

## Data Notes

The National Housing Preservation Database (NHPD) provides users with the best assumption of subsidy status based on nationally available data sources. The accuracy, format, completion, and frequency of update for each data source vary by program and have changed overtime. Data for Section 8 Project Based Rental Assistance (PBRA) and US Department of Housing and Urban Development (HUD) Insured subsidies update monthly, while all other subsidy programs update once a year or less. Programs primarily tracked at the local level such as Low Income Housing Tax Credit (LIHTC) subsidies often have insufficient information to determine subsidy status at the national level. For instance, LIHTC subsidies can be kept affordable by state Housing Finance Agencies (HFAs) despite passing their extended use period or being listed as non-programmatic in HUD's LIHTC Database. Until September 2017, the true subsidy end date for Section 515 Direct Loans was not available and the Restriction Clause Expiration Date was used instead. Therefore, it is possible that many Section 515 Direct Loans were incorrectly classified as inactive in versions of the database before 2017.

Each record in the database describes a property. While each property can consist of multiple buildings and addresses, only the first address listed is displayed in the database. This may hinder searches by property address. Searching for individual property addresses can be particularly challenging for public housing properties. Public housing properties are reported in Asset Management Projects (AMPs), which tend to be larger groups of buildings that can be scattered among a larger area than other subsidies.

The number of active subsidies reported in the NHPD can change over time as the format of data files change, subsidy programs expand or are phased out, and as the logic applied to determine subsidy status is updated. The procedure for updating new data and changes in the number of active subsidies and factors that affect the comparability of data over time are noted below for each data refresh.

## Data Refresh Updates

### December 2025

The December 2025 data refresh incorporated four file updates with no documentation changes. Currently, there is not an additional field for NSPIRE scores. NSPIRE scores are currently imported in the REAC score field.

### *Number of Active and Inconclusive Subsidies Before and After December 2025 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8</b>	24,439	24,403	0%
<b>Section 202 Direct Loans*</b>	657	649	-1%
<b>State HFA 236</b>	148	148	0%
<b>HUD Insured</b>	8,693	8,691	0%
<b>LIHTC</b>	41,265	41,239	0%
<b>HOME</b>	16,163	15,855	-2%
<b>Section 515*</b>	12,467	12,443	0%
<b>Section 538*</b>	1,429	1,438	1%
<b>Public Housing*</b>	6,250	6,256	0%

<b>State Subsidy</b>	5,552	5,520	-1%
<b>National Housing Trust Fund</b>	650	649	0%
<b>Project Based Vouchers</b>	3,119	3,112	0%
<b>Mod Rehab</b>	513	515	0%
<b>Total</b>	121,345	120,928	0%

### October 2025

The October 2025 data refresh incorporated one file update with no documentation changes. Currently, there is not an additional field for NSPIRE scores. NSPIRE scores are currently imported in the REAC score field.

#### *Number of Active and Inconclusive Subsidies Before and After October 2025 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,835	24,439	-2%
<b>Section 202 Direct Loans</b>	674	657	-3%
<b>State HFA 236</b>	148	148	0%
<b>HUD Insured</b>	8,702	8,693	0%
<b>LIHTC</b>	41,267	41,265	0%
<b>HOME</b>	16,447	16,163	-2%
<b>Section 515</b>	12,488	12,467	0%
<b>Section 538</b>	1,429	1,429	0%
<b>Public Housing</b>	6,250	6,250	0%
<b>State Subsidy</b>	5,558	5,552	0%
<b>National Housing Trust Fund</b>	650	650	0%
<b>Project Based Vouchers</b>	3,119	3,119	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,630	121,345	0%

### August 2025

The August 2025 data refresh incorporated seven file updates with no documentation changes. Data coverage has been expanded to include properties in U.S. territories. Currently, there is not an additional field for NSPIRE scores. NSPIRE scores are currently imported in the REAC score field.

#### *Number of Active and Inconclusive Subsidies Before and After August 2025 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,172	24,835	3%
<b>Section 202 Direct Loans*</b>	678	674	-1%

<b>State HFA 236</b>	152	148	-3%
<b>HUD Insured*</b>	8,660	8,702	0%
<b>LIHTC*</b>	40,923	41,267	1%
<b>HOME</b>	16,814	16,447	-2%
<b>Section 515*</b>	12,492	12,488	0%
<b>Section 538*</b>	1,401	1,429	2%
<b>Public Housing*</b>	6,023	6,250	4%
<b>State Subsidy</b>	5,556	5,558	0%
<b>National Housing Trust Fund</b>	641	650	1%
<b>Project Based Vouchers</b>	3,118	3,119	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	<b>121,143</b>	<b>121,630</b>	<b>0%</b>

#### April 2025

The April 2025 data refresh incorporated one file update with no documentation changes. Currently, there is not an additional field for NSPIRE scores. NSPIRE scores are currently imported in the REAC score field.

#### *Number of Active and Inconclusive Subsidies Before and After April 2025 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,114	24,172	0%
<b>Section 202 Direct Loans</b>	704	678	-4%
<b>State HFA 236</b>	152	152	0%
<b>HUD Insured</b>	8,668	8,660	0%
<b>LIHTC</b>	40,919	40,923	0%
<b>HOME</b>	17,496	16,814	-4%
<b>Section 515</b>	12,511	12,492	0%
<b>Section 538</b>	1,401	1,401	0%
<b>Public Housing</b>	6,022	6,023	0%
<b>State Subsidy</b>	5,538	5,556	0%
<b>National Housing Trust Fund</b>	623	641	3%
<b>Project Based Vouchers</b>	3,119	3,118	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	<b>121,780</b>	<b>121,143</b>	<b>-1%</b>

## December 2024

The December 2024 data refresh incorporated eight file updates with no documentation changes. A new subsidy, the national Housing Trust Fund, is now included in the NHPD. Currently, there is not an additional field for NSPIRE scores. NSPIRE scores are currently imported in the REAC score field.

