

# Appendixes

## Appendix A. Research Agenda Setting Before PD&R

Before PD&R existed within HUD, the Department commissioned two committees of the National Research Council (NRC) to explore long-range research needs related to the social sciences and technological sciences. This work was motivated by the perception that the urban unrest of 1967 required a thoughtful federal response. HUD told the committees of their intention to undertake major efforts in policy evaluation, research, and development, organized into the four areas of land use and community development, housing, public facilities and services, and assistance to local government administration.

- “Long-Range Planning for Urban Research and Development: Technological Considerations” was the product of the NRC Committee on Urban Technology in 1969 (NRC, 1969a).
- “A Strategic Approach to Urban Research and Development: Social and Behavioral Science Considerations” was prepared by the NRC Committee on Social and Behavioral Urban Research in 1969. The committee found that federal, state, and local governments had minimal access to relevant social and behavioral science knowledge, causing the nation to respond too slowly to urban problems, and that a need existed to use scientific and technical knowledge to “inhibit action on attractive but misconceived courses, as well as to create new options for action” (NRC, 1969b: 78). HUD’s research program was limited by insufficient funds and inadequate intramural research and development (R&D) capacity, creating a need to use research capacity found in the universities and the nonacademic private sector. The “systems” approach

was found to show promise for coping with urban problems and for designing R&D programs. The committee concluded that research is relevant if the results provide (1) greater understanding of obstacles to successful program implementation, (2) identification of new program instruments for goal achievement, and (3) the basis for reliable estimates of the future. The committee specifically recommended research on planning and information systems, sources of obstacles, and new program instruments that foster desired social outcomes.

During the same year, HUD initiated a 5-year, \$72 million housing technology demonstration called Operation Breakthrough. The General Accounting Office (now the Government Accountability Office) concluded from the limited successes of the effort that demonstration programs should involve “thorough preliminary work to develop criteria, evaluate proposed approaches, and analyze market uncertainties; feasible strategies to overcome marketing problems; research to resolve technical questions; and planning for program evaluation” (GAO, 1976: 30).

The Housing and Urban Development Act of 1970 authorized the Federal Experimental Housing Allowance Program. The Housing Allowance experiments were formative for PD&R, because they represented a major research commitment of the highest rigor and demonstrated the feasibility and benefits of a programmatic approach to providing assisted housing that grew into the nation’s largest assisted housing program, known today as the Housing Choice Voucher Program.

## Appendix B. OMB Guidelines for Integrating Evaluations and Research in Agency Strategic Planning and Management

The Office of Management and Budget's (OMB's) Circular A-11 (OMB, 2012) prescribes how federal agencies should comply with the Government Performance and Results Act of 1993. The following excerpt from the August 2012 version of Circular A-11 illustrates the extensive integration that OMB is seeking between research and evaluation, strategic planning, annual performance planning, and accountability reporting.<sup>12</sup> In addition, OMB is planning to move such performance information from printed reports to a central website, <http://www.performance.gov>, in machine-readable format.

### 8.3 Evaluations and Research.

[Strategic Plan] SP—Agencies should describe how information from research and program evaluation was used in developing the Strategic Plan, including how research and evaluation evidence was used to establish or revise the agency's strategic objectives and identify evidence-based strategies or approaches that will be used to reach the objectives. The SP also should describe efforts to further build the evidence base in the long term, by supporting high-quality evaluations of strategies, approaches or programs, as well as agency efforts to build greater capacity for conducting and using evaluation and evidence findings. The agency should include a schedule of future studies and evaluations planned for the next four years or the timeline the SP covers. This schedule should go beyond simply listing evaluation topics. It should describe the objectives and how the evaluations or studies will improve agency decisionmaking.

[Annual Performance Plan] APP—Agencies should describe how information from research and program

evaluation was used in developing the performance plan, including how research and evaluation evidence was used to establish or revise the agency's performance goals; identify effective or evidence-based strategies or approaches that will be used to reach these goals; understand the agency's progress toward these goals; and inform budgetary allocations based on information about cost-effectiveness of agency efforts. The performance plan should also describe the agency's efforts to build the evidence base in the coming year by supporting high-quality evaluations of strategies, approaches or programs, as well as agency efforts to use existing data, and build greater capacity for conducting and using evaluation findings. The agency should include a schedule of evaluations planned for the coming year that goes beyond simply listing evaluation topics for planned studies, describing the objectives of planned evaluations and how they will improve agency decisionmaking. See M-12-14 for more information and 51.9 for agency budget submission.

[Annual Performance Report] APR—Agencies should describe findings from agency-funded evaluations or other research completed during the prior fiscal year, as well as evaluations and other research relevant to the agency's understanding of the performance of its programs, the problems the program is trying to tackle, and the identification of external factors that might influence agency performance. If no evaluations were completed, the performance report should note this. Agencies are expected to have a web page on the agency's evaluations or links to other evaluations relevant to the agency's work with summaries of the findings and specific citations.

<sup>12</sup> Section 210, page 11.

## Appendix C. Stakeholders' Consultation Process and Stakeholder Feedback

### Multiple Venues for Stakeholders' Comments

Four members of PD&R's staff served as Roadmap coordinators. The coordinators organized and conducted listening sessions with four types of stakeholders, as follows:

- Federal partners (11 sessions).
- Nonfederal partners (21 sessions).
- HUD staff (3 sessions).
- PD&R staff (13 sessions).

Roadmap coordinators also compiled stakeholders' comments from these sources:

- Conference Breakout Group—From the PD&R Research Agenda Conference (November 2011) and the Research Agenda Conference on Design, Construction, and Technology (May 2012).
- PD&R internal web survey.
- E-mail to HUD USER Research Clearinghouse—PD&R solicited comments on HUD USER before the Research Agenda Conference.
- E-mail followup from listening sessions.

### List of Stakeholders' Consultation Meetings

PD&R Roadmap outreach consisted of numerous meetings with internal and external stakeholders organizations. This list is grouped by federal and nonfederal entities.

#### HUD Internal Roadmap Sessions

- Office of Policy Development and Research staff.
- HUD Program Office staff.
- HUD senior staff.

#### Other Federal Government Agencies and Entities

- *Cityscape* Advisory Board.
- Congressional Appropriations Committee Staff.

- Federal Housing Finance Agency.
- Government Accountability Office.
- U.S. Department of Energy.
- U.S. Department of Health & Human Services.
- U.S. Department of Labor.
- U.S. Department of the Treasury.
- National Institutes of Standards and Technology.
- Office of Management and Budget.
- Partnership for Sustainable Communities (U.S. Department of Transportation, Environmental Protection Agency).

#### Stakeholders' Listening Sessions With External Partners<sup>13</sup>

- American Council for an Energy Efficient Economy.
- Corporation for Enterprise Development.
- Housing Statistics Users Group.
- HUD Office of International and Philanthropic Innovation (IPI) philanthropic partners.
- IPI international partners.
- HUD Office of University Partnerships (OUP) 2012 National Conference.
- Indian Housing Consultation.
- National Academy for Housing and Sustainable Communities.
- National Alliance to End Homelessness.
- National Council of La Raza.
- National Housing Conference (Leadership Circle and Board).
- National Low Income Housing Coalition (NLIHC).
- NLIHC (members).
- NeighborWorks staff.
- NeighborWorks executive directors.
- Public Housing Authority Directors Association.
- PD&R Research Agenda Conference on Design, Construction, and Technology.
- Smart Growth America/Reconnecting America/T4 America.

<sup>13</sup> Listed organizations often served as organizers or hosts for a larger number of their member organizations and partners.

- Urban Land Institute.
- U.S. Green Building Council.
- Young Leaders in Affordable Housing.

## Analysis of Stakeholder Feedback

The Roadmap coordinators recorded a total of 950 stakeholders' comments and entered them into a database. Comments are identified by the session in which they were received, but individual commenters are anonymous. Exhibit A-1 shows the number of comments received from each venue. The distribution of participant interest across HUD's strategic goals was fairly well balanced. Comments that relate to more than one strategic goal (such as those about researching community recovery from natural disasters) were assigned to the crosscutting category.

## Types of Feedback Recorded

Roadmap coordinators recorded four types of comments from participants of both conferences and listening sessions:

1. **Research questions**—Foremost, PD&R sought suggestions from participants about priority research questions to address during the next 5 years.

2. **Research projects**—Rather than framing a general research question, some participants were more inclined to suggest proposals to use specific methods or data sources to examine a topic.
3. **Assets**—Participants were encouraged to identify elements under HUD's or PD&R's control (for example, datasets or human resources) that either currently support HUD-related research or should be employed more fully.
4. **Comparative advantage**—Coordinators solicited feedback about how PD&R's position and roles in the nation, the federal government, or HUD offer strategic opportunities for focusing efforts most usefully, for expanding availability of research assets to researchers or practitioners, or for collaborating to achieve Roadmap objectives and supporting HUD's mission.

When coordinators reviewed themes in stakeholders' comments, they combined comments about research questions and research projects, and combined comments about assets and comparative advantage. Coordinators also grouped stakeholders' comments according to the implications of those comments for PD&R's four major roles, as shown in exhibit A-3.

Stakeholders were asked to identify timely and policy-relevant research questions. As might be expected from stakeholders

Exhibit A-1. All Stakeholders' Comments by Strategic Goal and Source of Comment

Venues	Homeownership/ Finance	Rental Housing	Housing As a Platform	Sustainable/ Inclusive Communities	Other/ Crosscutting	Grand Total
Nonfederal session	48	63	38	73	67	289
Conference breakout group	2	52	51	31	51	187
PD&R session	38	46	23	30	54	191
Federal session	18	8	21	20	32	99
PD&R internal survey	26	10	15	10	5	66
HUD session	8	1	19	22	8	58
E-mail	7	0	6	3	12	28
E-mail to HUD USER	0	20	0	0	4	24
Other	0	0	5	2	1	8
<b>Grand total</b>	<b>147</b>	<b>200</b>	<b>178</b>	<b>191</b>	<b>234</b>	<b>950</b>

Exhibit A-2. All Stakeholders' Comments by Strategic Goal and Type of Comment

Comment Types	Homeownership/ Finance	Rental Housing	Housing As a Platform	Sustainable/ Inclusive Communities	Other/ Crosscutting	Grand Total
Research question	95	130	137	141	93	596
Research project	29	47	22	14	20	132
Asset	13	22	11	16	72	134
Comparative advantage	10	1	8	20	49	88
<b>Grand total</b>	<b>147</b>	<b>200</b>	<b>178</b>	<b>191</b>	<b>234</b>	<b>950</b>

**Exhibit A-3. All Stakeholders' Comments by Strategic Goal and PD&R Core Roles**

PD&R Roles	Homeownership/ Finance	Rental Housing	Housing As a Platform	Sustainable/ Inclusive Communities	Other/ Crosscutting	Grand Total
Policy development	45	73	74	92	126	410
Basic research	46	61	40	55	26	228
Data collection	20	32	17	16	53	138
Evaluation	36	34	47	27	27	171
Not applicable	0	0	0	1	2	3
<b>Total</b>	<b>147</b>	<b>200</b>	<b>178</b>	<b>191</b>	<b>234</b>	<b>950</b>

having defined advocacy interests or well-formed policy ideas, the greatest number of comments (43 percent) indicated a specific purpose of informing policy development or action. Comments assigned to the policy development category include suggestions about documenting a specific policy need, developing policy options, testing a new program idea, developing performance measures, and identifying best practices to expand certain programs.

Smaller shares of comments were focused on other PD&R roles, highlighting the need for more basic research to understand housing and community development issues, to improve data collection to support such research by HUD or others, and to evaluate HUD programs to assess and document their effectiveness.<sup>14</sup>

### Topical Themes in Stakeholders' Comments by Comment Type

Roadmap coordinators classified stakeholders' comments into topical themes. The themes represented by comments focusing on research (research questions and research projects) are shown in exhibit A-4 in descending order. In the aggregate, research comments were somewhat evenly distributed across thematic categories, although, within strategic goals, the comments clustered around particular themes.

Research comments in the Homeownership/Finance category fell into five identifiable themes with 15 or more comments. The themes were access to financing, followed by market analysis

and demographics, program effectiveness/impact, and owner behavior/market functioning. No other single theme received 10 or more comments.

For Rental Housing, program function and program effectiveness/impact were major themes, while rental behavior/market functioning made a showing as well.

For Housing as a Platform, next-generation platform services was a clear favorite, while better typologies/targeting, cost effectiveness of supportive housing, impacts of housing problems and community interactions each received at least 10 research comments.

For Sustainable and Inclusive Communities, the strong favorites of stakeholders were energy efficiency/green practices, followed by land use/coordinated planning and program effectiveness. No other themes received comments numbering in the double digits.

Finally, Other/Crosscutting had a clear theme about building technology/construction, followed by disaster mitigation with 10 comments.

In addition to suggesting research topics, stakeholders also commented extensively about PD&R assets and comparative advantage. By far, the most frequently cited assets relate to data, including HUD administrative data, PD&R-sponsored surveys, and capabilities for data matching. The largest category after data is the miscellaneous "other" category. Building technology and construction themes and program effectiveness themes were the only groups receiving 10 or more comments about assets or comparative advantage.

<sup>14</sup> Although the PD&R organization includes offices and divisions that have one or more of these roles as a primary focus, the actual functions are substantially shared among internal divisions.

**Exhibit A-4. Stakeholders' Comments About Research Questions and Research Projects by Strategic Goal and Theme**

<b>Theme</b>	<b>Homeownership/ Finance</b>	<b>Rental Housing</b>	<b>Housing As a Platform</b>	<b>Sustainable/ Inclusive Communities</b>	<b>Other/ Crosscutting</b>	<b>Grand Total</b>
Program effectiveness/impact	16	53	9	11	8	97
Program function	0	55	4	0	1	60
Energy efficiency and green practices	0	6	0	42	7	55
Next-gen platform services	0	0	43	1	1	45
Other	15	2	10	6	11	44
Market analysis and demographics	17	8	0	5	9	39
Building technology and construction	2	1	0	6	24	33
Better measures/metrics	6	6	4	8	4	28
Better typologies and targeting	2	2	16	3	3	26
Access to financing	23	1	1	0	0	25
Community interactions	1	0	12	6	5	24
Impacts of housing problems	2	1	14	1	3	21
Better data	0	5	4	4	7	20
Owner behavior and market functioning	15	5	0	0	0	20
Land use and coordinated planning	0	0	0	20	0	20
Pre- and post-disaster mitigation	0	0	0	8	10	18
Regulatory enhancement	5	3	1	1	6	16
Cost effectiveness of supportive housing	0	0	15	0	1	16
Institutional capacity	0	1	1	9	4	15
Rental behavior and market functioning	0	12	0	2	0	14
Financial and neighborhood stabilization	9	3	0	0	1	13
Informed mobility	0	0	8	1	3	12
Expanding access to opportunity	1	1	2	7	1	12
Increasing housing supply	3	1	2	2	4	12
Fair housing/antidiscrimination	0	0	0	8	0	8
Access to community health services	0	0	7	0	0	7
General rental market functioning	0	6	0	0	0	6
Community integration of people with disabilities	0	0	6	0	0	6
Mortgage fraud	6	0	0	0	0	6
Regional equity	0	0	0	4	0	4
Policy for boom towns	0	3	0	0	0	3
Assisted housing preservation	0	2	0	0	0	2
Financial literacy	1	0	0	0	0	1
<b>Total</b>	<b>124</b>	<b>177</b>	<b>159</b>	<b>155</b>	<b>113</b>	<b>728</b>

Exhibit A-5. Stakeholders' Comments About HUD Assets and Comparative Advantage by Strategic Goal and Theme

Theme	Homeownership/ Finance	Rental Housing	Housing As a Platform	Sustainable/ Inclusive Communities	Other/ Crosscutting	Grand Total
Access to financing	3	0	0	0	0	3
Better data	11	16	6	5	31	69
Better measures/metrics	0	2	0	0	1	3
Better typologies and targeting	0	1	0	0	0	1
Building technology and construction	0	0	0	3	12	15
Community interactions	0	0	1	1	0	2
Energy efficiency and green practices	0	0	0	3	3	6
Expanding access to opportunity	0	0	0	1	1	2
Fair housing/antidiscrimination	1	0	0	1	0	2
Financial literacy	1	0	0	0	0	1
Institutional capacity	0	0	0	1	1	2
Land use and coordinated planning	0	0	0	2	0	2
Market analysis and demographics	2	1	0	0	5	8
Mortgage fraud	0	0	0	1	1	2
Next-gen platform services	0	0	2	0	0	2
Other	0	0	4	5	43	52
Pre- and post-disaster mitigation	0	0	0	4	0	4
Program effectiveness/impact	0	1	1	3	5	10
Program function	0	1	1	0	0	2
Regional equity	0	0	0	1	0	1
Regulatory enhancement	1	0	0	2	0	3
Rental behavior and market functioning	0	1	0	0	0	1
Undetermined	4		4	3	18	29
<b>Total</b>	<b>23</b>	<b>23</b>	<b>19</b>	<b>36</b>	<b>121</b>	<b>222</b>



Exhibit A-6. All Stakeholders' Comments by Strategic Goal and Theme

Theme	Homeownership/ Finance	Rental Housing	Housing As a Platform	Sustainable/ Inclusive Communities	Other/ Crosscutting	Grand Total
Program effectiveness/impact	16	54	10	14	17	111
Other	19	2	15	10	63	109
Better data	11	21	10	11	41	94
Program function	0	56	5	0	1	62
Energy efficiency and green practices	0	6	0	45	10	61
Next-generation platform services	0	0	48	1	1	50
Building technology and construction	2	1	0	9	36	48
Market analysis and demographics	19	9	0	5	14	47
Better measures/metrics	6	8	4	8	5	31
Access to financing	26	1	1	0	0	28
Better typologies and targeting	2	3	16	3	3	27
Community interactions	1		13	7	5	26
Regulatory enhancement	6	3	1	4	8	22
Land use and coordinated planning	0	0	0	22	0	22
Pre- and post-disaster mitigation	0	0	0	12	10	22
Impacts of housing problems	2	1	14	1	3	21
Owner behavior and market functioning	15	5	0	0	0	20
Institutional capacity	0	1	1	10	5	17
Cost effectiveness of supportive housing	0	0	15	0	1	16
Rental behavior and market functioning	0	13	0	2	0	15
Expanding access to opportunity	1	1	2	8	2	14
Financial and neighborhood stabilization	9	3		0	1	13
Informed mobility	0	0	8	1	3	12
Increasing housing supply	3	1	2	2	4	12
Fair housing/antidiscrimination	1	0	0	10	0	11
Mortgage fraud	6	0	0	1	1	8
Access to community health services	0	0	7	0	0	7
Community integration of people with disabilities	0	0	6	0	0	6
General rental market functioning	0	6	0	0	0	6
Regional equity	0	0	0	5	0	5
Policy for boom towns	0	3	0	0	0	3
Assisted housing preservation	0	2	0	0	0	2
Financial literacy	2	0	0	0	0	2
<b>Total</b>	<b>147</b>	<b>200</b>	<b>178</b>	<b>191</b>	<b>234</b>	<b>950</b>

## Appendix D: Prioritized Roadmap Research Questions

The following list of research questions originated with the research questions suggested by stakeholders during the listening sessions. They were consolidated, refined, and prioritized through successive analysis by PD&R leadership, by research teams, and, finally, by HUD leadership. Team leaders assessed whether addressing research questions would require substantial or minor resource levels, and they assigned priority ranks within those groups.

### Homeownership and Housing Finance (Goal 1)

Rank	Comment Number	Refined Research Question
1	53, 89, 734, 947, 55	Protocols for Mortgage Modifications have changed significantly during the past few years. How are current modifications performing relative to past modifications? Which types of modifications are most effective from a sustainability point of view? How should current modification protocols under HAMP be modified? How can the effect of the modification on neighborhoods and the broader stakeholder community be incorporated into the modification decision? How do outcomes vary for homeowners, holders of mortgage notes and MBS, neighborhoods, local governments, etc., when homeowners are granted principal forgiveness rather than principal forbearance? How does the presence of a shared appreciation clause alter outcomes?
2	79, 80, 946, 240, 253	Impact of Real Estate Owned (REO) properties: What is the effect of sales of foreclosed/REO properties and conversion to rentals on local housing markets and neighborhoods? What are the nature of the transactions, and the effect on property values and rents? How do investor purchases of REO properties, bulk purchases in particular, differ from REO purchases by owner-occupiers? Would REO sales to nonprofits have greater public benefits? What have practitioners in this field identified as best practices? What is the potential to take advantage of foreclosures in high-income neighborhoods to create better opportunities for low-income households? With households forming at one-half the rate of recent years, how can the repurposing of vacant housing be connected and scaled up to provide affordable housing?
3	62 (substitute)	What are the pros and cons for the economy and housing market arising from nonretention alternatives to foreclosure such as short sales and Deed-in-lieu? How do these differ in the short and long run? What are the current penalties and costs for market participants associated with these options and who bears them? What neighborhood costs or other negative externalities are associated with them? Can these costs be identified and quantified?
4	765	Under what conditions is using home equity through a reverse mortgage to maintain quality of life in retirement an effective strategy in the long term? What features of reverse mortgages are most helpful in doing so? What can we learn about reverse mortgages from counseling data? What are the trends in local property taxes and hazard insurance rates and how can they be used to inform HECM policy? What factors affect lender participation in the reverse mortgage market?
1	940,88, 93	What should be the future role of FHA? Are current evaluations, stress tests, fiscal soundness assessments, and policy studies (for example, for setting loan limits) rigorous enough to ensure that future? Are FHA's criteria for approval of a condominium for eligibility necessary to protect the MMI Fund from excessive risk exposure? Conversely, do these criteria interfere with FHA's ability to stabilize housing markets with large concentrations of condominium units?
2	83	What are the outcomes for REO properties? Are they being maintained, demolished, altered, rented or vacant? What are the best practices in this area? How can these outcomes be incorporated into NSP evaluation?
3	58	Foreclosure landscape: What is the effect of state laws, regulations, and practices on households and lenders dealing with negative equity? Are any best practices arising out of these experiences for households, lenders, communities, and stakeholders? Are additional metrics around foreclosures available for HUD to use to track foreclosures?
4	5, 198 (tangential), Added	How and when does tenure choice matter in a person's life cycle?

## Homeownership and Housing Finance (Goal 1) continued

Rank	Comment Number	Refined Research Question
5	Added	What happens to homeownership voucher households after the expiration of the subsidy, as subsidies will soon end for the first set of households?
6	25	What prevents equity sharing from achieving larger scale as a form of housing tenure? Are there barriers to financing, consumer acceptance, and local capacity to administer equity sharing programs? How do the opportunities to build wealth and the risk of equity loss vary across models of shared equity ownership?
7	102	By how much have tight credit markets reduced the pool of potential homebuyers? Does the effect vary geographically? What are the race and income characteristics of those who qualify for mortgages versus those who do not qualify and how has this changed throughout the crisis?
8	58	How does HUD interpret the shrinking inventories of homes for sale and rent and the growth of the “other” vacant stock, and the interaction of these trends with prices and volume?
9	102	What can be learned from international comparisons about housing finance that is applicable to the United States?

## Affordable Rental Housing (Goal 2)

Rank	Comment Number	Refined Research Question
1	101, 127, 402, 449, 810, Cityscape board, New	<p>How much affordable rental housing does HUD have?</p> <ul style="list-style-type: none"> <li>• How many units and projects also include LIHTC financing?</li> <li>• What are current tenant incomes in HUD and LIHTC properties and what is the incidence of high rent burden?</li> <li>• What percentage of tenants in LIHTC properties have very low incomes?</li> <li>• What factors, including the presence of vouchers and location, affect the affordability of LIHTC units for these households?</li> </ul>
2	444, 517, 939, 527, 528, 749, New	<p>How do we better align existing housing programs with need in terms of subsidy levels?</p> <ul style="list-style-type: none"> <li>• How well is the HOME subsidy working to create affordable housing? [TI project proposed in fiscal year 2013]</li> <li>• What’s the right subsidy amount and time for extremely low and very low-income households?</li> <li>• What alternatives to the current income eligibility system exist and could they improve the targeting, cost effectiveness, and outcomes from HUD programs?</li> <li>• Is the 30 percent of income standard of affordability sufficient?</li> <li>• Are there practical alternatives to the 30 percent income standard that would improve the targeting, cost effectiveness, and outcomes from HUD programs?</li> <li>• What is the future of rental assistance, especially deep subsidy programs?</li> <li>• Is there a place for AHSSIA/SESA/SEVRA-like reforms?</li> <li>• How do you reconcile a shallow subsidy with AFFH and small area FMRs?</li> <li>• What is the cost effectiveness of project-based versus tenant-based rental assistance?</li> </ul>
3	New	What happens to families in the Rental Assistance Demonstration (RAD) and how does the conversion play out?
4	920, New	<p>How does HUD ensure that families receiving housing subsidies or living in subsidized housing are in units of appropriate quality?</p> <ul style="list-style-type: none"> <li>• What is the best method of assessing unit quality across all HUD housing programs?</li> <li>• What is the current quality of the affordable rental stock in metropolitan, suburban, and rural areas?</li> <li>• What strategies or innovations could HUD implement to improve the quality of affordable rental stock across different markets?</li> </ul>

**Affordable Rental Housing (Goal 2)** *continued*

Rank	Comment Number	Refined Research Question
5	482, 935, New	<p>What are the impacts of different rent models on subsidized households and on the PHAs that serve them?</p> <ul style="list-style-type: none"> <li>• Which rent models will incentivize subsidized households to increase their earnings?</li> <li>• Which rent models improve the PHAs financial status while minimizing the impact on tenants?</li> <li>• Which rent models will increase administrative efficiencies for PHAs and improve their financial status?</li> </ul>
6	<i>Cityscape</i> board, New	<p>How have renters been affected by the housing crisis?</p> <ul style="list-style-type: none"> <li>• Has the crisis affected single-family renters differently than multifamily renters?</li> <li>• How has the crisis affected household stability and child welfare?</li> <li>• How do fluctuations in the housing market (boom and bust) affect the assisted families?</li> </ul>
7	New	<p>What is the impact of asset management on cost savings, unit quality, and tenants?</p>
8	465, New	<p>How successful are voucher holders (and the program as a whole) in “leasing up”?</p> <ul style="list-style-type: none"> <li>• Are certain populations (including special populations such as nonelderly disabled, homeless families, youth aging out of foster care, formerly incarcerated individuals, etc.) less successful than others?</li> <li>• How long is the time to lease up?</li> <li>• How many people submit RFTAs or ask for an extension?</li> </ul>
9	404	<p>What is the effect of small-area FMRs on voucher holder location and on PHA costs?</p>
10	408, 466, 470, 510, 514, 519; 384, 394, 471, New	<p>In what ways does landlord behavior affect the success of HUD subsidy programs?</p> <p>How do renters search for properties and how does variation in the search process affect where tenants of various types live?</p> <ul style="list-style-type: none"> <li>• How can outcomes from HUD programs be improved through interventions in the search process?</li> <li>• Are information-only interventions effective?</li> </ul>
11	New	<p>How are small PHAs performing and what are the reasons for their performance and administrative costs and challenges?</p>
12	436	<p>What measures of housing cost inflation does HUD currently employ? Are these measures appropriate, practical, and sufficiently accurate (for example, controlling for differences in unit quality)?</p>
13	New	<p>What is the cost effectiveness of project-based versus tenant-based rental assistance?</p>
14	New	<p>What are the impacts of cost-saving measures implemented at MTW PHAs on tenants over time?</p> <ul style="list-style-type: none"> <li>• Are the PHAs serving “substantially” the same number of families?</li> <li>• Are the PHAs more cost effective, given the relaxed regulatory burdens?</li> </ul>
15	499, 512, 513	<p>Who owns what types of rental properties today?</p> <ul style="list-style-type: none"> <li>• What is the federal role in properties with fewer than 50 units?</li> <li>• What are the characteristics of HCV landlords?</li> </ul>
16	New	<p>What are the differences among PHAs in waiting list management?</p> <ul style="list-style-type: none"> <li>• When do they open waiting lists, why, and what is the effect on extremely low- and very low-income households in their jurisdictions?</li> </ul>

**Affordable Rental Housing (Goal 2)** continued

Rank	Comment Number	Refined Research Question
1	New	<p>What does the national rental market look like beyond HUD programs?</p> <ul style="list-style-type: none"> <li>• How does the national rental market affect HUD programs?</li> </ul>
2	401, 803	<p>What are the outcomes and what is the cost effectiveness for PHAs and tenants of the regional administration of voucher programs?</p> <ul style="list-style-type: none"> <li>• What are the outcomes and cost effectiveness for PHAs and tenants for PHAs that operate as part of voucher consortia?</li> </ul> <p>What are the outcomes and cost effectiveness for PHAs and tenants for PHAs who have MOUs suspending portability requirements?</p>
3	New	<p>What do troubled PHAs have in common?</p> <ul style="list-style-type: none"> <li>• Are there differences in program performance between public housing and HCV programs within the same PHAs, that is troubled on the public housing side, but not the HCV side, or vice versa?</li> </ul>
4	New	<p>What is the impact of portability policies on voucher tenants and PHA program operations and costs?</p> <ul style="list-style-type: none"> <li>• Does the proposed revised portability rule facilitate port moves and household mobility?</li> <li>• How does the revised portability rule affect the cost of port moves?</li> </ul>
5	Added	<p>Are voucher holders better off because poverty has moved to the suburbs and voucher holders are more dispersed as a population?</p> <ul style="list-style-type: none"> <li>• Are efforts to deconcentrate voucher holders resulting in better quality housing?</li> <li>• Are voucher holders more likely to relocate in a less impoverished neighborhood now than before?</li> </ul>
6	New	<p>What does the tenure of assisted households look like?</p> <ul style="list-style-type: none"> <li>• What are the reasons for end of participation (EOPs)?</li> <li>• Why do families leave the program?</li> <li>• What are the demographics of households that leave?</li> <li>• Are there differences between households that leave and those that stay?</li> </ul>
7	421, New	<p>How can rent levels be better measured and verified for HUD programs?</p> <ul style="list-style-type: none"> <li>• What is the effect of a much smaller sample of RIM reviews being conducted annually by PIH and the reduced involvement in approving PHA plans?</li> </ul>
8	809	<p>What is the current state of housing that is accessible and visitable by the disabled?</p> <ul style="list-style-type: none"> <li>• How does this compare to the need?</li> <li>• What is HUD's contribution to the stock of visitable and accessible homes?</li> </ul>

## Housing As a Platform (Goal 3)

Rank	Comment Number	Refined Research Question
1	7, 151, 179, 191, 228, 229, 262, 266, 664, 768, 779, 780	<p>How cost effective is supportive housing for elderly populations? (Effectiveness can be considered in terms of improvements in quality of life, health outcomes, and budget savings to other programs).</p> <ul style="list-style-type: none"> <li>• What do people at advanced ages (75, 85, 95) need (comparatively) to be able to age in place successfully, particularly those who are most at risk of being institutionalized (for example, accommodations in the house, support and services such as exercise programs, neighborhood features such as services and transportation access)? How do elderly households make decisions about their housing and aging in place?</li> <li>• What are the most effective models to bring support and services to low-income elderly people in assisted housing, especially those with chronic conditions and functional limitations that are most at risk of institutionalization?</li> </ul>
2	6, 106	<p>What interventions and/or program models are most effective at preventing homelessness? What are the costs and benefits to providing individually based homelessness prevention versus community-based prevention programming?</p>
3	152, 184, 207, 416, 855, 856, 858, 859	<p>What are the benefits of providing housing as a part of a short-term intervention “package” for vulnerable populations when exiting institutional settings? Examples include youth aging out of foster care, people leaving correctional institutions, and households exiting emergency shelter.</p>
4	855, 856, 858, 859	<p>How effective is rapid rehousing in limiting the incidence and duration of homeless spells? What lessons can be learned from the implementation of rapid rehousing programs that could guide a broader experiment of time-limited subsidies or shallow subsidies?</p>
5	152,115, also Sustainable 653	<p>What are the costs and benefits of different assisted housing models for people with disabilities, including project-based vouchers, group homes, housing choice vouchers, 811 PRA, designated PH units, etc.</p> <ul style="list-style-type: none"> <li>• Which models have the best outcomes (health, independence, quality of life) for residents, considering type and severity of disabilities and community settings?</li> <li>• What are the most effective models to bring support and services to people with disabilities in assisted housing?</li> <li>• What effect does the Olmstead ruling have on the policies governing housing in the community for people with disabilities? How is “most integrated setting” defined in housing? How does this vary across states?</li> </ul>
6	121, 153, 324, 859, 191	<p>What is the public benefit in providing housing assistance to ex-offenders?</p> <ul style="list-style-type: none"> <li>• What are the costs and benefits of relaxing PHA administrative policies that screen out ex-offenders?</li> <li>• Does allowing ex-offenders on the lease in public and assisted housing programs lower recidivism? Does it increase or decrease the safety of the development?</li> <li>• Does allowing ex-offenders on the lease help families become more economically self-sufficient?</li> <li>• What nonhousing services are needed to ensure successful tenancy?</li> </ul>
7	144	<p>Does housing assistance matter? What is the impact of receiving housing assistance over time for different populations (for example, families with children, homeless households, people with disabilities)?</p> <ul style="list-style-type: none"> <li>• Does HUD housing assistance change family spending patterns in ways that improve family health and well-being (beyond provision of adequate shelter)? For instance, with food security?</li> </ul>
8	Added/USICH	<p>What are the effects of PHA administrative policies on homelessness? Do strict PHA screening criteria and termination policies contribute to homelessness? Does the adoption of PHA work requirements, income requirements, higher minimum rents, or flat rents make it more likely that extremely low-income households will lose assistance and become homeless? What is the cost to PHAs to evict households and reissue vouchers?</p>
9	Added	<p>How do households, especially families with children, make decisions about where to live? When presented with mobility and school choice, how do families prioritize what is important in their location choice? What type of information is made available to families to help make these decisions and to what extent does this information assist families in choosing to move to high opportunity areas?</p>

**Housing As a Platform (Goal 3)** continued

Rank	Comment Number	Refined Research Question
1	187, 186	How many youth (ages 16 through 24) are homeless and how can they best be served? What are the best strategies for developing a national count of homeless youth?
2	Added	How do HUD programs that promote mixed-income communities (for example, HOPE VI, Choice Neighborhoods, vouchers, home ownership-promoting programs) affect neighborhood safety (that is, crime and exposure to violence)?
3		What are the long-term effects of having experienced homelessness during childhood?
4	Added	What do people in the HOPWA and homeless assistance programs need to be able to successfully transition to mainstream housing programs? What types and levels of services need to be in place before, during, and after the transition to ensure that clients are able to successfully make the transition to mainstream programs?
5	Added	How can HUD housing assistance to families with children be better linked to interventions that support families and positive child development and school readiness? <ul style="list-style-type: none"> <li>• What are existing examples of community-based partnerships between housing and family service agencies?</li> </ul>
6	111, 112, 832, 119	What questions can we answer with existing administrative data between HUD and HHS through administrative data matching?
7	190	How can we understand the incidences of, and arrests because of, criminal activity associated with voucher households? What are the crimes most commonly committed?
8	921	How can measures to reduce key residential asthma triggers (for example, tobacco smoke, cockroach and mouse allergens, mold/moisture) be implemented widely in assisted housing in a cost-effective manner?

## Sustainable and Inclusive Communities (Goal 4)

Rank	Comment Number	Refined Research Question
1	584, 585, 261, 790	<p>How can HUD achieve its stated departmental objective of reducing energy consumption in its public and assisted housing stock during the next 10 years?</p> <ul style="list-style-type: none"> <li>• What is the current energy consumption of public housing and assisted multifamily developments? How can we obtain reliable data on energy consumption and costs in public and assisted housing?</li> <li>• With more and better data, how can HUD improve estimates of utility allowances?</li> <li>• What are long-run cost savings of energy investments in public and multifamily housing?</li> </ul>
2	429, 546, 550, 552, 560, 617, 628, 635, 430, 824, 617, 622, 633, 642, 648, 694, 580	<p>How do behavioral factors and incentives (for tenants, landlords and owners) affect the energy efficiency and energy consumption of multifamily housing?</p> <ul style="list-style-type: none"> <li>• What is the intersection between technology and behavior with respect to tenant energy consumption? What components does a tenant engagement program need to have a reasonable expectation of changing behavior to achieve energy savings at various thresholds (for example, education of parents or children, income, housing cost burden)? What are the benchmarks necessary to gauge success?</li> <li>• What is the effect on energy use, tenants, and landlords of switching from landlord-paid to tenant-paid utilities? How can utility companies (broadly defined) be involved in reducing per-unit costs to tenants or landlords?</li> <li>• How can we incentivize private landlords to improve the energy efficiency of their units, while factoring in resident behavior (for example, rebound effects)? How can energy retrofits to existing homes be paid for? What is the potential for using on-bill financing of energy retrofits (that is, monthly loan payments on utility bills)? Are there incentives for utility companies to pay for it?</li> <li>• Does housing counseling that includes information about transportation, green housing, and energy change behavior? What is the outcome for households and environment from this sort of counseling?</li> </ul>
3	608, 876, 877, 885, 886	<p>What forces cause segregation by race and income to persist? How can HUD promote the development of more inclusive communities?</p> <ul style="list-style-type: none"> <li>• Is HUD's Affirmatively Furthering Fair Housing (AFFH) policy working to reduce segregation and increase affordable-housing supply?</li> <li>• How do consumers search for housing, and how does consumer search behavior affect fair housing outreach activities and discrimination outcomes?</li> <li>• What preferences do consumers have about what kinds of neighborhoods they would want to live in, and how does that affect affirmatively furthering fair housing policy goals?</li> </ul>
4	194, 477, 590	<p>How should federal policy for mixed-income housing move forward?</p> <ul style="list-style-type: none"> <li>• How successful has the HOPE VI program been in achieving the goal of sustaining mixed-income and diverse neighborhoods and communities? What about other programs such as Choice Neighborhoods?</li> <li>• To the degree programs have been successful what have been the outcomes for residents?</li> <li>• Does geographic proximity lead individuals with different income levels to engage in cooperative and pro-social behaviors, or is it necessary for HUD and its partners to deliberately encourage engagement?</li> <li>• What is the impact of anchor institutions (especially universities and hospitals) on income mixing and the transformation and stabilization of neighborhoods? What incentives cause anchor institutions to engage with their communities, and how does the nature of neighborhood interaction affect the outcomes?</li> </ul>
5 (New)	615, 658, 979, Added	<p>What are the economic impacts of different types of HUD spending? How does economic impact per dollar of spending vary for different HUD programs (for example, NSP2, HOPE VI, CDBG, HOME, public housing capital investment)?</p>
6	Added	<p>How effective is inclusionary zoning as a strategy for reducing race and income segregation, creating mixed-income communities, and expanding the supply of affordable housing?</p>
7 (New)	615, 658, 979, Added	<p>How successful are HUD-supported economic development activities?</p>



**Sustainable and Inclusive Communities (Goal 4)** continued

Rank	Comment Number	Refined Research Question
8	558, 878, 888	What is the current level of fair housing awareness and understanding, (for example, as determined through previous “How Much Do We Know” surveys)? Are people aware of HUD’s nondiscrimination policies regarding gender-based housing and sexual orientation?
9	540, 541, 545, 548	<p>What is the state of play for Energy Service Companies (ESCOs) in assisted housing?</p> <ul style="list-style-type: none"> <li>• How can a public-sector or nonprofit Energy Service Company (ESCO) be stood up so that a greater proportion of energy savings could flow to housing providers, and what are the regulatory barriers (reference documentation by the National Association of State Energy Officials)? Are there PHAs for which an inhouse energy manager is a better option than an ESCO?</li> <li>• How can quasi-municipal finance instruments (for example, revolving loan funds through block grants) be used to lift up community development organizations to enable energy efficiency, and how can those instruments appeal to private investors?</li> </ul>
1	792, 800, 842, Added	What state and local policies inhibit the construction of housing in high demand communities? What mechanisms are available to HUD to incentivize these local governments to enable the development of more location efficient housing?
2	656, Added	What are the social, economic, and health effects of “food deserts” on neighborhoods where HUD public and assisted housing is situated?
3	Added	How do housing outcomes for same-sex couples compare with opposite-sex married and unmarried couples with similar socioeconomic characteristics?
4	553, 554	How can HUD’s energy efficiency initiatives for project-based housing be made regionally appropriate for various climate zones? Would a HUD Cool Roofs/Cool Pavement program be cost effective in some regions? Do we know enough about the structural composition of the HUD stock?
5 (New)	Added	What is the annual state-by-state trend of certified green homes within the United States?
6 (New)	Added	Will the introduction of a new, alternative home improvement mortgage product, focusing on energy efficiency, be beneficial for lenders and homeowners?
7 (New)	Added	What is the appreciated value for energy-certified homes at resale?
8	569, 599	What is the role of transit-oriented development in costly, builtup regions? What is the experience with transit-oriented development in Japan, Hong Kong, and other nations (that is, conduct a research mission to Japan with Japanese government assistance)? What valuable cross-national comparisons could lead to greater insight?

