



2013 Annual Awards Entry Form
(Complete one for each entry.)

Entry Name Multifamily Mapping Application

Fill out the entry name <i>exactly</i> as you want it listed in the awards program.

HFA Pennsylvania Housing Finance Agency

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Entry form with description, check(s), and visual aids (optional) must be received by NCSHA by **Monday, July 1, 2013.**

Use this header on the upper right corner of each page.

HFA Pennsylvania Housing Finance Agency

Entry Name Multifamily Mapping Application

Communications	Homeownership	Legislative Advocacy	Management Innovation
<input type="checkbox"/> Annual Report <input type="checkbox"/> Promotional Materials and Newsletters <input type="checkbox"/> Creative Media	<input type="checkbox"/> Empowering New Buyers <input type="checkbox"/> Home Improvement and Rehabilitation <input type="checkbox"/> Encouraging New Production	<input type="checkbox"/> Federal Advocacy <input type="checkbox"/> State Advocacy	<input type="checkbox"/> Financial <input type="checkbox"/> Human Resources <input type="checkbox"/> Operations <input checked="" type="checkbox"/> Technology
Rental Housing	Special Needs Housing	Special Achievement	Are you providing visual aids?
<input type="checkbox"/> Multifamily Management <input type="checkbox"/> Preservation and Rehabilitation <input type="checkbox"/> Encouraging New Production	<input type="checkbox"/> Combating Homelessness <input type="checkbox"/> Housing for Persons with Special Needs	<input type="checkbox"/> Special Achievement	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Description

Location is an important consideration when planning new housing or managing existing housing. By using Geographic Information Systems (GIS), Pennsylvania Housing Finance Agency (PHFA) is able to map its multifamily housing portfolio. The Multifamily Mapping Application is an online mapping tool that enables users to interact with multifamily developments. The application includes tools and menus that perform the following:

- zoom in/out
- pan in all directions
- measure distance
- identify features
- turn layers on/off
- query developments
- search developments
- change background between street map and satellite image

The location of each PHFA multifamily property is displayed on the map as a point feature. To obtain the attribute information for each property, the point feature is joined to its corresponding record in the PHFA database. Properties are color coded by funding type such as PennHOMES (red), Section 8 (green) or tax credit (blue). Additional spatial layers include but are not limited to nursing homes, adult day care centers and school districts. These layers are made visible by clicking a check box next to the layer name under the Layers Menu.

Developments can be queried by county name, project type, occupancy type, vacancy status and other property related criteria. Users can also search for developments by name. Query and search result information is displayed in a table below the map. Properties matching the search criteria are highlighted in yellow. Clicking on a property name in the table opens an image of the property. Placing the mouse cursor over a highlighted point reveals the property name below a thumbnail image.

Meets NCSHA Award Judging Criteria

Innovative

The PHFA database stores a large amount of information for each multifamily development but this data alone does not allow a user to visualize the geographic distribution of properties. By utilizing GIS technology, the Multifamily Mapping Application adds a visual component to the Agency's multifamily portfolio. After a brief training session, PHFA staff have the skills necessary to navigate the map and create their own queries. The results of these queries can be viewed with other features such as roads, nursing homes, schools and medical facilities.

Replicable

The Multifamily Mapping application was developed entirely by PHFA using ESRI ArcGIS software and customized code. HFAs can purchase the software and design a mapping application that is specific to their own needs. If programming experience is limited, ESRI provides an application viewer that does not require written code.

Respond to a management challenge or opportunity

Many of PHFA's multifamily initiatives provide an opportunity to incorporate the Multifamily Mapping Application. Two examples:

- Assists a program that transitions eligible occupants out of nursing homes into affordable housing. PHFA staff can create a query that selects senior developments with vacant units. The results are displayed with the nursing home layer and the measure tool can be used to determine the proximity between a nursing home and a PHFA property.
- Used to review new applications for development. The proposed property sites are mapped and added to the application as a layer. PHFA staff can locate a proposed site before a visit and measure proximity to existing PHFA properties while reviewing a developer's market study/housing needs assessment.

Achieve measurable improvements in agency operations

The Multifamily Mapping Application greatly reduces the planning time required before a site visit. Since developments were previously mapped, time is not wasted locating a property by its street address. Staff can quickly search for a development and print a map with an accurate location.