### *Number of Active and Inconclusive Subsidies Before and After December 2024 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,142	24,114	0%
<b>Section 202 Direct Loans*</b>	729	704	-3%
<b>State HFA 236</b>	153	152	-1%
<b>HUD Insured*</b>	8,665	8,668	0%
<b>LIHTC</b>	40,948	40,919	0%
<b>HOME*</b>	17,802	17,496	-2%
<b>Section 515*</b>	12,584	12,511	-1%
<b>Section 538*</b>	1,357	1,401	3%
<b>Public Housing*</b>	6,025	6,022	0%
<b>State Subsidy</b>	5,567	5,538	-1%
<b>National Housing Trust* Fund</b>	-	623	-
<b>Project Based Vouchers</b>	3,121	3,119	0%
<b>Mod Rehab</b>	513	513	0.0%
<b>Total</b>	<b>121,899</b>	<b>121,780</b>	<b>-0.1%</b>

## October 2024

The October 2024 data refresh incorporated one file update with no documentation changes.

### *Number of Active and Inconclusive Subsidies Before and After October 2024 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,059	24,142	0%
<b>Section 202 Direct Loans</b>	749	729	-3%
<b>State HFA 236</b>	155	153	-1%
<b>HUD Insured</b>	8,665	8,665	0%
<b>LIHTC</b>	40,958	40,948	0%
<b>HOME</b>	18,121	17,802	-2%
<b>Section 515</b>	12,600	12,584	0%
<b>Section 538</b>	1,357	1,357	0%
<b>Public Housing</b>	6,025	6,025	0%
<b>State Subsidy</b>	5,576	5,567	0%

<b>Project Based Vouchers</b>	3,123	3,121	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,292	121,899	0%

#### August 2024

The August 2024 data refresh incorporated eight file updates with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After August 2024 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,113	24,059	0%
<b>Section 202 Direct Loans*</b>	802	749	-7%
<b>State HFA 236</b>	155	155	0%
<b>HUD Insured*</b>	8,675	8,665	0%
<b>LIHTC*</b>	40,207	40,958	2%
<b>HOME*</b>	17,981	18,121	1%
<b>Section 515*</b>	12,685	12,600	-1%
<b>Section 538*</b>	1,333	1,357	2%
<b>Public Housing*</b>	6,114	6,025	-1%
<b>State Subsidy</b>	5,346	5,576	4%
<b>Project Based Vouchers</b>	3,123	3,121	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,292	121,899	0%

#### April 2024

The April 2024 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After April 2024 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,046	24,113	0%
<b>Section 202 Direct Loans</b>	812	802	-1%
<b>State HFA 236</b>	158	155	-2%
<b>HUD Insured</b>	8,675	8,675	0%
<b>LIHTC</b>	40,210	40,207	0%
<b>HOME</b>	18,309	17,981	-2%
<b>Section 515</b>	12,707	12,685	0%
<b>Section 538</b>	1,334	1,333	0%
<b>Public Housing</b>	6,114	6,114	0%

<b>State Subsidy</b>	5,291	5,346	1%
<b>Project Based Vouchers</b>	3,123	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,818	121,292	0%

### December 2023

The December 2023 data refresh incorporated five file updates with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After December 2023 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8</b>	24,087	24,046	0%
<b>Section 202 Direct Loans*</b>	842	812	-4%
<b>State HFA 236</b>	160	158	-1%
<b>HUD Insured*</b>	8,719	8,675	-1%
<b>LIHTC</b>	40,275	40,210	0%
<b>HOME</b>	18,610	18,309	-2%
<b>Section 515*</b>	12,744	12,707	0%
<b>Section 538*</b>	1,316	1,334	1%
<b>Public Housing*</b>	6,117	6,114	0%
<b>State Subsidy</b>	5,312	5,291	0%
<b>Project Based Vouchers</b>	3,123	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,818	121,292	0%

### October 2023

The October 2023 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After October 2023 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,058	24,087	0%
<b>Section 202 Direct Loans</b>	850	842	-1%
<b>State HFA 236</b>	164	160	-3%
<b>HUD Insured</b>	8,724	8,719	0%
<b>LIHTC</b>	40,275	40,275	0%
<b>HOME</b>	18,791	18,610	-1%
<b>Section 515</b>	12,755	12,744	0%

<b>Section 538</b>	1,316	1,316	0%
<b>Public Housing</b>	6,117	6,117	0%
<b>State Subsidy</b>	5,326	5,312	0%
<b>Project Based Vouchers</b>	3,123	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	122,012	121,818	0%

### August 2023

The August 2023 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After August 2023 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,068	24,058	0%
<b>Section 202 Direct Loans</b>	901	850	-6%
<b>State HFA 236</b>	168	164	-2%
<b>HUD Insured</b>	8,648	8,724	1%
<b>LIHTC</b>	39,040	40,275	3%
<b>HOME</b>	18,796	18,791	0%
<b>Section 515</b>	12,828	12,755	-1%
<b>Section 538</b>	1,296	1,316	2%
<b>Public Housing</b>	6,211	6,117	-2%
<b>State Subsidy</b>	5,191	5,326	3%
<b>Project Based Vouchers</b>	3,123	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	120,783	122,012	1%

### April 2023

The April 2023 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After April 2023 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,035	24,068	0%
<b>Section 202 Direct Loans</b>	916	901	-2%
<b>State HFA 236</b>	169	168	-1%
<b>HUD Insured</b>	8653	8648	0%
<b>LIHTC</b>	39,040	39,040	0%
<b>HOME</b>	19,052	18,796	-1%
<b>Section 515</b>	12,843	12,828	0%
<b>Section 538</b>	1,296	1,296	0%
<b>Public Housing</b>	6,211	6,211	0%

<b>State Subsidy</b>	5,198	5,191	0%
<b>Project Based Vouchers</b>	3,123	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,049	120,783	0%

#### December 2022

The December 2022 data refresh incorporated ten file updates with no documentation changes. State funded subsidies were added for properties in Washington.