## Crosscutting

Rank	Comment Number	Refined Research Question
1	350, 351, 612, 613, 616	<p>How can HUD more effectively accelerate community reconstruction and recovery following a disaster?</p> <ul style="list-style-type: none"> <li>• In what ways can HUD promote and support preplanning for reconstruction, potentially including manufactured housing communities and identification/remediation of extremely risky parcels? Can it be made part of Consolidated Plans?</li> <li>• Can a typology of housing solutions provide a roadmap for response/recovery from various disasters?</li> <li>• Can HUD develop “programs in a box” consisting of data systems, program rules, virtual plans, memorandums of understanding to speed access to federal resources and deployment of solutions?</li> <li>• How can HUD more effectively estimate disaster damage to housing, infrastructure, and economies for allocating postdisaster CDBG funds to affected states and communities? Can the extent of property insurance coverage and claims inform allocations? Is damage to private homes an effective predictor of other community needs?</li> </ul>
2	292, 215	<p>How should the American Housing Survey (AHS) be redesigned for 2015?</p> <ul style="list-style-type: none"> <li>• Does the AHS sufficiently cover the topic of home insurance to support disaster preparedness?</li> </ul>
3	271, 308, 309, 310, 314, 985	<p>How can HUD administrative data serve better for purposes of performance management and evaluation of outcomes, cost effectiveness, and cost benefit?</p>
4	48	<p>Which services provided to tenants help reduce the operating costs of assisted multifamily housing? What methods can be used to determine the effect of tenant service programs on building operating costs?</p>
5	319	<p>How can HUD target assistance to need more effectively and flexibly as markets change and demographics shift?</p>
1	326	<p>Would the supply of good-quality, affordable housing be increased if the International Residential Code replaced the HUD Code for manufactured housing?</p>
2	375	<p>What are detailed characteristics of typical HUD-assisted households, such as employment, work search, educational pursuits, seeking permanent residences, and decisions to move?</p>
3	795	<p>How do current financial processes affect the use of manufactured housing?</p> <ul style="list-style-type: none"> <li>• How are sales of manufactured homes affected by consumer financial readiness, market alternatives, and the availability of financing?</li> <li>• Are chattel loans (compared with conventional real estate loans) an appropriate financing vehicle for manufactured homes?</li> <li>• Would FHA increase risk to the insurance fund by offering real property loans for manufactured homes that are not permanently installed?</li> </ul>
4	337	<p>Is there a federal role in accelerating replacement of pre-HUD-Code housing?</p>
5	252	<p>How can PD&amp;R market studies be of greater use to the public and private sectors to inform and shape state and local policy and market decisions? Can U.S. Housing Market Conditions be restructured to appeal to a wider audience?</p>
6	982, 928	<p>Can the usefulness of HUD surveys, data and metrics be increased through coordination and data harmonization within HUD and with similar efforts of external organizations?</p>
7	376	<p>What changes are occurring in the role of the “natural [that is, unsubsidized] affordable” housing stock in meeting the need for affordable housing, particularly in rural communities, due to the ownership of many single-family homes by small or aging families? How many people are being displaced by the scarcity of natural affordable stock in these communities?</p>
8	936	<p>What challenges do international “social protection floor” concepts pose for core U.S. policies, including housing policy?</p>
9	239, 244, 240, 253	<p>What effect does foreclosure hangover have on neighborhoods, including minority neighborhoods, over time?</p>

## Appendix E. Full Descriptions of Research Roadmap Projects

The research projects described in this appendix reflect preliminary thinking by HUD research teams about how best to respond to priority research questions identified in the Roadmap process, rationale for conducting the research, and the research design. The project proposals are listed in alphabetical order by strategic goal.

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## Homeownership and Housing Finance (Goal 1)

### Assessing the Effectiveness of Mortgage Modification Protocols

#### Research Question

Distressed mortgage modification protocols have changed significantly during the past few years. How are current modifications performing relative to past modifications made under different protocols and rules after controlling for changed economic conditions? Which types of modifications are most effective from a sustainability point of view? How should current modification protocols (Home Affordable Modification Program [HAMP], Federal Housing Administration [FHA]-HAMP and others) be modified? How do outcomes vary for homeowners, holders of mortgage notes and MBS, neighborhoods, local governments, etc. when homeowners are granted principal forgiveness rather than principal forbearance? How does the presence of a Shared Appreciation Mortgage (SAM) clause alter outcomes at different time intervals?

#### Rationale

This research project is important to HUD for several reasons, including policy relevance and comparative advantage. Modifications are a key component of federal policy in dealing with the current housing crisis, and the programs themselves have been evolving. In the past, distressed mortgage modification was a rarely used loss-mitigation tool, but the scale and scope of the current housing market crisis have resulted in their widespread use. Mortgage modifications are offered under a host of programs, such as the U.S. Department of the Treasury's HAMP, FHA-HAMP and Rural Development (RD)-HAMP, Principal Reduction Alternative (PRA), Second Lien Modification Program (2MP), and non-HAMP or "proprietary modifications," which are also much more common. The Office of the Comptroller of the Currency (OCC) Mortgage Metrics Report indicates that, between 2008 and the second quarter of 2012, 2.6 million<sup>15</sup> loans were modified under various programs (with different rules and qualifications), with 47 percent of them being reported as current as of the second quarter of 2012. Moreover, 14.9 percent were reported as seriously delinquent as of the second quarter of 2012, and 17 percent had either

completed the foreclosure process or were in the foreclosure process. Because of the unprecedented scale of this crisis, few effective benchmarks for modification success are available for policymakers to use to evaluate the situation. PD&R can play a key role in offering informed opinions backed by research into issues, such as defining modification success and sustainability, that will take public interest into account. Such research will not only inform HUD policy and operation, but it will also shape federal policy in general.

#### Description

This research project seeks answers to several interrelated questions around modifications. First, servicers have been following different rules for modification under different modification programs (HAMP, FHA-HAMP, RD-HAMP, PRA, 2MP, as well as proprietary modifications), and the eligibility rules in these programs have also been changing. This research project will compile the rules under the programs to better understand issues around their uptake and effectiveness. Second, this research will develop alternatives to the Net Present Value (NPV) calculation that might be employed by policymakers to explicitly factor in the costs and benefits of the modification decision to parties such as the borrower, neighborhoods, and local governments that must deal with the negative consequences of the decision not to modify the loan or of a failed modification. Finally, this research project will develop analyses to compare principal reductions (with and without SAM clauses) with principal forbearance to investigate the effect of reequifying borrowers.

Detailed tasks are as follows:

**Task 1.** Surveying and analyzing the effect of different modification protocols followed by servicers.

A need exists to compile and understand the different modification protocols (such as the HAMP "Waterfall" or rules of eligibility that determine what kind of modifications the borrower is eligible) over time as these have dictated both the number and types of modifications offered. Because financial incentives are attached to HAMP and the PRA, understanding the effect of the protocols themselves is important for policymakers in evaluating the effect on the housing market.

<sup>15</sup> OCC (2012: 46; table 40).

**Task 2.** From a public policy point of view, a great need exists to define “modification success.” Is it a lower redefault rate at 6 or 12 months or over longer periods? Experts have noted that traditional methods of quoting modification success often overstate success with the error compounding over a longer measurement period due to remodifications and liquidations (Goodman et al., 2011). Thus, rate modifications are more “successful”/have a lower redefault rate in the short run while principal modifications are “more successful” after 12 or 24 months. This research project will analyze data from various sources including the OCC/Office of Thrift Supervision (OTS) Mortgage Metrics Report, FHA and LPS Applied Analytics (LPS) to evaluate this question.

**Task 3.** Identifying alternatives to the NPV to the investor test as the sole determinant of the modification decision.

The decision to modify a loan or not is made by the mortgage servicer following the rules specified in their pooling and servicing agreements (PSAs). If the NPV to the investor of making the loan modification exceeds the NPV of not offering a modification, then the servicer, assuming the PSA guidelines permit, is likely to offer the modification. Although this NPV to the investor test satisfies the servicer’s fiduciary duty to the investor, it ignores the costs and benefits of such a decision to other parties including the borrower, neighborhoods and local governments that must deal with the negative consequences of the decision not to modify the loan or a failed modification. Thus it is in public interest to identify and develop alternate NPV tests that could be used to provide additional information and be the basis for additional financial incentives from Treasury or HUD that enables servicers to satisfy PSAs (and their fiduciary duty to investors) for modifications meeting the alternative NPV test but not the traditional NPV test and thereby permitting these modification to be implemented.

**Task 4.** Comparing principal reductions (with and without SAM clause) with principal forbearance<sup>16</sup> by analyzing loan level data.

This is a very relevant housing policy issue<sup>17</sup> as the Federal Housing Finance Agency (FHFA) has refused to permit principal reductions for Fannie Mae and Freddie Mac loans claiming

instead that principal reductions are the equivalent to principal forbearance. Although some advocates of principal forbearance have claimed that it is economically equivalent to principal reductions with a SAM feature, the two are not equivalent in their effect on borrower’s incentive and experience—especially over the longer run. From a borrower’s perspective, a principal reduction with SAM reduces the debt of the borrower and restores his/her equity position in exchange for a share of future appreciation in the value of the house. Under the typical SAM clauses used in such workout situations, the borrower is expected to share future appreciation only if home values appreciate enough: if home values do not appreciate at the end of the term of the loan, the borrower is not expected to repay any amount under the SAM clause. A borrower with principal forbearance, however, is still expected to repay the principal forborne at the end of the loan term. This reequification of borrowers under principal reduction is the key difference between principal reduction and principal forbearance that can offset the cost differential between the two approaches in an NPV test.

Principal forbearance enables the lender or investor to temporarily set aside and defer the underwater portion of the borrower’s principal and forgo interest on that deferred principal. As a result, while the borrower’s monthly mortgage payment declines, his or her equity position is not restored. The amount of principal forborne typically must be repaid either via a repayment plan over a period of time or via a balloon payment at the end of the loan term.<sup>18</sup> In contrast, the lender or investor actually forgives (permanently) a portion of the borrower’s principal to avoid the losses associated with foreclosure in the case of principal reduction. As a result, not only is the borrower’s monthly payment reduced, but the borrower also is reequified as his or her debt is reduced, which further decreases the likelihood of default. Although Goodman et al. (2011) found preliminary evidence consistent with this hypothesis, performance analysis over a longer time is needed.

Thus, principal reductions can have a dual positive effect: as borrowers exit their negative equity position, their incentive to redefault (whether strategically or through trigger event) is reduced or effectively eliminated. Investors’ risks of losses associated with foreclosures are reduced consequently and the

<sup>16</sup> In principal balance modifications, the principal balance is reduced, either in the form of principal forbearance or principal forgiveness. In a principal forbearance, repayment of the principal is deferred for some period of time but is paid back either via a repayment plan or as a balloon payment at end of the loan period. In the case of principal forgiveness, the loan is modified so that the borrower no longer owes a portion of the principal or the interest on it. In a rate modification, the interest rate is reduced. In a capitalization modification, neither the rate nor the principal balance is reduced but the term is extended to reduce monthly payment.

<sup>17</sup> HUD’s upcoming Report to Congress on Shared Appreciation Report, which is in interdepartmental clearance, also identifies principal reductions with SAMs as a solution for dealing with the growing pool of loans with negative equity.

<sup>18</sup> Principal forbearance in the HAMP context must be noninterest bearing and nonamortizing. Zero interest balloons are permitted.

other negative effects of foreclosures noted earlier are avoided as well. For instance, Quercia and Ding (2009: 190) found that principal forgiveness has the lowest redefault rate among different types of loan modifications: “most likely because it addresses both the short-term issue of mortgage payment affordability and longer term problem of negative equity.”

To study and analyze redefault rates for principal forbearance versus principal reductions, we would need to account for underlying borrower and loan characteristics such as that the borrower’s financial situation at the time of modification, LTV, etc., that influence the servicer’s decision. In the case of securitized loans, the PSA is important along with the incentives under HAMP or PRA that would be applicable at that time. Detailed loan level information from the OCC/OTS’s Mortgage Metrics database on loan modifications would be the preferred<sup>19</sup> way to research this question. It is likely that the OCC will be sensitive to servicer information but this information could be stripped from the loan level dataset.

Because only a few servicers are offering principal reductions with SAM features, we could arrange to get loan-level information, including performance on such loans from Ocwen and Bank of America, both of whom have publicized their principal reduction efforts. HUD’s upcoming Report to Congress on SAMs recommends that the Congress consider authorizing pilot programs to demonstrate and evaluate the greater use of principal reductions with SAMs as a loss-mitigation tool for underwater loans. The current research study would help the design of such a pilot program if that should be authorized in the future.

## Background

Retention alternatives to foreclosures, such as modifications, have been an important part of current public policy solutions to the housing market crisis. This research project seeks to explore the various metrics for “successful” modifications and to identify and quantify benefits and costs associated with the modification decision to the broader stakeholder community, such as the neighborhood, local governments, and the broader realty community that is affected by the modification but whose interest is not part of the NPV to the investor calculus. Modification literature is still limited and nascent in development, but existing studies have already identified some issues with defining success, and this research project would add to that strand of literature.

## Policy Implications

This research project would provide identify and quantify the alternatives to the standard NPV to the investor basis for the modification decision and would thus inform future policies around modifications such as the financial incentives that may need to be offered under government or HUD related modification program and eligibility and screening rules for effective modifications. By tracking successful modifications over time and identifying the principal factors influencing success, this project will also provide the evidentiary basis for informing future federal and HUD policies and programmatic guidelines.

## Finance

The proposed cost estimates for this study is between \$500,000 and \$1 million, depending on the scope of the tasks and the data sharing agreements that can be obtained with other federal agencies such as OCC.

## Comprehensive Study of Shared Equity Homeownership

### Research Question

How prevalent is shared equity homeownership? What obstacles exist?

### Rationale

Although shared equity homeownership has gained increased attention, little is known about the size and scope of this sector of the market, or of the obstacles to its increased use in HUD-promoted affordable-housing strategies. This project has policy relevance and timeliness due to the fact that foreclosures are near all-time highs, while shared equity homeownership programs exhibit low levels of foreclosure.

### Description

**Task 1.** Survey of Long-Term Affordable Homeownership Programs

Long-term affordable homeownership (LTAH) is a growing and significant part of state and local affordable-housing strategies. LTAH allows for leveraging of public dollars by retention of subsidy dollars and increased stability from homeownership. This project will be the first comprehensive, systematic survey of state, local, and community LTAH programs across the country.

<sup>19</sup> It is typical that when principal is forborne, there is a zero-interest balloon payment at the end of the loan term. This balloon indicator data field, however, is said to be not well populated in the CoreLogic Loan Performance dataset.

**Task 2.** Survey of Lenders' Policies and Practices on LTAH Programs

LTAH mortgage financing opportunities are restricting the growth of LTAH. FHA is evaluating removing obstacles to access to FHA financing, which may be crucial to the sustainability of LTAH efforts, but much depends on the home mortgage industry's response to and perspective on such changes. This project would survey lenders' involvement in such programs, and obstacles and potential incentives to their involvement.

**Task 3.** Demonstration to Promote LTAH Best Practices

Significant diversity exists in LTAH programs, ranging from purely governmental to public-private partnerships, to community- and nonprofit-led initiatives. Because of the disparate, decentralized nature of these efforts, they have not been the subject or focus of federal programs or related oversight. This demonstration will identify 5 to 10 communitywide, regionwide, or statewide initiatives to produce an understanding of best practices in the field.

**Background**

It is estimated that 250,000 to 400,000 units of LTAH exist in the United States today, but without a comprehensive study it is impossible to know the true scope of these programs. In addition, the housing crisis has led to some lenders implementing SAM modifications to reequify borrowers while providing the potential for sharing in future home price appreciation between homeowner and the mortgage investor.

**Policy Implications**

Study results could inform FHA policy such that FHA underwriting could be altered to allow for shared equity homeownership, which may increase opportunities for low-income households and could reduce claims rates.

**Finance**

The three phases of this project are excellent candidates for multisource funding, including collaborations with non-HUD organizations such as the Ford Foundation. HUD has requested up to \$2 million, with a timeframe of 2 years.

**Foreclosure Landscape Study**

**Research Question**

What is the effect of state laws, regulations, and practices on households and lenders dealing with negative equity? Are any best practices arising out of these experiences for households,

lenders, communities, and stakeholders? Are additional metrics around foreclosures available for HUD to use to track foreclosures?

**Rationale**

FHA has a large stock of seriously delinquent and in-foreclosure properties. Anything HUD can learn about foreclosure practices and outcomes would aid FHA. Access to FHA data may provide comparative advantage. This project is extremely timely.

**Description**

The proposed project will provide HUD with the tools to analyze and understand the foreclosure experience and effects under different legal and regulatory regimes.

**Task 1.** Survey state laws and regulations in judicial versus nonjudicial, recourse versus nonrecourse states and their effect on (a) households dealing with negative equity, and (b) lender strategies regarding loss mitigation.

**Task 2.** Determine the feasibility of creating a regional foreclosure tracking system that can be shared and used to inform policy.

**Background**

Differences in state laws and regulations have often been called 'natural laboratories' and this research project explores the different outcomes arising out of these 'natural laboratories.' A growing body of literature explores the differences between judicial and nonjudicial states and between recourse and non-recourse states; this research project would add to that.

**Policy Implications**

At least two direct policy implications are arising out of this project. The analysis of outcomes under different regimes would inform any changes in FHA policy around loss mitigation that might be needed. In addition, the regional foreclosure tracking system will provide a way for HUD to monitor foreclosures in a meaningful way.

**Finance**

The basic literature survey in Task 1 can be conducted with less than one-half full-time equivalent (FTE) in house or through a limited contract of less than \$500,000 dollars. The task of implementing a regional foreclosure tracking system is scalable, depending on the coverage, precision, and options selected, and it is likely to cost up to \$2 million. Opportunities may exist for partnerships with philanthropies and local or nonprofit neighborhood development organizations.



## Impact Evaluation of the Pre-Purchase Homeownership Counseling Demonstration

This project, although consistent with Roadmap priorities, pre-existed or developed outside the Roadmap's project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the Transformation Initiative (TI) Fund in the President's fiscal year (FY) 2014 Budget.

## Impact of Real Estate Owned Properties on Neighborhoods

### Research Question

What are the outcomes for Real Estate Owned (REO) properties? Are they being maintained, demolished, altered, rented or vacant? What are the best practices in this area? How can these outcomes be incorporated into Neighborhood Stabilization Program (NSP) evaluation?

What is the effect of sales of foreclosed/REO properties and conversion to rentals on local housing markets and neighborhoods? What are the nature of the transactions, and the effect on property values and rents? How do investor purchases of REO properties, bulk purchases in particular, differ from REO purchases by owner-occupiers? Would REO sales to nonprofits have greater public benefits? What have practitioners studying REO repurposing identified as best practices? What is the potential to take advantage of foreclosures in high-income neighborhoods to create better opportunities for low-income households? With households forming at one-half the rate of recent years, how can the repurposing of vacant housing be connected and scaled up to provide affordable housing?

### Rationale

According to LPS, more than 500,000 properties began the foreclosure process in the third quarter of 2012 and the pipeline ratio (length of time to clear/sell inventory of seriously delinquent properties) averaged 33 months in nonjudicial foreclosure states and 69 months in judicial foreclosure states. Thus, although home prices have been increasing and delinquencies are down, REO disposition will be an enduring issue for years to come. This is an issue of heightened concern for FHA and policymakers as REO portfolios are being disposed of and it remains unclear whether the trajectory of REO properties and the neighborhoods where they have been concentrated will continue to be differentiated from the broader market. This project will provide HUD with data on REO disposition strategies and effects that can be used to inform and defend REO policy actions. At the project's foundation is an effort to track ongoing

REO research currently being conducted at the local level and outcomes for REO properties, including FHA REO. Results may also be useful in evaluating the NSP program success.

### Description

This project would track the ongoing research in the field on the REO market and the outcomes for REO properties, especially those in the FHA system and would incorporate these outcomes into the NSP evaluation framework. The following tasks are envisioned:

**Task 1.** Review literature to identify analysis being done by regional practitioners monitoring and evaluating REO disposition and repurposing. In addition, this project will interview practitioners, firms with REO portfolios, and agency staff responsible for disposing of their REO portfolios such as the government-sponsored enterprises (GSEs) to understand their strategies. Task 1 will use FHA, UPPS, RealtyTrac, and GSE data to identify neighborhoods affected by REO, and REO bulk sales in particular (possibly from Fannie Mae or private servicers). Task 1 will also develop a methodology for incorporating the different REO outcomes in the NSP evaluation process. Finally a system for geographic tracking of patterns and trends in REOs concentration and disposition from the height of the financial crisis and then overtime through the next 5 years will be designed.

**Task 2.** Implement REO tracking system and design and conduct followup surveys of a representative sample of REO properties—their owners, occupants, and neighborhoods—to measure the effect on identified neighborhoods and analyze survey results for inclusion in a published report. (Depending on budget allocation, this project could also set up a database and continue to perform periodic followups.) HUD's specific focus may be on FHA REO sales, exploiting the Department's comparative advantage and serving its primary policy interest.

**Task 3.** Using findings in Task 1 and Task 2, Task 3 will prepare a report on different REO sales approaches that assesses the ease of transition from vacant REO stock to occupied housing units. Task 3 will compare and contrast the effect on neighborhoods and occupants of small investor versus large investor/landlord disposition, and of REO-to-rental versus REO-to-owner occupant disposition.

### Background

Because REO disposals in large numbers is a relatively new phenomenon, little research exists on this issue, although a growing body of analysis is being done by regional practitioners

in this area. As a first step, this emerging literature should be reviewed and summarized to inform best practices in this area and avenues for HUD-specific research.

### Policy Implications

The questions addressed by this research are of heightened concern for FHA and policymakers, as REO portfolios are being disposed of and it remains unclear whether the trajectory of REO properties and the neighborhoods where they have been concentrated will continue to be differentiated from the broader market. Results of this study will be disseminated to allow FHA, FHFA, the GSEs, and banks to better understand the effect of their REO disposition strategies on the REO properties, neighboring properties and property values, and the subsequent occupants of the REO properties. The information will be beneficial to local policymakers in setting rules and regulations for distressed property disposition to minimize the negative externalities (lower neighboring property values, high incidence of crime, etc.) often associated with distressed properties. Results may also help inform subsequent rounds of NSP or Hardest-Hit funding. Finally, nonprofit affordable-housing providers may be able to use the results to seek additional funding to purchase REO properties and for use in targeting existing funding on properties most likely to stabilize home prices or provide benefits to renters or new low-income owner occupants.

### Finance

The basic literature and tracking design proposed for this project can be conducted with less than one-half FTE in house or through a limited contract of less than \$500,000 dollars. The task of implementing field research on the outcomes for REO properties is more costly and scalable depending on the coverage, precision, and options selected but it is likely to cost up to \$2 million. There may be opportunities for partnership with philanthropy, universities, and local or nonprofit neighborhood development organizations.

## Impact of the Foreclosure Crisis on HUD Programs and the Rental Market

### Research Question

How have renters been affected by the housing crisis?

### Rationale

Although the length, strength, and path of the recovery remains highly uncertain, it seems clear that housing markets in the United States have hit some manner of inflection point. Given

the tremendous impact that the recent recession and the housing bust have had on the demand and costs for HUD programs, assessing the risks and opportunities for these same programs from the likely recovery scenarios seems prudent. This project seeks to implement a process by which HUD could implement scenario planning and potentially anticipate the effect on programs from the recovery.

### Description

In the wake of the foreclosure crisis the rental market has been transformed. The foreclosure crisis has both added new renters, who lost their homes through foreclosure, and displaced renters, whose landlords experienced foreclosure of a property. Lower wages and unemployment sent additional households to seek rental rather than to own their housing. The collapse of demand for owner-occupied housing and credit markets severely slowed the production of housing of all types. At the same time, many homes that could not be sold to owner occupants were shifted to the rental market. Between 2007 and today the relationships between supply and demand have become extremely dynamic. These market changes also affected HUD programs not only increasing demand for assistance but also increasing the subsidy required for many assisted households, generally as incomes fell and market rents rose.

Today, the market appears to have stabilized and a recovery seems to be in the works. What will this recovery look like and what will be the effect on HUD programs in the future?

In answering this question, this project seeks to provide a postmortem evaluation of the effect that the foreclosure crisis had on rental markets and HUD programs. This evaluation will form the foundation from which to forecast what to expect during the next few years, in particular, regarding what the implications of an eventual recovery might be.

The project would—

1. Provide a literature review of recent research on the foreclosure crisis's effect on renters and the rental market
2. Analyze the effect of the crisis on the major HUD rental programs thus far linking program data to local market data
3. Based on the current forecasting literature develop a limited number of scenarios for the rental market and logically analyze the effect of each on HUD programs at the national level and region by region.
4. Design tools or methods to continue to track changes and alter scenarios based on new data and perspectives.

This proposal originated with the Office of Public and Indian Housing (PIH) and would focus on the programs of PIH.

### Background

PIH wants PD&R to help assess how changes in the rental market affect the demand for its programs. At this time, given the state of flux, it is difficult to determine how fluctuations in rental markets (rent prices, supply of units, tenant demand) affect the Housing Choice Voucher (HCV) program, especially in terms of Housing Assistance Payment (HAP) contract costs, exception rents, hardship requests, and other program operations. A formal review of the existing literature and scenario planning could help address this uncertainty.

This research would build on and complement HUD's existing rental-market intelligence tools, such as the State of the Cities database, Comprehensive Housing Affordability Strategy (CHAS) data, Worst Case Needs, CINCH, and Rental Market Dynamics, and, in particular, the *U.S. Housing Market Conditions* reports and market assessments.

### Policy Implications

This project could develop tools or other forms of market assessments that would help PIH determine and predict changes in demand for its programs.

### Finance

The project would be an inhouse project or a small contract of between \$1 and \$2 million.

## International Comparative Study of Housing Finance

### Research Question

What can the United States learn from international housing finance systems?

### Rationale

The heavily intertwined crises in the housing and financial markets in the United States have led to many proposed policy changes with the goal of strengthening these markets and preventing such a situation from happening again. In evaluating and proposing housing policy changes, researchers and policy-makers may benefit from alternative international housing finance experiences.

### Description

This research will consist of international housing and finance literature and policy reviews. Researchers will look to compare and contrast international structures, policies, and experiences with those in the United States.

### Background

What we can learn from other countries on housing financing can be sub-divided into more macro level (monetary policy, taxation system, risks or bubbles) or regulatory structure and regulatory tools. An international comparison study PD&R conducted in 2011 focused more on the regulatory and institutional framework in European countries based on an International Monetary Fund/World Bank survey after the crisis that IMF divided countries into the categories of high home-ownership, low ownership, high government interventions, and low government interventions. For 2012 and beyond, we can research those high ownership countries by comparing the government intervention and their regulatory frameworks to learn how to reduce government risks, from both public and private-sector perspectives. The key is to study the strengths of the high ownership, low government intervention countries. In other words, the objective of the research is to learn their policy, regulatory, and institutional structures that can reduce the government risks as more homebuyers are seeking affordable mortgages.

The European Network of Housing Research has few research papers on post crisis (not quite over yet in Europe) housing and finance sector assessment. PD&R research can establish collaboration with the European scholars. A similar network of scholars is also active in Asia.

### Policy Implications

The housing and economic crises have resulted in the conservatism of the GSEs and passage of the Dodd-Frank finance reforms by U.S. policymakers; yet, many unresolved issues still surround the GSEs, Qualified Mortgage, Qualified Residential Mortgage, and government involvement in mortgage markets. Thus, it is useful to evaluate other policies and structures that have been tried around the world that might inform future U.S. housing policy.

### Finance

HUD has proposed between \$500,000 and \$1 million for this project.

## Nonretention Alternatives to Foreclosure

### Research Question

What are the pros and cons for the economy and housing market arising from nonretention alternatives to foreclosure such as short sales and deeds-in-lieu? How do these differ in the short and long run? What are the current penalties and costs for market participants associated with these options and who bears them? What neighborhood costs or other negative externalities are associated with them? Can these costs be identified and quantified?

### Rationale

The rise in short sales has led to questions about their overall costs and benefits to borrowers and to society and whether current features, including potential recourse for the short amount, may be reducing the short sales to the detriment of housing markets, employment markets, and the overall economy. This research will explore the effects short sales, and other home forfeiture actions, are having on the economy and estimate the costs and benefits of short-sale penalties.

### Description

This study will be composed of four tasks to evaluate the effect of short sales and other nonretention alternatives to foreclosure.

#### Task 1: Survey of Short-Sale Practices and Laws

Task 1 will survey short-sale and other nonretention alternatives to foreclosure practices across the United States and will (1) compare states with recourse versus those without recourse in pursuing deficiency judgments; (2) compare the use and the timelines of foreclosure versus nonretention alternatives to foreclosure by lenders/investors; (3) compare sales price, appraised value, list price, and investor losses for short sales, other foreclosure alternatives, and foreclosures; (4) compare vacancy rates and duration for short sales, other foreclosure alternatives, and foreclosures.

#### Task 2: Outcome Evaluation of Short-Sale and Other Nonretention Alternatives to Foreclosure in Judicial and Nonjudicial Jurisdictions

How do short sales and other nonretention foreclosure alternatives differ across states and localities? Using the data collected in Task 1, researchers will assess the sources of differences in practices, timelines, and prevalence of short sales and other nonretention foreclosure alternatives. They also will evaluate the differences in costs to homeowners, including costs to their

credit profiles, of exiting homeownership through short sales and other foreclosure alternatives or through foreclosures.

#### Task 3: Cost-Benefit Analysis of Short Sales in Minimizing Distressed Housing Disposition Costs

Are the penalties associated with short sales preventing sales of underwater homes, restricting labor mobility, and hindering economic growth? What would happen if all mortgages were nonrecourse? Should the negative credit score effects of a short sale be limited or mitigated? What would be the effect of greater government support for short sales? Would increased short sales imperil lenders, the GSEs, or the FHA, or would they benefit the housing markets by hastening the revaluation of the housing stock and bank assets? How do short-sale losses systematically compare with foreclosure losses on similarly situated homes? How do costs to neighborhoods vary across short sales, other foreclosure alternatives, and foreclosures?

#### Task 4: Governmental Role

What role does the federal government play in the short-sale process? Is federal absence hindering short sales or expanding short-sale timelines because of lack of uniformity of short-sale practices and laws across jurisdictions? Should the government have a larger, more formal role in establishing nationwide short-sale processes and standards? Practitioners complain short-sale timelines, often 3 to 6 months between the time a contract is received and the closing after the short sale is approved, are too long. FHFA has set maximum timeframes for responses on GSE-backed mortgages. Should national standards be established for all mortgages? Should current FHA or GSE short-sale and other nonretention foreclosure alternative policies serve as the basis for national standards?

### Background

In the wake of the housing bust, short sales have grown from a minimally used nonretention alternative to a widely used alternative. The OCC Mortgage Metrics Reports show 59,996 short sales in the first quarter of 2012, an increase of 20 percent from the first quarter of 2011 and an increase of 222 percent from the first quarter of 2009. In addition, short sales in the first quarter of 2012 accounted for more than 32 percent of home forfeiture actions. Many analysts consider short sales a more effective option than foreclosure due to higher sales prices, shorter disposition timelines, shorter periods of vacancy, reduced investor losses, and reduced borrower credit damage. This research project would explore and attempt to quantify these costs and benefits and assess the effect of nonretention alternative to foreclosure.

## Policy Implications

Short sales have grown from a minimally used nonretention alternative to a widely used alternative to foreclosure. This study will catalog the differences in short-sale practices across the country and across lenders and conduct a cost-benefit analysis to evaluate the efficiency of nonretention alternatives to foreclosure in disposing of nonperforming loans, minimizing losses to lenders and insurers, minimizing impacts on neighborhoods, and transitioning households out of underwater homeownership situations. If best practices can be identified and nonretention alternatives to foreclosure are determined to minimize net economic losses from a distressed home sale, these findings could help inform FHA and GSE policy to minimize losses and negative externalities.

## Finance

This research is estimated to take 2 years to complete. Task 1 is expected to take 6 months to complete, task 2, 1 year to complete, and task 3, 6 months to complete. HUD has proposed between \$500,000 and \$1 million for this project.

## Reassessing the Role and Function of FHA

### Research Question

What should be the future role of FHA? Are current evaluations, stress tests, fiscal soundness assessments, and policy studies (for example, for setting loan limits) rigorous enough to ensure that future? Are FHA's criteria for approval of a condominium for eligibility necessary to protect the Mutual Mortgage Insurance Fund from excessive risk exposure? Conversely, do these criteria interfere with FHA's ability to stabilize housing markets with large concentrations of condominium units?

### Rationale

The FHA's market share of the home purchase market increased from less than 5 percent to close to 40 percent between the peak home price boom and the depths of the credit freeze. FHA and the government's housing finance role for the future are now up for debate. With access to FHA's Single Family Data Warehouse and mortgage market data from LPS, PD&R is uniquely positioned to address this timely question.

### Description

The proposed project seeks to provide HUD with the necessary evidentiary basis to design and implement policy responses (both within HUD and outside of HUD) in the changing mortgage market during the next 5 years. The heart of this project

is collaborative research with other entities (within and outside of HUD) to support a more effective role for government, especially FHA insurance, in the mortgage market.

**Task 1:** Evaluate the methodology currently used in evaluations, stress tests, and fiscal soundness assessments by FHA that can be used to inform broader housing market policy.

**Task 2:** Undertake mortgage market studies to examine effects of policies, such as resetting FHA loan limits, which were temporarily raised by stimulus legislation.

**Task 3:** Undertake review and analysis of specific policies at FHA, such as condominium eligibility criteria and other specific credit underwriting policies identified by other offices at HUD.

## Background

PD&R is already writing a white paper on the role of FHA, past and present. The FHA in particular has played a strong counter-cyclical role in the current housing market crisis and has helped break the self-perpetuating spiral of declining house prices and defaults. Private capital remains reluctant to return to housing finance markets and government backstop continues to be needed in mortgage markets. As policymakers debate the size and type of government needed in the future, this PD&R research project can inform this debate.

## Policy Implications

By targeting issues and questions critical to policymakers, this research project will inform not only HUD policy but national housing policy as well.

## Finance

This effort is likely scalable, depending on the number and scope of studies considered, and is likely to cost in the range of \$1 to \$2 million. It may provide opportunities for partnership with other agencies, such as Treasury and FHFA, and with other researchers.

## Reverse Mortgage Study

### Research Question

Under what conditions is using home equity through a reverse mortgage to maintain quality of life in retirement an effective strategy in the long term? What features of reverse mortgages are most helpful in doing so? What can we learn about reverse mortgages from counseling data? What are the trends in local property taxes and hazard insurance (T&I) rates and how can

they be used to inform Home Equity Conversion Mortgage (HECM) policy? What factors affect lender participation in the reverse mortgage market?

### Rationale

This research addresses critical issues for seniors needing to access the equity in their home while still living there, either to supplement their income or to finance purchase of a new primary residence, the reverse mortgage market in general, and informs HUD’s policy decisions regarding the HECM program.<sup>20</sup> The reverse mortgage sector and the HECM program in particular have undergone tremendous change in the past decade, including significant changes in borrower profile, product offerings and choices, and significant structural changes in the primary and secondary segments—including a rapid rise in private-sector participation during the housing bubble years and rapid withdrawal of the same after the bursting of the housing bubbles. In 2012, the FHA’s HECM remains the predominant product offering. Significant product and feature changes have occurred within the program itself in response to market and economic conditions, such as the introduction of the HECM Saver<sup>21</sup> product and the introduction of the Fixed Rate HECM option and changes in the principal limit. Significant changes have also occurred in the typical HECM borrower’s profile (a trend toward younger borrowers, for instance) and changes in product features used (fixed-rate, lump-sum HECMs now dominate) that have negatively affected loan performance and need to be studied. This analysis will also inform programmatic policy decisions for the future.

### Description

**Task 1:** Undertake an evaluation of the HECM program. HUD conducted the last evaluation in 2000. The evaluation will use data from various HUD systems, the Census Bureau, American Housing Survey (AHS), and other publicly available sources, along with interviews conducted with selected FHA lenders, housing counselors, major program stakeholders (for example, Ginnie Mae and lenders), and national organizations promoting the welfare of older Americans (such as AARP and the National

Council on Aging [NCOA]). The study will address the background and history of HECM, trends in the characteristics of past HECM loans and borrowers, the potential market demand for HECM, trends in the participation by the financial community (lenders, servicers, investors), current legal and regulatory issues, barriers to continued growth of the HECM program, and potential program design changes that could better address future demand for the product.<sup>22</sup>

**Task 2:** Use new datasets created using merged housing counseling and HUD administrative records to understand borrower choices and profiles better.

