incidence/severity-blood lead level-blood-Pb (µg/dL)	Avg. %
Housing-Enhanced utilization-housing-time occupied-continued occupancy	Months
Research-Data analysis completed	Completed
Research-Final project report	Accepted
Research-Hazard assessment method developed-Other	Other
Research-Hazard assessment method developed-Reduced cost	Dollars
Research-Hazard assessment method developed-Reduced time	Hours
Research-Hazard intervention protocols developed-Other	Other
Research-Hazard intervention protocols developed-Reduced cost	Dollars
Research-Hazard intervention protocols developed-Reduced time	Hours
Research-New technologies developed	Technology
Research-New/Improved assessment tool-Housing health hazards	Tools
Research-New/improved technologies developed-Reduced cost	Dollars
Research-New/Improved technologies developed-Reduced time	Reduced hours
Research-New/Improved technologies-precision/accuracy-% change in coefficient of variation	% change
Research-Submitted manuscript(s) accepted by HUD	Manuscript Accepted
Research-Submitted manuscript(s) for publication	Manuscript Submitted
Research-Submitted manuscript(s) published	Manuscript Published
Training Opportunities-Green -Other-Persons	Persons
Training Opportunities-Green Other-Sessions	Sessions
Training Opportunities-Green Section 3-Persons	Persons
Training Opportunities-Green Section 3-Sessions	Sessions
Other	Other

## **Measurement Tools**

<b>A. Tools to Track Outputs and Outcomes</b>
Bank accounts
Construction log
Database
Enforcement log
Financial aid log
Intake log
Interviews
Mgt. Info. System-automated
Mgt. Info. System-manual
Outcome scale(s)
Phone log
Plans
Pre-post tests
Post tests
Program specific form(s)
Questionnaire
Recruitment log
Survey
Technical assistance log
Time sheets
<b>B. Where Data are Maintained</b>
Agency database
Centralized database
Individual case records
Local precinct
Public database
School
Specialized database
Tax Assessor database
Training center
<b>C. Source of Data</b>
Audit report
Business licenses
Certificate of Occupancy
Code violation reports
Counseling reports
Employment records
Engineering reports
Environmental reports
Escrow accounts
Financial reports
GED certification/diploma
Health records
HMIS
Inspection results
Lease agreements
Legal documents
Loan monitoring reports

Mortgage documents
Payment vouchers
Permits issued
Placements
Progress reports
Referrals
Sale documents
Site reports
Statistics
Tax assessments
Testing results
Waiting lists
Work plan reports
D. Frequency of Data Collection
Daily
Weekly
Monthly
Quarterly
Biannually
Annually
Upon incident
E. Process of Collection and Reporting
Computer spreadsheets
Flat file database
Manual tallies
Relational database
Statistical database

**Evaluation Process – These are standard requirements that HUD will expect every program manager receiving a grant to do as part of their project management.**

- An evaluation process will be part of the on-going management of the program.
- Comparisons will be made between projected and actual numbers for both outputs and outcomes.
- Deviations from projected outputs and outcomes will be documented and explained on space provided on the "Reporting" Tab.
- Analyze data to determine relationship of outputs to outcomes; what outputs produce which outcomes.

The reporting requirements are specified in the program specific NOFA and your funding award.

**HUD Will Use The Following Management Questions To Evaluate Your Program**

1. How many units of housing had interventions completed (unduplicated account)?
2. What is the average cost to produce a successful hazard intervention that could improve the effectiveness of the program?
3. What is the average anticipated savings in emergency room visits resulting from a successful hazard intervention?
4. What is the average anticipated savings in hospitalization days resulting from a successful hazard intervention?
5. What is the average anticipated savings in sick days resulting from a successful hazard intervention?

6. What is the average anticipated savings in symptom days resulting from a successful hazard intervention?
7. What is the average intervention cost per housing unit?
8. What are the key findings reported in your manuscript to be submitted for publication?
9. How many new full-time permanent jobs were created to perform work under this grant?
10. How many new full-time permanent jobs were created to perform work under this grant and were fulfilled with persons eligible under Section 3?
11. How many existing full-time permanent jobs performing work under this grant were retained?
12. How many existing full-time permanent jobs performing work under this grant were retained by persons eligible under Section 3?
13. How many new green full-time permanent jobs were created to perform work under this grant?
14. How many new green full-time permanent jobs were created to perform work under this grant and were fulfilled with persons eligible under Section 3?
15. How many existing green full-time permanent jobs performing work under this grant were retained?
16. How many existing green full-time permanent jobs performing work under this grant were retained by persons eligible under Section 3?
17. Describe the population you are serving in the space below:

If you are collecting client level data, identify the number of persons receiving services:

18. How many persons receiving services are under the age of 6?
19. How many persons receiving services are ages 6-17?
20. How many persons receiving services are ages 18-30?
21. How many persons receiving services are ages 31-50?
22. How many persons receiving services are ages 51-61?
23. How many persons receiving services are age 62 and older?

### **Carter-Richmond Methodology**

The above Management Questions developed for your program are based on the Carter-Richmond Methodology<sup>1</sup>. A description of the Carter-Richmond Methodology appears in the General Section of the NOFA.

<sup>1</sup>© The Accountable Agency – How to Evaluate the Effectiveness of Public and Private Programs,” Reginald Carter, ISBN Number 9780978724924.