#### *Number of Active and Inconclusive Subsidies Before and After December 2022 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	24,061	24,035	0%
<b>Section 202 Direct Loans</b>	961	916	-5%
<b>State HFA 236</b>	172	169	-2%
<b>HUD Insured</b>	8727	8653	-1%
<b>LIHTC</b>	39,093	39,040	0%
<b>HOME</b>	19,407	19,052	-2%
<b>Section 515</b>	12,885	12,843	0%
<b>Section 538</b>	1,274	1,296	2%
<b>Public Housing</b>	6,213	6,211	0%
<b>State Subsidy</b>	4,886	5,198	6%
<b>Project Based Vouchers</b>	3,126	3,123	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,318	121,049	0%

#### October 2022

The December 2022 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After October 2022 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,980	24,061	+0.34%
<b>Section 202 Direct Loans</b>	969	961	-0.83%
<b>State HFA 236</b>	174	172	-1.16%
<b>HUD Insured</b>	8,731	8,727	-0.05%
<b>LIHTC</b>	39,093	39,093	0%
<b>HOME</b>	19,611	19,407	-1.05%
<b>Section 515</b>	12,891	12,885	-0.05%
<b>Section 538</b>	1,274	1,274	0%
<b>Public Housing</b>	6,213	6,213	0%
<b>State Subsidy</b>	4,888	4,886	-0.04%

<b>Project Based Vouchers</b>	3,126	3,126	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	121,463	121,318	-0.12%

#### June 2022

The June 2022 data refresh incorporated ten file updates with no documentation changes. State funded subsidies were added for properties in Hawaii, Kentucky, and Oregon. State imposed LIHTC affordability restriction end dates were updated for Connecticut, Hawaii, Montana, Oregon, and Wyoming.

#### *Number of Active and Inconclusive Subsidies Before and After June 2022 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,929	23,980	0%
<b>Section 202 Direct Loans*</b>	1,050	969	-8%
<b>State HFA 236</b>	178	174	-2%
<b>HUD Insured*</b>	9,091	8,731	-4%
<b>LIHTC*</b>	38,348	39,093	2%
<b>HOME**</b>	18,923	19,611	4%
<b>Section 515*</b>	13,045	12,891	-1%
<b>Section 538*</b>	1,256	1,274	1%
<b>Public Housing*</b>	6,268	6,213	-1%
<b>State Subsidy**</b>	2,829	4,888	73%
<b>Project Based Vouchers</b>	3,134	3,126	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	118,564	121,463	2%

#### December 2021

The December 2021 data refresh incorporated nine file updates with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After December 2021 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,940	23,929	0%
<b>Section 202 Direct Loans</b>	1088	1050	-4%
<b>State HFA 236</b>	180	178	-1%
<b>HUD Insured</b>	9467	9091	-4%
<b>LIHTC</b>	39,229	38,348	-2%
<b>HOME</b>	19,200	18,923	-1%
<b>Section 515</b>	13,074	13,045	0%
<b>Section 538</b>	1,230	1,256	2%
<b>Public Housing</b>	6,332	6,268	-1%
<b>State Subsidy</b>	2,530	2,829	11%
<b>Project Based Vouchers</b>	3,136	3,134	0%

<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	119,919	118,564	-1%

#### October 2021

The October 2021 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After October 2021 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,914	23,940	0%
<b>Section 202 Direct Loans</b>	1,105	1,088	-2%
<b>State HFA 236</b>	180	180	0%
<b>HUD Insured</b>	9,483	9,467	0%
<b>LIHTC</b>	39,335	39,229	0%
<b>HOME</b>	19,587	19,200	-2%
<b>Section 515</b>	13,092	13,074	0%
<b>Section 538</b>	1,233	1,230	0%
<b>Public Housing</b>	6,343	6,332	0%
<b>State Subsidy</b>	2,533	2,530	0%
<b>Project Based Vouchers</b>	3,137	3,136	0%
<b>Mod Rehab</b>	513	513	0%
<b>Total</b>	120,455	119,919	0%

#### June 2021

The June 2021 data refresh incorporated nine file updates with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After June 2021 Refresh*

<b>Subsidy Type</b>	<b>After Refresh</b>	<b>Before Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,914	23,906	0%
<b>Section 202 Direct Loans*</b>	1,105	1,161	-5%
<b>State HFA 236</b>	180	181	-1%
<b>HUD Insured*</b>	9,483	9,447	0%
<b>LIHTC*</b>	39,335	37,994	4%
<b>HOME</b>	19,587	19,967	-2%
<b>Section 515*</b>	13,092	13,182	-1%
<b>Section 538*</b>	1,233	1,180	4%
<b>Public Housing*</b>	6,343	6,262	1%
<b>State Subsidy</b>	2,533	2,528	0%
<b>Project Based Vouchers</b>	3,137	3,141	0%
<b>Mod Rehab</b>	513	514	0%
<b>Total</b>	120,455	119,463	1%

The following updates were made to LIHTC end dates to correct for statewide affordability restriction requirements in Qualified Action Plans:

State	Conditions	End Date
Alabama	[YR_ALLOC]>2019	[YR_PIS]+35 or [YR_ALLOC]+37 if [YR_PIS] is blank.
California	[YR_ALLOC]>2000* Tax credits allocated earlier may be subject to extended affordability restrictions, but earlier QAPs are not available.	[YR_PIS]+55 or [YR_ALLOC]+57 if [YR_PIS] is blank.
Connecticut	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+40 or [YR_ALLOC]+42 if [YR_PIS] is blank.
Hawaii	[YR_ALLOC]>2015 and [CREDIT]=1 or 3	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
Kentucky	[YR_ALLOC]>2004 and [YR_ALLOC]<2019	[YR_PIS]+33 or [YR_ALLOC]+35 if [YR_PIS] is blank.
Maine	[YR_ALLOC]>2003 and [YR_ALLOC]<2013	[YR_PIS]+90 or [YR_ALLOC]+92 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
New Hampshire	[YR_ALLOC]>2003 and [YR_ALLOC]<2019	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.
	[YR_ALLOC]>2018 & [YR_ALLOC]<2020 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.
	[YR_ALLOC]>2019 and [CREDIT]=2 or 3	[YR_PIS]+60 or [YR_ALLOC]+62 if [YR_PIS] is blank.
Oregon	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+60 or [YR_ALLOC]+62 if [YR_PIS] is blank.
Pennsylvania	[YR_ALLOC]>2016 & [YR_ALLOC]<2021	[YR_PIS]+35 or [YR_ALLOC]+37 if [YR_PIS] is blank.
	[YR_ALLOC]>2020	[YR_PIS]+40 or [YR_ALLOC]+42 if [YR_PIS] is blank.
Utah	[YR_ALLOC]>1999 and [YR_ALLOC]<2008	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
	[YR_ALLOC]>2007 and [YR_ALLOC]<2013	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
Vermont	[YR_ALLOC]>2000 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.

April 2021

The April 2021 data refresh incorporated one file update with no documentation changes.

*Number of Active and Inconclusive Subsidies Before and After April 2021 Refresh*

<b>Subsidy Type</b>	<b>After Refresh</b>	<b>Before Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,906	23,809	0%
<b>Section 202 Direct Loans</b>	1,161	1,209	-4%
<b>State HFA 236</b>	181	181	0%
<b>HUD Insured</b>	9,447	9,617	-2%
<b>LIHTC</b>	37,994	38,146	0%
<b>HOME</b>	19,967	20,038	0%
<b>Section 515</b>	13,182	13,220	0%
<b>Section 538</b>	1,180	1,129	5%
<b>Public Housing</b>	6,262	6,335	-1%
<b>State Subsidy</b>	2,528	2,536	0%
<b>Project Based Vouchers</b>	3,141	3,150	0%
<b>Mod Rehab</b>	514	514	0%
<b>Total</b>	119,463	119,884	0%

December 2020

The December 2020 data refresh incorporated six file updates with no documentation changes.

*Number of Active and Inconclusive Subsidies Before and After December 2020 Refresh*

<b>Subsidy Type</b>	<b>After Refresh</b>	<b>Before Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,809	23,832	0%
<b>Section 202 Direct Loans*</b>	1,209	1,173	3%
<b>State HFA 236</b>	181	184	-2%
<b>HUD Insured*</b>	9,617	9,452	2%
<b>LIHTC</b>	38,146	37,992	0%
<b>HOME*</b>	20,038	20,206	-1%
<b>Section 515*</b>	13,220	13,195	0%
<b>Section 538*</b>	1,129	1,180	-4%
<b>Public Housing</b>	6,335	6,262	1%
<b>State Subsidy</b>	2,536	2,528	0%
<b>Project Based Vouchers</b>	3,150	3,141	0%
<b>Mod Rehab</b>	514	514	0%
<b>Total</b>	119,884	119,659	0%

\*Data updated (previous data outdated by less than one year)

October 2020

The October 2020 data refresh incorporated one file update with no documentation changes.

*Number of Active and Inconclusive Subsidies Before and After October 2020 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,700	23,809	0%
<b>Section 202 Direct Loans</b>	1,218	1,209	-1%

<b>State HFA 236</b>	182	181	-1%
<b>HUD Insured</b>	9,632	9,617	0%
<b>LIHTC</b>	38,271	38,146	0%
<b>HOME</b>	20,381	20,038	-2%
<b>Section 515</b>	13,236	13,220	0%
<b>Section 538</b>	1,133	1,129	0%
<b>Public Housing</b>	6,352	6,335	0%
<b>State Subsidy</b>	2,539	2,536	0%
<b>Project Based Vouchers</b>	3,154	3,150	0%
<b>Mod Rehab</b>	515	514	0%
<b>Total</b>	<b>120,313</b>	<b>119,884</b>	<b>0%</b>

\*Data updated (previous data outdated by less than one year)

### August 2020

The August 2020 data refresh incorporated seven file updates, two new data files, and one documentation change. Buildings with 11 or more units assisted by Project Based Vouchers and Mod Rehab were newly added to the NHPD during the August 2020 data refresh. Additionally, HUD insured mortgages listed in HUD's terminated mortgage database with a maturity date in the future and a termination type code not equal to 20, 14, 17, 18, 60, 13, 26, 11, or 21 are now have a subsidy status equal to inconclusive rather than active.

### Number of Active and Inconclusive Subsidies Before and After August 2020 Refresh

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,700	23,700	0%
<b>Section 202 Direct Loans*</b>	1,277	1,218	-5%
<b>State HFA 236</b>	183	182	-1%
<b>HUD Insured*</b>	9,651	9,632	0%
<b>LIHTC*</b>	36,732	38,271	4%
<b>HOME</b>	20,956	20,381	-3%
<b>Section 515*</b>	13,301	13,236	0%
<b>Section 538*</b>	1,078	1,133	5%
<b>Public Housing*</b>	6,466	6,352	-2%
<b>State Subsidy</b>	2,543	2,539	0%
<b>Project Based Vouchers**</b>	0	3,154	N/A
<b>Mod Rehab**</b>	0	515	N/A
<b>Total</b>	<b>116,006</b>	<b>120,313</b>	<b>4%</b>

\*Data updated (previous data outdated by less than one year)

\*\*New data

The following updates were made to LIHTC end dates to correct for statewide affordability restriction requirements in Qualified Action Plans:

<b>State</b>	<b>Conditions</b>	<b>End Date</b>
--------------	-------------------	-----------------

<b>Alabama</b>	[YR_ALLOC]>2019	[YR_PIS]+35 or [YR_ALLOC]+37 if [YR_PIS] is blank.
<b>California</b>	[YR_ALLOC]>2000* Tax credits allocated earlier may be subject to extended affordability restrictions, but earlier QAPs are not available.	[YR_PIS]+55 or [YR_ALLOC]+57 if [YR_PIS] is blank.
<b>Connecticut</b>	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+40 or [YR_ALLOC]+42 if [YR_PIS] is blank.
<b>Hawaii</b>	[YR_ALLOC]>2015 and [CREDIT]=1 or 3	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
<b>Kentucky</b>	[YR_ALLOC]>2004 and [YR_ALLOC]<2019	[YR_PIS]+33 or [YR_ALLOC]+35 if [YR_PIS] is blank.
<b>Maine</b>	[YR_ALLOC]>2003 and [YR_ALLOC]<2013	[YR_PIS]+90 or [YR_ALLOC]+92 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
<b>New Hampshire</b>	[YR_ALLOC]>2003 and [YR_ALLOC]<2019	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.
	[YR_ALLOC]>2018 & [YR_ALLOC]<2020 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.
	[YR_ALLOC]>2020 and [CREDIT]=2 or 3	[YR_PIS]+60 or [YR_ALLOC]+62 if [YR_PIS] is blank.
<b>Oregon</b>	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+60 or [YR_ALLOC]+62 if [YR_PIS] is blank.
<b>Pennsylvania</b>	[YR_ALLOC]>2016	[YR_PIS]+35 or [YR_ALLOC]+37 if [YR_PIS] is blank.
<b>Utah</b>	[YR_ALLOC]>1999 and [YR_ALLOC]<2008	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
	[YR_ALLOC]>2007 and [YR_ALLOC]<2013	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
<b>Vermont</b>	[YR_ALLOC]>2000 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.

### March 2020

The March 2020 data refresh incorporated one file update with no documentation changes.

### *Number of Active and Inconclusive Subsidies Before and After March 2020 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,610	23,700	0%
<b>Section 202 Direct Loans</b>	1,286	1,277	-1%
<b>State HFA 236</b>	183	183	0%
<b>HUD Insured</b>	9,694	9,651	0%
<b>LIHTC</b>	36,732	36,732	0%
<b>HOME</b>	21,113	20,956	-1%
<b>Section 515</b>	13,301	13,301	0%

<b>Section 538</b>	1,078	1,078	0%
<b>Public Housing</b>	6,466	6,466	0%
<b>State Subsidy</b>	2,543	2,543	0%
<b>Total</b>	116,006	115,887	0%

\*Data updated (previous data outdated by less than one year)

### December 2019

The December 2019 data refresh incorporated six file updates with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After December 2019 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,681	23,610	0%
<b>Section 202 Direct Loans*</b>	1,329	1,286	-3%
<b>State HFA 236</b>	184	183	-1%
<b>HUD Insured*</b>	9,728	9,694	0%
<b>LIHTC</b>	36,957	36,732	-1%
<b>HOME*</b>	19,046	21,113	11%
<b>Section 515*</b>	13,423	13,301	-1%
<b>Section 538*</b>	995	1,078	8%
<b>Public Housing</b>	6,471	6,466	0%
<b>State Subsidy</b>	2,556	2,543	-1%
<b>Total</b>	114,370	116,006	1%

\*Data updated (previous data outdated by less than one year)

### October 2019

The October 2019 data refresh incorporated one file update with no documentation changes.

#### *Number of Active and Inconclusive Subsidies Before and After October 2019 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,632	23,681	0%
<b>Section 202 Direct Loans</b>	1,333	1,329	0%
<b>State HFA 236</b>	184	184	0%
<b>HUD Insured</b>	9,769	9,728	0%
<b>LIHTC</b>	36,956	36,957	0%
<b>HOME</b>	19,252	19,046	-1%
<b>Section 515*</b>	13,423	13,423	0%
<b>Section 538</b>	995	995	0%
<b>Public Housing</b>	6,471	6,471	0%
<b>State Subsidy</b>	2,556	2,556	0%
<b>Total</b>	114,571	114,370	0%

\*Data updated (previous data outdated by less than one year)

### June 2019

The June 2019 data refresh incorporated updates from seven programs and changes to how Low Income Housing Tax Credits (LIHTC) subsidy status is classified. Tax credits that were allocated before 1990 or listed as non-programmatic are now listed as inactive, resulting in a large decrease in the number of active and inconclusive tax credits. Additionally, HUD insured mortgages listed in HUD's terminated mortgage database that do not impose affordability restrictions were added to the NHPD if the property

received another subsidy. Previously these mortgages were excluded, resulting in a large increase in the number of HUD insured mortgages in the database.

*Number of Active and Inconclusive Subsidies Before and After June 2019 Refresh*

Subsidy Type	Before Refresh	After Refresh	Change
Section 8*	23,545	23,632	0%
Section 202 Direct Loans*	1,363	1,333	-2%
State HFA 236	183	184	1%
HUD Insured*	7,851	9,769	24%
LIHTC*	45,169	36,956	-18%
HOME	19,467	19,252	-1%
Section 515*	13,472	13,423	0%
Section 538*	911	995	9%
Public Housing**	6,587	6,471	-2%
State Subsidy	2,556	2,556	0%
<b>Total</b>	<b>121,104</b>	<b>114,571</b>	<b>-5%</b>

\*Data updated (previous data outdated by less than one year)

\*\*Data update (previous data outdated by more than one year)