PD&R is presently working with CredAbility (a national housing counseling agency) to merge its detailed HECM client dataset with HUD’s administrative data records. In addition, HUD is working with NCOA to get data from its Financial Interview Tool, which housing counselors use to create a budget based on client income, assets, debt, and expenses. PD&R would use both these newly available datasets to analyze the effect of a HECM borrower’s financial condition at the time of counseling on the payment option chosen and the subsequent performance of the loan. This analysis would also inform HUD policy regarding HECM underwriting changes such as a new financial assessment requirement to mitigate tax and insurance defaults. Ohio State University has received a MacArthur Foundation grant to study reverse mortgages as a tool for aging in place. OSU is using grant funds to conduct longitudinal surveys of HECM recipients to determine changes in borrower characteristics (financial, demographic) after receiving a HECM. PD&R has agreed to contribute HECM data to the OSU project, and may seek access to the OSU survey data for this task.

**Task 3:** Survey local T&I rates and identify trends and causes of increases by region.

A large proportion of HECM borrowers (9.4 percent as of February 2012) are at risk of foreclosure because of their non-payment of T&I. Although foreclosure counseling is improving borrowers’ awareness of T&I obligations, such obligations are beyond their control, and HUD has not studied them

<sup>20</sup> HECMs are available for people meeting the following requirements: 62 years of age or older; collateral must be the primary residence; no delinquencies on any federal debt, suspensions, debarments, or excluded participation from FHA programs; and completion of HECM counseling.

<sup>21</sup> HECM Saver is a modified version of the HECM product that has a lower maximum draw amount than a traditional HECM but in return has a significantly reduced upfront premium.

<sup>22</sup> Although the 2000 Evaluation report (Rodda, Herbert, and Lam, 2000) included an actuarial review of the HECM program, this project will not because FHA evaluates the financial performance of HECM in its audited financial statements and the HUD budget process. The 2000 Evaluation report also included borrower feedback regarding satisfaction with the program obtained from interviews of small numbers of HECM borrowers, which this research will not.

systematically. Property taxes have risen as house prices and assessments have risen. Private insurance companies set property insurance rates. In the HECM portfolio, Florida has high T&I default because the borrower lets insurance policies lapse (Florida has had the greatest hikes in insurance rates in recent years and ranks highly in the number of lienholder-required [“forced place”] insurance cases). Nonpayment of property taxes also accounts for the high number of T&I defaults in New York.

**Task 4:** Undertake a study of incentives, such as financial compensation formulas, for HECM loan originators and loan correspondents to originate fixed-rate, closed-end loans versus adjustable-rate, open-end loans by interviewing Ginnie Mae issuers, FHA approved lenders, and loan correspondents, obtaining and analyzing lender rate sheets, and extracting a sample of HUD-1 settlement forms to analyze differences in closing costs and loan charges.

A striking change in HECM loan features has occurred during the past few years: fixed-rate, lump-sum loans now account for about 70 percent of the origination. These loans command a high secondary market premium that is passed on to the Ginnie Mae issuer and results in originators charging lower upfront fees for fixed-rate loans than for adjustable-rate loans. Yet, from a borrower’s point of view, choosing a fixed-rate lump-sum draw and accessing his or her entire equity up front leaves the borrower with no funds to draw on in the future.

The June 2012 CFPB report notes that “Fixed-rate, fully drawn loans not only earn a higher percentage premium in the secondary market, but they earn that premium on a higher loan balance. Thus, there is more money in the equation for fixed-rate loans, making it easier to return more of that money to consumers in the form of waived origination fees and lender-paid discounts on closing costs and/or MIP” (CFPB, 2012: 98). In addition, different regulatory treatment of fixed-rate, closed-end loans versus adjustable-rate, open-end loans has meant lower origination fees for fixed-rate loans. Thus, from a HECM borrower’s point of view, the net proceeds from fixed-rate loans are higher than those from the adjustable-rate loans. The CFPB report also notes that industry rate sheets reveal that broker compensation for fixed-rate loans may be twice that of adjustable-rate loans and that some originators may be recommending the fixed-rate product more strongly or even excluding adjustable-rate product to prospective borrowers. With the exit of big lenders such as Wells Fargo, Bank of America, and MetLife, the role of wholesale and correspondent channels is likely to grow, and the financial incentives in these channels favor fixed-rate loans.

## Background

In 2000, PD&R released its final evaluation of the HECM program to fulfill the National Housing Act mandate that HUD report to Congress on the HECM program. The main findings of that report were that the demonstration phase of HECM was successful (Rodda, Herbert, and Lam, 2000). Much has changed in the subsequent 12 years, however, and other FHA programs have been evaluated, but not HECM, and issues have arisen that were not anticipated in 2000, such as defaults precipitated by the nonpayment of T&I. Thus, it is time for another review of the program.

## Policy Implications

This issue is one of heightened concern for FHA and policy-makers, because FHA’s HECM has come to dominate the reverse mortgage market. Much has changed across FHA since the 2000 evaluation of HECM (Rodda, Herbert, and Lam, 2000). A new evaluation will provide the evidentiary basis for future programmatic changes for HECM and inform future policy changes affecting the reverse mortgage market in general.

## Finance

The four tasks that make up this project could be completed under a research contract or with one-half FTE working during 2 years in conjunction with a contractor. The overall cost of this project is estimated at \$2 million or more, with a timeframe of 2 years.

## Tenure Choice During the Household Lifecycle

### Research Question

How and when does tenure choice matter in a person’s life-cycle? What are the long-term consequences of negative equity for retirement, intergenerational wealth transfers, and so on? How do households make the transition to retirement in their housing and what happens with any available home equity?

### Rationale

The United States is currently experiencing a large shift on housing tenure. The housing crisis has resulted in many families departing homeownership by foreclosure or short sale, resulting in impaired credit that prevents them from obtaining financing for a new home mortgage. In addition, the volatility in housing prices is causing some households to delay homeownership and remain renters for longer periods.

An existing body of literature on tenure choice has identified homeownership as the source of asset building, family stability, good educational outcomes for children, and other desirable outcomes. Given the current state of the housing market and the large numbers of households making the transition from unsustainable mortgages into rental homes, PD&R should conduct a literature survey to identify housing tenure and household wealth paths for the future.

### Description

PD&R will conduct a literature survey to identify issues likely to be critical to future policymaking.

### Background

See the section, Rationale.

### Policy Implications

The findings could be used to alter HUD's division of resources between homeownership and rental housing. Homeownership has traditionally been a major source of wealth building. If more households permanently transition to rental housing, the federal government may need to explore alternatives to encourage wealth building in asset poor households.

### Finance

HUD has estimated a project cost between \$1 and \$2 million.

## Tight Credit Markets

### Research Question

How has credit tightening after the housing boom (c. 2008 through 2012) affected the pool of potential homebuyers? Are specific geographic areas or demographics disproportionately affected? How has credit tightening affected FHA participants versus other market participants?

### Rationale

Access to FHA's administrative data puts HUD at a comparative advantage in terms of assessing the effect of credit constraints in the broader market on the pool of FHA borrowers. HUD also has a comparative advantage via its access to restricted HMDA files and LPS data. This study would enable HUD to assess the effects of credit tightening on the low-income and minority communities that HUD has traditionally served.

### Description

This research proposes to assess the effect of credit tightening after the housing boom (c. 2008 through 2012) on the pool of potential homebuyers. That is, how did the pool of potential homebuyers change as a result of the credit tightening that occurred in the aftermath of the housing boom that peaked during 2006 and 2007 and the financial crisis that ensued in 2008? Data from HMDA, FHA's Single Family Data Warehouse, and LPS would be used to track lending over time and assess changes in borrower characteristics and demographics. Credit tightening could be assessed from announced changes in underwriting standards by the GSEs and FHA and by prevalence of subprime lending. HMDA provides data on mortgage applications that were approved but not funded, approved and funded, or denied; it also provides detail on income, race, ethnicity, age, mortgage type, mortgage purpose, and location. LPS data provide mortgage performance histories, credit scores, location, product type, LTV, and other underwriting variables. Thus, changes that arose following the boom years could be tracked from these various databases.

### Background

Numerous studies (Kiff and Mills, 2007; Mian and Sufi, 2009) document the credit expansion that occurred from 2000 to 2006 and the contraction that followed. What is less well understood is the effect of the postboom tightening on the pool of potential homeowners. Throughout the credit tightening, FHA grew in prominence as a provider of credit to an expanded segment of the population; thus, analysis of the contraction and its effects on FHA are timely and relevant to HUD.

### Policy Implications

FHA traditionally has served credit-constrained borrowers for whom access to credit was limited in the conventional market; thus, this study will assess how well the FHA has continued to serve this segment and shed light on the effect of FHA underwriting standards and lender overlays over time.

### Finance

If carried out internally, the cost of this study would be approximately one-half FTE for a full year. If carried out externally, the estimated cost would be between \$500,000 and \$1 million.



## Voucher Homeownership Program Outcome Evaluation

### Research Question

What happens to homeownership voucher households after the expiration of the subsidy in a few years?

### Rationale

HUD's mission is to create strong, sustainable, and inclusive communities. Thus, HUD has an interest in evaluating the sustainability of the Voucher Homeownership (VHO) program as participants exit the VHO program, to see if they have been able to sustain homeownership without HAPs to help them pay their mortgage loans.

### Description

This study would survey a random, representative sample of VHO program participants who recently graduated from the program, including participants whose HAPs ended per the terms of the VHO program, to see if they have been able to sustain homeownership without HAP payments to help them pay their mortgage loans. This sample survey would be supplemented by an analysis of administrative data to determine whether any VHO participants left homeownership and if they are receiving some form of HUD assistance. It is unfortunate that administrative data do not provide information about whether VHO program participants have succeeded in continuing mortgage payments and sustaining homeownership, because the HUD-50058 form does not capture any data on VHO program participants beyond the initial home purchase.

### Background

As of the 2006 Voucher Homeownership Study (Locke et al., 2006), default/delinquency and foreclosure rates were very low in the VHO program. Of the 206 PHAs surveyed in December 2005, only 10 foreclosures and 30 mortgages were in default or delinquency out of more than 3,400 purchases (Locke et al., 2006). Because the foreclosure rate in the broader market accelerated after 2006, and because HAP contributions toward mortgage payments are ending for the first program participants, it is important to determine the loan status of the homes purchased through the VHO program and how the VHO program has fared during the foreclosure crisis.

### Policy Implications

The policy relevance is if VHO program participants are able to sustain homeownership after the VHO program assistance

ends, then HUD may have found a successful homeownership assistance program that successfully graduates households from the HCV program to achieve long-term self-sufficiency.

### Finance

This study is expected to cost between \$1 and \$2 million based on the size of the sample. There is no proposed contribution of outside funding sources, including support from nonprofits.

## What Do We Know About Vacancy? Review of Housing Inventory and Vacancy Statistics

### Research Question

How does HUD interpret the shrinking inventories of homes for sale and rent and the growth of the "other" vacant stock, and the interaction of these trends with prices and volume?

### Rationale

The foreclosure crisis has resulted in a glut of vacant properties in foreclosure and REO properties and substantial changes in ownership and occupancy status. At the same time, rental demand and rents are rising and first-time homebuyers are struggling to obtain financing for homes. Thus, this project will provide a foundation for assessing the direction of the market and the necessity and potential for policies such as converting the vacant "held off the market" supply to rental housing to meet expanded rental housing demand.

### Description

This project contains two somewhat distinct tasks. The first is an up-to-date literature and data methods review to determine how vacancy data, both public and private are obtained, reported, and interpreted. The second task is an analysis of how existing data on the housing stock, and vacant units in particular, could have improved understanding of the housing bubble. The rationale for this project is also twofold: First, to better understand trends in the market as ongoing background for HUD policy development and research; and second, to develop departmental guidance on interpreting census (for example, the American Community Survey [ACS], AHS, and Housing Vacancy Survey [HVS]) and noncensus housing inventory and vacancy data (for example, Regional Economic Information Systems) in the wake of the housing crisis.

### Background

In the lead up to the housing bust, vacancy rate statistics came under increasing scrutiny. In part, this was sparked by the

emergence of the ACS, which showed rates that were noticeably different from established surveys such as the HVS (conducted as part of the Current Population Survey).

This increased scrutiny also grew out of the debate about whether a housing bubble existed. One indicator used to argue against the presence of a bubble was the low for-sale vacancy rate. A few analysts, however, noted that for-rent and for-sale properties existed within the same overall market for housing services and properties and that tenants often switch tenure. Indeed, economic theory suggests the housing market should respond in this way to the changes in overall market conditions. Therefore, historically high rental-vacancy rates and relatively slow rent growth would be expected to drag on for-sale markets eventually. The bust of the ownership market seemed to bear out the skeptics' concerns and increase attention to inventory and vacancy statistics for both the for-sale and for-rent markets.

For-sale and for-rent vacancy statistics are now being used in analyses of the strength of the housing market's recovery and the extent of the "shadow" inventory. Receiving less attention,

however, has been a noticeable growth in "other vacant" residential properties; that is, those designated as "held off the market," those in which the tenants had a "Usual Residence Elsewhere," those designated seasonal, and those recorded simply as "other" in census data. Because for-rent and for-sale vacancy rates nationwide declined in recent months, the overall occupancy rate or, conversely, the gross vacancy rate has shown considerably less improvement. Any indication of increased sales and prices without a corresponding increase in the overall occupancy rate bears further investigation.

### **Policy Implications**

Understanding existing data sources helps their interpretation and market intelligence helps HUD craft better policies and responses to policy questions. This project is related to a similar project under rental looking to reassess what we know about rental demand and rent levels from the available data.

### **Finance**

The estimated cost for this project is up to \$500,000.

## Affordable Rental Housing (Goal 2)

### Analysis of Rent Level Measurement in Rental Housing

#### Research Question

How can rent levels be better measured and verified for HUD programs? What is the effect of a much smaller sample of rental integrity monitoring (RIM) reviews being conducted annually by PIH and the reduced involvement in approving PHA plans?

#### Rationale

There is a need to develop and implement a risk-based monitoring system for RIM, because not enough staff or resources are available to dedicate to this important aspect of program monitoring.

#### Description

This study would use data from the Quality Control (QC) study to assess whether PIH can narrow the scope of each RIM review to focus on the high-risk areas. This study would also provide data on the validity of the RIM review samples (which are currently nonrandom). Several main questions will be addressed: Where would the study do RIM reviews? How valid are the RIM review samples? How can the study minimize burden? This study has a possible synergy with the risk-monitoring model for the Office of Community Planning and Development (CPD) developed by PD&R staff.

#### Background

This proposed project has been on the research agenda since PIH Field Office staff started focusing on American Recovery and Reinvestment Act (ARRA) onsite reviews with PHAs and stopped conducting RIM reviews. PIH Quality Assurance Division staff conducted limited RIM reviews during this time. The initial proposal for this study included examining alternative approaches for conducting RIM reviews. A feasible option must be statistically valid, make use of a reliable sampling strategy—one that potentially uses indicators to identify PHAs for review, represents an effective and efficient use of available monitoring resources, and preserves the gains HUD has made in reducing improper payments. This study would come up with a defensible methodology that would include independent verification of HAP payments and a QC component.

#### Policy Implications

The policy implications are that improper payments could be reduced further with less staff time and resources if HUD could develop a reliable and valid RIM review risk-monitoring model.

#### Finance

HUD has proposed between \$500,000 and \$1 million for this project.

### Assessing Economies of Scale in PHA Operations

#### Research Question

What are the outcomes and what is the cost effectiveness for PHAs and tenants of the regional administration of voucher programs? What are the outcomes and cost effectiveness for PHAs and tenants for PHAs that operate as part of voucher consortia? What are the outcomes and cost effectiveness for PHAs and tenants for PHAs that have Memoranda of Understanding (MOUs) suspending portability requirements?

#### Rationale

The issue is timely because consortia are a growing trend and the study was requested by PIH. It is policy relevant because estimates of the effect of these policies on PHA costs and movement to opportunity areas are needed for efficient management of the HCV program. HUD has a comparative advantage in this research due to past research discussed in the following paragraphs and familiarity with Public and Indian Housing Information Center (PIC) data.

#### Description

This study would examine various efforts of PHAs to combine administrative functions or jurisdictional boundaries, either through consolidation of programs into a new PHA (Southern Nevada Regional Housing Authority), consortia (for example, Central Texas Housing Consortium, Erie County PHA Consortium), contracting of Housing Quality Standards (HQS)/Rent Reasonableness inspections, or erasing jurisdictional boundaries to eliminate portability (for example, Orange County/Anaheim/Garden Grove). This study would examine effects of scale economies on neighborhood choice and other outcomes such as rent burden using Inventory Management System/PIC and census data, and it would also examine financial impacts

using Voucher Management System and Line of Credit Control System data. If the Customer Satisfaction Survey (CSS) is redone, the effects on tenants' assessment of PHA performance and housing quality could be examined. Field studies could support more detailed analysis.

Two specific research questions could be addressed using this approach: What are the cost savings for PHAs associated with these types of actions or arrangements? Do voucher holders make more moves to opportunity areas when jurisdictional boundaries are eliminated?

### Background

Cunningham et al. (2010) studied mobility factors in the voucher program. Program administrators identified regional administration as an important determinant of mobility. PD&R staff conducted a preliminary study examining PHA market concentration and poverty concentration and found that greater PHA concentration is associated with slightly less poverty concentration.

### Policy Implications

Policy implications could include HUD promotion of more PHA merging, consortia, contracting, and erasing of jurisdictional boundaries.

### Finances

This could be done as an inhouse project involved one-half to three-fourths FTE plus travel costs if field studies would be conducted. If contracted out, the cost is estimated at up to \$500,000.

## Assessing Housing Quality in the Housing Choice Voucher Program: Design Phase

### Research Question

How does HUD ensure that families receiving housing subsidies or living in subsidized housing are in units of appropriate quality?

### Rationale

The priority research question asks how HUD ensures that families receiving housing subsidies or living in subsidized housing are in units of appropriate quality. The issues are timely and policy relevant, because the program offices requested many of the research topics, and HUD lacks a definitive quality assessment of its affordable rental stock. PD&R has a comparative advantage because of past survey research addressing HCV unit quality, the CSS.

### Description

This project would be a comprehensive study of unit housing quality of HUD-assisted rental units. This would not simply be a study of the best method of assessing unit quality for the purposes of our subsidized housing programs (HQS versus Uniform Physical Condition Standards [UPCS]), but would also provide a definitive assessment of the quality of the current affordable rental stock and recommend strategies for improving affordable rental stock unit quality. This study would examine issues regarding housing quality.

This study could involve multiple methodologies including a redo of the customer satisfaction survey or some other exploration of the quality of affordable-housing stock available in different communities, including a match with the AHS oversample. Starting in 2011 the AHS began oversampling assisted (public housing and HCV) units. This study could compare assisted units with a matched sample of unassisted units in the AHS data. If the CSS is redone, CSS results could also be compared with a matched sample of AHS unassisted units. This study could include an independent assessment of the effect of the Real Estate Assessment Center's (REAC's) physical inspections on the quality of multifamily stock. REAC is currently in the pilot phase of a demonstration of UPCS to line it up with HQS and test its feasibility, so this study would incorporate lessons learned from that demonstration pilot.

This research could address several specific research questions: What is the quality of units leased in the HCV program, and how does it vary geographically, demographically, and by PHA? How do Section 8 Management Assessment Program (SEMAP) housing quality measures compare with independent measures of HVC unit quality? What is the effect of REAC's physical inspections on the quality of multifamily stock? How does housing quality compare across HUD programs? How could we improve our methods for measuring housing quality and enforcing housing quality regulations? Which housing quality factors are most predictive of objectives such as tenant health (the Ohio Health Impact Assessment focuses on this topic) or improved asset management (as suggested by REAC)?

### Background

Between 2000 and 2002, PD&R conducted the CSS annually among HCV households. An unpublished internal report (Gray, Haley, and Mast, unpublished) on the CSS indicated that, although most voucher households were satisfied with their homes, a significant portion had serious HQS violations. Wide variation also existed across PHAs and demographic groups. A *Cityscape* article (Mast, 2012), which compared

housing quality of public housing and HCV tenants in the 2009 AHS, found little difference. The AHS has issues (reporting error in type of assistance, small sample of assisted units, no way to identify project-based Section 8), however, limiting its usefulness for this type of analysis.

A number of HUD Office of Inspector General reports point to housing quality issues in units leased by HCV households. In addition, HUD does not know the unit quality of multifamily stock or the reliability of REAC physical inspections on multifamily stock. Housing quality control processes vary across programs so that HUD has no administrative data to compare housing quality across its largest rental assistance programs. PIH is in the process of reworking HQS and HUD is in the process of moving toward UPCS across all housing programs (including vouchers and HOME). REAC is currently in the pilot phase of a demonstration of UPCS to line it up with HQS and test its feasibility so this study would incorporate lessons learned from that demonstration pilot. Forward-looking research could examine UPCS standards to better identify which factors are most predictive of tenant health or asset management.

### Policy Implications

This research would provide HUD with a definitive assessment of the quality of the current affordable rental stock and would inform strategies for improving and maintaining the quality of affordable rental stock over time.

### Finance

The expectation is that readministering the customer satisfaction survey would cost between \$1 and \$2 million. A study that would explore the quality of affordable housing stock available in different communities, including a match with the AHS oversample, could be done for about \$1 million. It is recommended that this project would include both elements for a total estimate in the range of \$2 to \$3 million. HUD requested funding for the design phase of this project, with estimated cost less than \$500,000, in the President's FY 2014 Budget.

## Assessment of Landlord Behavior in the Housing Choice Voucher Program

### Research Question

In what ways does landlord behavior affect the success of HUD subsidized housing programs?

### Rationale

Landlord participation is a critical component of the effectiveness of the Section 8 voucher program and the Department's goals to expand housing choice, yet it has received relatively little attention in the research. Broadening the range of rental opportunities available to voucher recipients would have tremendous benefits for resident mobility and PHA administrative operations. The study could also identify regulatory and program requirements that may form a barrier to landlord participation.

### Description

This study will explore how landlord behavior affects the effectiveness of the HCV program across a range of measures including voucher success rates and tenant mobility. This study would consider decisions about rent levels, whom to lease to, whether to accept vouchers, property management, maintenance/ improvement, and preservation. The basic methods for the study include (1) survey of a sample of participating landlords, (2) research and analysis of the housing markets and neighborhoods of participating landlords and location of units where HCV households lease up, and (3) survey of PHA staff on landlord marketing/outreach and housing mobility efforts. This study would provide HUD with information on why landlords choose whether to accept vouchers and to what extent landlord behavior affects the success of the HCV program.

The study would explore the following research questions relating to landlord behavior:

- To what extent do administrative burdens affect landlord willingness to participate in the HCV program?
- To what extent do market conditions (that is, soft/tight market, rents/FMR) affect landlord behavior and their willingness to participate in the HCV program?
- To what extent do HQS/property management and maintenance factors affect landlord willingness to participate in the HCV program?
- To what extent do PHA screening and eligibility criteria affect landlord willingness to participate in the HCV program?
- Does landlord behavior affect concentration of HCV households into certain types of neighborhoods (that is, segregated, high poverty)?
- Do housing mobility programs and other PHA landlord marketing and outreach efforts improve landlord willingness to participate in the program? Do housing mobility programs increase housing options and choice (that is, increase the number and quality of units and improve the location of units) for HCV households?

## Background

A study on landlord behavior as it relates to the HCV program is needed, as multiple stakeholders requested such a study. HUD has conducted studies on Section 8 success rates in the past (1990, 1994, and 2001) but none within the past decade. HUD also issued a study in 1977 “Research and Evaluation Regarding the Section 8 Housing Assistance Program: Sector A. Recipient and Landlord Participation Report” (Burchman et al., 1977).

Although incentives, such as a guaranteed monthly rental subsidy payment, encourage landlords to participate in the HCV program, disincentives, such as administrative burdens and a requirement that landlords hold units for PHAs to conduct required HQS inspections, discourage them. This study would provide HUD with information about why landlords choose to accept vouchers and to what extent landlords’ behavior affects the success of the HCV program.

## Policy Implications

The study will help inform decisions on possible streamlining and improvement of the Section 8 program. Research evidence can directly inform policy for increasing landlord participation and, therefore, resident mobility; it could also help reduce PHA administrative costs for operating the program.

Study results could inform policy changes related to rent setting, unit quality, landlord outreach and incentives, HCV program marketing, PHA administrative practices, lease requirements and possible regulatory or statutory reforms.

## Finance

The estimated budget would be \$1 million to do a survey of a national sample of landlords participating in the HCV program, rental market analysis, and a survey of PHA staff on their landlord outreach and mobility counseling efforts. FY 2014 funding of up to \$500,000 has been requested for the design phase.

## Comparing Subsidy Costs of Federal Housing Assistance Programs

### Research Question

How can rent levels be better measured and verified for HUD programs? (Questions # 421 and New)

### Rationale

Existing studies that compare costs of project-based versus tenant-based vouchers do not consider longer term costs. This study corrects for that shortcoming and examines the program over a larger geographical coverage.

## Description

This study responds to two previous studies that compared costs between project-based and tenant-based vouchers. McClure (1998) conducted one study and Shroder and Reiger (2000) conducted the other. Both studies were limited to selected geography, and both were based on the premise that the supply approach of providing housing units to low-income families entails higher cost compared with the demand approach. These studies and others also argue that cost differences influenced federal policies in favoring one program over the other. In addition, the tenant-based HCV program allows for mobility and moving to areas of opportunities.

Although philosophical differences are apparent in these programs, these studies also point out measurement and methodological differences in the research, and incorrect conclusions may be drawn when there is a lack of standardization and insufficient information for accurate measurement of costs.

## Background

The current proposal will take advantage of more recent and better quality data. The sources of the data for this study are the Tenant Rental Assistance Certification System (TRACS), the Integrated Real Estate Management System (iREMS), and the Census Bureau. The TRACS system provides information on individual unit rents across time as reported in the HUD-50059 form. The TRACS system through the mechanism of the Voucher Payment System also provides data on expenditures incurred by contracts to pay the owners participating in the project-based program. iREMS contains the characteristics of the properties participating in the program. The data from the decennial censuses and ACS will provide the comparable rents for the various geographies. This study will examine geographic variations between metropolitan and nonmetropolitan areas, urban and rural areas, and small and large cities. PD&R has a database that provides the geocodes for addresses of units and properties from TRACS and iREMS.

## Policy Implications

The federal government still sponsors the production and rehabilitation of units that can be used for low-income families through the Low-Income Housing Tax Credit (LIHTC) Program, Section 202 and Section 811 units with project rental assistance contracts, and the HOME program, but HUD no longer provides financial support for new construction and rehabilitation through the project-based Section 8 program. Substantial policy emphasis is placed on the tenant-based HCV program, which allows for mobility and choice. This study will inform policy to increase availability of affordable units for low-income families.

## Finance

The project would be done in house (two-tenths FTE or 400 hours) and would require a small stipend of less than \$500,000.

## Evaluating the Success of Tenants in Leasing Up With Housing Choice Vouchers

### Research Question

How successful are voucher holders (and the program as a whole) in “leasing up?” Are certain populations (including special populations such as nonelderly disabled (NED), homeless families, youth aging out of foster care, formerly incarcerated individuals, etc.) less successful than others? How long is the time to lease up? How many people submit Request for Tenancy Approval or ask for an extension?

### Rationale

This study addresses the priority research question regarding success of voucher holders (and the program as a whole) in “leasing up.” The issue is timely and policy relevant because the research was requested by PIH to address the lack of a recent assessment. The voucher issuance success rate is important for the neighborhood choice and the monitoring of the voucher program. PD&R has a comparative advantage in conducting this research because of past research in this area, discussed in the background section below.

### Description

This study will select a representative sample of PHAs and voucher holders within those PHAs and track the outcome of households issued a voucher during the housing search and lease-up process to generate a national success rate examine issues regarding leasing success in the HCV program. The study will also collect administrative data from the PHA and local rental-market data that could affect success rates, such as voucher holder characteristics, PHA screening criteria, housing quality, and local vacancy rates.

The study would address the following research questions:

- How successful are voucher holders (and the program as a whole) in leasing up?
- Are certain populations (including special populations such as NED families, homeless families, youth aging out of foster care, formerly incarcerated individuals) less successful than others?
- How long is the time to lease up?

- How many people submit RFTAs or ask for an extension?
- How does leasing up compare in LIHTC versus non-LIHTC properties?
- How do lease-up rates vary across PHAs?
- Given that MTW PHAs are not subject to the 40 percent rent burden cap at lease up, are success rates higher in MTW agencies?
- How does special counseling (like that in the Moving to Opportunity for Fair Housing Demonstration [MTO]) affect lease-up rates?

In an ideal situation, HUD would have ongoing estimates of the national success rate for voucher holders in metropolitan areas and would explore the factors that affect chances for success (for example, market tightness; voucher holder characteristics, including disability status; payment standards; PHA policies and procedures). The study would examine success rates across different special purpose voucher programs, such as HUD-Veterans Affairs Supportive Housing (VASH), which initially indicated low leasing rates.

PIC collects data on certification and voucher issuance. Even though PIH has made a recent effort to improve data collection on voucher issuance, both PIH and PD&R think the data are not good enough to use as the sole data source for this study. As such, this study would likely involve a duplication of Buron, Finkel, and Pistilli (2001) and earlier studies.

Note that, although PIH requested this project, it relates to work the Office of Multifamily Housing has been doing with the Office of Fair Housing and Equal Opportunity about nondiscrimination of voucher holders in LIHTC properties. It would be helpful to examine the comparative penetration rates of voucher holders into LIHTC versus non-LIHTC properties.

### Background

The first study of success performed in the early 1980s found that roughly 50 percent of voucher holders (at that time, certificate holders) succeeded in finding housing. From 1985 through 1987, the success rate was 68 percent, and by 1993 it had risen to 81 percent. Buron, Finkel, and Pistilli (2001), which is HUD’s most recent study of success rates, estimated a success rate of 69 percent. They also found that search times for successful households had increased since 1993: 83 days on average. Nearly one-fourth of successful households took more than 120 days to lease a unit, including 7 percent who leased a program-qualifying unit more than 180 days after receiving

the voucher. The study found that success rates did not differ by race, ethnicity, or gender of the head of household, nor by disability status of household members. Buron, Finkel, and Pistilli found that success rates did vary by household size, age of household head, and household composition.

Shroder (2002) examined the effect of MTO housing counseling and neighborhood poverty constraints on lease up. He found that the extra counseling for the treatment group increased success rates, and that the geographic constraints reduced success rates.

### Policy Implications

The policy implications are that HUD would have a definitive assessment of the how successful voucher holders (and the program as a whole) are in leasing up. Analysis of differential success rates by tenant type could inform special assistance with helping voucher holders successfully lease up, exception rents, or other policy or program changes that PIH might want to institute to improve success rates.

### Finance

The estimated budget is between \$1 and \$2 million for valid national estimates of success rates for the HCV program, including special vouchers (NED, VASH, the Family Unification Program [FUP], etc.) It is not known if PIH would have the funding to pay for this study.

## Evaluation of Jobs Plus: Baseline Phase

This project, although consistent with Roadmap priorities, pre-existed or developed outside the Roadmap's project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the Transformation Initiative Fund in the President's FY 2014 Budget.

## Examining Small PHA Performance

### Research Question

How are small PHAs performing, and what are the reasons for their performance and administrative costs and challenges?

### Rationale

Small PHAs administer a large percentage of the HCV program, but HUD does not require much of PHAs that administer less than \$300,000 in HCV funding annually. This study would provide the industry and interest groups with information about small PHAs that would inform the debate about small PHA consolidation.

### Description

This study would survey a sample of small PHAs to assess how they are performing and what are the reasons for their performance, administrative costs, and challenges. This is particularly relevant and timely because of the new proposed Small Housing Authority Reform Proposal (SHARP) legislation. With additional funding, PD&R could add a task order to examine small PHA performance and costs to the HCV Administrative Fee Study Indefinite Delivery, Indefinite Quantity (IDIQ), but not later than September 29, 2013.

If not enough funding is available to include in FY 2013, then a larger PHA management IDIQ is recommended, which would include this study, Study of Rent Level Management, Study of Troubled PHAs, Study of PHA Regionalization and Consolidation, Study of the Impact of Portability Policies, and Study of PHA Waiting List Management as additional task orders.

### Background

Small PHAs (PHAs administering fewer than 250 vouchers annually) account for almost one-half of the PHAs that administer the HCV program and serve about 30 percent of the total number of vouchers households. HUD does not require annual SEMAP certifications for PHAs operating with budgets of less than \$300,000. Because of the lack of annual SEMAP certifications, inherent flaws with SEMAP, and the fact that many PIH field office staff are burdened with shortfall prevention and other immediate program needs, few resources are dedicated to ensuring that small PHAs are administering the HCV program at a high-performing level. The HCV Administrative Fee Study is visiting some small PHAs as part of the process of identifying a sample of high-performing PHAs for the full time-and-motion and administrative cost measurement study, but the sample of small PHAs is not large enough to be representative of the population of small PHAs.

### Policy Implications

The policy implications of this study are that understanding small PHA performance, administrative costs, and challenges would provide PIH a better understanding of a significant number of PHAs that administer the HCV program in smaller or more rural jurisdictions that would enable PIH to determine how to allocate their Field Office staff and technical assistance resources.

### Finance

FY 2014 funding has been requested for this study and is expected to cost between \$1 and \$2 million, based on the size of the small PHA sample. There is no proposed contribution



of outside funding sources. It is possible that the Housing Assistance Council or the U.S. Department of Agriculture (USDA) Rural Development Program would be interested in partnering, because many small PHAs are in nonmetropolitan or rural areas. This study is particularly relevant and timely because of the new proposed SHARP legislation.

### Improving HUD Measures of Housing Cost Inflation: Operating Cost Adjustment Factors

#### Research Question

What measures of housing cost inflation does HUD currently employ? Are these measures appropriate, particularly for budgetary purposes; practical; and sufficiently accurate (for example, controlling for differences in unit quality)?

#### Rationale

In addition to the statutorily required uses for inflating contract rents or reimbursing assisted housing operators for operating costs, many of these inflation factors are used in the formulation of HUD's annual budget. For years, the most current national Annual Adjustment Factor (AAF) was used to calculate future funding needs for the tenant-based rental assistance (TBRA) account in HUD's budget formulation; however, through PD&R's collaboration with PIH, the Department determined that using the AAF in the budget environment was not the measure needed for accurately predicting the funding needs of the program. PIH determined that a forecast of the annual per-unit cost in the voucher program would be the most useful measure for budget purposes. As a consequence, the Department invested in a research effort to generate a model that forecasts TBRA per-unit costs. This model was used to formulate the FY 2013 and FY 2014 HUD budgets. The rationale for this study would be to assess whether the current measures of housing cost inflation are appropriate for use in the budget process while also assuring these factors meet the statutory requirements for the programs they serve. The Department also would attempt to identify a consistent methodology for measuring the change in housing costs, while capturing unit quality, within the same market area, because HUD currently uses three different inflation factors, depending on the assisted housing program involved.

#### Description

PD&R produces three different inflation factors pertaining to housing costs (rents). These are Operating Cost Adjustment Factors (OCAFs), AAFs, and Project Expense Levels (PELs). PD&R also produces a forecast of per-unit costs for the TBRA program used in the formulation of the program budget request.

OCAFs and AAFs are specifically used to adjust rent levels from year to year and are calculated according to statutory requirements. PELs are a component of the Public Housing Operating Fund and do not affect rent levels per se, but are used in the determination of the subsidy provided to PHAs to operate these public housing units.

This research study can be phased into several components.

First, information about all HUD programs should be compiled to determine if the Department publishes additional housing cost inflation factors that are not already included in the study. Next, a determination needs to be made if the inflation factors, as currently constituted, are appropriate for use in formulating the budget. If not, then research into what is appropriate for budget purposes is needed. Finally, a comparison of the relevant statutes should be conducted to ensure that HUD's current calculation methodology is consistent with statutory language and intent.

Empirical study of the current formulas should be undertaken to determine the following:

1. Should any of the current methods be updated to incorporate new datasets?
2. Can any of the indices be consolidated?
3. Should the quality of the housing unit influence the cost inflator?

HUD found that a forecast of per-unit costs was needed for the TBRA account. For other programs, as well, HUD should create a forecasted version of the appropriate indices for budget formulation, regardless of whether the current inflation index is appropriate.

#### Background

This section discusses the data sources currently used to calculate housing cost inflation indices. Additional research into appropriate data sources will be needed if the analysis of budget needs determines that new measurements are necessary.

For AAFs, HUD uses local and regionally aggregated components of the Consumer Price Index (CPI; Rent of Primary Residence and Housing Fuels and Utilities) to measure the annual changes in gross rents. The two CPI components are aggregated using data from the Consumer Expenditure Survey on the percentage of renters who pay for head (as a proxy for the percentage of renters who pay for utilities separate from the rent paid for their housing unit). AAFs are published for metropolitan areas and nonmetropolitan counties.

OCAFs are calculated by collecting operating cost data from HUD's Annual Financial Statements database and segmenting the costs into nine component categories. Each of the nine cost categories is inflated by a market indicator of price inflation during the previous 12 months. The sum of the price inflation components becomes the following year's OCAF. OCAFs are published at the State Level.

In 2007 and 2008, HUD undertook significant inhouse research to develop an alternative method for calculating OCAFs. This revised method relied on actual operating cost changes captured through the audited financial statements filed with the Department. This methodology, however, was proven to be inflationary, and its use was discontinued.

PELs are calculated on a weighted average basis with 60 percent weight on wages (as measured by local government wage indices) and 40 percent weight on goods and services (as measured by the Producer Price Index [PPI] Finished Goods and PPI Capital Equipment indices). PELs are published at the state level for metropolitan and nonmetropolitan portions of a state.

### Policy Implications

All three of the aforementioned indices are used to inflate annual contract rent levels or provide operating cost subsidies for various HUD-assisted housing programs. Each program supported by these program parameters has different statutory and regulatory requirements in accomplishing the mission of providing housing assistance to needy families. Each program parameter is calculated in a different manner in accordance with the statutory or historical underpinnings for the calculations. Each index is incorporated into the Department's annual budget formulation. Given the fiscal environment, HUD has an acute need to ensure that the parameters used in its annual budget request measure the correct values and that they are forecasted appropriately, if necessary.

Each parameter is used to measure the annual change in operating housing units typically available across housing markets. To the extent possible, HUD should have a consistent methodology for measuring the change in housing costs within the same market area. With these three measures, similar housing units may be assigned differing levels of annual changes in costs depending on the program each unit serves.