February 2019

The February 2019 data refresh incorporated updates from five programs and changes to how Low Income Housing Tax Credits (LIHTC) end dates are classified. Tax credits allocated before 1990 are now listed as inconclusive and have affordability periods of only fifteen years. Further, tax credit end dates were updated to reflect statewide affordability requirements beyond the federal minimum in place. The following updates were made to LIHTC end dates to correct for statewide affordability restriction requirements:

State	Conditions	End Date*
Utah	[YR_ALLOC]>1999 and [YR_ALLOC]<2008	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
	[YR_ALLOC]>2007 and [YR_ALLOC]<2013	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+50 or [YR_ALLOC]+52 if [YR_PIS] is blank.
Vermont	[YR_ALLOC]>2000 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+101 if [YR_PIS] is blank.
California	[YR_ALLOC]>2000* *Tax credits allocated earlier may be subject to extended affordability restrictions, but earlier QAPs are not available.	[YR_PIS]+55 or [YR_ALLOC]+57 if [YR_PIS] is blank.
Kentucky	[YR_ALLOC]>2004 and [YR_ALLOC]<2019	[YR_PIS]+33 or [YR_ALLOC]+35 if [YR_PIS] is blank.
Maine	[YR_ALLOC]>2003 and [YR_ALLOC]<2013	[YR_PIS]+90 or [YR_ALLOC]+92 if [YR_PIS] is blank.
	[YR_ALLOC]>2012	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
New Hampshire	[YR_ALLOC]>2003 and [YR_ALLOC]<2019	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.

	[YR_ALLOC]>2018 and [CREDIT]=2 or 3	[YR_PIS]+99 or [YR_ALLOC]+102 if [YR_PIS] is blank.
<b>Oregon</b>	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+60 or [YR_ALLOC]+62 if [YR_PIS] is blank.
<b>Connecticut</b>	[YR_ALLOC]>2010 and [CREDIT]=2 or 3	[YR_PIS]+40 or [YR_ALLOC]+42 if [YR_PIS] is blank.
<b>Hawaii</b>	[YR_ALLOC]>2015 and [CREDIT]=1 or 3	[YR_PIS]+45 or [YR_ALLOC]+47 if [YR_PIS] is blank.
<b>Pennsylvania</b>	[YR_ALLOC]>2016	[YR_PIS]+35 or [YR_ALLOC]+37 if [YR_PIS] is blank.

\*An assumed end date of January 1st is used since only the year placed in service is provided in the originating dataset.

#### *Number of Active and Inconclusive Subsidies Before and After February 2019 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,419	23,545	1%
<b>Section 202 Direct Loans*</b>	1,534	1,363	-11%
<b>State HFA 236</b>	183	183	0%
<b>HUD Insured*</b>	7,804	7,851	1%
<b>LIHTC</b>	45,216	45,169	0%
<b>HOME**</b>	17,286	19,467	13%
<b>Section 515*</b>	14,398	13,472	-6%
<b>Section 538</b>	907	911	0%
<b>Public Housing</b>	6,592	6,587	0%
<b>State Subsidy</b>	2,535	2,556	1%
<b>Total</b>	119,874	121,104	1%

\*Data updated (previous data outdated by less than one year)

\*\*Data update (previous data outdated by more than one year)

#### **June 2018**

The June 2018 data refresh incorporated four file updates. In 2018, HUD introduced a new standardized ID format for LIHTC subsidies that affects properties placed in service in 2017 and later. The new ID format is longer. As part of this change, we preserved the original subsidy IDs for subsidies that were already in place before the change. These legacy IDs may be shorter and may not match current HUD datasets. For subsidies established after the change, we adopted the updated ID format. As a result, this field includes a mix of legacy and updated IDs. Users should be aware that the older IDs may not align directly with current HUD property-level data sources. When linking to external datasets, users may need to rely on additional identifying information such as project name or address to ensure accurate matching.

### *Number of Active and Inconclusive Subsidies Before and After June 2018 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,393	23,419	0.11%
<b>Section 202 Direct Loans</b>	1,536	1,534	-0.13%
<b>State HFA 236</b>	183	183	0.00%
<b>HUD Insured*</b>	7,681	7,804	1.60%
<b>LIHTC*</b>	44,535	45,216	1.53%
<b>HOME</b>	17,682	17,286	-2.24%
<b>Section 515</b>	14,396	14,398	0.01%
<b>Section 538*</b>	748	907	21.26%
<b>Public Housing</b>	6,592	6,592	0.00%
<b>State Subsidy</b>	2,535	2,535	0.00%
<b>Total</b>	<b>119,281</b>	<b>119,874</b>	<b>0.50%</b>

\*Data updated (previous data outdated by less than one year)

### *April 2018*

The April 2018 data refresh incorporated one file update. The subsidy end dates for Section 8 contracts that received a Section 811 or 202 capital advance were updated to be 40 years from the date of initial occupancy since properties that receive Section 202 or 811 capital advances are required to continue renewing their Section 8 contracts for a period of 40 years.

### *Number of Active and Inconclusive Subsidies Before and After April 2018 Refresh*

<b>Subsidy Type</b>	<b>Before Refresh</b>	<b>After Refresh</b>	<b>Change</b>
<b>Section 8*</b>	23,104	23,393	-1.3%
<b>Section 202 Direct Loans</b>	1,536	1,536	0.0%
<b>State HFA 236</b>	182	183	-0.5%
<b>HUD Insured</b>	7,685	7,681	0.1%
<b>LIHTC</b>	44,323	44,535	-0.5%
<b>HOME</b>	17,948	17,682	1.5%
<b>Section 515</b>	14,371	14,396	-0.2%
<b>Section 538</b>	748	748	0.0%
<b>Public Housing</b>	6,588	6,592	-0.1%
<b>State Subsidy</b>	2,535	2,535	0.0%
<b>Total</b>	<b>119,020</b>	<b>119,281</b>	<b>-0.2%</b>

\*Data updated (previous data outdated by less than one year)

### *December 2017*

The December 2017 data refresh incorporated six file updates. The subsidy end dates for Section 8 contracts that completed a full mark to market agreement were updated to be 30 years from the date the agreement was completed. No other changes were made to how property records are processed which resulted in minimal changes to the number of active and inconclusive subsidies included the database.