### Finance

The total cost estimate for this proposed research (\$1 to \$2 million) was derived based on the cost of the TBRA per-unit cost forecasting model. The TBRA cost model required a similar

analysis of HUD's current model, with research into finding better specifications for the model. This research had an initial contract value of approximately \$350,000. Tripling this cost estimate produces an estimated cost of slightly more than \$1 million; however, this research also required a detailed review of several statutory and regulatory provisions plus a canvas of other HUD programs to determine if other measures of housing cost exist. If so, the research budget must be robust enough to allow for similar research as what is proposed for AAFs, OCAFs, and PELs.

As a first step, undertaking a complete study of OCAFs would likely have a cost of approximately \$350,000 and would be well timed in light of the fact that the Department's Rental Assistance Demonstration (RAD) uses OCAFs as the key measure of annual cost changes.

## Leased Housing Tenant Payment Insurance Demonstration: Design Phase

### Research Question

How do we better align existing housing programs with need in terms of subsidy levels? What is the future of rental assistance, especially deep subsidy programs? How do you reconcile a shallow subsidy with Affirmatively Furthering Fair Housing (AFFH) and small area FMRs?

### Rationale

The rationale for the demonstration is to test whether a shallow subsidy, leased housing insurance program could achieve the following policy outcomes, relevant to HUD's Strategic Goals 2, 3, and 4:

- Help prevent homelessness for low-income, unassisted renters due to eviction from inability to pay rent during periods of income shock.
- Discourage discrimination and loosen screening criteria from landlords in the leasing process.
- Provide low-wage working households with a new safety net program available after deep housing assistance, potentially decreasing average length of assistance in deep assistance programs and increasing total number of extremely and very low-income households served by all rental assistance programs.

PD&R has a unique comparative advantage to run this new demonstration because it has set a precedent of running large-scale, national experimental demonstrations (for instance, MTO).

## Description

This proposal lays out the basic rationale and general concepts for a new shallow subsidy, leased housing insurance program for low-income individuals and/or households leaving or who have left housing assistance programs across the federal government (HCV, public housing, LIHTC, U.S. Department of Veterans Affairs, and USDA programs).<sup>23</sup> Much like mortgage insurance, a leased housing insurance program would cover a portion of a household's rent in the event of acute income shocks due to unemployment or health problems. Such a program should be considered as a complement to existing deep rental assistance programs that would address externalities inherent in rental tenure and current rental assistance programs.

To prevent potential moral hazard issues with this new rental assistance program, certain program parameters would be mandated, such as limits on preevent<sup>24</sup> rent-to-income ratio, some measure of fair market rents, and on the amount and duration of assistance. To reach the appropriate universe of unassisted rental households, however, the insurance program would most likely have to allow for higher than the standard rent burdens in the preevent screen.

## Background and Policy Implications

The idea of a lease insurance program can be traced to Columbia University researcher Brendan O'Flaherty, who has proposed an entitlement rental insurance program in response to the nation's growing income volatility problem (O'Flaherty, 2011).<sup>25</sup> Using modest resources from the What Works Collaborative (WWC), the Urban Institute is developing a detailed demonstration design to evaluate the effectiveness of various shallow subsidy programs, which may include a rental/lease insurance program. HUD could use the product of this effort to inform its own demonstration design for a new, targeted lease insurance program. Both of these sources include some literature review identifying the policy problems of (1) meeting the growing need of rental subsidy and (2) solving inefficiencies in the nation's current housing safety net programs.

Some literature exists on rising income volatility in low-income households, some on causal evidence of income volatility to homelessness, and some on initial thinking on how to structure a shallow subsidy rental insurance program.

## A growing need of rental assistance that current, deep subsidies cannot meet:

In recent years, it has become increasingly evident that the nation's deep subsidy rental-assistance programs will never meet the ever-growing need of affordable housing. In 2010, an estimated 46.2 million people were living in poverty, the highest number since the United States began measuring this statistic more than 50 years ago. It is unfortunate that affordable and accessible rental units are so scarce for the neediest of households and that prospects of substantial increases in federal resources for housing assistance are slim. JCHS (2011) estimated that, in 2009, only 3.7 million affordable and available rental units were available for 10.4 million extremely low-income households. The center also estimated that more than 80 percent of rental households at the bottom quintile of the income distribution spent more than 30 percent of their income on rent in 2009, and more than 60 percent spent more than 50 percent of their income.

Federal resources needed to close the gap between incomes and the cost of housing for the neediest of households are likely to dwindle further in the coming years. Some researchers have estimated that, to correct the long-term debt-to-GDP ratio, Congress would need to cut expenditures by as much as \$1.5 trillion annually, much of which may come from entitlement and discretionary safety net programs.

## Need to specifically address rising income volatility:

Compounding the challenge of providing affordable rental housing for the neediest of households, this generation faces higher levels of income volatility than previous ones, which does not seem to be improving any time soon. Researchers have estimated growing income volatility in the 1970s and 1980s, level volatility in the 1990s, and new increases in the 2000s. This often-overlooked trend is essential as we think about the future of rental assistance programs, as researchers have found increasing risks of homelessness with higher levels of income volatility.

## Finance

Because the leased housing insurance program is intended to serve low-income households, it is likely that it will require a significant public subsidy. That subsidy could be mitigated,

<sup>23</sup> The program could also be expanded to low-income households currently enrolled on voucher and public housing waitlists.

<sup>24</sup> *Preevent* means before the income shock incident.

<sup>25</sup> Note that O'Flaherty's proposal uses the term *rental insurance*. This proposal uses *lease insurance* to draw stronger parallels to mortgage insurance. The private market currently offers rental insurance programs, but those programs are more similar to homeowner's insurance.

however, by modest insurance premiums charged to the program participants. The cost could also be mitigated if the program were started as a demonstration that restricts participation in the first 5 years.

Much analysis and program development need to occur to estimate total program costs. An initial estimate presented in the next sections outlines a limited demonstration for 5,000 households that could cost up to \$65 million over an 8-year period. This estimate begins with a modest request in FY 2014 to begin a 2-year design of the demonstration. Then, the estimate begins program implementation in FY 2016 for a 5-year period and additional funding for completion of the evaluation starting in FY 2021.

Given substantial interest in a shallow rental subsidy demonstration in the WWC, HUD may find opportunities to partner with philanthropy to cover some evaluation costs. That opportunity, however, is not factored into the cost projection in the following sections.

### Moving to Work Demonstration: Baseline Phase

This project, although consistent with Roadmap priorities, preexisted or developed outside the Roadmap’s project development process and, therefore, lacks a similar detailed description. HUD sought to fund this project under the TI Fund in the President’s FY 2014 Budget.

### Project-Based Rental Assistance Transfer Authority Evaluation

This project, although consistent with Roadmap priorities, preexisted or developed outside the Roadmap’s project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the TI Fund in the President’s FY 2014 Budget.

### Rental Assistance Demonstration Evaluation

#### Research Question

What are the effects of different rent models on subsidized households and on the PHAs that serve them?

- Which rent models will incentivize subsidized households to increase their earnings?
- Which rent models improve the PHAs’ financial status while minimizing the impact on tenants?
- Which rent models will increase administrative efficiencies for PHAs and improve their financial status?

#### Rationale

RAD has the potential to answer some of the most difficult questions about HUD’s current rent systems as they pertain to the HCV program. The demonstration provides an opportunity to test at least one alternative to the current percent-of-income system. A thorough evaluation is essential to understand the effect of such a change on the families who benefit from housing assistance and on the administration of the program. Although the study is fully funded, additional funds would enable us to test additional models and expand the research into public housing.

#### Description

The first phase of the project is already procured and funds are secured for the second phase. The rent reform demonstration will test alternatives to the current percent-of-income rent structure in the HCV program using a random assignment experimental model. Rent reform may affect assisted housing residents in terms of the rents they pay, the amounts they save and earn, and the income stream to the housing agency that administers the housing subsidy. In addition to the main focus of the study, rent simplification strategies that would contribute to administrative efficiencies will also be observed—for both voucher holders and public housing residents (although the random assignment would be conducted only for voucher holders).

#### Background

The key document that fed the ideas of the solicitation was the Study of Rents and Rent Flexibility (Abt Associates, Urban Institute, and Applied Real Estate Analysis, 2010). The core data for the study will be the baseline information and surveys conducted with participating families. Administrative records will also be crucial and will include unemployment insurance and PIC records.

#### Policy Implications

The policy implications of this study are potentially profound. The project can help us understand if any feasible alternatives to the current rent system will work better for the families we serve and if more families can be reached with the same amount of funding.

#### Finance

The first task order was awarded at \$3.4 million. The second task order will be solicited in the range of \$2 to 3 million; the money is already set aside for this project.

## Small Area Fair Market Rent Demonstration

### Research Question

What is the effect of Small-Area Fair Market Rents (SAFMRs) on voucher holders' location and on PHAs' costs? Three primary questions need to be answered by this research:

1. Do tenants take advantage of this opportunity by moving to areas with higher rents or selecting to locate in areas with SAFMRs larger than the metropolitanwide FMR?
2. What policies and procedures must PHAs undertake to successfully implement SAFMRs?
3. What are the programmatic costs (Housing Assistance Payments, administrative fees, etc.) of operating the HCV program using SAFMRs?

### Rationale

Small Area FMRs represent a fundamentally different way of operating the HCV program in metropolitan areas, so HUD is undertaking a demonstration program to better understand and solve potential operational issues and to assess the costs and effects of this potential new policy before deciding whether to implement the program on a national basis.

HUD believes that the use of SAFMRs will entice voucher families to move to neighborhoods of opportunity. If tenants take advantage of the higher rent structure in these areas, PHA HAP costs will increase; however, SAFMRs are also designed to discourage voucher tenants from locating in neighborhoods of concentrated poverty. If tenants do not move from these areas, specifically those areas where the SAFMR is lower than the metropolitanwide FMR, PHA HAP expenditures will decrease for these tenants following the second annual reexamination of income following the published decrease in the FMR. These HAP savings will be needed to offset the HAP increases for tenants taking advantage of the prospect of moving to opportunity neighborhoods.

On the other hand, tenants who do not move will likely face increased rent burdens if landlords do not adjust their rents downward in areas where the SAFMR is lower than the metropolitanwide FMR. The Department believes that the increased cost of housing subsidies in opportunity areas are exceeded by the benefits voucher clients receive from locating in areas with good schools, jobs, and access to public transportation. This study will help quantify the costs but also capture and attempt to monetize the benefits. The Department is already committing significant research resources to research the effects

of location choices in the voucher program, notably through the TI-funded Housing Tradeoffs and Children's Well-Being research. This study investigates how housing options and their links to neighborhoods and schools jointly affect the socio-emotional development, academic achievement and health of children from ages 3 to 8. Dallas, Texas, is one of the sites being studied in this research effort.

### Description

Increases in rent levels and slight increases in unit quality and neighborhood quality for tenants living in the Dallas, Texas area (the first metropolitan area to use SAFMRs) was found in research conducted by Collinson and Ganong (2013). Although these results are promising, more indepth research is needed over a longer time horizon to fully investigate the ramifications of implementing SAFMRs on a national scale.

Question 1, "Do tenants take advantage of this opportunity by moving to areas with higher rents or selecting to locate in areas with SAFMRs larger than the metropolitanwide FMR?," can be analyzed using PIC data. For existing tenants who choose to move, the distance moved is a straightforward calculation and the pre and post move FMRs are readily available. For newly admitted tenants, initial location choices and the comparison between the SAFMR for their selected unit and the metropolitan areawide FMR are available. Tenant location choice comparisons can be made in numerous ways: (1) comparison of tenant locations before SAFMRs and after for the same location, (2) comparison of number of moves and distance moved pre- and post-SAFMR implementation within the same area, (3) comparison of distance moved and frequency of moves between participating PHAs and control group PHAs, and (4) comparison of frequency and distance moved for invitational PHAs compared with involuntary PHA participants.

Question 2, "What policies and procedures must PHAs undertake to successfully implement SAFMRs?," requires substantial work to collect information from PHA participants. Listening sessions with participating PHA staff are required to determine best practices for implementing SAFMRs in the field. To better understand landlord responses to the implementation of SAFMRs (particularly in areas with the SAFMR is below the metropolitan areawide FMR), surveys of landlords or listening sessions with landlords. A survey of voucher tenants to gauge their reaction to the implementation of SAFMRs would also be beneficial. Finally, to understand all the tenant ramifications, an analysis of PHA tenant files for families failing to lease up or choosing to leave the program is important.

Question 3, “What are the programmatic costs (HAP, administrative fees, etc.) of operating the HCV program using SAFMRs?” can be addressed through data already being captured by HUD. Items such as Average HAP, level of Payment Standards relative to the FMR and number of utilized vouchers will help determine the dollar costs of operating the program under SAFMRs. Other data, such as invoices submitted to HUD for reimbursement of costs associated with implementing SAFMRs, which will provide HUD with data on the PHA startup costs for the program, will be collected as part of the operation of the demonstration.

### Background

Small Area FMRs represent a fundamentally different way of operating the HCV program in metropolitan areas. Instead of one set of FMRs being determined for an entire metropolitan area, each ZIP Code within a metropolitan area receives its own set of FMRs. PHAs operating under SAFMRs retain their 90 to 110 percent of FMR payment standard authority. As a consequence, SAFMRs should more accurately reflect the rental cost of housing in each small area within a metropolitan area. SAFMRs are intended to provide HCV tenants access to more housing units in neighborhoods of opportunity while discouraging tenants from locating in neighborhoods of concentrated poverty.

Collinson and Ganong (2013) provided a literature search that identifies a number of research papers focusing on location choice and the effect of location choice on outcomes.

### Policy Implications

Today, HUD publishes one set of FMRs for each Office of Management and Budget (OMB)-defined metropolitan area (including several subareas of OMB-defined areas determined by HUD) and each nonmetropolitan county in the country. HUD knows, however, that gross rental rates across metropolitan areas vary widely based on a variety of factors. Rent levels capture the desirability of areas along with the amenities offered in a particular housing unit. Under a single FMR for a metropolitan area, certain portions of metropolitan areas are likely unattainable for assisted families. SAFMRs attempt to provide voucher tenants access to more units in neighborhoods of opportunity. HUD also knows, however, that the following costs are associated with this policy:

- HAP costs will increase for families choosing to move to areas with SAFMRs above the metropolitanwide FMR.

- Rent burden for families choosing not to move from areas where the SAFMR is below the metropolitanwide FMR will increase.
- PHAs will experience additional administrative burden operating under SAFMRs.
- Landlords offering units in areas where the SAFMR is below the metropolitanwide FMR have a variety of responses each with their own costs.

HUD needs to understand each of these costs to make an informed decision about whether there is merit in implementing this policy on a nationwide basis because the benefits outweigh the costs.

As part of the decision to implement SAFMRs nationwide, several statutory and regulatory issues need to be addressed.

1. In the short run, PHAs are likely to be able to serve fewer voucher families under existing budget authority. This shrinkage is because HAP payments will adjust upward immediately for families located in areas with SAFMRs above the metropolitanwide FMR, but they will not adjust downward due to payment standard protection for in-place tenants until after the second annual income exam following the decrease in FMR. As a consequence, a need may exist for regulatory or statutory relief, such as adjustments to the administrative fee formula (maybe waivers?), so that any decreases in units resulting from SAFMRs do not result in administrative fee cuts. These adjustments would be in keeping with what might be anticipated to happen if the whole program went to SAFMRs in metropolitan areas: voucher counts go down, but appropriated administrative fees do not, so more funds would be available per voucher. An alternative approach would be to remove the second annual reexamination tenant protection following the initial implementation of SAFMRs.
2. SAFMRs are being evaluated to determine their efficacy in administering the tenant-based HCV program. Those tenants who hold tenant-based vouchers have the ability to move to areas of opportunity. Project-based vouchers do not afford tenants the same mobility options, because the voucher and subsidy are tied to a housing unit. The statute and regulations, however, do not provide for separate FMRs for the tenant-based and project-based programs. Therefore, a policy issue is whether the Department should seek regulatory or statutory relief so that project-based units would not be subject to SAFMRs.

## Finance

The total cost estimate for this demonstration is within the range of \$1 to \$2 million. HUD was unable to sign up a complete roster of PHA participants because of poor acceptance rates and the expiration of FY 2010 TI funds that were used to supply supplemental administrative fees to participating PHAs. Line item 1 seeks additional funding to complete the roster of PHA participants. Line item 2 provides funding for an in-person meeting with representatives from HUD and participating PHAs.

Line item 3 provides funding for a contract research project to undertake all aspects of the tenant location analysis. Line item 4 provides funding for the area specific data collection and analysis (PHAs listening, Landlord and Tenant Survey, etc.)

Each line item can be scaled up or down. If the Department chose not to seek more participants, then line items 2, 3, and 4 would have a lower cost. Until the project priority was elevated, line item 3 was conceived as inhouse research.

## Housing As a Platform (Goal 3)

### Demand and Supply of Supportive Housing for Elderly Households

#### Research Question

What is the gap between available and affordable *supportive housing* (housing that offers support and services) for elderly households and the number of households having lower income elderly heads with chronic conditions and physical limitations who need support with activities of daily living or instrumental activities of daily living? What are the different supportive housing options for lower income elderly households? Is the supply of affordable supportive housing expected to meet demand growth in the next 5 to 10 years for this population? What are the main barriers to producing affordable supportive housing? What can HUD's role be in this market and in meeting the housing needs of this segment of the population?

#### Rationale

HUD already plays a major role in providing housing assistance to older adults. About 1.8 million older adults live in federally subsidized housing—more than the number living in nursing homes (Redfoot and Kochera, 2004). Most of these households live in project-based Section 8 housing (30 percent), followed by those receiving a tenant-based voucher (28 percent), those residing in public housing (22 percent, one-half of which are in developments designated for seniors), and those living in Section 202 supportive housing for the elderly (17 percent).<sup>26</sup> With the U.S. population age 65 and older expected to double during the next 30 years, HUD's current annual supply of affordable supportive housing for this population is likely to be inadequate to meet future demand.

Although most seniors prefer to age in place, when chronic conditions and physical limitations worsen, seniors may need to make physical modifications to their homes or find supportive housing options. Lower income older Americans are often forced to enter nursing homes prematurely when their health deteriorates and they cannot afford to maintain their homes. Delaying or preventing the early institutionalization of this population could result in improved quality of life and also avoid unnecessary Medicaid and Medicare expenditures.

Medicaid is currently the largest single payer of nursing home care, dedicating two-thirds or \$50 billion of its long-term care spending in nursing homes (Spillman, Biess, and MacDonald, 2012). A recent movement aims to prevent early nursing home placement. The Centers for Medicare and Medicaid Services (CMS) has already adopted more flexible rules to provide home and community-based services. In addition, the Affordable Care Act provides incentives for states to expand Medicaid community-based care and reduce institutional care.

HUD has a number of ongoing research initiatives that advances our knowledge on how housing assistance can be an effective remedy for maintaining health, functioning, quality of life, and independence for seniors. Through an interagency agreement with the U.S. Department of Health & Human Services' Assistant Secretary for Planning and Evaluation (HHS/ASPE) and HHS's Administration on Aging (AoA), HUD is evaluating a Vermont program that coordinates support and healthcare services in HUD-assisted housing to promote aging in place. The study examines the effect of the Support and Services at Home (SASH) program participation on acute care use, Medicare expenditures, transfers to nursing homes, and adverse medical events. It includes a cost-effectiveness and cost-benefit analysis to quantify the net dollar value to the Medicare and Medicaid programs in reduced levels of expenditures for the increased costs of the SASH program. The evaluation design is being finalized and a final report is expected in 2016. HUD is also contributing effort to enable the matching of HUD data with CMS data. The data match is expected to be complete by December 2012. A proposal included in the data infrastructure section of this document will facilitate HUD, CMS an outside researcher access and use this matched data. Finally, HUD is supporting the Seniors and Services Demonstration project, jointly funded by ASPE, AoA, and HUD. The project will identify effective models to bring support and services to low-income elderly people in assisted housing, especially those with chronic conditions and functional limitations that are most at risk of institutionalization.

The project includes (1) identifying successful models that jointly provide housing and services to low-income households that require both, (2) determining whether individuals in publicly subsidized housing are more likely to have chronic health

<sup>26</sup> PD&R tabulation of PIC and TRAC administrative data, as of December of 2011, and Khadduri and Locke (2012).



conditions and functional limitations that result in greater healthcare use than others in the community, and (3) whether sufficient concentrations exist to implement care coordination or other evidence-based interventions in a cost-effective manner. The current study will culminate in a proposed design for a demonstration. HUD and HHS are expected to jointly fund and execute the demonstration. The full scope and cost will not be known until the design is complete.

None of these research initiatives will be able to address questions about the adequacy of the supply of affordable supportive housing for lower income elderly households and the barriers that exist for the production of these supportive housing options, given the expected demographic growth in this population group. The proposed research will complement HUD's ongoing research initiatives by answering questions related to the supply and demand of supportive housing for low-income elderly households.

### Description

This research project will (1) review demand trends among lower income elderly households, especially those that have residents with chronic conditions and physical limitations who need assistance (annual household formation, living arrangements, socioeconomic characteristics, housing and health expenditures, services and support needs); (2) identify the range of supportive housing options and supply trend (supply of housing options, supply of services and support, costs, financing, production trends); (3) assess the gap between demand and supply by different groups (by age, health condition, income); (4) identify major barriers for producing affordable supportive housing; and (5) discuss HUD's possible role in supporting housing production. The research will use existing studies and data sources to analyze demand and supply trends and gaps in different types of supportive housing.<sup>27, 28</sup> The study will identify major barriers for housing production and access to services and support to lower income elderly residents. A forum at the end of the study will address HUD's role in supporting housing production in this sector and meeting demand for this segment of the population.

### Background

Several studies and reports have looked at the intersection of an aging population and their housing and support needs: "A Quiet Crisis in America" (Commission on Affordable Housing and Health Facility Needs for Seniors in the 21<sup>st</sup> Century, 2002), "Older Americans 2012: Key Indicators of Well-Being" (Federal Interagency Forum on Aging-Related Statistics, 2012), "Housing an Aging Population: Are We Prepared?" (Center for Housing Policy, 2012), and the 2012 literature review on the evidence of housing as a platform for improving outcomes among older renters by the WWC Foundation (Spillman, Biess, and MacDonald, 2012) are just a few examples. One major area for future research that the recent WWC literature review identified is to understand the gap between supply of affordable supportive housing and the demand for these units. This research project is expected to help address this broad research question and define HUD's role in meeting supportive housing demand for lower income elderly households.

One of several research projects on "how housing matters" funded by the MacArthur Foundation is looking at housing decisions faced by seniors and how existing policies affect housing supply for this population (MacArthur Foundation, 2012). The Maxwell School of Syracuse University's research "Aging in Place, Access to Affordable Housing and the Health and Living Arrangements of Older Americans" uses data from the Health and Retirement Study, the National Investment Center for Senior Housing, the Medicare use records and HUD to model housing demand for seniors and measure effects on health outcomes. This retrospective study will be an important input to the proposed research, which will use demand and supply conditions and trends to forecast future supportive housing needs for lower income elderly households and discuss HUD's role in meeting future need.

### Policy Implications

This research will provide a picture of the expected demand and supply of supportive housing for lower income elderly households in the near future. It will define HUD's role in assisting lower income elderly households find affordable,

<sup>27</sup> Existing data sources may include the U.S. decennial census (population data and projections), American Community Survey (population, household and housing data), American Housing Survey (housing stock characteristics and conditions, accessibility features, supportive services), Bureau of Labor Statistics Consumer Expenditure Survey (housing, health, and supportive services expenditures), and Medicare Beneficiaries Survey (residential settings), among others.

<sup>28</sup> A typology of housing options for older people may include (1) independent-living options (for example, age-restrictive communities, naturally occurring retirement community supportive services programs, Section 202 supportive housing for the elderly program, accessory dwelling units), (2) supportive housing (for example, assisted living, adult foster care, adult family homes, supportive-care homes, board and care homes), (3) skilled nursing home, (4) continuing care retirement communities (from independent living to supportive housing and nursing home), and (5) hospice (Ginzler, 2012).

supportive housing options and avoid early institutionalization. This research can help HUD develop a housing policy strategy for this market that will support the federal government's overall goal of better integrating housing, health and supportive services and reducing institutional care.

### Finance

This research project is expected to cost between \$500,000 and \$1 million. Potential external partners include ASPE, AoA, and CMS. Provision of home and long-term care services is a major component of supportive housing and Medicaid and Medicare are likely to be major funding sources for lower income elderly households living in assisted housing.

## Developing a Youth Point-in-Time Count Methodology

### Research Question

What methodologies are effective for generating a point-in-time (PIT) estimate of the number of unaccompanied homeless youth?

### Rationale

HUD requires continuums of care to participate in a sheltered PIT count on a single night in late January every year and an unsheltered PIT count every 2 years. Although the set of methodologies for conducting PIT counts has improved over time, the counts often do a poor job of enumerating the number of unaccompanied homeless youth. Because homeless youth are often found in locations that differ from homeless adults and/or homeless families, different strategies may need to be employed to conduct a PIT count of this population. This research effort would help craft a methodology (or a set of possible methodologies) for measuring the scope of the problem of youth homelessness, and it would thereby inform strategies to end youth homelessness. This research therefore would be a substantial contribution toward the goal of the U.S. Interagency Council on Homelessness (USICH) to end family and youth homelessness by 2020.

### Description

In January of 2013, HUD will be partnering with the USICH, HHS, and the U.S. Department of Education (ED) to support *Youth Count!*, an interagency initiative to develop promising strategies for counting unaccompanied homeless youth. Nine communities have volunteered to take part in conducting a PIT count that will focus on enumerating the number of unaccompanied homeless youth in addition to the number of homeless individuals and families with children. The goal of this

count will be to learn promising strategies for both a collaborative count (engaging partnerships between local runaway and homeless youth providers, local education agency homeless liaisons, and other youth service providers), and a credible PIT count. The proposed project will seek to support a second youth-targeted PIT count in 2014 and use the lessons learned from the 2013 count to test a handful of promising methodologies.

### Background

During the past decade, HUD has invested millions of dollars toward developing methods to count people who experience homelessness during the course of 1 year. Homeless Management Information Systems have been established in most continuums of care and support a tally of the number of people who access the homeless assistance system over the course of time. HUD collects aggregate data from continuums of care on an annual basis. In addition, continuums of care are required to participate in a sheltered PIT count on a single night in late January annually and an unsheltered PIT count every 2 years, at which time, community members seek out people living in places not meant for human habitation (cars, abandoned buildings, parks, etc.). This method of assessing the stock and flow of a highly mobile population in a consistent manner has allowed HUD to develop an annual homelessness count and to document the size of the homeless population both on any given night and over the course of the year. Although PIT count efforts have included a data element for unaccompanied youth, the field was not mandatory and the data quality was poor. Unaccompanied homeless youth may not be found in the same settings as homeless adults or homeless families with children; therefore, different approaches and different partners (such as youth service agencies) would be necessary to improve the capacity of communities to conduct a PIT count that focuses on youth.

### Policy Implications

The scope of the problem of youth homelessness is unknown. No sound methodologies have been developed and tested to enumerate either the number of unaccompanied youth who are homeless on any given night, or the number of youth who experience homelessness during 1 year. This research effort would help craft a method (or a set of possible methods) for measuring the scope of the problem of youth homelessness, and possibly incorporating such estimates into future national PIT count efforts.

### Finance

It is anticipated that the cost of this study could be supported by HUD in partnership with the Administration for

Children and Families (ACF), which is the operating division within HHS that oversees the Runaway and Homeless Youth Programs. The total cost is estimated to be \$1 to \$2 million. Additional philanthropic partners that participate in supporting the *Youth Count!* 2013 initiative could be approached for partnership as well.

## Early Child Development and School Readiness Services to HUD-Assisted Families

### Research Question

How can HUD housing assistance to families with children be linked to interventions that support positive child development and school readiness?

### Rationale

The concept of “housing as a platform” embodies the idea that HUD has a comparative advantage in improving quality-of-life outcomes through our relationships with housing providers and the families assisted. Although interventions in early childhood create the highest returns on investment for very poor children’s academic achievement and later life outcomes, reaching very young, at-risk children and connecting them with interventions can be difficult (Heckman and Masterov, 2007). Unlike school-age children, children ages 0 through 3 do not necessarily come in regular contact with schools or other early childhood service providers. HUD’s housing assistance can be a platform for bringing effective interventions to at-risk infants and toddlers. Improving the life chances of very disadvantaged children in HUD-assisted families would diminish the intergenerational reproduction of poverty.

### Description

In collaboration with HHS’ Administration on Children, Youth, and Families staff, this inhouse research will produce two separate papers. First, a white paper will synthesize the extant literature to identify policy levers that can be exploited to intervene in early child development and educational readiness for the most disadvantaged young families in public and assisted housing. This paper will provide recommendations for one or more program demonstrations of cost-effective interventions that could be pursued through public or private partnerships. The focus will be on early childhood interventions that have been tested and shown to be cost effective or reflect the current state of knowledge on how to facilitate cognitive and noncognitive bases for school readiness and achievement in highly disadvantaged families.

The second deliverable will be a guide for PHAs, assisted housing owners, and a broader set of practitioners summarizing best and promising practices in early childhood intervention, including any that may already be linked to public or assisted housing. PD&R staff will work with HUD’s public housing staff to determine dissemination and ways to ensure that the guide is useful to the target audience. Part of this process may involve speaking with PHAs themselves about what a helpful guide would include. PD&R will also seek to partner with ACF.

### Background

Research shows that differences in parenting and home environments account for a large part of the deficit in performance of low-income children compared with middle-income children (Heckman et al., 2008; Waldfogel and Washbrook, 2011). Additional factors amenable to intervention that hinder positive child development include maternal depression, prenatal care, lack of access to high-quality childcare, and child maltreatment (Halle et al., 2000; Huffman, Mehlinger, and Kerivan, 2000). Neuroscience provides plausible explanations for the effects of parenting style and home environments on the development of cognitive and noncognitive skills needed for educational achievement (NSCDC, 2009). Important research shows that early childhood interventions substantially improve outcomes for poor children. For instance, periodic nurse home visits to low-income, first-time mothers during pregnancy and the first 2 years of the child’s life improve prenatal health, reduce dysfunctional care of children early in life, and improve family functioning and economic self-sufficiency (Waldfogel and Washbrook, 2011). Random-control studies show that interventions that improve, or compensate for deficits in, parenting and the home environment produce long-term individual and social benefits (Heckman and Masterov, 2007). Effective interventions may also be highly cost effective. Waldfogel and Washbrook (2011) cited costs of \$9,500 and savings of \$17,000 per family for a nurse visitation program, with larger effects for high-risk families. Heckman and Masterov (2007) reported that the Perry Preschool had an estimated annual return of 16 percent. In sum, the convergence of research in social sciences, neuroscience, and cost-benefit analysis provides an evidence base adequate to inform policy designed to bring cost-effective early childhood interventions to HUD-assisted families.

### Policy Implications

Public support for assisted housing is undercut by perceptions that it promotes intergenerational reproduction of poverty. This perception could be reversed if effective early childhood

interventions linked to housing assistance mitigate the deleterious impact of poverty on child development. Demonstrable impacts could lead to transformation of HUD's programs.

### Finance

Potential external partners may include HHS/ASPE and ACF, and Child Trends. A white paper developed internally might be expected to require as little as 160 staff-hours, although significantly greater resources might be required for extensive literature review and collaboration.

## Effect of Housing Assistance Over Time

### Research Question

Does housing assistance matter? Does HUD housing assistance affect different types of households differently when observed during a period of 5 or more years? Do these impacts depend on intermediate effects, such as changes in family spending patterns associated with receipt of HUD assistance?

### Rationale

To be good stewards of public resources, HUD leaders need to know what programs function most effectively for whom and why. PD&R's cadre of experts in HUD programs and data are uniquely placed to develop and sponsor this investigation. The proposed project has three tasks, each building on the previous one: (1) analysis of American Housing Survey data, (2) hypothesis generation and testing with administrative data, and (3) hypothesis testing with a random-assignment study.

Outcomes of interest, as stated in HUD's FY 2010–2015 Strategic Framework, Goal 3, include: educational attainment, early childhood learning and development, health status, economic security, economic self-sufficiency, and criminal justice involvement. Key household variables include: presence of children, marital status, history of homelessness, disability of head of household, race, ethnicity, gender, and age.

### Description

The proposed research would have the following three tasks, each building on the previous one.

- 1. Analysis of American Housing Survey data.** Use the AHS to conduct a longitudinal analysis of public housing residents, describing lengths of stay, changes in education levels, and changes in income. Use these descriptive findings to develop hypotheses about what characteristics of households determine the effect of assistance on particular outcomes.

- 2. Hypothesis generation and testing with administrative data.** Design a study to test hypotheses developed in the first project through the matching of PIC data with administrative data collected by local entities to observe the interactions of assisted households over time with public systems, such as TANF, criminal justice, child welfare, Medicaid, and Medicare. To do this, leverage existing integrated datasets, such as those developed by the initiative Intelligence for Social Policy.
- 3. Hypothesis testing with a random-assignment study.** Based on hypotheses about the effects of assistance on different types of households that appear reasonable based on the first two tasks and on previous random assignment studies of HUD housing assistance, design and conduct a random-assignment study to investigate how the effect of assistance on outcomes varies depending on the type of household assisted.

### Background

HUD programs assist many different types of households and assistance can reasonably be expected to have different types of effects on different types of households and individuals. Descriptive empirical analyses are needed to produce a better understanding of the types of households receiving HUD assistance and what household characteristics might influence the effect of assistance.

The AHS and PIC data are rich resources for describing HUD-assisted households. The capacity to match PIC data with administrative data from state, county, and other local entities offers another, rich and nearly untapped source of information. Some states and local governments have already created integrated administrative data systems; the idea is to leverage these resources by matching to HUD administrative data in these states and localities (rather than starting de novo).

### Policy Implications

This research has the potential to validate or call into question the primary channels through which HUD attempts to accomplish its mission. Given the amount of accumulated evidence of research spanning the past half-century, such sweeping results are unlikely. This research, however, focuses on the amount of long-term good that the Department's programs do for the American populace. It may well identify gaps in our coverage and particular programs that are not delivering results effectively.

### Finance

The first project can be completed in house, with approximately one-fourth FTE of a mid- to senior-level analyst. It might also

be assigned to a contractor, either as a very small independent procurement or as part of some larger research contract. Estimated cost is less than \$50,000.

The second project will require more time and cooperation among experts in housing policy, statistics, and data processing. These could be a team of HUD employees or any of a number of social science research consultancies. It is also possible that a hybrid approach could be used, with the data matching and cleaning being contracted out and the analysis performed in house. Given the interdisciplinary and interinstitutional character of this project, cost-sharing with a foundation or local jurisdiction is also an avenue worth investigating. This project would cost in the range of \$100,000 to 500,000.

The third project will be expensive. It will require hiring an outside service to conduct the data collection at the very least, and we may also want to hire the specialized resources to analyze and maintaining the effort over such a long period. Again, such an ambitious undertaking may well appeal to partners who may contribute either financially, with labor, or with computing resources. Assuming a sample size of 5,000 cases to provide sufficient coverage of different assistance channels and household types, plus controls, the cost of the project over 5 or more years would significantly exceed \$2 million.

## Ensuring Successful Transitions: Housing and Services for Youth Aging Out of Foster Care

### Research Question

What are the benefits of providing housing as a part of a short-term intervention “package” for vulnerable populations when exiting institutional settings, such as youth aging out of foster care?

### Rationale

A small but growing body of research points to high rates of homelessness among youth who have aged out of the foster care system, with estimates ranging from 14 percent to almost 30 percent of youth experiencing at least one night of homelessness in the first 1 to 3 years following emancipation, and far greater numbers of youth teetering between precarious housing and literal homelessness. To end homelessness, effective programmatic initiatives must be established that target the institutional settings, such as foster care, that feed the homeless assistance system.

### Description

This study would seek to compare outcomes of youth aging out of the foster care system that are offered different packages of housing and services to help the youth successfully make the transition to independence. Possible interventions to be tested include receipt of a (time-limited) voucher through the Family Unification Program, Critical Time Intervention (which is a 9-month intensive case management protocol), and usual care (at this time, this intervention may be best defined as a loose network of low-dose services, such as mentoring, case management, and independent living classes). Outcomes of interest include, but are not limited to, housing stability, education and training, physical and behavioral health status, and income and earnings. The current array of programming offered to youth as they exit the foster care system is focused heavily on independent living classes; educational activities, such as tutoring; and case management, including mentoring. Housing interventions for youth aging out of foster care are few, with the exception of FUP, through which youth ages 18 through 21 who left foster care at age 16 or older and who do not have adequate housing are eligible for a time-limited housing voucher not to exceed 18 months. This research effort would seek to understand the effect of incorporating housing into the array of services offered to this vulnerable population.

### Background

Each year, approximately 30,000 youth “age out” of the foster care system in the United States. In contrast to the decreasing number of children and youth in foster care overall, the number of young adults who exit foster care each year before being reunified with their family of origin, being adopted, or achieving another permanent living arrangement has remained relatively steady. The primary federal resource dedicated to the needs of youth aging out of foster care is the set of programs authorized under the John H. Chafee Foster Care Independence Act (P.L. 106-169), commonly referred to as the Chafee Program and administered by HHS. The Chafee Program provides \$140 million annually to states (allocated proportionally based on the number of children in foster care, with a minimum allocation of \$500,000) to provide services to youth in foster care and young adults ages 18 through 21 who have emancipated from the child welfare system. Stipends for housing are an eligible use of Chafee funds for youth ages 18 through 21; however, the funds have a 30 percent cap on room-and-board expenses, and the vast majority of states do not come close to reaching the cap. Even if they did, the amount of assistance that would be available per youth would be meager. Affordable housing is consistently listed as a critical need for youth aging out of

foster care, yet a dearth of housing options is available to the population. HUD is currently supporting a study titled Housing for Youth Aging Out of Foster Care, and one aspect of the research effort is an in-depth review of the way PHAs choose to use, or not use, FUP to create housing opportunities for youth aging out of foster care. This study will yield a list of PHAs that are targeting youth with FUP vouchers and, therefore, some potential sites for study.

### Policy Implications

HUD is a key member of USICH and dedicates a significant portion of resources to programs that are designed to prevent and end homelessness. A recent scan showed approximately 385 projects receiving nearly \$80 million in HUD homeless dollars specifically targeted at youth and young adult homelessness. The development of evidence-based interventions targeted toward populations at high risk of homelessness would be a substantial contribution to the Council's goals to end family and youth homelessness by 2020. USICH has identified youth formerly in foster care as a priority subpopulation of homeless youth.

### Finance

It is anticipated that HUD, in partnership with ACF, which is the operating division within HHS that oversees and funds child welfare programs at the federal level, could support the cost of this study. HUD estimates the total cost would be about \$2 million.

### Evaluation of the Section 811 Project Rental Assistance Demonstration

This project, although consistent with Roadmap priorities, pre-existed or developed outside the Roadmap's project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the TI Fund in the President's FY 2014 Budget.

### Homelessness Prevention Demonstration

This project, although consistent with Roadmap priorities, pre-existed or developed outside the Roadmap's project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the TI Fund in the President's FY 2014 Budget.

## Impact of Providing HUD-Funded Housing Assistance to Ex-Offenders

### Research Questions

What is the impact of providing HUD-funded housing assistance to ex-offenders? Does allowing ex-offenders on the lease in public and assisted housing programs lower recidivism? Does allowing ex-offenders on the lease help families become more economically self-sufficient? What nonhousing services are needed to ensure successful tenancy?

To what extent do PHA administrative policies serve as barriers to ex-offenders seeking housing assistance (or seeking to reunify with families already residing in assisted housing)?

### Rationale

Approximately 730,000 ex-offenders are released from federal or state prison each year. Research demonstrates that access to stable, affordable housing increases positive outcomes, such as employment, and reduces negative outcomes, such as recidivism or homelessness. Local PHA administrative policies may currently present barriers to providing housing assistance to ex-offenders or to reunifying ex-offenders with their families who already receive housing assistance. A significant amount of interest in this population exists in various parts of government (the Domestic Policy Council, U.S. Department of Justice [DOJ], HHS, etc., at the federal level), and HUD clearly has comparative advantage in leading research efforts relating to the effects of, or barriers to, providing housing assistance for ex-offenders.

### Description

This research effort would seek to understand the effect of providing HUD-funded housing assistance to ex-offenders, with a focus on outcomes such as recidivism, education/training and employment, family preservation, and income and earnings. The optimal study would be conducted using an experimental design, allowing the establishment of several intervention arms that would include various combinations of housing assistance and service packages, including interventions of "housing only" and "services only." PHAs could be solicited directly by HUD to participate based on an assessment of their willingness to set aside an allotment of subsidies (either units of public housing or housing choice vouchers) for the purpose of this study.

### Background

Local PHA administrative policies may present barriers for ex-offenders in receiving housing assistance, or in the return

of ex-offenders to their families currently residing in HUD-assisted housing. A significant number of public housing families are headed by single mothers, whose husbands or fathers of their children (approximately 40 percent) have been incarcerated. PHAs are statutorily required to ban applicants with specific types of criminal records, including people subject to a lifetime registration requirement under a state sex offender registration program, people convicted of manufacturing or otherwise producing methamphetamine on the premises, people evicted from federally assisted housing for drug-related criminal activity within the past 3 years, and people who are illegally using a controlled substance, or people whose abuse of substances is believed to interfere with the health, safety, or right of peaceful enjoyment of the premises by other residents. Aside from these factors, though, PHAs have a great deal of latitude in establishing additional policies that may serve as barriers for ex-offenders (such as screening for family behavior and “suitability for tenancy,” denying admission to people with specific types of offenses, etc.).

### Policy Implications

A significant level of interest exists in crafting policies regarding the ex-offender population that could lead to lower recidivism rates and better community integration. Findings from this research effort would provide evidence of the effect that housing assistance makes on select outcomes of interest, such as recidivism, attachment to the labor market, and family preservation. HUD and local PHAs could use the findings from this study to assess the utility of their administrative policies toward housing ex-offenders, and other federal agencies that operate programs that target the ex-offender population may use findings to make adjustments to programs or policies or to seek to develop relationships with local housing providers.

### Finance

It is anticipated that the cost of this study could be supported by HUD in partnership with others, including federal agencies, such as ACF DOJ, and nonfederal partners. Such partnership opportunities would be explored at a later phase of project development. The proposed project cost is estimated to be \$2 million or more.

## Mixed-Income Communities and Public Safety

### Research Question

What do we know about the relationship between HUD’s programs that promotes mixed-income neighborhoods and

neighborhood safety? How successful have the implementation and preliminary results of the Choice Neighborhoods program’s public safety initiatives been?

### Rationale

HUD’s success in promoting viable and sustainable mixed-income communities depends on a number of factors beyond housing, such as the quality of educational opportunities, access to jobs, business investment, and neighborhood safety. Market-rate renters are unlikely to choose to live in a high-crime neighborhood, and crime is a deterrent to business investment. HUD-assisted households, particularly those with children, will not thrive in a neighborhood where they do not feel safe. Thus, neighborhood safety is critical to protecting HUD’s investment in developing mixed-income housing and for achieving the goal of using housing as a platform to improve the long-term outcomes of the families and children living in HUD-assisted housing.

One of HUD’s key programs focused on creating mixed-income housing is Choice Neighborhoods, which aims to transform neighborhoods of concentrated poverty into mixed-income neighborhoods. Choice Neighborhoods provides a core investment in improving distressed public or assisted housing that either complements or anchors a broader plan for neighborhood revitalization. The success of Choice Neighborhoods grantees in attracting higher income households and business investment depends in large part on the safety of the neighborhood.

As such, effective public safety strategies are a key element of the Choice Neighborhoods program. Applicants for implementation grants are required to include a public safety plan as part of their application for funding, and they can use part of the grant funding to support public safety. The first five Choice Neighborhoods implementation grantees were also invited to apply for public safety enhancement funding, which DOJ provided to HUD as part of the Neighborhood Revitalization Initiative. Four of the five grantees received \$400,000 in funding and, in doing so, submitted detailed plans of how they would employ an evidence-based strategy or promising practice to improve public safety in their target neighborhood. Grantees can use the public safety enhancement funding to support implementation of an evidence-based public safety strategy or a promising practice around public safety. In addition, all five grantees received \$80,000 in public safety technical assistance funds.

The Urban Institute is evaluating the Choice Neighborhoods implementation grants comprehensively and will be analyzing crime data for the target neighborhoods. The Urban Institute’s

evaluation, however, will not focus extensively on the public safety strategies the grantees are employing, nor how the public safety enhancement funding enabled the grantees to expand or deepen those strategies. In addition, HUD does not have a clear picture of which public safety strategies work and which could be integrated with investments in housing revitalization. Research on this topic would help HUD understand what the research shows about mixed-income neighborhoods, the effect of mixed incomes on neighborhood safety, and which evidence-based public safety initiatives are successful at improving public safety in distressed neighborhoods.

### Description

This research project will have two products. The first is a literature review of the evidence about the relationship between HUD's programs that promote mixed-income neighborhoods and neighborhood safety. The second is a review of the implementation and preliminary results of the public safety initiatives under the Choice Neighborhoods program, in collaboration with Office of Public and Indian Housing staff.

This project would describe the public safety strategies that the grantees chose, which had to be either an evidence-based strategy or a promising practice, and how they plan to implement them (or are implementing them). The project would include the following:

- A review of the strategies the grantees are employing and the evidence base for those strategies, including where and how the strategies have worked previously.
- A description of the grantees' specific public safety challenges as outlined in their Choice applications, through baseline data collected as part of the Choice performance plan, and through additional background research on the neighborhood targeted through the grant.
- An analysis of the data that HUD plans to collect on public safety and crime as part of its annual reports and evaluation of the grantees.
- An examination of other examples of successful public safety strategies employed in distressed neighborhoods and/or in conjunction with broader neighborhood revitalization strategies.

The research team will interview PIH's Choice staff on the progress of the public safety plans, but will not contact the Choice grantees directly unless authorized to do so by the Choice Neighborhoods team. The project could be further expanded to include information on the public safety strategies employed by the Byrne Criminal Justice Innovation grantees that are in

the same neighborhood as a Choice grant. In at least one case, a housing authority that received a Choice planning grant also received a Byrne grant, providing another opportunity to examine how housing and public safety strategies are interwoven as part of a broader plan for comprehensive neighborhood revitalization.

### Background

Two recent HUD reports reviewed the empirical evidence on subsidized housing and crime. Ellen, Lens, and O'Regan (2011) found that a large body of literature analyzes the effect of subsidized households on crime, but much of that literature is dated and focused on large public housing developments. The study found that the empirical evidence on the extent to which voucher households affect neighborhood crime is quite scarce. Their analysis of 10 cities indicated that voucher holders do not seem to bring crime to neighborhoods. Instead, voucher holders seem to locate in neighborhoods where crime is rising. Lens, Ellen, and O'Regan (2011) found that the research on the Moving to Opportunity program shows that households in these programs were successful at moving to safer neighborhoods and interim results from the Housing Opportunities for People Everywhere (HOPE VI) program show some evidence that participants are moving to safer and more affluent neighborhoods.

Ongoing and future PD&R research will bring additional evidence and help understand the relationship between HUD's programs that promote mixed-income communities and neighborhood safety. First, an ongoing PD&R research project is investigating the level and nature of arrests and incidents that are associated with HCV households using individual or household level data to further understand the relationship between vouchers and neighborhood crime. Second, a final assessment of the 15 HOPE VI developments that were studied in the 1996 baseline assessment and the 2003 interim assessment is proposed under the Goal 4 projects of this research roadmap. Crime and perceptions of personal and neighborhood safety are outcomes to be assessed in this final evaluation. The proposed research project can help summarize the literature in this area, incorporating results from the ongoing HCV and the previous HOPE VI research projects. This review will be complemented by an analysis of public safety strategies and their effect on neighborhood safety.

### Policy Implications

The coordination of Choice Neighborhoods grants with DOJ's Byrne Criminal Justice innovation is promoting a high level of



coordination with law enforcement agencies to prevent and reduce crime and use housing as a platform to improve public safety. This research project will ensure that Choice Neighborhoods safety initiatives are documented, we learn from this process, and results from this initiative are reviewed and disseminated. The literature review will help understand the state of knowledge on subsidized housing, crime and neighborhood safety.

### Finance

Potential external partners may include DOJ. The literature review developed internally is estimated to require 160 staff hours. The review and analysis of Choice Neighborhoods safety initiatives is expected to require the same amount of staff time.

## PHA Administrative Policies and Homelessness

### Research Question

What are the effects of PHA administrative policies on homelessness? Do strict PHA screening criteria and termination policies contribute to homelessness? Does the adoption of PHA work requirements, income requirements, higher minimum rents, or flat rents make it more likely that extremely low-income households will lose assistance and become homeless? What is the cost to PHAs to evict households and reissue vouchers?

### Rationale

Administrative policies of PHAs could contribute to homelessness in one of two ways—either by *perpetuating* homelessness, by establishing policies that are barriers to homeless households' ability to access assistance, or, by *creating* homelessness through rigid eviction policies that increase the likelihood of evicting extremely low-income households that ultimately become homeless. In fact, however, very little evidence exists beyond anecdote or theory to point to *specific* administrative policies that are the most problematic for homeless households. If HUD were able to pinpoint a set of problematic administrative policies or practices, and identify alternatives to these policies or practices, this could increase the supply of mainstream assisted housing available to homeless households and potentially reduce the eviction rate from assisted housing.

### Description

Given the two different ways that PHA administrative policies may affect homeless households (either by perpetuating homelessness on the front end, or creating homelessness on the back end), it is likely that a different set of PHAs would be selected

for case studies on each issue. HUD is currently funding a Study of PHAs' Engagement with Homeless Households, which includes a web-based survey of all 4,065 PHAs (completed October 2012, with an 80-percent response rate), and an extended followup telephone survey with a purposeful sample of 125 PHAs early in 2013. The web-based survey includes a question that asks PHAs if they have modified or made exceptions to tenant screening or other policies to provide housing assistance to homeless households. The survey includes an open-ended followup question for those PHAs that respond "yes" for the purpose of ascertaining *which* policies were changed and why. The followup survey instrument has additional and more detailed questions regarding the administrative policies of PHAs. At the conclusion of the study, HUD should have a pool of PHAs that have indicated that they have made modifications to existing administrative policies to better serve homeless households. The set of PHAs to include in a series of case studies could be drawn using this data.

### Background

Restrictive or inflexible policies that are developed and enforced by public housing agencies to govern housing assistance programs are often cited as major barriers to homeless households in their efforts to receive and maintain housing assistance. In fact, however, very little evidence beyond anecdote or theory exists to point to *specific* administrative policies that are the most problematic for homeless households. Nor has research measured the effect of relaxing or modifying those policies that are seen as most problematic (policies such as strict screening procedures for criminal background checks, inflexible appointment scheduling, or barring households with a former eviction from a PHA program from receiving assistance). The evidence base linking evictions to homelessness is even less established; however, a handful of innovative PHAs have established innovation eviction prevention efforts. For example, King County Housing Authority in Washington established a program to reach out earlier to at-risk households and deploy resident services staff to preserve tenancies. The PHA documented the cost savings of avoiding preventable eviction and found that each eviction prevented saved the PHA an estimated \$3,550.

### Policy Implications

If HUD were able to pinpoint a set of problematic administrative policies or practices, and identify alternatives to these policies or practices, this could increase the supply of mainstream assisted housing available to homeless households and potentially reduce the eviction rate from assisted housing.

## Finance

HUD estimates that it will require up to \$1 million to implement the proposed study, with potential assistance from outside funding partners.

## Physical Inspections of Assisted Housing and Residential Asthma Triggers

### Research Question

How effective are the periodic physical inspections of public housing or other subsidized housing units in identifying conditions that can trigger asthma (for example, tobacco smoke, cockroach and mouse allergens, and mold/moisture) and result in the subsequent mitigation of these conditions?

### Rationale

HUD's goal of "housing as a platform" includes the concept that providing safe, healthy housing extends benefits to both residential quality of life and overall health. Asthma is a chronic, debilitating disease that disproportionately affects many of the recipients of HUD-assisted housing (that is, low-income, minority populations) (Akinbami, Moorman, and Liu, 2011). Research has established that residential allergens (that is, cockroaches, mice, mold) and irritants (for example, tobacco smoke) are important asthma triggers, especially among inner city populations (IOM, 2000). Research has further shown a greater occurrence of elevated levels of cockroach and mouse allergen in low-income, multiunit housing (Cohn et al., 2006; Salo et al., 2008). Housing interventions that include reducing exposure to asthma triggers have been shown to improve the health of asthmatic children, while having a positive benefit/cost ratio (Crocker et al., 2011). HUD currently requires the periodic physical inspection of public housing or other subsidized housing units (that is, through the Physical Housing Assessment System for public housing and assisted multifamily housing or through Housing Quality Standards inspections for rentals subsidized through the HCV program). Research on the degree to which these inspections identify conditions that can trigger asthma and result in the subsequent mitigation of these conditions is important for improving the health of HUD-assisted residents with asthma. Efforts to understand the relationship between physical inspections and asthma trigger reduction will emphasize HUD's commitment to environmental justice and is an important step in the Department's implementation of the *Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities* (President's Task Force on Environmental Health Risks and Safety Risks to Children, 2012).

## Description

This research has components that could be conducted in house or with the assistance of an external contractor. Real Estate Assessment Center data from physical property inspections of multifamily property owners/agents and PHAs will be analyzed to identify patterns in the occurrence of conditions that contribute to asthma morbidity, and inspection protocols will be assessed for their efficacy in identifying these conditions. Public housing, single-family and multifamily scattered sites will be included in this analysis, possibly looking at a sample of PHAs and properties. The product will be a white paper that provides recommendations for improving inspection protocols and processes and for ensuring that effective corrective actions are taken for reducing resident exposures to key residential asthma triggers.

## Background

The Centers for Disease Control and Prevention (CDC) conducted an extensive literature review that resulted in the conclusion that multifaceted home interventions with an environmental focus (including the control of residential asthma triggers) are effective in improving the overall quality of life and productivity in children and adolescents with asthma (Crocker et al., 2011). In addition, HUD-sponsored research has demonstrated that integrated pest management was effective in reducing levels of cockroach allergen in public housing.

## Policy Implications

Asthma is a multifaceted disease that disproportionately affects disadvantaged populations. Improving housing inspections and followup has the potential to improve the health of assisted residents with asthma by reducing their exposure to key asthma triggers. This could be accompanied by efforts to provide improved medical care asthma (for example, through coordination with federally qualified health centers) to reduce levels of asthma morbidity among HUD-assisted residents.

## Finance

Nothing indicates that partnerships outside of HUD will be necessary to complete this project, although partnerships with HHS/CDC and HHS/Health Resources and Services Administration may be advantageous. A collaborative effort among PD&R, the Office of Healthy Homes and Lead Hazard Control (OHHLHC), PIH, and Multifamily should occur to facilitate the completion of the project. OHHLHC can provide resources for contractor support, if needed.

## Seniors and Services Demonstration

This project, although consistent with Roadmap priorities, pre-existed or developed outside the Roadmap’s project development process and therefore lacks a similar detailed description. HUD has sought to fund this project under the TI Fund in the President’s FY 2014 Budget.

## State Olmstead Plans and Assessment of Demand, Available Resources and Needs

### Research Question

What is the scale of need for people seeking to transition out of large institutions? What is the scale of need for people in smaller scale housing types that might be deemed “segregated” under new definitions? How are existing Olmstead Consent decrees being structured (housing goals, definitions of “integrated” settings and related issues)? What are the existing resources available from HUD to help meet these needs? What is the “unmet” level of need (with geographic breakdown)? What types of information (or technical assistance) might assist new states with developing transition plans?

### Rationale

Supportive housing for people with disabilities is going through a major policy shift. The 1999 Supreme Court Olmstead decision ruled that people with disabilities have the right to live in integrated settings rather than in institutions. Several major developments have occurred in the implementation of Olmstead during the past few years. First, many states have entered into consent decrees to transition people out of large institutions and move them to community based, integrated settings. Other states are likely to soon follow suit. These state consent decrees often have very ambitious goals while at the same time mandate very narrow options for meeting the community and integration goals. Second, DOJ issued a major Policy Statement in 2011 that defines any congregate housing as a “segregated” setting. HUD will also need to issue guidance on how to implement Olmstead. Third, HHS/CMS is in the process of finalizing a regulation that will restrict the use of Medicaid funds to pay for services only in integrated housing settings while withdrawing them potentially from tens of thousands of existing units.

These major nationwide issues affect hundreds of thousands of people with disabilities. The affordable-housing needs and HUD’s limited resources are not well understood by nonhousing agencies involved. HUD and its grantees and partners often are unaware of the ramifications of subsidized housing programs. Major questions remain about both the existing HUD-supported stock and the need for alternative housing

options. Because the Olmstead integration mandate applies not only to those currently in large institutions but also to all people with disabilities *at risk* of institutionalization, millions of people may be affected by ongoing policy changes.

### Description

This inhouse research project, involving PD&R, FPM, PIH, Housing, and the Secretary’s Office, will provide an overview of the housing needs and range of responses to Olmstead-related housing needs for people with disabilities. The initial work product will be an internal policy document to be presented to HUD’s new Olmstead working group. Ultimately, it should form the basis of policy guidance for HUD regional and field staff who may be involved in negotiations on future consent decrees. Some coordination with DOJ and CMS may also be needed.

### Background

The research will use HUD administrative data (PIC, Tenant Rental Assistance Certification System) and census data. State consent decrees will be reviewed. Materials from private advocacy organizations (Technical Assistance Collaborative, Bazelon Center) should also be reviewed.

### Policy Implication

Discussed previously, under Rationale.

### Finance

Policy documents developed internally might be expected to require 180 staff hours or up to \$500,000 of contract resources.

## Successful Exits From Targeted Housing Assistance Programs for Vulnerable Populations

### Research Question

How do communities promote “graduation” from supportive housing models into mainstream housing? What do people in the Housing Opportunities for Persons with AIDS (HOPWA) and homeless assistance programs specifically need to be able to successfully make the transition to mainstream housing programs? What types and levels of services need to be in place before, during, and after the transition to ensure that clients are able to successfully make the transition to mainstream housing?

### Rationale

HUD is the primary federal funder of permanent supportive housing for vulnerable populations, particularly through the homeless assistance programs and the HOPWA program.

Ensuring an adequate supply of permanent supportive housing requires that HUD support the development of new units of assisted housing, but also ensure the appropriate use of the existing supply of assisted housing. When a household is ready to move on from the intensive support and deep subsidy associated with permanent supportive housing, it is critical that a mechanism is in place to ensure that a household can leave permanent supportive housing and make the transition to mainstream housing smoothly. Given the scope of HUD's resources, as well as HUD's level of investment in this area, the Department has a clear comparative advantage in conducting research to understand what programs and policies are currently in place to ensure a successful transition of a household from permanent supportive housing to mainstream housing.

### Description

This study would develop a series of case studies exploring how different communities have created successful strategies to enable people residing in supportive housing, or some other type of housing designed for vulnerable populations, to move on from this type of specialized housing into "mainstream" housing. Because the affordability of mainstream housing is cited as a barrier preventing households from moving out of permanent supportive housing setting, PHAs have a significant role to play in the creation of affordable-housing opportunities for those households that are ready and willing to exit permanent supportive housing. PD&R recently completed a survey of PHAs regarding their engagement with homeless households; one question on the survey addressed the types of preferences that PHAs had established. The response categories to this question included households "timing out" of transitional housing and households making the transition to the HCV program from four programs: Shelter Plus Care, Veterans Affairs Supportive Housing, HOPWA, and Single-Room Occupancy Mod Rehab. PHAs that reported any of these preferences may be an excellent place to begin a review of PHA policies that create a pathway to mainstream housing from supportive housing. Site visits and structured interviews could be used to explore the community partnerships that have been established to ensure the success of these transition policies, as well as the aspects of the policies and programs that stakeholders consider crucial for ensuring successful transitions to mainstream housing.

### Background

There is a limited supply of permanent supportive housing and other types of housing that are designed to serve vulnerable populations. The population of individuals and families who could benefit from permanent supportive housing continues to

grow each year, yet many programs become fully leased up and new households seeking permanent supportive housing are shut out. Some communities have established programs or policies that encourage residents to "graduate" or move on from permanent supportive housing, which not only allows units to continually open up for new residents, but also better suits the needs of households that no longer need the intensive support or deep rental subsidies that are typically associated with these units.

### Policy Implications

Discovering and promoting policies and programs that encourage and support this type of "moving up" or graduation to mainstream housing ensures that a sufficient supply of permanent supportive housing is available for the households that are most in need of such intensive assistance, without requiring substantial investments in the construction of new units.

### Finance

At the current time, it is anticipated that HUD would support the cost of this study; however, outside funding partners would be sought, if approved. The estimated cost would be up to \$500,000 in contract resources.

## Understanding Rapid Re-Housing: Models and Outcomes for Homeless Households

### Research Question

How effective is rapid rehousing in limiting the incidence and duration of homeless spells? Are lessons to be learned from the implementation of rapid rehousing programs that could guide a broader experiment of time-limited subsidies or shallow subsidies?

### Rationale

The immense amount of homeless assistance funding made available to communities nationwide through the Homelessness Prevention and Rapid Re-Housing Program (HPRP) during the past several years resulted in the accelerated adoption of the relatively new intervention of rapid rehousing. Data being collected in a handful of communities tracking shelter recidivism of program participants suggest positive early results—namely, very low rates of shelter reentry up to 12 months after program participation—and have sparked significant enthusiasm for expanding the availability of the intervention broadly. Early learning from two ongoing studies sponsored by HUD that are examining outcomes of rapid rehousing programs, however, suggests that further study is warranted to better understand the models that various communities are implementing and to

explore more thoroughly the extent of housing stability that households achieve after rapid rehousing. HUD is currently the primary funder of homeless assistance in communities across the country, and has a critical role in conducting research and program evaluation to ensure that programs designed to prevent or end homelessness are the most effective and are as efficient as possible. Given the scope of HUD's resources, as well as HUD's level of investment in this area, HUD has a clear comparative advantage in conducting research to evaluate the rapid rehousing program model.

### Description

This study would require two components to be completed in a stepwise fashion. First, we would seek to identify the most common program models being implemented under the rubric of a rapid rehousing intervention. After the array of program models is established, rough groupings of program models would be established and an empirical study would be designed to measure the outcomes of households that are served under the various program models being tested. Outcomes would include, but not be limited to, shelter entry, housing stability, family stability, and income and earnings. The goal of the study would be to develop evidence-based rapid rehousing interventions and to determine if certain households might be more or less likely to succeed after participating in a rapid rehousing program.

### Background

HUD's FY 2008 appropriation included a \$25 million set-aside to implement a rapid rehousing for families demonstration program. The notion of rapid rehousing for families grew from the recognition that a subset of families enters shelter with only moderate barriers to stable housing. For this band of families, the provision of a short-term housing subsidy and limited set of supportive services is often sufficient to move the family quickly out of the shelter system and back into community-based housing. The demonstration program was designed to replicate the rapid rehousing interventions that were being developed in a handful of communities, and which were demonstrating positive early results, namely very low rates of shelter reentry 12 months after program participation.

In 2009, the American Recovery and Reinvestment Act included \$1.5 billion for the HPRP, infusing an enormous amount of resources into communities to be spent over 3 years on rapid rehousing or homelessness prevention. The accelerated expansion of the rapid rehousing program, along with the flexibility

offered to communities to design their own rapid rehousing programs under both the demonstration program and HPRP within a broad set of guidelines provided by HUD, has led to the establishment of a broad array of programs, varying in their length and depth of both housing assistance and accompanying service package. Outcome data from the few communities that have been tracking outcomes of households that have been served through the program have indicated low rates of returns to shelter, but these timeframes are limited to 12 months and no other outcomes have been documented.

Two ongoing evaluations supported by HUD, the Evaluation of the Rapid Re-Housing for Homeless Families Demonstration Program and the Family Options Study, are tracking a set of outcomes for families who are served by a rapid rehousing program. Early findings indicate a lack of clarity among many families regarding the intervention itself (such as the length and amount of assistance provided) and significant mobility after assistance ends. Early findings from these two studies, when taken individually, do not tell a full story; however, when considered together, they suggest that further study is needed to better understand the intervention itself—What do providers offer? How similar is it to what the provider next door offers and *also* calls rapid rehousing—and further information is needed about what happens to households after the intervention. The low costs of rapid rehousing add to the appeal of the intervention, particularly when compared with more costly interventions such as transitional housing; however, until longer term outcomes from rapid rehousing can be articulated, the true cost effectiveness of the intervention cannot be fully assessed.

### Policy Implications

The rapid rehousing intervention is rapidly expanding throughout communities across the country, far quicker than evidence supporting the most effective way to structure programs. The development of models for replication and testing is critical to ensure that these programs are achieving their goals of effectively moving households quickly out of shelter and into stable, community-based housing. Findings relating to which households are best assisted through rapid rehousing may also inform a broader experiment of time-limited subsidies or shallow subsidies to nonhomeless households.

### Finance

HUD estimates a cost in the range of \$2 million or more, with potential for funding assistance from external partners.

## Sustainable and Inclusive Communities (Goal 4)

### Achieving Energy-Efficiency Goals in HUD Public and Assisted Housing through Behavioral Change

#### Research Question

Overarching Question: How do behavioral factors and incentives (for tenants, landlords, and owners) affect the energy efficiency and energy consumption of multifamily housing?

- What is the intersection between technology and behavior regarding tenant energy consumption? What components does a tenant engagement program need to possess to have a reasonable expectation of changing behavior to achieve energy savings at various thresholds (for example, education of parents or children, income, housing cost burden)? What benchmarks are necessary to gauge success?
- What is the effect of energy use on property owners, tenants, and landlords when switching from landlord-paid to tenant-paid utilities? How can utility companies (broadly defined) be involved in reducing per-unit costs to tenants or landlords?
- How can we incentivize private landlords to improve the energy efficiency of their units, while factoring in residents' behavior (for example, rebound effects)? How can energy retrofits to existing homes be paid for? What is the potential for using on-bill financing of energy retrofits (that is, monthly loan payments on utility bills)? What are the incentives, if any, for utility companies to pay for it?
- Does housing counseling that includes transportation, green features, and energy information change behavior? What is the outcome for households and environment from this sort of counseling?

#### Rationale

Few incentives are currently available that encourage landlords, residents, and owners of HUD properties to reduce energy consumption through modest changes in behavior. This project will enable us to evaluate how well the Energy Innovation Fund is working to help housing authorities adopt various strategies that encourage the reduction of energy usage and promote the value of energy-efficient behavior. We also have an opportunity to work closely with PIH, the Office of Affordable Housing Preservation, and the Office of Sustainable Housing and Communities on the research design and project development.

#### Description

This proposed research involves several phases that will be developed into multiyear tasks.

The first task is designed to address the initial research question. We will evaluate various innovative information tools and strategies that housing authorities adopt to educate consumers, landlords, and owners about the benefits of “going green.” These information tools include automated technologies like Baltimore’s “Green Button Initiative” and New York’s Heat Watch monitoring program.

The second task addresses the second question by building on the work already under way in PD&R’s Office of Economic Affairs that examines energy consumption trends at the national level. The existing project involves entering into contractual agreements with private utility companies to establish baseline measures of energy consumption in HUD-funded housing developments. The results will have major implications for how HUD sets utility allowances. We can extrapolate from these results to demonstrate how tenants and landlords would be affected if we moved from a landlord-paid to a tenant-paid scenario in properties that are individually metered. In addition, an update to the existing HUD Utility Schedule Model (HUSM) will provide more accurate, standardized local utility schedules used by many HUD public and assisted housing developments.

To address the third research question (third task), we evaluate various incentive structure scenarios that may address the “split-incentive” problem. Here, we have an opportunity to monitor several grants under the Multifamily Energy Innovation Fund to test behavioral change strategies that have been implemented by a number of housing authorities across the country. In alignment with the goals put forth in HUD’s 2012 Energy Action Plan, we can also evaluate energy efficiency in housing financed through competitive grant programs and through Federal Housing Administration multifamily insurance programs.

The final task involves a selection of several small, mid-sized, and large PHAs to assess the effectiveness of various counseling programs targeted at landlords and consumers to raise awareness about the importance of reducing energy consumption. We want to understand specifically which education tools are most effective for inducing modest changes in consumption behavior, thus reducing energy usage in HUD-assisted housing stock.

## Background

Although the body of work in the field of behavioral economics on the “demand side” of energy consumption is growing, no identified systematic study examines these issues as they relate to public and assisted housing. For instance, with some 2.1 million Section 8 vouchers, HUD spends approximately \$2.9 billion a year on the utility allowance portion of these vouchers. Because most utilities are partially or entirely paid for through the subsidy, tenants have little or no incentive to reduce their energy usage. This problem is often referred to as the “split incentive.” Likewise, many owners or landlords of rental or multifamily properties receive subsidies to help manage administrative or utility costs, thus offering little incentive to influence the behavior of tenants when it comes to energy consumption.

## Policy Implications

This research will help the Department achieve two central objectives related to its stated objective to reduce energy consumption in its housing stock during the next 10 years. First, it will improve the availability and management of good-quality data on energy. In public housing, the data that we extrapolate from the survey of the existing inventory consumption and utility data from HUD Form 52722 will generate more robust and reliable information on energy usage. In addition, review a sample of completed ARRA-funded PHA energy retrofit projects reported in HUDStat to identify the energy and cost savings resulting from energy and green building measures. Second, for multifamily housing, we may learn from the initial findings of the Green Retrofit Program projects to show projected and actual energy and cost savings. This includes an evaluation of Mark to Market outcomes. We hope to refine estimates of cost savings for HUD-funded energy retrofits completed, using Residential Energy Consumption Survey (RECS) and U.S. Energy Information Administration (EIA), U.S. Department of Energy, or Environmental Protection Agency data or other third-party assumptions. Finally, we can work with PHAs and other housing providers to improve information tools that educate residents about the value of reducing energy and the cost savings that are generated even when moderate changes in energy behavior take place.

## Finance

Between \$1 and \$2 million would be required to carry out the PHA pilot and conduct an evaluation of various learning tools targeted to both consumer and landlords.

## Advancing Utility Allowance Modeling for HUD Housing Programs

### Research Question

How can HUD achieve its stated departmental objective of reducing energy consumption in its public and assisted housing stock during the next 10 years? What is the current energy consumption of public housing and assisted multifamily developments? How can we obtain reliable data on energy consumption and costs in public and assisted housing? With more and better data, how can HUD improve estimates of utility allowances? What are long-run cost savings of energy investments in public and multifamily housing?

### Rationale

Under the provisions of the U.S. Housing Act of 1937, HUD provides assistance to approximately 1.2 million households living nationwide in public housing. Approximately 3,100 PHAs receive federal housing assistance and guidance from HUD on how to implement the assistance. The same statute provides that a resident’s share of the gross rent in federally assisted public housing should equal 30 percent of the household’s adjusted monthly income. The gross rent, as defined by HUD, includes costs for shelter and reasonable amounts for utilities, such as: electricity, natural gas, and other fuels. The amount determined by a local PHA to cover a tenant’s reasonable utility costs is the Utility Allowance (UA). PHAs are required to routinely update their administered UAs; however, HUD has not defined a unified approach to calculate these UAs.

To assist in this process, a HUSM was developed to generate standardized local utility schedules, which are based on local climate data, residential housing unit information from RECS data, tariffs, and utility rates. At the present, HUD uses these schedules to estimate the costs for tenant-paid utilities in the HCV and Low-Income Housing Tax Credit programs.

### Description

This research will refine HUSM to account for a unit’s energy efficiency when estimating a tenant’s UA. The current model uses three age categories to estimate the energy usage for an average unit. Previous reports indicate that this methodology results in disproportionate allowances for units that are more (or less) energy efficient than average. Refining the model to address this issue will assist HUD in its efforts to more accurately disburse funds for utilities that are actually consumed. In conducting this study, contractors will conduct a literature review, incorporate additional utility consumption data into

HUSM, revise estimation algorithms, structure the model to be web-accessible, and document the work in a report. The project will also include updating HUD's Utility Allowance Guidebook to include energy efficiency as a factor when calculating a unit's UA. The guidebook was last updated in 1998 and serves as an optional resource to assist PHAs in estimating UAs for residents.

Previous partnerships with EIA will need to be reestablished in support of using RECS data for HUSM. New working relationships will need to be created with state energy commissions and utility companies to survey the customers that they service. The working relationships with the state energy commissions and utility companies will allow for the model to be comprised of a broader sampling basis, resulting in more stable estimates. HUD anticipates that utility consumption data collected through the Utility Cost Data System project (described under the Data Infrastructure section that follows) will serve to validate the alternative UAs developed with HUSM.

### Background

Since the initial model was developed in 2003, multiple Task Orders have been awarded to revise the model and make it more resourceful. The current HUSM is primarily based on RECS data from 1997 and 2001 and uses an assortment of algorithms to estimate the utility costs for occupied units of different structure types, different bedroom sizes, and various climate zones. Reports of previous model revisions indicate that the calculated allowances only estimate energy usage for an average unit by three age categories, thereby resulting in disproportionate allowances for units that are more (or less) energy efficient than average. The incorporation of additional data (that is, 2005 and 2009 RECS and utility survey data from state energy commissions and local utility companies) will help provide a broader basis for estimation purposes and serve to increase model stability.

### Policy Implications

Refining the model will assist HUD in its efforts to more accurately disburse funds for utilities that are actually consumed. The development of more accurate utility schedules will also assist in PHA benchmarking efforts and out-year projections of utility costs. The model will provide evidence to support HUD's efforts to promote and improve the energy efficiency and sustainability of the federally assisted housing stock.

### Finance

It is anticipated that this study will cost from \$500,000 to \$1 million.

## Analysis of the Economic Impact of the Community Development Block Grant Nationwide

### Research Question

What are the economic impacts of different types of HUD spending? How does economic impact per dollar of spending vary for different HUD programs (for example, Neighborhood Stabilization Program 2, HOPE VI, the Community Development Block Grant program [CDBG], HOME, public housing capital investment)?

### Rationale

As the economy continues to slowly make its way out of recession, policymakers are interested in the extent to which public spending spurs economic growth and job creation. The Recovery Act was a high profile act of legislation meant to spur economic growth and job creation, but economic outcomes like jobs have been used to justify HUD's established programs as well. CDBG is a formula grant program with annual allocations around \$3 billion per year that has frequently come under fire for inability to demonstrate outcomes. The quirks of the CDBG funding formula may allow for a statistical analysis to estimate the impact of the program on economic outcomes like employment and income.

### Description

This in-house project would take advantage of variation in CDBG funding levels to estimate the effect of the program on employment and income. In FY 2012, the CDBG allocation formula moved from the 2000 census to the 2005–2009 American Community Survey. Because of differences between the two data sources, CDBG funding amounts varied for many grantees (sometimes by a great deal) from FY 2011 to 2012, independent of any true change in conditions. This exogenous variation in funding amounts may present an opportunity to estimate the effect of CDBG funding on outcomes such as employment and income.

### Background

The literature on community development is extensive, but rigorous models of the effect of community development activity are scarce. PD&R has funded several studies of CDBG and other similar programs, but these studies have typically relied on either inadequate data, or overly simplistic models, or both. Advances in the past 5 years—in the quality of HUD data, the availability of geographically precise data (such as address-level property sales), and empirical models—make it possible to do more rigorous research.



## Policy Implications

This research may illustrate the potential of the CDBG program to justify its existence to Congress at a time when funding for the program is facing significant cuts.

## Finance

We propose this study to be conducted in house by PD&R staff. The study would require approximately 200 hours to develop a research design and conduct preliminary analysis, and an additional 400 to 800 hours to complete the research and develop a report.

## Choice Neighborhoods and Education Outcomes

### Research Questions

How should federal policy for mixed-income housing move forward? What about other programs such as Choice Neighborhoods? To the degree programs have been successful, what have been the outcomes for residents? Does geographic proximity lead individuals with different income levels to engage in cooperative and pro-social behaviors, or is it necessary for HUD and its partners to deliberately encourage engagement?

### Rationale

This research has clear policy implications for Choice Neighborhoods, and for other community-development programs and community-oriented educational programs (see Policy implications). It is important for HUD to conduct this research, for two reasons. First, HUD is interested in evaluating the social and economic benefits of departmental programs. Second, because HUD has the PIC/TRACS data that will form the core of the analysis, the Department may have a comparative advantage when negotiating with local school systems for access to confidential student data. Finally, the U.S. Department of Education is interested in a possible collaboration to evaluate how well Choice Neighborhoods goals may positively interact with their Promise Neighborhoods agenda to improve the quality of life of the residents these programs serve.

### Description

The central research question is whether Choice Neighborhoods investments have any effect on educational outcomes of the children living in the focal development. The project would rely on administrative data on housing assistance (from PIC/TRACS) and educational outcomes from the local school system. HUD would identify a specific Choice Neighborhoods site where the research would be feasible—one with high-quality

data infrastructure, a cooperative school system, and a Choice Neighborhoods intervention reasonably expected to influence education. HUD would select a contractor to negotiate with the school system about data access and privacy restrictions, match the HUD data to the school system data, and develop an evaluation framework including Choice Neighborhoods treatment youth and youth living in non-Choice comparison sites.