*Number of Active and Inconclusive Subsidies Before and After December 2017 Refresh*

Subsidy Type	Before Refresh	After Refresh	Change
Section 8*	22,970	23,104	1%
Section 202 Direct Loans	1,538	1,536	0%
State HFA 236	181	182	1%
HUD Insured*	7,896	7,685	-3%
LIHTC*	41,384	44,323	7%
HOME	18,461	17,948	-3%
Section 515*	14,092	14,371	2%
Section 538	748	748	0%
Public Housing*	6,778	6,588	-3%
<b>Total</b>	<b>116,586</b>	<b>119,020</b>	<b>2%</b>

\*Data updated (previous data outdated by less than one year)

*September 2017*

The September 2017 data refresh incorporated 12 new file updates, a new matching protocol, and changes to how subsidy status is classified for all subsidies. These changes will impact overtime comparisons of earlier versions of the NHPD. Since many subsidies are either missing information on the subsidy end date or are not continually monitored by the government agencies that provide data on these programs, 'inconclusive' was added as a third subsidy status category. This change gives researchers more control over how conservative their estimates of active and inactive affordable housing properties are. Researchers can now choose to report inconclusive properties separately or re-categorize inconclusive subsidies using the subsidy status description field, which describes why a subsidy is labeled inactive or inconclusive. The number of active LIHTC, Section 515, and Section 8, and State HFA 236 subsidies were most affected by the subsidy status change rule. Many subsidies missing key information, such as subsidy end date, that were previously classified as active are now classified as inconclusive. Similarly, the number of HUD insured mortgages increased drastically between 2016 and 2017 due to the inclusion of a handful of HFA risk sharing mortgages programs that were not previously tracked by the NHPD. Meanwhile, the large change in the number of active Section 538 subsidies can be attributed to data updates for these programs that were more than a few years outdated. To view a version of the Data Dictionary that lists all changes side by side, click [here](#).

*Number of Active Subsidies Before and After September 2017 Refresh*

Subsidy Type	Before Refresh	After Refresh	Change
Section 8*	21,574	19,989	-7%
Section 202 Direct Loans*	1,721	1,533	-11%
State HFA 236	206	35	-83%
HUD Insured*	5,826	7,896	36%
LIHTC*	37,865	33,352	-12%
HOME*	20,639	18,461	-11%
Section 515*	14,719	14,080	-4%
Section 538**	424	748	76%
Public Housing*	6,890	6,778	-2%
<b>Total</b>	<b>109,864</b>	<b>105,410</b>	<b>-4%</b>

\*Data updated (previous data outdated by less than one year)

\*\*Data updated (previous data outdated by more than one year)

## September 2017

In September 2017, the NHPD was updated to incorporate new variables, prepackaged extracts, and enhanced user features. Data processing updates were also made to improve data accuracy and reduce the number of duplicate properties in the database. To learn more about these changes, click [here](#).

## February 2016

The February 2016 refresh incorporated ten data file updates, which led to a significant change in the number of total active subsidies. The number of active Home Investment Partnership (HOME), Section 202, and Section 515 subsidies changed significantly because the data for both of these programs was outdated by more than three years. This refresh incorporated new subsidies that have been awarded or terminated during this time. Additionally, the HOME data used previously did not include subsidies awarded to properties with less than five units. The number of Section 202 Direct Loans decreased significantly because some owners prepaid their mortgages and there were no new Section 202 Direct Loans awarded. Section 202 assistance is now awarded through rental assistance contracts, which are tracked under the Section 8 program.

### *Number of Active Subsidies Before and After February 2016 Refresh*

Subsidy Type	Before Refresh	After Refresh	Change
Section 8*	21,733	21,574	-1%
Section 202 Direct Loans**	2,231	1,721	-23%
State HFA 236	214	206	-4%
HUD Insured*	5,551	5,826	5%
LIHTC*	34,220	37,865	11%
HOME**	6,451	20,639	220%
Section 515**	10,877	14,719	35%
Section 538	422	424	0%
Public Housing**	6,813	6,890	1%
<b>Total</b>	<b>90,218</b>	<b>109,864</b>	<b>22%</b>

\*Data updated (previous data outdated by less than one year)

\*\*Data updated (previous data outdated by more than one year)

## February 2015

The February 2015 data refresh incorporated five new data files, an update to the logic used to determine which HUD Insurance programs would be included in the database, and an update on how LIHTC subsidy status is calculated. Previously, all properties that were HUD Insured were included in the database. During this refresh, selected HUD Insurance programs that are not affiliated with affordable rental housing were excluded from the database. This change resulted in a reduction of the number of active units in the database by one million. For a list of HUD programs included in the database, see the Data Dictionary.

Additionally, LIHTC subsidies listed as non-programmatic in the LIHTC Database were reclassified as inactive, which resulted in a significant reduction in the number of active LIHTC subsidies.

### *Number of Subsidies Before and After February 2015 Refresh*

Subsidy Type	Before Refresh	After Refresh	Change
Section 8*	21,227	21,733	2%
Section 202 Direct Loans	2,266	2,231	-2%
State HFA 236	228	214,206	-6%

<b>HUD Insured*</b>	13,964	5,551	-60%
<b>LIHTC*</b>	37,184	34,220	-8%
<b>HOME</b>	6,595	6,451	-2%
<b>Section 515</b>	11,001	10,877	-1%
<b>Section 538</b>	422	422	0%
<b>Public Housing</b>	6,813	6,813	0%
<b>Total</b>	101,407	90,218	-11%

\*Data updated (previous data outdated by less than one year)

\*\*Data updated (previous data outdated by more than one year)

## Data Integration and Cleaning Protocol

### Procedure for Integrating New or Updated Data

The NHPD is updated three times a year. At these times, any updates made to source datasets by the dataset originator (such as the Department of Housing and Urban Development) are imported into the Database. A list of all data sources included in the NHPD and their most recent update date can be found [here](#).