### Background

Extensive literature in the field of education addresses the relative importance of a student's experience in and outside the classroom. The Harlem Children's Zone drew widespread attention for tying together school-based and neighborhood-based initiatives to improve educational outcomes in a low-income community. Research on the Harlem Children's Zone suggests that this approach is significantly more beneficial than a school-based approach alone. ED's Promise Neighborhoods Initiative and HUD's Choice Neighborhoods were motivated by the Harlem Children's Zone and are—conceptually, at least—coordinated with the goal of comprehensive community change.

### Policy Implications

As Choice Neighborhoods and Promise Neighborhoods roll out, it is important to examine how these programs are living up to the ideal of coordinated school-based and neighborhood-based change. Are Choice Neighborhoods sites actually coordinating assisted housing redevelopment with strategies to improve educational outcomes for the youth in the assisted development? Does the disruption associated with relocation and redevelopment affect children's school attendance, performance, and dropout rates? Does the community context change significantly, and if so, does this change support improvements in educational outcomes? The results of this research may demonstrate that Choice Neighborhoods can have a positive effect on educational outcomes, which would be an important finding in support of the program. This research may find that youth in a Choice Neighborhoods development are not affected at all, which might suggest that the program reexamine its focus on education. The research may also find a negative effect of Choice Neighborhoods on educational outcomes, in which case HUD might want to modify the program to reduce or eliminate this negative effect.

### Finance

This research would not require a survey. It would focus on only one site, partly to minimize costs and partly because the complexity of this project will vary significantly from one city to another. The only costs would be for researcher labor and

associated costs. The project would require an estimated 400 hours to negotiate data access and develop the necessary data agreements and privacy protocols, 240 hours to conduct the data matching, 800 hours of data analysis and reporting, and 360 hours in contract administration and management. In sum, the project would require approximately 1,780 labor hours and would cost between \$500,000 and \$1 million.

## Choice Neighborhoods Followup Study

### Research Question

Overarching Question: How should federal policy for mixed-income housing move forward?

- What about other programs such as Choice Neighborhoods?
- To the degree programs have been successful what have been the outcomes for residents?
- Does geographic proximity lead individuals with different income levels to engage in cooperative and pro-social behaviors, or is it necessary for HUD and its partners to deliberately encourage engagement?

### Rationale

Since the development of the HOPE VI program in the 1990s, HUD has sought to transform neighborhoods of concentrated poverty into mixed-income neighborhoods. Policymakers believe that mixed-income communities will be more resilient over time, as middle-income and upper income residents provide both a stable economic base and political support for public investment in the neighborhood. Mixed-income communities may also provide improved quality of life, and expanded economic and educational opportunities for low-income households. Research on HOPE VI and similar efforts pursued by other organizations (such as the New Communities Program, implemented by the Local Initiatives Support Corporation and supported by the MacArthur Foundation) has been mixed. Such investments often improve the quality of the targeted assisted housing, and sometimes improve neighborhood conditions, but have been less successful in creating opportunities for low-income households. The Choice Neighborhoods program is meant to build on the successes of the HOPE VI program by focusing more on broad neighborhood transformation and ensuring that new opportunities are shared with original residents.

### Description

This project would be developed as a Phase 2 analysis of the long-term evaluation of the initial five recipients of Choice

Neighborhoods Implementation Grants. In 2011, HUD awarded a contract to the Urban Institute for phase 1 of this project. Phase 1 involved an evaluation of the implementation process, the development of a household survey, and an assembly of existing secondary data. Phase 2 would include a thorough documentation of the activities funded through the program and the direct results of those activities. It would also include a followup survey of the longitudinal household panel established in 2012 and 2013. This survey would not have a comparison group and would thus not be able to make any causal inferences about the program. The project could be designed to focus on the analysis of matched administrative data, although Phase 1 of the project has not had a significant administrative data component.

### Background

The literature on community development is extensive. Little research, however, has been conducted to date on the new Choice Neighborhoods program. Also, not much rigorous evaluation of community development initiatives has occurred because of the complexity of such programs, endogeneity problems, and limited generalizability.

### Policy Implications

The Choice Neighborhoods Initiative is the centerpiece of HUD's neighborhood revitalization strategy. The initiative builds on the established foundation of the HOPE VI program, while increasing flexibility and seeking to increase the scope of revitalization efforts to support comprehensive community transformation. It is essential that PD&R conduct a comprehensive evaluation Choice Neighborhoods to learn how whether it is achieving its stated goals.

### Finance

Based on earlier studies of similar scope (including the first phase of this project) the project would cost \$2 million or more.

## Comparing Housing Outcomes of Same-Sex and Other Couples

### Research Question

How do housing outcomes for same-sex couples compare with opposite-sex married and unmarried couples with similar socioeconomic characteristics?

### Rationale

The study is highly relevant to HUD policy regarding equal housing opportunity for Lesbian, Gay, Bisexual, and

Transgender (LGBT) households. It would build on previous contract research regarding discrimination in the rental housing market. PD&R has a comparative advantage in conducting the research because of recent research on same-sex discrimination and familiarity with the ACS and its housing measures. The study is timely, because HUD enacted LGBT equal access regulations this year for housing providers that receive HUD funding or have loans insured by the FHA and for lenders insured by the FHA.

### Description

This study would compare housing outcomes of same-sex couples compared with married and unmarried opposite-sex couples. A recent PD&R study found evidence of discrimination against same-sex couples when seeking rental housing (Turner et al., 2013). These findings suggest that same-sex couples may have worse housing outcomes compared with other couples. This study would examine evidence, using data on couples in the ACS.

### Background

HUD contracted a study (Friedman et al., 2013) to examine differences between matched pairs of same-sex and heterosexual couples responding to Craigslist ads for rental housing in metropolitan areas. They found evidence of adverse treatment, with effects varying depending on whether the couple was gay or lesbian, and size of the metropolitan area. A matched-pair study of Vancouver, Canada (Lauster and Easterbrook, 2011) found that same-sex male couples were nearly 25 per cent more likely to be rejected by landlords seeking renters but did not find evidence of discrimination against lesbian couples. Swedish studies have also found disparate treatment of gay couples (Ahmed and Hammarstedt, 2009), but not lesbian couples (Ahmed, Andersson, and Hammarstedt, 2008). U.S. Surveys (Herek, 2009; Kaiser Family Foundation, 2001) have also revealed housing discrimination against U.S. gays and lesbians.

Based on web searches and correspondence with scholars (Gary Gates, Williams Institute; Nathanael Lauster, University of British Columbia), no studies have compared housing outcomes of same-sex and other couples using census or ACS data.

The data would come from the ACS Public Use Microdata Sample for 2006–2010. Housing outcomes studied would include housing cost to income ratios, homeownership rates, crowding, and building age. Building age will be used as a

proxy for housing quality. Although the American Housing Survey would be much more useful to examine housing quality differences, same-sex edits during AHS data collection prevent reliable identification of same-sex couples. HUD currently plans to eliminate these edits with the 2015 redesign of AHS.

The ACS has issues regarding reliability of identification of same-sex couples, as discussed in a working paper by Gary Gates.

Household comparisons would be made using propensity score weighting. Opposite-sex married and unmarried couples would be weighted based on their predicted probability of being a same-sex couple. Probabilities would be predicted by logistic regression with variables such as geographic area (Public Use Microdata Area [PUMA]), household size, income relative to the PUMA median, and age.

### Policy Implications

The Fair Housing Act does not specifically include sexual orientation and gender identity as prohibited bases. Housing providers that receive HUD funding or have loans insured by the FHA, and lenders that participate in FHA programs may be subject to HUD program regulations intended to ensure equal access of LGBT people. This study would provide further evidence on whether additional federal protections are needed to ensure equal housing opportunity for same-sex couples. It would also provide evidence on the effect of state antidiscrimination laws.

### Finance

The project would require no resources other than staff time at approximately one-half FTE per year.

## Development of a Certified Green Homes Database

### Research Question

What is the annual state-by-state trend of certified green homes within the United States? Of all the units in HUD's housing portfolio, which ones are green?

### Rationale

HUD's strategic subgoal 4B<sup>29</sup> focuses on promoting and improving the energy efficiency and sustainability of the nation's homes and neighborhoods. Foreseeable benefits of this approach

<sup>29</sup> Subgoal 4B: Promote energy-efficient buildings and location-efficient communities that are healthy, affordable, and diverse, supporting Goal 4: Build Inclusive and Sustainable Communities Free From Discrimination (HUD, 2010).

include reductions in residential energy consumption and the emission of harmful pollutants. In addition, by developing structures that are aligned with this initiative, occupants will benefit through the lowering of their overall housing costs and be provided with environments that are healthier, resource-efficient, and safer for all.

An approach to support this subgoal is through the recognition of homes that have been certified “green”—structures designed to reduce their overall effect on the built environment and have met and/or exceeded stringent guidelines established by one of the national certifying authorities. A consolidated resource would highlight and document the achievements to date and make the results available to a broad range of stakeholders.

### Description

The objective of this project is to develop a database comprising homes that have been rated and received the certification associated with at least one of the national green rating programs (Leadership in Energy and Environmental Design [LEED], ENERGY STAR, National Green Building Standard [NGBS], or Enterprise Green Communities). Through partnerships with each of the rating programs, certified green housing data (for single-family homes and multifamily units) will be collected and analyzed annually. The American Council for an Energy Efficient Economy, for instance, produces a statewide “green” scorecard; we may learn more about their methodology to discern which green building standards they rely on for their rating. Enterprise Communities track green practices for LIHTC properties through state Qualified Allocation Plans. States like Florida and Massachusetts have been active in this area. Through a potential collaboration with Green Build, HUD may be able to track information on these homes.

### Background

Several green certification programs are currently available to homeowners and property owners who are interested in having a property certified green. Many of these programs are applicable to specific areas and can be certified only on a local, state, or regional level. Only four of the programs certify on a national basis—LEED, ENERGY STAR, NGBS, or Enterprise Green Communities—and each program keeps record of the housing units certified through its respective rating system. To date, no single resource is available that illustrates the number of certified green homes that are built annually, on a national basis, within the United States. A consolidated database will be developed to document this trend and compared against the nation’s housing stock. Each of the four national rating

programs has been contacted in an effort to obtain annual housing data. The gathered data, which will include single-family homes and multifamily housing units, should be able to leverage the Master Data and Information Consolidation multifamily database proposed elsewhere in this Roadmap.

### Policy Implications

HUD will serve as the leader in gathering, analyzing, and disseminating the results. The findings will help support HUD’s goal of promoting and improving the energy efficiency and sustainability of the nation’s homes and neighborhoods. The database’s audience will gain a better understanding of the trends and strides that have been made in the residential green housing arena from a national perspective.

### Finance

No additional costs are associated with this research proposal, but it will require one-half FTE per year. This study will involve a literature review, gathering and analyzing data, and a report of the findings. PD&R staff will perform the literature review; develop, analyze and maintain the database; and report on the findings. Staff will work with the Research Utilization Division’s contractors to package and post the findings on line annually. HUD will serve as the primary authority for disseminating the database nationwide.

## Economic Impacts of HUD Block Grant Programs

### Research Question

How successful are HUD-supported economic development activities?

### Rationale

It is a top priority of the Office of Community Planning and Development to be able to demonstrate the economic impacts of its block grant programs—specifically CDBG and HOME. Evaluating these programs is challenging, and previous efforts have not been able to clearly specify a model of program impact. The CDBG authorizing statute now provides for 28 different eligible activities that can be used for many different purposes and different objectives. Identifying appropriate outcome measures and specifying a model of program impact requires a complete and accurate understanding of what the program is intended to accomplish. Because the objectives of CDBG vary so much from site to site and grantee to grantee, this study would focus on a small number of sites. CDBG would be the primary focus—sites would be selected and models would be

specified based on CDBG activities, such as the State and Small Cities CDBG program—but HOME activities would also be analyzed to the extent that they accompany CDBG. Focusing on specific sites would also enable the research team to collect information about other funds leveraged by the CDBG activity.

### Description

This project would focus on a small number of CPD grantees that have high-quality data and good CDBG and HOME program design. PD&R would consult with CPD staff and grantee staff to select these grantees and identify specific activities. PD&R would then develop a research project to evaluate the effect of those activities. The evaluation could focus on CDBG activities, HOME activities, or both—this would be determined in the evaluation design phase before issuing the RFP. Although the evaluation design would not be representative of the CDBG or HOME program as a whole, it would overcome challenges that typically weaken analysis of block grant programs. For instance, HUD recently completed a study of the Section 108 Loan Guarantee program, which often tracks economic development activities. The Section 108 study could serve as a model for studies that track and monitor loans to businesses and infrastructure development in support of various economic development activities. The State and Small Cities CDBG program is a good candidate for this study.

### Background

The literature on community development is extensive, but rigorous models of the effect of community development activity are scarce. PD&R has funded several studies of CDBG and other similar programs, but these studies have typically relied on either inadequate data, or overly simplistic models, or both. Advances in the past 5 years—in the quality of HUD data, the availability of geographically precise data (such as address-level property sales), and empirical models—make it possible to do more rigorous research.

### Policy Implications

This evaluation serves two goals. First, it may illustrate the potential of the program to justify its existence to Congress at a time when funding for the program is facing significant cuts. Second, the study results may also demonstrate to HUD and its CDBG grantees how certain program designs can generate more cost-effective outcomes.

### Finance

If the basic evaluation design is developed in house by PD&R staff with support from CPD, this project could be completed

with 200 hours of PD&R staff time before procurement. The contract cost is estimated between \$500,000 and \$1 million.

## Expanding Housing Opportunities Through Inclusionary Zoning: Phase II

### Research Question

How effective is inclusionary zoning (IZ) as a strategy for reducing race and income segregation, creating mixed-income communities, and expanding the supply of affordable housing? How well IZ programs have performance to expand affordable-housing options for low- and moderate-income individuals and families? Do IZ programs work to reduce race and income segregation through the creation of mixed-income communities? What are the costs associated with the implementation of these programs? If so, are the costs concentrated or widely dispersed? What are the effects of these costs, if any? Do IZs restrict the supply and increase the cost of market-rate housing in the communities that adopt them?

### Rationale

Although IZ programs have grown in scope and popularity during the past decade, relatively little is known about their overall effects. Recent studies have begun to shed light on these issues but the assessments are neither comprehensive nor definitive. Reliable research into these issues has been hindered due to serious methodological and data limitations. Specific information regarding how IZ programs are sustained over time; on the adoption and administration of these programs; on the differentiation of program provisions and restrictions; the number and type of units required and the target income groups served; cost information; and the duration of affordability is difficult to obtain, thus leading to inaccurate or unreliable results.

This research attempts to address these critical and related these issues. Given the growing attention to the linkage between housing and transportation, the study will also examine the degree to which IZ programs have responded to or support transit-oriented development activities. This project, which will use the case study approach as the primary research vehicle, is intended to advance our understanding and knowledge of IZ programs, by filling in key methodological gaps and addressing critical issues raised from the existing research.

### Description

The study was designed to consist of two phases. Phase I, completed this year, includes the preparation of a critical literature review that identifies gaps in current IZ knowledge; development

of a research design and implementation strategy for conducting the case studies; development of site-selection criteria; and pilot research in two selected sites—Montgomery County, Maryland, and Fairfax County, Virginia. These programs were selected because they operate in the same metropolitan housing market and have been in place for decades. The design and structure of these programs, however, differ significantly and, therefore, offer potential insight into how contrasting approaches may lead to interesting outcomes. The research team collected information and data to evaluate how well IZ strategies provide affordable-housing options for low-income communities over time. To conduct the analysis, the team relied on information gathered from multiple sources, including IZ ordinances and other relevant documents, program data, interviews with key stakeholders, and local housing-market statistics.

A key observation is that although IZ has increased the supply of affordable-housing units in these two sites, IZ requirements must be clear and administered consistently so that developers can effectively predict when it is economically feasible to build inclusionary housing units. The researchers conclude that future inquiry should focus on how IZ programs perform across various economic and political contexts. A large-scale field testing or demonstration of IZ programs is needed to gain greater insight on how these programs preserve affordability overtime.

Phase II will draw on the strategies and protocols tested in the base period to conduct a larger number of case studies. These cases will thoroughly examine a number of factors, which have received little to no research attention to date, that can affect the production of new affordable units and retention of existing units through IZ programs. Results from the rigorously conducted case studies will be of interest to policymakers, practitioners, and the research community.

## Background

Little objective, empirical research has been done to test the validity of the many claims made related to IZ programs. Much of the research that has been conducted has been relatively broad in approach and findings (for example, surveys that have captured important information but not in great depth) or relatively deep (for example, case studies that have examined pre- and post-IZ program implementation but have not thoroughly explored a broader range of factors, conditions, and stakeholders that affect implementation). This study builds on both types of research to expand our understanding of IZ programs—how they work on the ground, their limitations, costs and benefits, and how they might interact with other housing issues and programs—beyond what previous survey or case study efforts have demonstrated.

As of 2005, between 350 and 400 IZ ordinances had been enacted throughout the United States (Tombari, 2005b). Each is designed and administered by a local unit of government. The common objective of these ordinances is the provision of affordable housing: all of them require setting aside a certain percentage of affordable-housing units for low- and moderate-income (and, in a handful of cases, very low-income) households. After some of the first IZ programs had been implemented, however, different IZ advocates, practitioners and planning jurisdictions began to argue for goals that went beyond simply the creation of affordable housing. What follows, therefore, is a discussion of some additional goals and objectives associated with one or another cluster of IZ ordinances that are in effect today. IZ ordinances were often adopted in response to housing crises. As such, one goal of IZ ordinances has been to lessen the effect of housing crises on low- and moderate-income people who are priced out of local housing markets.

Goals can be specific to the type of jurisdiction. Brunick, Goldberg, and Levine (2003) and Brunick (2004) suggested that large cities, in particular, should further aim to build affordable housing to attract and maintain entry-level, and low- and moderate-income workers that are needed in the city—such as teachers, firefighters, policemen, janitors, and childcare workers. Such households might not be able to afford to move to the city otherwise. They also suggest that large cities could use the density bonuses and other cost offsets included in many IZ ordinances to encourage investment in the city, as opposed to the suburbs, thereby supporting the goal of decreasing sprawl. The goal of decreasing sprawl was also cited by Lerman (2006), the CCRH/NPH (2003), and Burchell and Galley (2000), who suggest that by providing affordable housing in areas with high job growth, households will have shorter commutes and will be less likely to seek housing in the outer suburbs. As a consequence, IZ can support efforts to ameliorate the spatial mismatch between available jobs and available affordable housing (Burchell and Galley, 2000; CCRH/NPH, 2003; Wish and Eisdorfer, 1997).

Another goal of some IZ ordinances is to support racial and socioeconomic integration (Boger, 1997; Brunick, Goldberg, and Levine, 2003; Burchell and Galley, 2000; Calavita, Grimes, and Mallach, 1997; Lerman, 2006; Wish and Eisdorfer, 1997). By providing affordable housing in relatively more affluent communities, IZ can offer lower income individuals and households the opportunity to live in communities they might not otherwise be able to afford, thus decreasing racial and socioeconomic segregation. Another important aspect that Brown (2001) argued works in tandem with racial and socioeconomic integration is the placement of units. Brown (2001) suggested that when

affordable units are placed in highly distressed, segregated neighborhoods, this eliminates residents' access to a host of economic and social opportunities.

Conversely, when affordable units are constructed in diverse and thriving communities, this provides residents access to high-quality, full-time jobs; access to social services; and physically attractive, safe, and healthier neighborhoods. As a result, Brown argues that affordable units should be strategically placed to help lessen concentrated poverty or segregation and support the integration of various economic, racial, social and cultural groups. The placement of units within the development itself also can serve this goal. For example, Porter and Davison (2009) found that in Montgomery County, Maryland, and Pasadena, California, inclusionary programs required that affordable units be dispersed throughout the development and appear similar in design to market-rate units. This strategy deters developers from segregating affordable units in one part of the development.

Goals may also be specific to the types of people IZ ordinances aim to help. Burchell and Galley (2000) suggested that inclusionary programs can support integration beyond race and income, by targeting the young, retired and elderly, and single parents. Lerman (2006) also suggested that one goal for IZ should be to preserve housing for long-time residents, who might be priced out of their current neighborhoods. The final goal for IZ could be merely to ward off litigation (Herr, 2002).

The number of affordable-housing units produced through IZ varies widely from one jurisdiction and one program to the next, primarily due to variations in the ages of programs, programmatic characteristics, and contextual characteristics of jurisdictions and time periods.

Montgomery County, Maryland, is well known as a pioneer in the adoption and implementation of an IZ ordinance—known as the Moderately Priced Dwelling Unit program. This program also has produced a significant share of the county's affordable units during the course of three decades. Porter and Davison (2009) found that from 1975 to 2005, Montgomery County produced more than 12,000 affordable-housing units, 8,527 of which were owner-occupied units and 3,520 of which were rental units. By far, Montgomery County has produced a significant share of affordable units for a single jurisdiction. In more recent years, however, Tombari (2005a) and Pendall (2009) found that Montgomery County is experiencing a

significant slowdown in affordable-housing production, largely because of the fewer developable parcels of land available due to the prevailing state of widespread urbanization. As a result, Pendall (2009) suggested that, like New York City, Montgomery County has approached “build-out”—a state in which no more (or very limited) developable land is available.

Another important discussion that literature points to with respect to goal achievement concerns the type of units produced. For example, most of IZ programs' affordable-housing production consists of both rental and ownership units. Newton and Boulder Counties, Colorado, are two of a few instances that regulate only for-sale units. Porter and Davison (2009) found that this is the case in Boulder because of state law that prohibits cities from regulating rents to rental developments. Pleasanton, California, is one example of a jurisdiction that shifted away from the production of owner-occupied housing to a sole focus on rental housing. For the most part, owner-occupied units target moderate-income families, whereas rental units target very low- and low-income households.

Finally, do we know how well IZ programs have worked to reduce race and income segregation, thereby producing more diverse communities? Pendall (2009) argued that because Latinos and African Americans tend to earn 50 to 70 percent of the Area Median Income (AMI), IZ programs oftentimes vary in their restrictions and preferences. For example, in the San Francisco Bay Area, target income populations include very low-, low-, and moderate-income people; whereas, in suburban Boston, target populations are primarily low- and moderate-income people (Schuetz et al., 2008). The targeted level of affordability for IZ programs ranges from very low-income residents to moderate-income residents. Programs that are liberal will require that units be set aside for moderate-income households earning about 80 percent of the AMI, while stricter, more stringent programs will require that units be set aside for very low- and low-income households—those earning very close to 50 percent of the AMI. More research is needed to evaluate how well these strategies work to produce more diverse communities.

### Policy Implications

Although IZ programs are administered at the local levels of government, in the past, funds from HUD's HOME and CDBG supported elements of the program. For example, Fairfax County, Virginia, has in the past operated both the American Dream Downpayment Initiative (ADDI) Program<sup>30</sup> and the

<sup>30</sup> Congress funded the ADDI program for FY 2003 through FY 2008. See [http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/comm\\_planning/affordablehousing/programs/home/addi](http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/programs/home/addi).

Sponsoring Partnerships and Revitalizing Communities (SPARC) Program<sup>31</sup> to subsidize closing costs, down payments, and interest rates for purchases of affordable homes. At present, the program is not supported by CDBG or HOME funds because CDBG and HOME do not have additional funds to allocate toward the ADU program. Learning more about how HUD funding programs may assist local governments in the administration of IZ, especially where positive results are generated, however, could be worthwhile.

### Finance

For an estimated cost up to \$1 million, we would be able to increase the number of case study sites. Having more case studies to analyze would increase the power of cross-site comparisons, leading to stronger findings on factors that support and impede the realization of IZ benefits. Support above the estimated project cost would enable researchers to include a survey component to the case-study based project. A web-based survey could be fielded to a large number of IZ programs to gather data of interest in a more standardized manner. The survey data could then be triangulated with data from interviews and documents collected for the case studies to create even richer findings on the benefits and risks of IZ.

## Food Access, Location Efficiency, and Public Health Outcomes for HUD-Assisted Residents Living in Food Deserts

### Research Question

What are the social, economic, and health effects of “food deserts” on neighborhoods where HUD public and HUD-assisted housing are situated?

### Rationale

No cohesive or systematic analysis is known to explore the relationship between access to healthy, affordable food and health outcomes for residents of public housing, tenant-based Section 8 voucher holders, or HUD-assisted elderly residents.

### Description

This project involves an inquiry into the accessibility of good-quality, affordable food for urban public and assisted housing

residents. To assess the relationship between food access and health outcomes among HUD-assisted households involves several steps. The first step is to review the existing literature and methodology for defining food deserts and their ramifications for low- to moderate-income families. Then, urban metropolitan areas will be selected on the basis of the Centers for Disease Control and Prevention’s recent report on obesity in urban metropolitan areas (Ogden et al., 2010). An ongoing effort to match HUD-assisted households with the National Health Interview Survey (NHIS) potentially could be overlaid with food desert maps from the U.S. Department of Agriculture’s Food Atlas Database. Using Geographic Information Systems and statistical software, the proximity and access of public housing residences to high-quality supermarkets, convenience stores, and other food outlets could be calculated. Emory University’s Nutrition Environment Measurements Survey will support classification of the nutritional content of food in these areas.

### Background

The prevalence of chronic diseases related to obesity and other environmental factors persist, especially among children and adolescence. These health-related outcomes are even more pronounced among children of low-income parents or those living in poverty. For instance, data from National Health and Nutrition Examination Surveys (1976–1980 and 2003–2006) reveal that the prevalence of obesity among children living in poverty has increased: for children age 2 through 5 years, prevalence increased from 5.0 to 12.4 percent; for those age 6 through 11 years, prevalence increased from 6.5 to 17.0 percent; and for those age 12 through 19 years, prevalence increased from 5.0 to 17.6 percent. Obese children and adolescents are at risk for health problems during their youth and as adults. For example, during their youth, obese children and adolescents are more likely to have risk factors associated with cardiovascular disease (such as high blood pressure, high cholesterol, and Type 2 diabetes) than are other children and adolescents.<sup>32</sup>

Millions of low-income Americans live in food deserts—neighborhoods that lack convenient access to affordable and healthy food. Instead of supermarkets or grocery stores, these communities often have an abundance of fast-food restaurants and convenience stores. In addition, stores in low-income communities may stock fewer and lower quality healthy foods.

<sup>31</sup> SPARC is a low-interest mortgage program available to first-time homebuyers using a Virginia Housing Development Authority loan product for their first-trust mortgage. As of July 2010, no SPARC funds were available. Another allocation round of SPARC funds has yet to be determined. See more about program requirements at <http://www.fairfaxcounty.gov/rha/homeownership/sparc.htm>.

<sup>32</sup> CDC, October 20, 2009. Division of Nutrition, Physical Activity and Obesity National Center for Chronic Disease Prevention and Health Promotion.



When available, the cost of fresh foods in low-income areas can be high. Public transportation to supermarkets is often lacking, and long distances separate home and supermarkets in many rural communities and American Indian reservations. It is hard for residents of these areas—even those fully informed and motivated—to follow the necessary and recommended steps to maintain a healthy weight for themselves and their children. Too often, economic incentives strongly favor unhealthy eating, and accessibility, safety concerns, and convenience can also promote unhealthy outcomes.

Limited access to healthy food choices can lead to poor diets and higher levels of obesity and other diet-related diseases. In addition, limited access to affordable food choices can lead to higher levels of food insecurity, increasing the number of low- and moderate-income families without access to enough food to sustain a healthy, active life. A growing, although incomplete, body of research finds an association between food insecurity and obesity, suggesting that hunger and obesity may be two sides of the same coin. Lack of access to nutritional and affordable food may compound this problem. This research seeks to explore the connection between food deserts—or inadequate access to high-quality, affordable food—and health outcomes for HUD public and assisted housing stock.

### Policy Implications

Food access has reemerged as a challenge that is exacerbated by the recent energy and economic crisis, and is becoming a major focus for health researchers and policy experts. Food access is also an important issue for HUD and the housing research community, because it directly affects the life outcomes for HUD public and assisted housing residents. This research will provide an opportunity to build on the existing HUD-U.S. Department of Health & Human Services and HUD-USDA partnership.

### Finance

This study is expected to cost \$500,000 or less based on the size of the sample. It may be possible to obtain financial support from USDA and HHS for this project.

## Housing Search Process of Racial and Ethnic Minorities

### Research Question

How do consumers search for housing, and how does consumer search behavior affect fair housing outreach activities and discrimination outcomes? What preferences do consumers

have about what kinds of neighborhoods they would want to live in, and how does that affect affirmatively furthering fair housing policy goals?

### Rationale

With the Department’s pending proposed Affirmatively Furthering Fair Housing rule, studying how housing search and housing preference affect efforts to build inclusive communities is extremely timely and relevant. Although efforts are under way to encourage grantees to improve access to opportunity, create inclusive communities, and foster true housing choices for all, HUD does not know how households search for housing and what their preferences are when searching for housing. This research will shed light on how housing search and preference affect HUD’s fair housing/AFFH goals and how they promote or deter goals to build inclusive communities.

### Description

This study will explore the variation in housing search strategies (for example, newspaper, Internet, family or friend) by household type and will explore housing preferences (for example, housing and neighborhood characteristics) that affect housing search by different household types. A contractor will conduct a survey of a sample of (assisted) households and analyze housing and neighborhood characteristics by household type.

### Background

AFFH efforts to build inclusive communities may be impeded not only by blatant acts of discrimination and segregation, but by housing search strategies and housing preferences that vary by household type. The study, titled “Does Race Matter for Housing? An Exploratory Study of Search Strategies, Experience, and Locations” (Krysan, 2008), found from a 2004 survey of householders living in three counties in the Detroit metropolitan area that housing search strategies, in general, are similar for White and Black households, although more so for buyers than renters. The study found that Black renters use more informal strategies and networks than White renters. Also, it was found that, although the length of time and number of homes inspected were similar for Black and White homebuyers, Black buyers submit more offers and applications for homes, report more difficulties, and are much more likely to report they were taken advantage of during the search process. The racial characteristics of the communities in which Black and White homebuyers search were also different. White buyers mainly searched in White communities and Black buyers searched in communities with a variety of racial compositions.

The study “Community Undesirability in Black and White: Examining Racial Residential Preferences through Community Perceptions” (Krysan, 2002) relies on perceptions of community undesirability as a measure of racial residential preferences. Data are used from the Multi-City Study of Urban Inequality, which asked large samples of White and Black residents in Atlanta, Boston, Detroit, and Los Angeles to rate the desirability of five to seven local communities. In addition to the closed-ended ratings, this study draws on survey data asking respondents to explain why they find communities undesirable. Overall, Black residents rate most communities as more desirable than do White residents, and Black residents find desirable many of the communities in which they are the minority. White residents rate mixed-race communities as undesirable, in part because of a desire to avoid Black neighbors, but also because of what may be an inflated perception of crime in those communities. Analyses of Black community ratings highlight the importance of racial climate in shaping perceptions of communities and argue against the assertion that racial composition alone is the key factor in Black preferences.

### Policy Implications

This study would provide HUD with information about how different households search for housing, how preferences differ by household type when searching for housing, and how these factors affect fair housing and AFFH efforts to build inclusive neighborhoods.

### Finance

This research is estimated to cost from \$500,000 to \$1 million (Housing Discrimination Survey 2010 task order funding).

## International Comparisons: Partnership Models for Sustainable and Inclusive Communities

### Research Question

Overarching Question: What lessons can we learn from successful sustainable development strategies and models adopted by our international partners?

- How can HUD achieve its stated departmental objective of reducing energy consumption in its public and assisted housing stock during the next 10 years?
- How should federal policy for mixed-income housing move forward?
- What is the role of transit-oriented development in costly, builtup regions? What is the experience with transit-oriented

development in Japan, Hong Kong, and other nations (that is, conduct a research mission to Japan with Japanese government assistance)? What valuable cross-national comparisons could lead to greater insight?

### Rationale

This international research is particularly timely as nations are experimenting with a range of policies and programs to encourage the development of sustainable and inclusive communities that could inform U.S. practices and help bolster our capacity. Although each nation is quite different from the United States, each provides important development context for the United States. Further, as we examine the ability of each nation to implement effective local programs for sustainability and inclusion, we will study if and how these strategies may contribute to cities improving their global competitiveness.

### Description

This proposal will use international comparative analysis to examine the policies, strategies, and partnership systems of three different nations in implementing sustainable and inclusive communities: Brazil, Germany, and Korea. In this study, the Office for International and Philanthropic Innovation will collaborate with each nation on a comprehensive information exchange during the next 2 years about their place-based practices that could inform HUD Goal 4 including energy retrofits in public buildings, transit-oriented development, brownfields adaptation, affordable housing, and green and cultural development zones. This examination will identify the incentives and regulations used at the federal-level and the public and private response at the local level. Finally, this research will identify if and how these programs are stimulating private investment and what types of financial or institutional systems enable success.

The research team involved in this program intends to survey the data and literature already produced by multilateral organizations and partners. Because this research will be conducted nation to nation, however, much will be evaluated through interviews and learning exchanges supported by program data.

### Background

This research is being supported, in part, through an Inter-Agency Agreement with the U.S. Department of State (FY 2013–15), Memoranda of Understanding with the Governments of Brazil and Germany, as well as an anticipated MOU with the Initiative for Responsible Investment at Harvard University.

## Policy Implications

This effort has potential policy implications for HUD place-based strategies and programs including the Office of Sustainable Housing and Communities; Strong Cities, Strong Communities; CDBG; and assisted or public housing programs. In a broader sense, the research will elevate financing, partnership, and investment innovations that could help the Department evolve.

## Finance

This program will be supported by PD&R staff resources in the form of one-half FTE per year, interagency resources from the U.S. Department of State dedicated at about \$100,000, and leveraged investment by philanthropic partners including the Rockefeller Foundation.

## Performance Measurement Tools for Sustainable Communities

### Research Question

What forces cause segregation by race and income to persist? How can HUD promote the development of more inclusive communities? What are the economic impacts of different types of HUD spending? How successful are HUD-supported economic development activities? What is the role of transit-oriented development in costly, builtup regions?

### Rationale

This collaboration will benefit HUD's efforts with the Partnership for Sustainable Communities (PSC). The purpose of this project is to create a Sustainable Communities Indicator Catalog (SCIC) and accompanying guidebook. Together, they will detail a wide range of performance metrics that can be used to evaluate progress toward various sustainable community objectives. The SCIC will be designed with the assumption that it will be available as an online web tool accessible via SustainableCommunities.gov.

### Description

Research hypothesis: If a set of core sustainability indicators framed by a specific and operationalized sustainable development paradigm is crafted primarily from existing sustainable development indicator systems, then it can be easily employed by U.S. cities and regions and used to support the development and refinement of national sustainable development policy.

HUD is embarking on developing ways to help communities balance various goals and determine the most effective and efficient use of their resources in accomplishing them as part

of their efforts with the PSC. Performance measurement is a prerequisite for this process. Numerous projects and initiatives have attempted to provide indicators and guidance for measuring sustainable practices and outcomes, but to date they have not been synthesized in a coherent, accessible way. The purpose of this project is to create a SCIC and accompanying guidebook. Together, they will detail a wide range of performance metrics that can be used to evaluate progress toward various sustainable community objectives. The SCIC will be designed with the assumption that it will be available as an online web tool located on SustainableCommunities.gov. The Penn Institute of Urban Research (IUR) will use its existing research on indicators to determine the full breadth of performance measurements to be included in this catalog. Using the PSC's Livability Principles as the operationalized sustainable development paradigm, the SCIC will be used by localities to identify indicators that can then be used to benchmark and evaluate progress to achieving sustainable development goals. As the indicators in the SCIC will already be in place in other jurisdictions, localities will be able to work with one another to trade practices to effectively use the indicators to measure their progress. The PSC can then evaluate this information to continue the development and refinement of our evolving national sustainable development policy.

### Background

Through the 2010 United Nations Habitat World Urban Forum—which examined ways in which accelerating urbanization will increase demands on housing, infrastructure, and services—HUD undertook a collaborative approach with Penn IUR to analyze sustainable development measures in urban communities worldwide. As a result, Penn IUR and HUD completed a scan and literature review of indicators that evaluate successful sustainable urban development and revitalization strategies (to gather and organize existing information on the attributes of good indicators and on efforts to measure and monitor urban sustainability). The scan resulted in the identification of global best practices, and started the process of developing potential common language and universal benchmarks around sustainability.

### Policy Implications

The metrics included in the catalog will be relevant to several themes: land use planning, transportation planning, affordable housing, and economic development at the local and/or regional scale in a variety of community types—including urban, suburban, and/or rural settings. The accompanying guidebook will serve as a resource on performance measurement for

interested communities. This project will build on several well-documented efforts by HUD to catalog, evaluate, and field test indicators associated with livability and sustainable community planning.

### Finance

The Ford Foundation has funded Penn IUR to conduct the project and create a SCIC and accompanying guidebook. The U.S. Department of Transportation and the Environmental Protection Agency are also actively involved in directing the work. This project has no direct budgetary cost to HUD; however, the project will require one-half FTE to complete.

## PowerSaver Energy Performance Evaluation

### Research Question

Will the introduction of a new alternative home improvement mortgage product focusing on energy efficiency, such as PowerSaver, be beneficial for lenders and homeowners?

### Rationale

The Consolidated Appropriations Act of 2010 provided funds for a HUD initiative to spur innovations and overcome barriers to energy efficiency in America's single-family residential sector. The aim of the initiative is to give incentives to lenders to provide single-family homeowners with low-cost loans to make energy improvements to their homes (for example, installation of insulation; doors and windows; heating, ventilation, and air-conditioning systems; and solar panels). In the program, homeowners are offered up to \$25,000. In response to the congressional appropriation, HUD developed the FHA PowerSaver mortgage pilot. Results from the pilot's energy evaluation will be used to help inform the Department of whether this alternative financing product is feasible for both borrowers and lenders, and can be scaled up on a national level.

### Description

PD&R will perform an energy performance evaluation of the PowerSaver mortgage pilot. The evaluation will consist of obtaining and analyzing participating borrowers' property and utility consumption and cost data. The property and utility data (preretrofit and postretrofit) will be collected through user consent forms and the development of partnerships with the servicing lenders and utility providers. The resultant savings from the installed improvements will be measured against the cost of the improvements costs and projected life-expectancy, and used as evidence to support HUD's success or lack thereof in introducing an alternative financing option focused on residential energy improvements.

### Background

A multitude of residential energy performance studies have been previously conducted to estimate the savings resulting from installed energy improvements. The studies describe the improvements made and methodologies used to estimate the savings. PD&R is aware of the complex and challenging factors that can significantly alter a program's success. Elements such as the "consumer rebound effect," selection bias when choosing a sample size, changes in occupant behavior preretrofit and postretrofit, designation of an appropriate control group, obtaining borrower's utility data, and changes in energy prices across a multitude of energy markets must all be taken into account when rationalizing the study's findings.<sup>33,34,35,36</sup> This evaluation will use the best practices of the industry to help justify the feasibility of this alternative financing product.

### Policy Implications

The results from this evaluation will directly affect HUD's ability to introduce an alternative finance product. If successful, the principles underwriting this pilot program can be expanded to a national level and used in other FHA-sponsored mortgage products.

<sup>33</sup> Greening, Greene, and Difiglio (2000) defined and identified the types of rebound effects that may offset the anticipated savings resulting from increases in energy efficiency. The article provides a summary of previous empirical studies that estimate the rebound effect for various energy services.

<sup>34</sup> Fuller et al. (2010) provided a historic overview of the major initiatives that have been conducted during the past 30 years that targeted residential home energy improvements. The report highlights the best practices and lessons learned from 14 previous programs so that future energy improvement initiatives may be more appropriately designed to achieve their intended goal.

<sup>35</sup> Sorrell, Dimitropoulos, and Sommerville (2009) provided an overview of the methodological approaches that have been taken to estimate rebound effects. The study summarizes the current economic and empirical estimates, and provides an analysis on each study's results and key weaknesses.

<sup>36</sup> Hirst, Goeltz, and Trumble (1989) discussed results from the Hood River Conservation Project, which analyzed the actual electricity use and savings from a utility retrofit program. The study discusses how selecting an appropriate control group, changes in household behavior, and fluctuations in fuel costs can all greatly influence the study's outcome.

## Finance

Under the inhouse project, PD&R staff will perform the necessary literature review, Paperwork Reduction Act submission to the Office of Management and Budget, development of a project database, collection and analysis of borrowers' property and utility consumption and cost data, and will provide a report of the findings. The project will require approximately one-half FTE per year.

## Survey of Fair Housing Knowledge

### Research Question

What is the current level of fair housing awareness and understanding? Are people aware of HUD's nondiscrimination policies regarding gender-based housing sexual orientation?

### Rationale

There is significant value in conducting replications of previous surveys of public knowledge about fair housing law and its enforcement—How Much Do We Know? (Abravanel and Cunningham, 2002) and Do We Know More Now? (Abravanel, 2006)—for four reasons:

1. The relatively low cost of repeating a known format.
2. Its usefulness in evaluating enforcement strategies.
3. Its effectiveness in assessing current education and outreach strategies.
4. The feasibility of the trend analysis that would be possible based on the findings from earlier surveys.

### Description

We will conduct a national survey of current public knowledge of fair housing law and its enforcement but consider targeting for oversampling groups of special interest (for example, rental agents). We could implement the survey as an add-on to a multitopic national poll or as a standalone survey by a contractor.

### Background

This research builds on previous surveys of public knowledge about fair housing law and its enforcement conducted in 2002 and 2006. These studies found that most of the public are *knowledgeable* about most aspects of the Fair Housing Act and between 2001 and 2005, there was a significant increase in overall *public support* of fair housing laws (Abravanel, 2006).

The most significant finding from these studies, however, might be that many alleged victims (80 percent) reported that

they did not take action to pursue their grievance because they presumed doing so would not have been worth it or would not have helped.

### Policy Implications

The policy significance of the findings would be their potential effect on the design and evaluation of HUD enforcement and education programs.

- Learning more about what outreach and educational programs about fair housing laws are more effective could lead to more efficient direction of such efforts and guide Office of Fair Housing and Equal Opportunity funding of such efforts.
- Assessing the factors that inhibit pursuing legitimate grievances could suggest procedural changes that would lead to more effective enforcement activities.
- Learning more about the perspectives of the housing agent might suggest a better combination of outreach, education, and enforcement activities to achieve reduced levels of discriminatory behavior.
- Exploring the attitudes of rental agents in more detail could provide evidence on what might deter discriminatory behavior, over and beyond education and enforcement activities.
- Understanding the factors affecting fair housing complaints could improve fair housing enforcement outcomes by enabling better cases to be initiated.

### Finance

The cost might be substantially more than the cost of the 2006 research (about \$250,000), given the additional topics and populations to be considered. It will require funding between \$500,000 and \$1 million.

## Valuation of Energy Efficiency in Housing: Phase II

### Research Question

What is the appreciated value for energy-certified homes at resale?

### Rationale

Previous analyses of energy efficiency programs conclude that consumers are willing to pay more for their home at closing if they were assured that the energy programs they were buying into generated cost saving benefits in the short run, such as lower monthly utility bills. What we do not know for certain is whether these cost-saving benefits also translate into appreciated values for these homes at resale. This issue will be the focus of the proposed research.

We know that—holding all else constant—homebuyers typically accrue long-term benefits from paying more for energy-efficient homes by reducing the cost of monthly utility bills. What cannot be determined for certain is whether these technologies will generate longer term returns realized by higher sales values for homeowners who place their homes on the market. This study on housing valuation is part of a larger effort by HUD to investigate the effect of new and innovative housing technologies on the value of new and existing homes. We wish to determine:

Whether technological innovation—as defined through higher performance homes rather than specific technologies or homes whose benefits accrue to anyone but the homeowner or resident—will increase the resale values of homes that have adopted them, and

If the role of information and knowledge transfer has any meaningful effect on the valuation of housing technologies.

Consistent with expectations based on economic theory, the empirical studies suggest that energy efficiency improvements in housing are capitalized to some degree. The weaknesses and limitations of the studies reviewed for the Phase I pilot, however, made it impossible to draw reliable conclusions about the magnitude of that capitalization in typical market environments. There is reason to believe much more could be learned with additional research using an improved methodology, drawing on the strengths of work performed to date and the recommendations presented in the Phase I study described in the next paragraph. The importance of the capitalization issue to so many different interest groups underscores the need for continuing work in this area. The results could yield insight into the value of energy improvements in housing and bolster support for a HUD-sponsored energy-efficiency mortgage product.

### Description

Phase I of HUD's 2008 Valuation of Innovation study filled an important gap in research to address energy efficiency in homes and the long-run cost savings of energy improvements. As the initial phase of the study, it established a sound methodology for examining the difference in appreciation rates between energy efficient homes and homes built using standard building methods and features. Researchers compared ENERGY STAR homes with standard construction homes built in the same area and in the same timeframe. The data were analyzed using a repeat sales index to compare appreciation rates between the two groups of homes.

The results of this study, limited to only two metropolitan statistical areas (MSAs), did not find a difference in appreciation rates, but a broader study over a longer time is needed to substantiate or disprove these results.

Phase II would rely on a larger sample, focusing on at least 20 MSAs in different parts of the country with different housing markets and different climates to ensure a robust sample of energy and control homes in each MSA.

In addition to repeat sales index calculations implemented on a larger scale, a qualitative survey, preferably implemented in the same MSAs as the repeat sales index, would help answer important questions about information on energy efficient innovation. Knowing how information on energy efficiency is transferred, if at all, during the process of a home sale may help explain or qualify the results of the more quantitative repeat sales index.

This robust sample, in combination with a survey, should result in a more definite answer, which would give important insight into the value of energy efficiency in homes and provide guidance for efforts to educate homebuyers about energy efficiency.

### Background

A variety of studies have assessed consumer valuation for various kinds of housing technologies. Examples of such projects include an investigation of FHA default rates on Habitat for Humanity homes that incorporated energy-efficient technology and analyzed the rates at which Energy-Efficient Mortgages and Energy Improvement Mortgages are used (PATH, 2001). It should also be noted that past and recommended valuation studies of innovation vary widely in scope—from method surveys of consumer perceptions, motives, and behaviors to hedonic pricing and willingness-to-pay analyses. All the studies of consumer perceptions or returns on technological investments to date, however, have focused only on energy-efficient technologies, so a vast terrain is yet to be explored.

The assumption that consumers undervalue technology, either at the initial purchasing stage or when deciding to remodel an existing home, may explain why valuation intermediaries such as appraisers are reluctant to invest time or resources in becoming versed in new housing innovations. The methods for estimating the amount of value the consumer ascribes to new technologies are often too complex and time consuming to evaluate. Appraisers are not necessarily housing technology experts, and often they are unaware or lack the knowledge of the potential value of new technologies. Inadequate information may, in turn, affect how consumers assess the value of a

home. As an alternative, third-party mortgage providers that have knowledge about new technologies but are uncertain about their potential value may affect *how* they transfer that information to homebuyers.

A better understanding of both homeowners' actual valuations and appraiser capacity are clearly needed. This is what HUD hopes to achieve with the proposed study. In 1998, the American Council for an Energy Efficient Economy convened in Washington, D.C., to deliver its progress report on the ENERGY STAR program, stating that ENERGY STAR had successfully incorporated energy efficient mortgages that provided cost-saving benefits to both consumers and the homebuilding industry (Webber and Brown, 1998). The report also suggested, however, that strategies ought to be implemented to market these programs more effectively if they do generate long-term financial incentives for consumers.

The most common statistical method that these evaluative studies employ is the hedonic price estimation procedure, which, until very recently, was accepted by housing economists as the most reliable way to evaluate energy-efficiency programs. The basic premise of the hedonic pricing method is that the price of a marketed good is related to its characteristics or the services it provides, such as energy-efficiency programs. Therefore, we can determine the value of a particular good (for example, energy efficiency) by the benefits that the good provides, such as reduced utility bills. Housing economists rely on the hedonic pricing method to evaluate environmental amenities that affect the price of residential properties. One shortcoming of these studies, however, as Dacquisto et al. (2001) and others (Acks, 1995) aptly pointed out, is that the hedonic pricing technique often suffers from variable omission bias, unspecified samples, and multicollinearity or misspecification of statistical relationships.

This proposed study of housing valuations hopes to gain a better understanding of how and if innovative strategies affect the housing market in positive ways. It must be stated at the outset that methodological issues exist and must be addressed before carrying out a high-quality housing valuation study. First and foremost, regarding potential sampling, a lack of sufficient standards exists for home performance in other performance categories (with the possible exception of the recent "Fortified Homes" program coordinated by the Institute for Building and Home Safety and the very recent LEED for Homes program of the U.S. Green Building Council).

## Policy Implications

The question of whether and to what extent housing markets capitalize the value of energy efficiency in construction has been addressed in a series of studies published during the past two decades. The answer is important to home builders, who must decide how much energy efficiency to design and build into new houses. It is important to homebuyers and homeowners, whose decisions about how efficient of a home to buy or whether to invest in energy upgrades may be affected by potential effect on resale value. It is important to appraisers, who may need to consider energy efficiency as one determinant of market value. It is also important to policymakers, who are sometimes called on to set criteria for energy efficiency based on costs and benefits to the consumer. The extent of capitalization is especially important for housing, because the service life of improvements may extend well beyond the ownership period of any one household. In those cases the effect on market value can make the difference in the purchaser's eyes between an attractive investment and an unattractive one.

Assessing the depreciated value of ENERGY STAR for Homes (as in Phase I) would again be a desirable target to act as the energy efficient homes sample, but buy-in from the Residential Energy Services Network (RESNET) and ENERGY STAR communities will be vital to do a study of multiple MSAs. The national registry that RESNET is planning to compile of all ENERGY STAR homes will make access to this data easier. The establishment of RESNET's national registry will be vital to gaining buy-in from the rating community around the country. The ability to gain buy-in limited Phase I of the project because individual Home Energy Rating System providers in communities around the country had to agree to provide data. An industry-level agreement would eliminate this issue. Other industry partners that should be included in data discussions include the National Association of REALTORS® (NAR) and Ecobrokers.

## Finance

The purchase of sales data, outreach to industry (RESNET, Ecobrokers, NAR) to collect addresses of energy efficient homes, data cleaning, verification, and analysis, and survey development and administration is estimated to bring total costs into the range of \$500,000 to \$1 million.

## Crosscutting

### Accelerating Post-Disaster Community Recovery

#### Research Question

How can HUD more effectively accelerate community reconstruction and recovery following a disaster? Are there ways for HUD to promote and support preplanning for reconstruction and identification/remediation of extremely risky parcels? Can it be made part of Consolidated Plans? Can a typology of housing solutions provide a roadmap for response/recovery from various disasters? Can HUD develop “programs in a box” consisting of data systems, program rules, virtual plans, MOUs to speed access to federal resources and deployment of solutions? How can HUD more effectively estimate disaster damage to housing, infrastructure, and economies for allocating postdisaster CDBG program funds to affected states and communities? Can the extent of property insurance coverage and claims inform allocations? Is damage to private homes an effective predictor of other community needs?

#### Rationale

Communities attempting recovery from a catastrophic disaster often rely on significant amounts of federal assistance. CDBG typically provides assistance to affected communities and other HUD programs to fund repair and replacement of community assets that are supported through those program areas. Although much of the funding serves to renew and improve the assisted housing stock in the community, funding may also be targeted in areas not typically assisted by HUD. As a result, affected communities may lack the experience and capacity to effectively implement recovery programs. Inadequate local planning and faulty execution predictably lead to lengthy recovery periods that represent a great opportunity cost to affected residents and the larger society.

Because HUD has been engaged with communities well before any disaster and will be providing significant funding in the aftermath, it is reasonable to conduct research to maximize the effectiveness of HUD’s investment in these communities. Improving the execution of HUD disaster assistance and implementing actions to reduce the need for that assistance will provide increased flexibility for HUD and our partner communities, particularly in times of austerity.

#### Description

This research will consist of three interrelated projects.

##### Task 1: Typologies of Disaster Planning and Recovery

For the first project, the contractor will conduct a literature review and consult with experts using focus groups or other methods to document what is known about community resilience and recovery and to identify typologies of disaster planning and housing recovery solutions. The researchers will assess whether certain models have evidence demonstrating they are superior, and then conduct pilot studies to test the effectiveness of planning models. The product will be an integrated report that identifies alternative planning strategies and guidelines and an assessment of how more effective community planning requirements could be integrated into HUD programs.

It is expected that the Federal Emergency Management Agency (FEMA), the designated coordinating agency for community planning and capacity building, will lead this work. HUD’s close collaboration on this work is required, however, because of three aspects of disaster planning: the unique challenges of housing recovery, the effective use of HUD disaster recovery funds (including “programs in a box” as discussed in Task 3), and the potential integration of resilience and recovery issues with Consolidated Planning for Office of Community Planning and Development programs.

##### Task 2: Improving Analytic Methods for Disaster Planning and Recovery

The second project will involve quantitative analysis of data collected from disaster areas, including FEMA and SBA disaster registrant files, private insurance coverage data, and parcel-level data that PD&R is currently planning to compile for areas at elevated risk of disaster. The data will be assessed for their ability to support identification/remediation of high-risk parcels, disaster planning, and targeting of recovery resources. A series of brief reports will be based on the analysis.

##### Task 3: Disaster Recovery Programs in a Box

In the third project, the contractor will draw on the first two projects to inform potential models for HUD “programs in a box” and prepare guidelines for how HUD can implement such approaches.

This research would be coordinated with other federal partners charged with disaster response, including FEMA and the Small Business Administration.



## Background

How communities recover following a disaster has been the subject of several studies. In the assessment of the benefits of the CDBG investments in the Gulf following the hurricanes of 2005, HUD found that insured properties were more likely to rebuild than properties without insurance. Louisiana, for example, has 1.91 million housing units but only 483,000 flood insurance policies. In the flood-prone areas, the coverage is not universal, as the 9,270 housing units in Plaquemines Parish are protected by only 6,009 flood insurance policies. A similar problem with lack of homeowners insurance has been observed in the examination of FEMA disaster registration records. Without access to insurance industry market information, the extent of homeowners insurance cannot be determined.

In an examination of disaster-affected communities, Kates et al. (2006) concluded that recovery times, in general, are quite long, in some cases 20 to 40 years. That estimate has been validated by repeated visits to affected neighborhoods in both Louisiana and Mississippi.

It is clear that communities cannot recover without significant planning. Inefficiency or delays in that planning and execution process is likely to degrade the eventual recovery effort. Because the CDBG disaster assistance may greatly exceed the normal CDBG program funding (the Hurricane Katrina funding for Louisiana was 192 times the state CDBG grant for 2005 and in Mississippi it was 140 times larger), existing grantee plans may be ineffective. Although surges of recovery funding open up numerous opportunities, they also are likely to overwhelm the planning capacity and might result in decisions that might not reflect the true needs of the community. Effective and early planning also will increase the transparency and accountability in the process.

HUD is designated as the coordinating agency for the Housing Recovery Support Function under the National Disaster Recovery Framework (FEMA, 2011), and FEMA has the coordinating role for Community Planning and Capacity Building, including predisaster planning. To effectively support communities in their recovery, HUD must both work within the Framework and be positioned to help communities shape the planning and execution of the response. To help position those communities will require HUD to identify policies and aggressively implement them. The American Planning Association (2005) has published guidance for planning for postdisaster recovery that is likely to be a valuable resource for this work.

## Policy Implications

The results of this research effort are likely to provide an analytical or empirical basis for refining policies or procedures at HUD, within the federal agencies active in disaster response, and between HUD and our grantees. The proposed collaboration with FEMA to understand how disaster planning can better support housing recovery and other HUD responsibilities creates potential for significant improvements in the coordination and alignment of federal policy. Some aspects of the research are likely to provide support for local decisions that will not be required by HUD programs or policies.

## Finance

This project, fully implemented, will cost \$2 million or more. At the upper end, it is likely that the findings would be validated with local community engagement via grants or cooperative agreements.

## Affordable Housing in Rural Communities

### Research Question

What changes are occurring in the role of the “natural [that is, unsubsidized] affordable” housing stock in meeting the need for affordable housing, particularly in rural communities, due to the ownership of many single-family homes by small or aging families? How many people are being displaced by the scarcity of natural affordable stock in these communities?

### Rationale

Some of HUD’s programs, such as the Indian Housing Block Grants (IHBGs), require a specific knowledge of rural housing markets, which usually are rather thin. Federal partners such as the USDA, including the Economic Research Service, would appreciate our partnership in generating knowledge concerning rural development. Examining the issue of how demographic and market trends affect the supply of affordable housing will inform the understanding housing cost burdens in general and worst case housing needs in particular.

### Description

The research would be in depth but primarily descriptive. PD&R regularly produces similar studies at a national scale: the Worst Case Housing Needs Report, which examines the extent of unmet need for decent, affordable rental housing (Steffen et al., 2011). The effect of the housing stock on population movement could be assessed by developing and estimating a simple model of housing prices and population flows in

rural areas using census data. In addressing this question, one would have to distinguish between supply-side displacement and demand-side migration motivated by better opportunities elsewhere. The longitudinal aspects of the American Housing Survey potentially could be enhanced through the 2015 redesign to better capture motivations for moving.

### Background

Although housing is relatively inexpensive in rural areas, residents of those areas, in general, have fewer and lower earning job opportunities. In addition, not as many housing submarkets will be in rural areas as are in urban areas. Thus, if any adverse effects on rural housing markets exist, then one of the incentives to remain in a rural area—affordable housing—weakens substantially.

### Policy Implications

The research would add to our knowledge of community development and the interaction with housing markets. Understanding the hardships that rural residents face may be useful for programs such as the HOME Investment or CDBG.

### Finance

This inhouse project is projected to cost one-fourth FTE of staff time.

## Characteristics of HUD-Assisted Households

### Research Question

What are the detailed characteristics of typical HUD-assisted households, such as employment, work search, educational pursuits, seeking permanent residences, and decisions to move?

### Rationale

One of HUD's primary missions is providing assistance to needy renters. Although many studies and datasets touch on the characteristics of such households, no other product provides a comprehensive, dynamic picture that can integrate its initial states, policy interventions, intervening events, and outcomes. Such a picture would give policymakers a better understanding of the population's needs and the effectiveness of policy initiatives. Tenant outcome data provide a central resource for performance management initiatives such as HUDStat. The proposed research with these data thus aligns closely with broader data infrastructure initiatives such as the Master Data and Information Consolidation database of multifamily housing. In addition to expanding the general knowledge about characteristics of

assisted households, this project includes a key tool for using these enhanced data to their maximum potential by enabling quick-turnaround, policy-focused research, as described in the following paragraphs.

### Description

This project includes two major elements: (1) a systematic compilation of data about the characteristics of assisted households and (2) a research mechanism that can maximize HUD's ability to conduct quick-response analyses of tenant data in response to policy questions.

#### Characteristics of HUD-Assisted Households

This project would proceed in five stages.

1. Develop a prospectus or wish list of information needed about assisted households. This stage may involve holding a symposium, hosting focus group sessions, conducting a survey, or implementing other vehicles to obtain input from all stakeholders.
2. Compile an inventory of existing administrative and survey datasets that cover assisted households. These include—
  - a. Databases that explicitly identify assisted households, either through administrative flagging or self-reporting.
  - b. Databases that include households that are likely to be assisted and might be identified through geocoding or other matching algorithms.
3. Attempt to develop a synthetic dataset by matching records from the datasets identified in stage 2.
4. Analyze the strengths and weaknesses of the synthetic dataset, with special attention given to gaps in our knowledge (comparing the contents of the dataset with the prospectus from stage 1.)
5. Design and implement a periodic survey of assisted households that will fill in the gaps identified in stage 4. This survey may be structured as an independent data collection or a supplement to existing surveys, depending on budgets and the data to be collected.

#### Multidisciplinary Research Team Renewal

Early in FY 2013, PD&R is procuring a 2-year contract for selecting a Multidisciplinary Research Team (MDRT) and coordinating HUD-requested research projects to be addressed by the team. This project would fund two option periods of 12 months, each beginning in FY 2015.

The purpose of the MDRT is to expand PD&R's ability to obtain quick response research of the highest quality that will help (1) develop and validate performance metrics to evaluate HUD programs and their effects; (2) improve HUD policy and program management to more effectively achieve strategic outcomes, such as improved quality of life for residents and more vital, sustainable and inclusive communities; and (3) demonstrate accountable and effective use of public resources to Congress and other stakeholders as required by the Government Performance and Results Act of 1993 or other mechanisms. The MDRT contract provides access to researchers who can conduct important research quickly, including data analyses and reports, across a range of areas relating to housing policy.

As part of the initial MDRT contract, the contractor will solicit applications from researchers and then work with HUD to select a group of researchers who are interested in making themselves available for short-turnaround research during the period of the contract. When HUD requests research on a particular topic, those researchers will then negotiate fixed-price subcontracts for their services.

## Background

PD&R has periodically published a series of “Characteristics of HUD-Assisted Renters and Their Units” reports (1989, 1991, 1993, 2003) based on administrative matches of the AHS (HUD-PD&R, 2008). The oversample of assisted renters in the 2011 AHS provides a new opportunity for improving the usefulness and reliability of those reports, and for assessing outcomes on a longitudinal basis through the repeated visits of AHS to sampled housing units. Likewise, PD&R's recent collaboration with the National Center for Health Statistics to match tenant data with the National Health Interview Survey provides an opportunity for significantly expanded scope of coverage in the area of health conditions and healthcare use—while also highlighting confidentiality-motivated barriers to full data integration. Datasets that may be considered for integration in this project include the Public and Indian Housing Information Center, Tenant Rental Assistance Certification System, AHS, American Community Survey, Survey of Income and Program Participation, Current Population Survey, NHIS, Residential Energy Consumption Survey, and Crime Victimization Survey. MDRT researchers may use these data sources as well. Matched data, such as the NHIS, AHS, Medicare and Medicaid records, or educational outcome data, are subject to different confidentiality restrictions with which the contractor and researchers must comply.

## Policy Implications

The Characteristics of Assisted Households project is intended to establish a solid foundation of knowledge concerning HUD's client population to better understand how housing matters. Many policy proposals founder on the lack of comprehensive measures of the characteristics of assisted renters as they enter programs, the possibly confounding effects of events that occur during program participation, and the myriad of outcomes that policymakers wish to influence. This project takes the approach of leveraging existing data collections and then trying to fill in the gaps that remain.

Specific policy implications of the MDRT research will depend on the nature of the requested research products. In general, obtaining the services of external MDRT experts at modest cost can be expected to address a number of discrete research questions in the Roadmap and priorities in HUD's strategic plan.

## Finance

Most of the stages in this project would be conducted by outside contractors, with close supervision by PD&R personnel. If a periodic data collection is implemented in stage 5, this would require a long-term contract with a survey research firm or an interagency agreement with the Census Bureau. HUD proposes a cost estimate in the range of \$1 to \$2 million.

## Financing for Manufactured Housing

### Research Questions

How do current financial processes affect the use of manufactured housing? How are sales of manufactured homes affected by consumer financial readiness, market alternatives, and the availability of financing? Are chattel loans (compared with conventional real estate loans) an appropriate financing vehicle for manufactured homes? Would FHA increase risk to the insurance fund by offering real property loans for manufactured homes that are not permanently installed?

### Rationale

Manufactured housing historically has provided the largest portion of unsubsidized affordable housing in the United States. During the past 12 years, shipments of new manufactured housing units have decreased significantly and manufacturers have attributed a significant element of the decrease to a variety of factors for which no focused or definitive study has been conducted. HUD has spent more than \$15 million during the past 5 years, approximately 10 FTEs, and has insured loans on manufactured homes without research into the role of

financing options, product alternatives, the role of purchaser preparedness, or regulations, and how these factors affect the sale, purchase, and placement potential of manufactured homes. Through a focused analysis of the factors related to the decrease in construction and sales, HUD can make more informed fiscal and policy decisions regarding its regulatory role in manufactured housing.

### Description

The goal of the project is to expand HUD’s understanding of the changes to the manufactured housing market during the past 10 years, and the role of the multiple factors that have been frequently cited as contributing to the decrease in construction and sales, but cited without analysis and study. The project will particularly emphasize finance-related factors.

The contractor will conduct a literature review to identify housing-related and finance-related factors affecting consumer demand for manufactured housing. Factors are likely to include housing alternatives, prices, incomes, and credit availability. The researchers then will develop an economic model to evaluate the relative importance of various factors in explaining trends in manufactured housing supply and demand, and use the model to assess potential market impacts of changing finance options through federal or private policy changes.

This analysis will help the Department estimate the validity of the primary financially related arguments multiple parties use to explain the decline in demand of manufactured housing, and, from that, develop policy changes to increase the demand for manufactured housing as a nonsubsidized source of privately funded affordable housing.

### Background

Data that researchers use may come from (1) the HUD Manufactured Housing Program, (2) historical data collected by HUD’s Manufactured Housing Program, (3) its contractor, and (4) PD&R’s Manufactured Home Survey conducted by the Census Bureau.

Manufactured housing lacks analysis with independent review, which supports the argument for PD&R analysis. Previous PD&R research shows that for low-income households, manufactured housing is a good lower cost alternative to renting, but is not an appreciating asset unless land is owned in conjunction with the manufactured home (Abt Associates, 2004).

### Policy Implications

Analysis of these issues will provide evidence-based justifications for policy decisions that could increase the availability of

FHA-insured financing or housing counseling, reduce the cost of manufactured homes to purchasers of affordable housing, and provide greater incentive for the production of this key supply of affordable housing. Costs to the consumer would be reduced if financing requirements were changed to permit broader use of longer term (and likely lower interest) mortgages.

### Finance

Not a great deal of research has been conducted in this area, so much of the research and analysis will be original. The nature of the work is broad—including multiple economic factors. Funding of up to \$500,000 over 2 years is proposed for this analysis.

## Foreclosures and Effects on Real Estate Markets

### Research Question

What effect does foreclosure hangover have on neighborhoods, including minority neighborhoods, over time?

### Rationale

Sizeable losses exist from a foreclosure borne by consumers, lenders, property markets, and local governments. A deeper understanding of the dynamics of the housing market when foreclosures are present would help us in refining addressing the remnants of the foreclosure crisis. The negative effect of foreclosures on residential property values and on local public finances may be one of the greatest costs of the current sub-prime lending crisis. A concentration of foreclosures in a neighborhood that lead to long-term vacancies would contribute to urban blight, reduce the desirability of the neighborhood, and thus reduce the amenity value of surrounding residential property. Evaluating to what extent this vicious cycle can be reversed would be an important contribution. Many studies on foreclosure are limited to local data sources and thus the conclusions may not be general enough for national policy.

### Description

The research would entail estimating an empirical model that would describe the interaction of foreclosures, prices and investment in the housing market, and the socioeconomic characteristics of the residents. Questions to be addressed include (1) What effect do foreclosures have on residential housing markets? (2) How do those effects vary by the type of city and over time? (3) What is the interaction of HUD policy with foreclosures on the housing market? Data sources would include RealtyTrac (to be acquired by PD&R) and the ACS. A simultaneous equation model would be estimated at the place

level and metropolitan level to estimate both the causes and consequences of foreclosure on the local economy. A first priority for this research would be to develop a sophisticated model of the interplay between the housing market and foreclosures. Not all of the previous studies control for the economic trends that trigger foreclosures. A second goal would be to allow the effects to vary by characteristics of the city.

### Background

Foreclosures resulting in long-term vacancies have a negative effect on the value of neighboring properties by: reducing the physical appearance of the neighborhood, attracting crime, and depressing the local economy. Numerous empirical studies performed in recent years have found that foreclosures have a negative and statistically significant influence on neighboring property values. In general, researchers report a 1 percent reduction of value for nearby properties. Immergluck and Smith (2006) reported a reduction of 0.9 percent of value for all properties within one-eighth of a mile. Campbell, Giglio, and Pathak (2011) found that a foreclosure at a distance of 0.05 miles (264 feet) lowers the price of a house by about 1 percent. The reduction of approximately 1 percent appears to be robust across other studies as well.

### Policy Implications

Knowing which economic and demographic factors heighten foreclosures and their effects on communities will enable HUD to motivate and refine foreclosure mitigation policies.

### Finance

We would use data that is already available and the research would be in house.

## Formula Studies for Effective and Flexible Targeting

### Research Question

How can HUD target assistance to need more effectively and flexibly as markets change and demographics shift?

### Rationale

A number of HUD's largest programs are administered through formula grants to state and local partners. Formulas generally are established by statute and are not changed frequently. Yet large sums of money are devoted to serving the program purposes, and as conditions evolve across the nation, programs may be targeted less and less effectively over time. The criteria

for eligibility of grantees and program activities may become obsolete. Needs may shift to different areas or populations, so that indicators that once correlated strongly with program need may no longer reflect any purpose with a national benefit. For these reasons, periodic review of formula targeting is a basic aspect of accountability for federal agencies. PD&R has a comparative advantage in addressing formula targeting because of ready access to HUD program offices and administrative data and familiarity with the policy context in which programs operate.

### Description

Three formula studies are proposed for completion by PD&R staff during the Roadmap period.

First, there is an urgent need to study the IHBG formula in preparation for IHBG negotiated rulemaking with the tribes (which are sovereign nations). This study, which will begin in 2013, will use special tabulations of 2010 ACS data to assess tribal needs. The primary objective of this study will be to provide information about housing problems. A secondary purpose, at the discretion of HUD principals, could be to offer options for appropriate formulas.

Second, a study of the low-income housing tax credit formula is sorely needed to better allocate housing production where it is beneficial. Evidence suggests the simplistic per-capita allocation of tax credits to states has the effect of flooding soft markets with subsidized housing while neglecting markets with severe affordable-housing shortages. PD&R will collaborate with the U.S. Department of the Treasury, which administers the LIHTC Program, to define the scope and approach to this study. PD&R's management of the LIHTC data collection offers a comparative advantage for inhouse research. This effort will include an examination of the Qualified Allocation Plans through which state housing finance agencies allocate tax credits to developers. The findings will be summarized in a report about how LIHTC could be better targeted, which should be useful both to Congress and State Housing Finance Agencies.

Third, a study of how to improve targeting of HOME block grant funds is needed. Recent controversy centering on delayed completion of subsidized housing developments suggests the potential for achieving improvements in program results. Further, a significant proposed regulation for the HOME program was proposed in the *Federal Register* on December 16, 2011, to make changes designed to enhance performance and accountability. Study of HOME targeting later during the Roadmap period would offer a chance to assess the effect of regulatory changes.

## Background

The National Research Council’s Panel on Formula Allocations (NRC, 2003) recommended that policymakers periodically review formula allocation programs to assess whether they are performing as intended. For the CDBG formula, five major assessments of the formula have occurred since 1974. For example, “CDBG Formula Targeting to Community Development Need” (Richardson, 2005) answered this call and assessed how well the CDBG formula allocates funds toward the community development needs identified in the Housing and Community Development Act of 1974.

The LIHTC formula for allocating has come under significant criticism by fair-housing advocates and is generally blamed for diverting affordable housing to high-poverty areas (McClure, 2010). Criticism of the HOME and IHBG formulae for determining need has not been as great as for the LIHTC. Nonetheless, an evaluation similar to the one done by Richardson (2005) for CDBG would provide valuable insights into how well our formulas target assistance to areas in need.

An updated formula study for CDBGs is currently nearing completion.

## Policy Implications

Formula studies have direct policy implications affecting the extent to which statutory purposes of federal programs are fulfilled. As the federal fiscal situation grows increasingly tight, offering Congress concrete suggestions for better targeting of federal housing resources under the three programs covered by this proposal could have significant effects on affordable housing by the end of the decade.

## Finance

The inhouse research is not anticipated to require any funds. Staff time is estimated at approximately one-fourth FTE year for each study.

## Identifying Operating Cost Savings From Multifamily Tenant Services

### Research Question

Which services provided to tenants help reduce the operating costs of assisted multifamily housing? What methods can be used to determine the effect of tenant service programs on building operating costs?

## Rationale

The continuing increases in cost of providing housing assistance during a period of rapidly increasing federal deficits makes cost reduction a top priority. It is especially desirable to identify opportunities to reduce program costs while benefiting rather than harming tenants. For example, housing providers who offer counseling or support services to tenants who are heading for eviction could benefit the tenants while also saving providers from the cost of releasing and the physical wear and tear units experience in an eviction.

## Description

Roadmap stakeholder outreach identified an interest among providers of HUD-assisted affordable housing in research on the proposition that using operating funds for tenant services could reduce operating costs.

Although the logic of this proposal is clear to its advocates and suggestive research on specific programs has occurred, the research base is lacking for HUD to answer the following questions about this proposed reform:

1. What types of services could be expected to provide operating cost savings?
2. What property, provider, and service factors appear to determine the extent of the cost savings?
3. Are the cost savings observed in specific contexts generalizable or otherwise replicable across housing providers and properties?

Answering all three questions will be important to assess whether allowing operating funds to pay for specific services is likely to reduce operating costs in specific HUD project-based programs. The first question can be addressed through a literature review, scan of the industry and additional policy analysis based on these sources. The second two questions will most likely require a demonstration or policy experiment to be designed and conducted.

In the initial phase described here, a contractor will—

1. Conduct a scan and develop a typology of what tenant services exist in assisted multifamily housing, and which are believed to reduce operating costs.
2. Determine the channels through which these services are expected to reduce operating costs.
3. Assess whether the existing evidence suggests that providing flexibility in operating subsidies would be sufficient to motivate housing providers to offer services in a way that reduces costs and evaluates the strength of this evidence.

The scan and typology could involve a focus group or survey of selected housing providers. An outcome evaluation would be designed to measure the effects of the most promising services. The type of hypothesis that the evaluation would attempt to prove would be “Providing service X increases tenant stability” and “Increasing tenant stability reduces costs of operating a housing development.”

### Background

The idea that improving tenants’ education or assisting them in other ways can reduce costs and increase revenues for property owners is not particularly new. Properties have often provided services and amenities such as afterschool care, adult education, or counseling with both self-serving and altruistic aims. Keeping youth occupied in nondestructive ways and tenants employed should be good for a property’s bottom line. What makes this of particular interest to HUD is the request to have these benefits recognized and the cost of the services paid for with operating subsidies such as project-based Section 8.

Some initial research suggests these services do provide net benefits, most prominently a series of research projects conducted by affordable-housing providers such as Enterprise Community Partners, NeighborWorks, and the Pennsylvania Housing Finance Authority.

This research is in its infancy and requires a review and an expansion.

### Policy Implications

Identifying cost savings from tenant services would satisfy the dual purposes of reducing budget pressures while serving the goal of using housing as a platform for better quality of life. The policy implications are likely to depend on demonstrated outcomes and cost savings of tenant services, and on the feasibility of creating sufficient incentives through regulatory flexibility alone for housing providers to adopt and effectively implement the services that appear to have the greatest chance of success.

### Finance

The outcome evaluation component could become expensive, especially if a randomized design is needed. Given the interest of the provider community, however, \$2 to \$4 million spread over 4 years might be needed to complete this research. Affordable-housing providers are potential research and financial partners.

## Improving Usefulness of PD&R Market Analysis Products

### Research Question

How can PD&R market studies be of greater use to the public and private sectors to inform and shape state and local policy and market decisions? Can *U.S. Housing Market Conditions* be restructured to appeal to a wider audience?

### Rationale

PD&R invests a significant amount of resources in its field economist staff to produce market study reports (Comprehensive Housing Market Analyses and Market at a Glance) and the *U.S. Housing Market Conditions* report (Housing Market Profiles and Regional Narratives). These reports help the field economists provide critical economic and market analysis intelligence to Headquarters, regional, and field leadership in a timely manner and expedite the review process of applications for FHA multi-family mortgage insurance. It is important to have a better understanding of how the public and private sectors use these reports and if PD&R could or should make changes to enhance the usefulness of these reports for existing, and potentially new, users.

PD&R’s market study products are used by HUD, local governments, developers, lenders and bankers, realtors, apartment managers, academics, and others to help make supply decisions and shape local housing policy. In addition, the studies have been used to gauge the impact of disasters on local housing markets and monitor how those markets are recovering. The Research and Utilization Division keeps track of the number of downloads of these market studies, which are significant. PD&R wants to determine if the reports should be changed to better meet the needs of the audience. For example, what other types of data would readers like to see included in the reports that HUD might be able to provide? What particular market segment would readers like to see included in the reports (for example, seniors, low-income)? What other issues that are currently not in the reports should be covered?

### Description

PD&R would use a private contractor to help develop and conduct a survey of HUD clients to get feedback on the usefulness of PD&R’s market study products and suggestions on ways in which they might be improved. The contractor will compile the survey results and prepare a report that summarizes the current uses of the studies and suggestions for possible improvements to the reports. The contractor will work with PD&R staff to help develop pertinent survey questions. Having a private

contractor conduct the survey and analyze the results would help ensure the independent quality of the survey results. Both internal and external clients should be surveyed. Internal clients would consist of HUD staff around the country in various offices such as Multifamily Housing, CPD, public housing, and the Office of Fair Housing and Equal Opportunity. External clients would likely consist of local and state government officials (planning departments, permit offices, economic development offices), realtors, lenders and bankers, universities, developers, apartment managers, military offices, and labor market analysts. The report delivered by the contractor would be considered as the final deliverable.