As data quality and data format vary by data source and each data source may contain duplicate property entries, automated procedures have been created to standardize imported data and reduce the number of incorrect or duplicate entries in the NHPD. During the import process, data inconsistencies that cannot be corrected through the automated process are flagged for manual cleaning. Manual cleaning takes place at each tri-annual data update and on an ongoing basis. The procedures used for both automated and manual cleaning are described below.

### Automated Cleaning Procedures

Automated cleaning procedures center on correcting property addresses and latitude and longitude values, as these fields are the primary matching keys for identifying and linking all of a property's subsidies. As property addresses are imported into the Database, they are standardized according to USPS standard address protocols and extraneous characters or words appearing in addresses are attempted to be removed. Likewise, property names are standardized and extraneous characters are attempted to be removed. These procedures improve the rate of positive property matches between data sources.

Once addresses are standardized, they are matched and compared to existing address records in the database using subsidy ID. If the address is new or has changed, it is entered into an address verification system. The system currently utilized is based on US Postal Service Coding Accuracy Support System (USPS CASS) certification provided by Smarty Streets and Melissa Data. These address verification systems return latitude, longitude, and other geographic information about the area the property is located in. Geocodes from Melissa Data and Smarty Streets are only kept for building level property matches. If the address verification systems do not return a match, the latitude and longitude provided from the originating data source are used if available.

After addresses have been standardized and verified using Smarty Streets and Melissa Data, they are matched to comparable addresses in the database using the following fields:

- Property address, city, and state
- Property name, city, state, zip code, and total units +/- 2

- Property ID
- Latitude and longitude
- Referencing subsidy ID

Any subsidy record that matches based on these fields is considered to be awarded to the same property. If two records with different property addresses are matched by these rules, an admin user select which property address to display in the database. Any property records missing street address, city, state, total units, latitude, or longitude are flagged for manual review and are withheld from the database until these fields can be populated.

### Manual Cleaning Procedures

Several types of data issues lead to manual review and cleaning. First, all properties that do not CASS certify with a valid USPS address in the automated cleaning process are flagged for manual review. These properties are checked using Google Maps to validate the address and are manually cross checked to the NHPD to ensure that there are no duplicate properties located in the database once the address is updated. Any changes made to property and subsidy records in the database are retained after subsequent data updates. Several common address errors and their corresponding cleaning protocol are listed below.

#### **Incomplete or Incorrect Address: Incomplete or Incorrect Address:**

- Case 1: Address is incomplete and does not contain a house number. (Ex. Main St.)
- Case 2: Address is a set of cross streets. (Ex. 5th and Vine)
- Case 3: Address contains no street address. (ex. apartment name or city is repeated in street address line)
- Case 4: Address contains misspellings (ex. 100 Mairn St., Phonix, AZ)
- Case 5: Address contains incorrect information. (ex. 100 Main St., Phoenix, AR)
- Case 6: Address contains a range of street numbers. (ex. 1-100 Main St., Phoenix, AR)

**Solution:** The correct property address is researched by googling the apartment name and location to identify the official address and by using google maps to verify the address and identify a corresponding building footprint. Once a correct address is found, it is cross checked to the NHPD to ensure that a duplicate property with the correct address is not present. If a duplicate is found, the subsidy information for the duplicate property is merged. Each of the corrected addresses are CASS certified using SmartyStreets. If the corrected address does not CASS certify the latitude and longitude provided by Google Maps is entered into the record. If an address is too incomplete to identify a property's location, the property is flagged as 'incomplete' and remains flagged for cleaning. It cannot be updated until more information is received from the source data.

- Case 6: Address does not offer a mail receptacle.

**Solution:** The address is viewed on google maps to determine that the building footprint is viewable. If the property address is confirmed, the latitude and longitude provided by Google Maps is entered into the record. If the footprint cannot easily be confirmed, the latitude and longitude provided by the source data is retained and the property remains flagged.

Second, all properties that have received a comment from users or staff from [databasefeedback@preservationdatabase.org](mailto:databasefeedback@preservationdatabase.org) are flagged for manual review. Comments may pertain to incorrect address information as described above, indicate that a property is a duplicate property, state that a property's name has changed, or other data issues that require change and verification. Several common duplicate and name discrepancy scenarios and their corresponding cleaning protocol are listed below.

**Property is a Duplicate Entry:**

- Case 1: Properties with same street name and city/state, same or similar name, unit count is +/- 2.
- Case 2: Properties with same property name, city/state, unit count +/- 2, different street address.

**Solution:** The main property address is validated as described above. Then the subsidies located at the duplicate property are attached to the property with the valid address or more subsidies.

**Property Name is Incorrect or Has Changed:**

- Case 1: Property name on Google Maps is different.
- Case 2: Property name on official website site is different.

**Solution:** The correct name is verified using Google and Google Maps and is replaced.

- Case 3: Property name is correct, but can be linked to a duplicate property with different address and different property name (most likely from a new data source).

**Solution:** The correct name is verified using Google and Google Maps. The subsidy from the older dataset with the incorrect name is linked to the property with the updated name from the newer dataset.

Third, properties may be flagged for manual review if there are major inconsistencies in property information between data sources, but the property can be linked to another property from a different data source through the use of (HUD) IDs. Likewise if there are major inconsistencies in property information from one update to the next in a particular data source, the property is flagged for manual review. The discrepancies are verified and if they cannot be verified, one source is chosen based on staff's assessment of data quality and the radical nature of the change.