### Background

The function of housing market analysis predates HUD. The FHA housing market analysts initially carried out the role; now PD&R's field economists perform the function. The guidelines for PD&R's market studies were developed using the FHA Techniques for Housing Market Analysis text as a foundation and have been further refined over time. The techniques and reports are constantly being updated and revised to keep up with changes in the markets and changes in technology to try and deliver the best possible product. The techniques used are consistent among the field economists throughout the country and extensive training is provided to all new field economists when they are first hired. All published reports are peer reviewed and receive final review and approval from headquarters to maintain consistency. In addition, HUD's Economic Market Analysis Division (EMAD) conducts regular trainings throughout the year to update staff on any changes and refresh the analysts on the methodology. EMAD's techniques are in line with other third party market studies. The FHA method of analysis is truly a standard for the industry. EMAD has presented and discussed these techniques with such outside groups as the National Council of Housing Market Analysts and other third party analysts and we have commented on their methodology as well.

PD&R's housing studies are used throughout HUD and are made available to both the public and private sectors through the [huduser.org](http://huduser.org). Within HUD, the Office of Multifamily Housing is the primary consumer of the field economists' reports

because a market review is conducted for every application received by HUD for FHA mortgage insurance. Market study areas are selected for comprehensive reports and housing market profiles in anticipation of new FHA multifamily applications where market conditions appear to be changing for new construction activity. This also helps HUD to achieve its goal of providing affordable housing while also protecting the FHA mortgage insurance fund by helping the decision makers to steer funds to those projects with the highest likelihood for success by assessing the need for the proposed units (increased efficiency). Outside of HUD, the market studies help guide local decisions to achieve or maintain healthy balanced housing market conditions.

PD&R periodically assesses the usefulness of research products for users based on HUD USER clients.<sup>38</sup> This research will complement PD&R's ongoing efforts to seek more relevant and timely market data, and will be used to inform the focused evaluation of market analysis products produced by field economist.

### Policy Implications

Timely evaluation of PD&R research products, including market analysis products, is central to the organization's alignment with the departmental strategic goal 5, "Transform the way HUD does business." The strategic plan describes the goal as "responding to the need for increased transparency and improved service delivery." This structured assessment of the utility of PD&R's market analysis products and how their usefulness could be extended to new customers has potential to have transformative effects for HUD and its stakeholders.

### Finance

To finance a private contractor to conduct a survey of clients throughout the United States would likely require an investment of \$1 to \$2 million. In addition, PD&R staff would need to take time to work with the contractor to help develop appropriate survey questions. To maintain the independence of the study, the contractor should probably be assigned a GTR from the Research and Utilization Division. This would represent a new contract for someone to monitor.

<sup>38</sup> PD&R. 2011. "Assessing the Usefulness of PD&R Research Products." [www.huduser.org/portal/elist/2011-Feb16.html](http://www.huduser.org/portal/elist/2011-Feb16.html).



## Data Infrastructure Priorities

### The Importance of HUD's Data Infrastructure

Without good data, good research is impossible; and without good research, it is difficult to draw conclusions about the effect on public policy. Research requires access to reliable data that are relevant to the motivating questions. The projects proposed in this Roadmap require an investment in good data. Further, a single piece of data collected for one purpose can help answer a myriad of questions from inside and outside the agency.

A central Roadmap strategy is to increase the range of questions to which HUD's data can be applied to maximize the investment in data collection. This strategy was strongly supported by HUD's stakeholders during Roadmap consultations. Parallel investments by HUD in how we collect and manage data will enhance the flexibility we have to apply HUD's data to many questions. Targeted modifications and expansions in the data we collect will help HUD address a changing and growing set of research questions. Pursuing these responsibilities carefully and systematically will multiply the value of the public investment in data and increase the utility of the national data infrastructure that helps us understand our housing markets and communities.

### Maintaining, Building, and Improving HUD's Housing Research Data Infrastructure

HUD generates significant quantities of data from programs and operations and through surveys. In pursuing HUD's comparative advantage, many of the projects in the Roadmap explicitly or implicitly rely on data resources unique to HUD, namely—

- The data associated with the administration of HUD programs.
- The data on American households, housing units, and owners gathered by the AHS, Rental Housing Finance Survey (RHFS), and other similar surveys of the wider housing market funded by HUD.

In addition to requiring access to reliable data from these two sources on an individual basis, a number of the projects in the Roadmap propose to match HUD data across programs and surveys and with external sources of data such as health data from the U.S. Department of Health & Human Services or data on tenants and properties in the LIHTC Program collected by HUD from housing finance agencies.

Linking diverse data sources not only will provide new perspectives and answer questions beyond the scope of what can be learned from these sources on their own, but will do so more cost effectively than relying entirely on special purpose data gathered for individual research projects. Even when special purpose surveys are required, mining data that are already collected can improve targeting, reduce duplication in collection effort, and diminish the private burden of responding to HUD data requests.

This foundation of interrelated data, which undergirds so many of the proposed projects in this report and HUD's day-to-day tracking and monitoring, is referred to here as HUD's Housing Research Data Infrastructure (HRDI). The HRDI is nested within the larger domain of HUD's departmental data infrastructure and the wider national housing data infrastructure, which includes housing finance and other housing data collected by other agencies, such as the Census Bureau, the Federal Reserve Board, and USDA. In addition to detailing projects that can use this infrastructure, the Roadmap provides an overarching set of six proposals to improve the HRDI and the confidence that HUD and external researchers can have in its data.

These six projects are truly foundational, supporting and enhancing projects across all five HUD strategic goals. The core nature of these projects is the primary reason for raising them for separate consideration under the heading of data infrastructure, but they also represent top priorities in their own right. These data and the public's access to them were repeatedly cited in our listening sessions with stakeholders inside and outside government as the most important public service that PD&R provides.

Six data infrastructure projects are highlighted by the Roadmap process.

1. American Community Survey Data Matching.
2. American Housing Survey 2015 Redesign.
3. HUD-HHS Data Matching.
4. Master Data and Information Consolidation System.
5. Toward a Comprehensive Rental Housing Finance Survey.
6. Utility Cost Data System.

Two projects (4 and 6) address improvements to HUD administrative data. Projects 2 and 5 modify and update HUD surveys to enhance our understanding of the broader housing market and the role of HUD-assisted landlords and households. Projects 1 and 3 are foundational data-matching projects. By completing and routinizing a match to HHS and ACS data, we will be able to answer a wide range of research and policy questions and track our progress in a more comprehensive way. Each project is discussed in some detail in the following paragraphs with reference to the specific research projects in the Roadmap that will rely or benefit from the results of these projects. In some cases, the completion of the data infrastructure project will not coincide with the schedule of the research project. In these cases, the research project serves as an example of the types of projects the data infrastructure will serve in the future.

### American Community Survey Data Matching

Examples of Research Projects Facilitated

- Crosscutting: Accelerating Post Disaster Community Recovery.
- Crosscutting: Characteristics of HUD-assisted Households.
- Crosscutting: Formula Studies for Effective and Flexible Targeting.
- Goal 1: Impact of Real Estate Owned Properties on Neighborhoods.
- Goal 2: Improving HUD Measures of Housing Cost Inflation.
- Goal 2: Impact of Foreclosure on HUD Programs and the Rental Market.
- Goal 2: Moving to Work Demonstration.
- Goal 2: Assessing Economies of Scale in PHA Operations.
- Goal 2: Examining Small PHA Performance.
- Goal 3: Demand and Supply of Supportive Housing for the Elderly.
- Goal 3: Mixed-income Communities and Public Safety.
- Goal 4: Choice Neighborhoods and Education Outcomes.
- Goal 4: Choice Neighborhoods Followup Study.
- Goal 4: Expanding Housing Opportunities through Inclusionary Zoning.
- Goal 4: Housing Search Process of Racial and Ethnic Minorities.

### Rationale

The Secretary of HUD, the Director of the Census Bureau, and the Director of the Office of Management and Budget all have spoken at length about the importance of data and making full use of administrative data for research and policy decisions. The ACS is the most extensive and comprehensive nationwide survey of household characteristics. If matched to HUD tenant data, the ACS estimates of housing cost burden, rent, income, and housing conditions would take on significantly more value as a measure, not just of housing need, but of *unmet* housing need. Furthermore, the ACS measures many outcomes and could be used to evaluate how conditions change over time for HUD-assisted households.

### Description

PD&R staff would work with the Census Bureau to match HUD-assisted households with households that responded to the ACS, and would then use this matched data to generate more accurate summaries of unmet housing needs for geographies down to counties and cities (perhaps even neighborhoods).

### Background

HUD and the Census Bureau already have several agreements in place related to this work. The Census Bureau produces special tabulations of ACS data for PD&R to support the production of income limits, FMRs, median family incomes, and housing affordability data to support the Consolidated Plan. The Census Bureau has also already matched HUD tenant data to AHS responses to validate responses on income and rent. Building on this effort, Census Bureau staff experimented with matching HUD tenant data to the ACS and had some success. Further work needs to be done, however, to complete the match and use it to produce information that can be approved by the Census Disclosure Review Board.

### Policy Implications

This data would make it possible to replicate some of the analysis in PD&R's Worst Case Housing Needs report at much smaller levels of geography, because the ACS has a much larger sample than the AHS. It would significantly increase the value of the CHAS data for Consolidated Planning. On the other hand, the Privacy Act, and the additional privacy restrictions imposed on Census Bureau data, would present a significant challenge to the successful completion of the project.

## Finance

This project could rely primarily on PD&R staff (approximately 600 hours per year), but would be most effectively accomplished through an interagency agreement with the Census Bureau that would not exceed \$500,000.

## American Housing Survey 2015 Redesign

### Examples of Research Projects Facilitated

- Crosscutting: Accelerating Post Disaster Community Recovery.
- Crosscutting: Affordable Housing in Rural Communities.
- Crosscutting: Characteristics of HUD-assisted Households.
- Crosscutting: Formula Studies for Effective and Flexible Targeting.
- Goal 1: Reverse Mortgage Study.
- Goal 1: What Do We Know About Vacancy? Review of Housing Inventory and Vacancy Statistics.
- Goal 2: Improving HUD Measures of Housing Cost Inflation.
- Goal 2: Housing Voucher Location Patterns: Implications for Participant and Neighborhood Welfare Revisited.
- Goal 2: Impact of Foreclosure on Renters, the Rental Market and HUD Programs.
- Goal 2: Assessment of Landlord Behavior in the Housing Choice Voucher Program.
- Goal 2: Assessing Housing Quality in the Housing Choice Voucher Program.
- Goal 3: Evaluation of the Section 811 Project Rental Assistance Demonstration.
- Goal 4: Housing Search Process of Racial and Ethnic Minorities.
- Goal 4: Advancing Utility Allowance Modeling for HUD Housing Programs.

### Rationale

The Census Bureau, for the first time since 1985, will be drawing a new sample for the 2015 AHS. Although the basic sample design has already been determined, many questions remain concerning how the survey can be redesigned to meet the data needs of the 21st century. Four areas need to be investigated: Sample design, Core question types and instrument design,

Rotating topical modules, and Survey output and outreach. The AHS is the prime source of information about the housing stock. It is the only survey that attempts directly to measure losses to the housing stock. PD&R (including its predecessor offices) has administered the AHS since its inception, and the survey accounts for the bulk of PD&R's research funding. AHS output provides a rich repository of housing data ready and waiting to be tapped for any future policy development need. The occasion of this redesign is the perfect time to consider how we want the survey to function in the future.

### Description

This research will be conducted as a series of small, self-contained efforts. Much of it will involve analytical pieces written by HUD or Census Bureau staff. Some well-defined projects, such as the enhanced bibliography, may be contracted out to specialist consulting firms. The outreach portion will consist of listening sessions and similar conversations between HUD staff and AHS stakeholders. Central to this effort will be a planning conference held in the spring of 2013 and research conferences highlighting research using the AHS.

### Sample design

- What is the appropriate level of statistical precision for national and metropolitan area estimates and what does this mean for sample sizes?
- What is HUD's need for metropolitan data? How many metropolitan areas should be sampled in total? Which specific areas should be selected? How often should they be rotated?

### Core question types and instrument design

- What data collection modes should be used, given the secular decrease in response rates in both face-to-face and telephone surveys?
- How should questions be formulated if we anticipate multi-mode data collection? Do AHS instrument items reflect the current state of knowledge about survey design?
- What data should be collected in the core modules of the instrument, given that many housing characteristics change very slowly?
- What AHS content overlaps other government surveys, such as the ACS and RECS? Is it necessary to collect these items in the AHS?

### Rotating topical modules

- What topics should be considered for rotating modules, if any?
- How can the rotating topical modules and rotating metropolitan samples be synchronized? Is it necessary to collect these data for all metropolitan areas?
- Do special topics require longitudinal data?

### Survey output and outreach

- In what forms should the survey output be distributed?
- Who is using the AHS, and for what purposes? (Envisioned as an enhanced bibliography.)
- How has the use of AHS data changed over time?
- Which AHS products are most useful to the research community and which to nonresearch stakeholders?
- What are the most useful geographic identifiers to include on the public use file, and how do they complicate preserving confidentiality?

Although much of the work of the AHS design is currently funded and will be completed in FY 2013, the actual work of the redesign and the analysis of the 2015 survey will continue into FY 2014 and beyond. For example, HUD plans a series of analytical contract research projects to be conducted based on the new survey design and implementation:

- **The Influence of Sample Size on the Statistical Precision in National and Metropolitan Estimates.** What is the appropriate level of statistical precision for national and metropolitan area estimates and what does this mean for sample sizes?
- **Future Strategies for Selecting Metropolitan Area Oversamples in the 2015 AHS and Beyond.** What is HUD's need for metropolitan data? How many metropolitan areas should be sampled in total? Which specific areas should be selected? How often should they be rotated?
- **Best Methods for Collecting Utility Cost Data: Evidence From ACS, AHS, and RECS.** Which surveys collect utility data? Do they produce similar estimates? Which survey does it best? Is the AHS an appropriate instrument for collecting utility data?
- **What Is the Overlap Between the AHS and Other Government Surveys?** What AHS content overlaps other government surveys, such as the ACS? What unique data do

the AHS provide that are not collected with other surveys? What is the value added of asking questions in the AHS when they overlap with other surveys? What data should be collected in the core modules of the instrument, given that many housing characteristics change very slowly?

- **What Does Current Research in Question Design and Survey Data Collection Tell Us About the Future of the AHS?** What data collection modes should be used, given the secular decrease in response rates in both face-to-face and telephone surveys? Are current AHS question formats appropriate to telephone surveys? How should questions be formulated if we anticipate multimode data collection? Do AHS instrument items reflect the current state of knowledge about survey design?
- **What Are Best Practices for Distributing Survey Results?** What forms of survey output are most useful to users? What are some of the best practices for survey output that government and nongovernment entities have adopted? Does the AHS do a good job of providing survey output? Which AHS products are most useful to the research community and which to nonresearch stakeholders?

### Background

The AHS is a longitudinal survey that visits the same households every 2 years. Although units can be added and removed from the sample to address the changing universe of U.S. housing for some time, every couple of decades it is advisable to draw a completely new sample and redesign the survey. After two decades with the current sample, HUD is now engaged in this redesign process, drawing in part on several studies of AHS functioning conducted over the years:

- *Disability Variables in the American Housing Survey*, available at <http://www.huduser.org/portal/publications/ahsrep/AHSDisability.html>.
- *Combining the American Housing Survey and the American Community Survey to Produce Information Useful in Public Emergency Situations: An Exploratory Analysis*, available at [http://www.huduser.org/portal/publications/ahsrep/ahs\\_acs\\_pub\\_emergency.html](http://www.huduser.org/portal/publications/ahsrep/ahs_acs_pub_emergency.html).
- *2007 Metropolitan Disaster Planning*, available at [http://www.huduser.org/portal/publications/ahsrep/2007\\_metropolitan.html](http://www.huduser.org/portal/publications/ahsrep/2007_metropolitan.html).
- *Analysis of Housing Finance Issues Using the American Housing Survey*, available at <http://www.huduser.org/portal/Publications/ahsrep/AhsAnalysis.html>.

- *Streamlining the American Housing Survey*, available at [http://www.huduser.org/portal/datasets/ahs/Streamlining\\_AHS.pdf](http://www.huduser.org/portal/datasets/ahs/Streamlining_AHS.pdf).
- *Evaluation of the 2005 Changes in the AHS Income Questionnaire*, available at [http://www.huduser.org/portal/datasets/ahs/Eval\\_05\\_AHS\\_1.pdf](http://www.huduser.org/portal/datasets/ahs/Eval_05_AHS_1.pdf).
- *Comparison of Housing Information from the American Housing Survey and the American Community Survey*, available at [http://www.huduser.org/portal/publications/pdf/comparison\\_hsg.pdf](http://www.huduser.org/portal/publications/pdf/comparison_hsg.pdf).
- *The American Housing Survey and Non-Traditional Mortgage Products*, available at [http://www.huduser.org/portal/publications/pdf/mortgage\\_prod.pdf](http://www.huduser.org/portal/publications/pdf/mortgage_prod.pdf).
- *American Housing Survey Metropolitan Bibliographies*, available at <http://www.huduser.org/portal/datasets/ahs/metsurvey.doc>.
- *Documentation of Changes in the 1997 American Housing Survey*, available at <http://www.huduser.org/portal/datasets/ahs/docchg1997.pdf>.
- *American Housing Survey—Metropolitan Sample Assessment Project*, available at <http://www.huduser.org/publications/affhsg/ahs.html>.
- *The American Housing Survey 2015 Redesign: Impact and Analysis*, available at <http://www.huduser.org/datasets/ahs/AHSRedesignWhitepaper.pdf>.

### Policy Implications

The AHS is the backbone of knowledge about the American housing stock. Any number of future policy initiatives, many as yet unimagined, will begin with preliminary analysis of then-current AHS data. We must ensure that we have good-quality data that address those future questions. The 2015 redesign is an opportunity to introduce data structures in the survey that will affect its capabilities until the next major redesign, which will not occur for at least another decade and possibly much longer. We will have to live with the fundamental decisions we make concerning sample design, geography, module rotation, metropolitan samples, oversamples, and survey modes. If we are to provide future policymakers with the analysis they need, we have to make the correct choices now.

### Finance

Most of the research will be financed through the AHS budget or in the form of HUD employee time. Given the lead time before going into the field, this research will have to be conducted in FY 2013. A generous estimate is about two-thirds FTE out of

the Housing and Demographic Analysis staff time to be devoted to redesign issues. In addition, \$100,000 should be set aside for contractor-based studies, which will need to use FY 2013 funds to enable timely completion.

### HUD-HHS Data Matching

#### Examples of Research Projects Facilitated

- Crosscutting: Accelerating Post-Disaster Community Recovery.
- Crosscutting: Characteristics of HUD-Assisted Households.
- Crosscutting: Formula Studies for Effective and Flexible Targeting.
- Goal 3: Demand and Supply of Supportive Housing for Elderly Households.
- Goal 3: Ensuring Successful Transitions: Housing and Services for Youth Aging Out of Foster Care.
- Goal 3: Early Child Development and School Readiness Services to HUD-Assisted Families.
- Goal 3: State Olmstead Plans and Assessment of Demand: Available Resources and Needs

#### Rationale

Understanding the contribution of stable housing to positive outcomes in nonhousing domains is challenging and often requires costly primary data collection. Numerous research questions remain, however, regarding the intersection of housing (where housing might mean receipt of housing assistance, type of housing, housing location, etc.) and individual or household outcomes related to nonhousing domains that could be answered by matching already existing administrative data. HUD is currently engaged in a number of projects that link administrative data on HUD tenants to health information collected by HHS. These nascent efforts to match administrative data across federal agencies are advancing HUD's understanding of the both the power of, and challenges to, linking administrative data. Moreover, as housing is increasingly seen as a platform for maintaining health and delivering health services, HUD expects to produce regular reports that serve a housing and health audience.

#### Description

Two projects are currently under way:

1. A HUD-HHS match involving the Centers for Disease Control and Prevention and the National Center for Health

Statistics involves linking the National Health Indicators survey data with HUD administrative data, based on address as a key.

2. A HUD-HHS match involving the Office of the Assistant Secretary for Planning and Evaluation and an outside contract involving the linking of Centers for Medicare and Medicaid Services administrative data with the HUD administrative data using the Social Security number as a key.

It is expected that these matched datasets will provide multiple opportunities for research but also additional areas for cooperation as they test the feasibility of matching health and housing data. HUD anticipates applying additional resources during the next few years to continue the administrative data matches already under way *and* launch new research projects and demonstrations that will be strengthened through the analysis of existing administrative data.

The first phase of the project proposed here would support the development of a primer that would inventory and describe existing data systems currently owned by HUD and HHS. Administrative data systems contain a wealth of information about the assistance or service funded by the agency and about the recipient of the assistance or service. Although many questions *could* be answered by matching administrative data, only a small fraction of what is possible will ever be completed without first understanding what is available and the challenges that may need to be addressed before conducting a match.

The purpose of the primer would be to create an exhaustive inventory of the many administrative data systems maintained and owned by HUD and HHS, including aspects of the system such as: the data elements captured by each system, the frequency of data collection, time lags in the data, the quality of the data, ownership and privacy-related aspects of the data, and allowable uses of the data.

A primer of this nature would be invaluable for researchers and policymakers who wish to understand more about the populations served through HUD programs, the efficacy of certain aspects of HUD programs, and the individual and community-level effects that may be realized through participation in various programs. It is expected that this primer would need to be updated at some interval to reflect the addition of new data systems, the expiration of old data systems, and modifications to existing data systems.

Subsequent phases of the project would include establishing a set of policy and research questions that might be answered through analysis of existing administrative data owned by HUD

and HHS, developing a standard protocol for conducting such matches, and using matched data to pursue joint research efforts.

## Background

A number of recent research efforts have successfully matched HUD tenant data with HHS health systems data. For example, HUD is currently operating a special purpose voucher program for *nonelderly disabled* households. To learn about the health status of the NED-voucher recipients and about the trajectory of their participation in the program, HHS and HUD have engaged in a data-matching exercise whereby the HHS data (Medicaid claims) and HUD data (Public and Indian Housing Information Center) have been matched to create a dataset that includes the relevant data on the same set of individuals collected by both agencies. This area of research is vastly underused, typically due to a lack of understanding of what is available and/or privacy policies that prevent agencies from collaborating as fully as they could. Data systems tend to be compartmentalized within agencies, operating divisions, and offices; each operating within their own unique sets of constraints. Navigating the process of matching administrative datasets can be fraught with challenges, but can yield large sets of data at a relatively low cost.

## Policy Implications

Improved use of HUD and HHS administrative data could have substantial policy implications with relatively low costs. Both agencies collect a significant amount of data from the households and individuals that are served through their programs. The ability to match the datasets supports a much deeper understanding of the households served and of the effect of the programs in a wider set of domains than might be possible by using just a single dataset administered by either agency.

Housing is increasingly being recognized as a “delivery device” for health services. At the same time, in an era of tight budgets, housing programs must increasingly show the positive outcomes from the provision of housing assistance, both in general terms and in the benefits achieved through targeted programs for vulnerable populations. This effort to build the capacity of the Department to use existing administrative data will enable both HUD and outside researchers to better understand and quantify the effect of housing assistance on assisted households beyond housing stability, including health outcomes, the receipt of health services, and costs. This research effort would enable HUD to better target housing assistance and more fully understand the effect of proposed program modifications.

## Finance

At the current time, it is anticipated that HUD would support the cost of the first phase of this project, although partnership with HHS would be critical to the success of the effort; therefore, HHS could be approached to be a funding partner as well. It is estimated that this research project would require one-half FTE and \$150,000 to hire an outside contractor.

The costs of ongoing data matching are assumed to be relatively small. The National Health Interview Survey data-matching project currently is an inhouse research project supported by less than one-half FTE. The HHS/Assistant Secretary for Planning and Evaluation project is a contracted project with a total budget of up to \$500,000, which includes data costs.

## Master Data and Information Consolidation System

### Examples of Research Projects Facilitated

- Crosscutting: Accelerating Post-Disaster Community Recovery.
- Crosscutting: Affordable Housing in Rural Communities.
- Crosscutting: Characteristics of HUD-Assisted Households.
- Crosscutting: Formula Studies for Effective and Flexible Targeting.
- Goal 2: Improving HUD Measures of Housing Cost Inflation.
- Goal 2: Impact of the Foreclosure Crisis on HUD Programs and the Rental Market.
- Goal 2: Assessment of Landlord Behavior in the Housing Choice Voucher Program.
- Goal 2: Assessing Housing Quality in the Housing Choice Voucher Program.
- Goal 2: Comparing Subsidy Costs of Federal Housing Assistance Programs.
- Goal 2: Evaluating the Success of Tenants in Leasing Up With Housing Choice Vouchers.
- Goal 3: Demand and Supply of Supportive Housing for Elderly Households.
- Goal 4: Advancing Utility Allowance Modeling for HUD Housing Programs.

## Rationale

This information technology (IT) project would fund data infrastructure to enable HUD to have common data elements across all of its programs related to people, households, projects, building, units, organizations, and geography. Having common data elements (such as a common identification number for a project) can simplify HUD's process of identifying and reporting on program overlap. The project will pull together data from HUD's existing Multifamily Assisted, Multifamily Insured, Single-Family Insured, public housing, HCV, CDBG, HOME, Homeless Assistance Grants, and Fair Housing enforcement. This system will not only greatly facilitate research into HUD programs but also program administration and oversight.

Embedded within this project will also be the data repository that would enable HUD to properly conduct the congressionally mandated LIHTC data collection. Among the many uses of this data system will be to enable HUD to easily match LIHTC tenant data with tenant data from HUD's programs and conduct research on the layering and interaction of housing programs. For example, New York University's Furman Center, using similar data for a small subset of states, recently released a study about the extent to which the LIHTC Program served the lowest income households. This IT infrastructure project will enable HUD to conduct similar studies covering all states and enrich the data with administrative data from HUD's tenant- and project-based programs. HUD does not have current capability to conduct such cross-program analyses.

## Description

This IT infrastructure project develops and constructs a data system to store and report on tenant- and property-level data from all of HUD's administered programs, both subsidized and insured, and also HUD's LIHTC data. This project begins with the development of a system to receive, validate and store the tenant and property data received in PD&R's LIHTC data collection. Congress statutorily mandates this data collection but did not appropriate the authorized funding for developing a data system. The lack of a structured data system has delayed HUD's ability to release LIHTC data as required by statute.

HUD is currently designing the Master Data Management (MDM) plan for a departmentwide database inclusive of all HUD programs, subsidized and insured, and the LIHTC Program. After the conceptual design of this overarching data system is completed, the LIHTC tenant data will be the first data housed in the new system. The first phase in developing the departmentwide tenant database, therefore, is to relate the three existing major tenant databases—Tenant Rental

Assistance Certification System, PIC, and PD&R's LIHTC—to match tenants and properties across the various programs. This project conceptually maps the relationship between these databases and identifies fields that will be commonly defined. The cross-program tenant data system is referred to as the HUD Enterprise MDM Database, initially coined as “MAGIC” because of its potential as a tool for both reporting and improving data quality in HUD's source systems.

## Background

The Housing and Economic Recovery Act (HERA) of 2008 required the state Housing Finance Agencies (HFAs) that administer the LIHTC Program to submit data to HUD on tenants in LIHTC properties. Despite the 5-year funding authorization of \$6.1 million included in HERA, no funds were appropriated and HUD received no funding to support this mandate. In an effort to comply, but without the systems envisioned, HUD published data collection standards and developed a basic system of receiving electronic data in the spring of 2010. The Department collected the first annual submission from the HFAs in the fall of 2010.

Without the financial assistance implied in the statutory authorization, HFAs were, and in some cases continue to be, delayed in their ability to collect (from the property managers) and submit (to HUD) the required tenant data. A combination of HUD's inability to procure the necessary data system and the HFAs' inability to adjust their collection methods and data systems resulted in a significantly incomplete set of data on LIHTC tenants. The second collection of tenant data in the fall of 2011 resulted in a more complete set of data, but the lack of a proper validation system and a lack of staff time has prevented the intended release of state-level tabulations. The third collection in the fall of 2012, yielded the most complete set of tenant data, but the lack of formal data infrastructure will continue to affect HUD's ability to analyze and report on this data.

In November 2012, the Government Accountability Office sent a draft report to PD&R examining the effect of HERA on the LIHTC Program. The report's only recommendation is that LIHTC data collection is lacking and needs to be more robust. To ensure the continued improvement in the quality of data received and ensure that HUD has the ability to tabulate and analyze the data, HUD needs to invest in the development of a structured data system.

This recent history of the LIHTC data collection is simply a recent example that emphasizes the longer standing difficulties of integrating and reporting on HUD program data. The

LIHTC data, however, also represent an opportunity—an entry point—for the rollout of HUD's new MDM system. The processes, definitions, and infrastructure built in addressing the need for better LIHTC data collection and management, and the lessons learned from this, can become the platform on which the HUD-wide data infrastructure is updated and integrated. Also, because the LIHTC Program is the most dynamic program today and one that combines with nearly every current HUD program from FHA insurance to HCVs in one way or another, it is well positioned to play this role.

## Policy Implications

The MADIC database will enable more frequent and reliable analyses of the layering of project- and tenant-based subsidies, the interaction of subsidy programs, and the financing of assisted properties. Currently the matching of these data occurs on a more ad hoc basis, often limited to one or a small number of jurisdictions. This project will also inform the national housing data infrastructure by informing the multiagency alignment effort between HUD, USDA, and Treasury (LIHTC) programs. This effort will also provide HUD a method by which to examine how larger subsidy reform would affect program administration and assisted tenants. Having easy access to reliable comparable data regularly will provide a much enhanced empirical basis for policy and budget discussions.

## Finance

This project is being funded under the Information Technology portion of the Transformation Initiative Fund. The planning and project management is funded with FY 2010 TI funding, the first phase of the “build” with FY 2011 TI funds, and the second phase of the build with FY 2013 TI funds. PD&R staff will be engaged in determining the extent to which the multiple data systems have standardized fields to match. PD&R staff time would total approximately one FTE spread across several researchers in FY 2013. Staff time from program offices may also be required.

## Toward a Comprehensive Rental Housing Finance Survey

### Examples of Research Projects Facilitated

- Crosscutting: Affordable Housing in Rural Communities.
- Crosscutting: Foreclosures and Effects on Real Estate Markets.
- Goal 1: What Do We Know About Vacancy? Review of Housing Inventory and Vacancy Statistics.



- Goal 2: Improving HUD Measures of Housing Cost Inflation.
- Goal 2: Assessment of Landlord Behavior in the Housing Choice Voucher Program.
- Goal 2: Assessing Housing Quality in the Housing Choice Voucher Program.
- Goal 4: Housing Search Process of Racial and Ethnic Minorities.

### Rationale

The RHFS of private-market, multifamily, non-owner-occupied properties was successfully completed in 2012. Expanding the scope of this survey to include all rental units will greatly increase its value to HUD and the broader research community. For example, the operations of the HCV program depend almost entirely on the participation of private landlords, yet little is known about those who participate and how they differ from those who choose not to. Not only is determining this information about participation important to HUD’s understanding and operation of the program, but HUD also has a comparative advantage in its ability to access landlord data in administrative systems and to use the vehicle of the RHFS. This survey could provide data for a variety of studies, such as the project “Assessment of Landlord Behavior in the Housing Choice Voucher Program.”

### Description

The RHFS appears to be a perfect vehicle for describing and analyzing landlord participation in the HCV program. The survey instrument contains a number of questions about the program and an extensive battery of questions about the ownership and financing of properties. The universe for the RHFS, however, is currently limited to nonpublic housing multifamily properties. Single-family rentals are not in the sampling frame and, within this frame, the survey excludes smaller mixed tenure properties; that is, those that contain rentals and at least one owner-occupied unit. A large proportion of HCV program participants use their vouchers in these excluded properties, and this proposal seeks to expand the sampling frame for the 2014 survey to—

- Include single-family rental properties.
- No longer exclude smaller mixed-tenure buildings.
- Oversample HCV households.

This proposal will seek to leverage an existing, more general survey to authoritatively answer a number of priority research questions about the HCV program on an ongoing basis. A second best alternative is to sample the full range of rental properties for the oversample of HCV properties only.

### Background

There is considerable interest in knowing more about the market context in which the HCV program operates. A key question identified by the Roadmap is, “What types of landlords and which properties participate in the HCV program?” Determining this requires a survey of HCV landlords. A special purpose survey of Housing Vacancy Survey landlords is one approach but adding an oversample of properties containing HCV households to the 2014 RHFS would not only provide valuable information on these landlords but also place them within the context of the wider rental market and ongoing research using the RHFS.

The public use file from the inaugural 2012 RHFS is set for release in FY 2013 and the survey is scheduled for completion every 2 years. The 2012 RHFS will provide the first nationwide statistical look that HUD and the public have had into the ownership and financing of private rental housing in the United States since the 2001 Residential Housing Finance Survey.

The 2012 RHFS data will contain information on which properties house voucher tenants and receive other subsidies and some initial research on the subject of HCV landlords may be completed in FY 2013. There is, however, a significant barrier to adequately studying the HCV program within the current RHFS. Although it provides valuable information about the ownership and financing of properties about which otherwise little would be known, it excludes important sources of rental housing for the voucher program. As a new survey and due to funding constraints, the decision was made to focus the 2012 survey on the nonpublic housing, non-owner-occupied multifamily (two units plus) rental stock. Surveys such as the AHS and single-family mortgage data already provide some into the ownership and financing of the smaller owner-occupied and single-family rental stock and HUD has comprehensive data on the financing and ownership of public housing. Therefore, the 2012 RHFS focused on the properties about which the least was known. Expanding the survey to include single-family rental properties and smaller mixed tenure buildings, would provide a truly comprehensive and statistically consistent picture of the private rental market and an ideal platform for the study of the ownership and financing of HCV properties.

It is also important to note that in 2011, the AHS oversampled HCV tenants and these data shortly will be available for analysis. Although the 2012 RHFS is already completed, a similar oversample will be conducted in the 2013 AHS and conducting a similar oversample in the 2014 RHFS will be highly complementary. The proposed project will build on the current survey

and subsequent research and enable HUD to provide a fuller picture of the HCV program in 2014 and every 2 years thereafter.

### Policy Implications

HUD wishes to improve the cost effectiveness of the HCV program and expand its use in what have been termed “high opportunity areas.” The failure of some landlords to accept vouchers and participate in the program has been identified as a barrier to achieving these goals. Understanding which landlords do and do not participate and what differentiates them and their properties from others in the market is a missing element in the evidence base that is needed to support effective reform.

### Finance

The costs for this proposal are associated with designing the expansion of the sampling frame in a manner consistent with the current survey and the costs of implementing and tabulating the results from an expanded survey. The costs of such an expansion have yet to be discussed with the Census Bureau, but are likely to exceed \$2 million. The current cost of the RHFS is \$6 million and the roughly 12 million additional units in the excluded categories amount to roughly one-half of the current sampling frame.

Although the proposal is to expand the RHFS to cover one-unit rentals and two- to four-unit mixed-tenure properties while adding an HCV oversample, a less costly option would be to add to the RHFS an HCV oversample in which, for the oversample only, we remove the screen-outs for single-family units and mixed-tenure two- to four-unit buildings. This option would limit the opportunity to compare HCV properties against the broader market.

## Utility Cost Data System

### Examples of Research Projects Facilitated

- Goal 2: Improving HUD Measures of Housing Cost Inflation.
- Goal 2: Assessment of Landlord Behavior in the Housing Choice Voucher Program.
- Goal 2: Assessing Housing Quality in the Housing Choice Voucher Program.
- Goal 4: Achieving Energy Efficiency Goals in Public and Assisted Housing Through Behavioral Change.
- Goal 4: PowerSaver Energy Performance Evaluation.
- Goal 4: Advancing Utility Allowance Modeling for HUD Housing Programs.

### Rationale

It is widely quoted that HUD effectively spends more than \$5 billion a year on utilities in its assisted housing programs. To date, however, HUD has lacked a statistically valid way to make such estimates and little capacity to collect, standardize, and aggregate utility usage and cost data from the units it assists. Although understanding utility usage is an important goal for any real estate interest, in recent years tightening fiscal constraints and the focus on climate change have increased the pressure on HUD to get a handle on utility consumption and cost in the units it assists. In an ideal scenario, HUD needs a database that would enable the Department to describe utility usage in HUD units, to target improved utility usage through the development and modification of HUD policies and programs, and to evaluate existing policies and programs, especially efficiency and retrofit programs. At this time, it is not clear how to collect and construct a database to achieve all these ends. This proposal contains elements for moving HUD toward the ultimate goal.

### Description

This project is still in the initial development phase, with details to follow at a later date. HUD lacks an efficient way to collect and compare utility costs across its stock and to the wider market. Proposed is a three-phase project.

The first phase, which has already been proposed, is to assess the accuracy of allowances for tenant-paid utilities (Utility Allowances) in HUD rental subsidy programs by collecting tenant-paid utility data as an addition to the existing Quality Control study that PD&R conducts annually. The QC study uses a statistically valid sample of units to estimate rent error in assisted housing programs. The utility addition will collect utility data using the QC sample of tenants and compare actual tenant utility expenses with both the UA provided to the tenant by the PHA (or project administrator for assisted multifamily programs). Utility data also will be used to assess the validity of alternative UAs calculated from the HUD Utility Schedule Model, which is based on RECS data.

A second phase would seek a potential avenue for comparing utility usage in HUD-assisted units to housing units more generally. One way to do this would be to partner with the U.S. Department of Energy to add an oversample of HUD-subsidized units to the next RECS. Identifying HUD-subsidized units in RECS data would provide the cleanest means of comparing their utility usage to that of other units.

The third phase would be to include utility data collection as part of HUD's administrative systems. The first steps of this phase would be to examine feasibility, cost effectiveness, and whether a sufficient programmatic need exists to justify the additional information collection.

### **Background**

The Energy Policy Act of 2005 required HUD to “develop and implement an integrated strategy to reduce utility expenses through cost-effective energy conservation and efficiency measures and energy-efficient design and construction of public and assisted housing.” HUD's 2008 progress report to Congress showed that HUD's outlays for utilities were increasing as rates climbed (Energy Task Force, 2008). Owners and tenants in public and assisted housing units were reported to spend an estimated \$5.01 billion, including \$1.8 billion in public housing, and \$3.2 billion was spent on utility allowances through the tenant- and project-based rental assistance programs. The estimates represented a 13.5-percent increase since the 2006

report, which introduced HUD's Energy Action Plan (Energy Task Force, 2006). The report acknowledged, however, that “HUD does not yet have tracking systems to monitor energy savings for its overall inventory of public and assisted housing.”

### **Policy Implications**

The most immediate effect of this project would be to provide a common foundation for policy analysis, which would enable HUD to target its resources better. For example, the results of the first element could be to encourage or require a wider adoption of HUSM in the determination of UAs.

### **Finance**

The first element, adding a component to the QC study, has been estimated to cost between \$1 and \$2 million. The cost of the second element would be determined through discussions with the Energy Department. The cost of the third element would be largely staff time.

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