Provide benefits that outweigh costs

The annual software license is the greatest cost incurred by the Multifamily Mapping Application. The data is updated as needed and the software only requires an occasional upgrade. Costs are justified through increased productivity. With less time spent locating a development staff can devote more time to managing its programs and services.

Demonstrate effective use of resources

The Multifamily Mapping Application is an effective use of PHFA resources. Since the PHFA database already exists, there was no need to purchase additional hardware or design a new database. The application is accessed through the PHFA network and is available to all employees from their office computers or while working in the field.

Achieve strategic objectives

Part of PHFA's mission is to provide affordable rental housing for "older adults, persons of modest means, and those with special housing needs." The Multifamily Mapping Application provides PHFA staff with the tools necessary to support this mission.

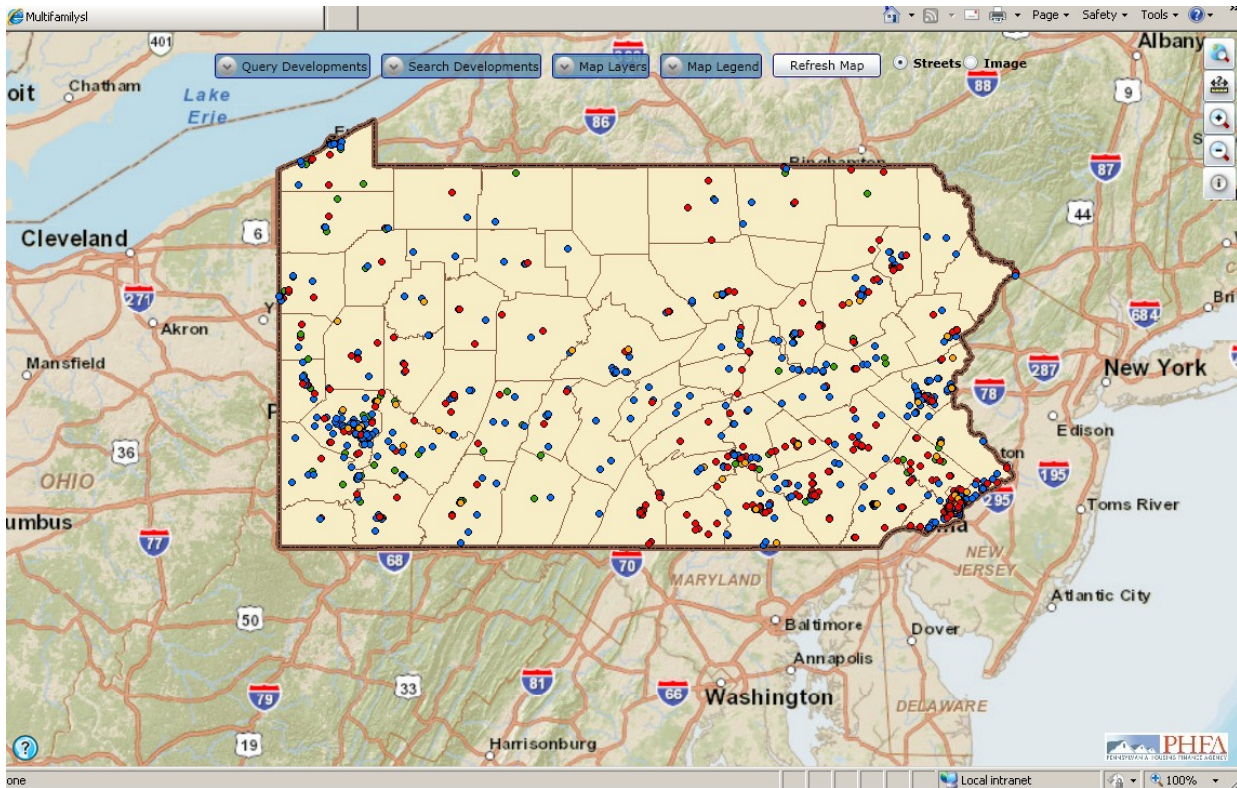
Conclusion

Since its inception, the Multifamily Mapping Application has been a useful tool for PHFA employees. PHFA's investment in GIS technology has helped create an innovative mapping interface for its multifamily portfolio. The application will continue to evolve as software updates provide advanced functionality and users request additional data layers. The application was originally designed for multifamily housing but could be replicated in the future to include mapping options for homeownership and foreclosure prevention programs.

Screenshots on Remaining Pages

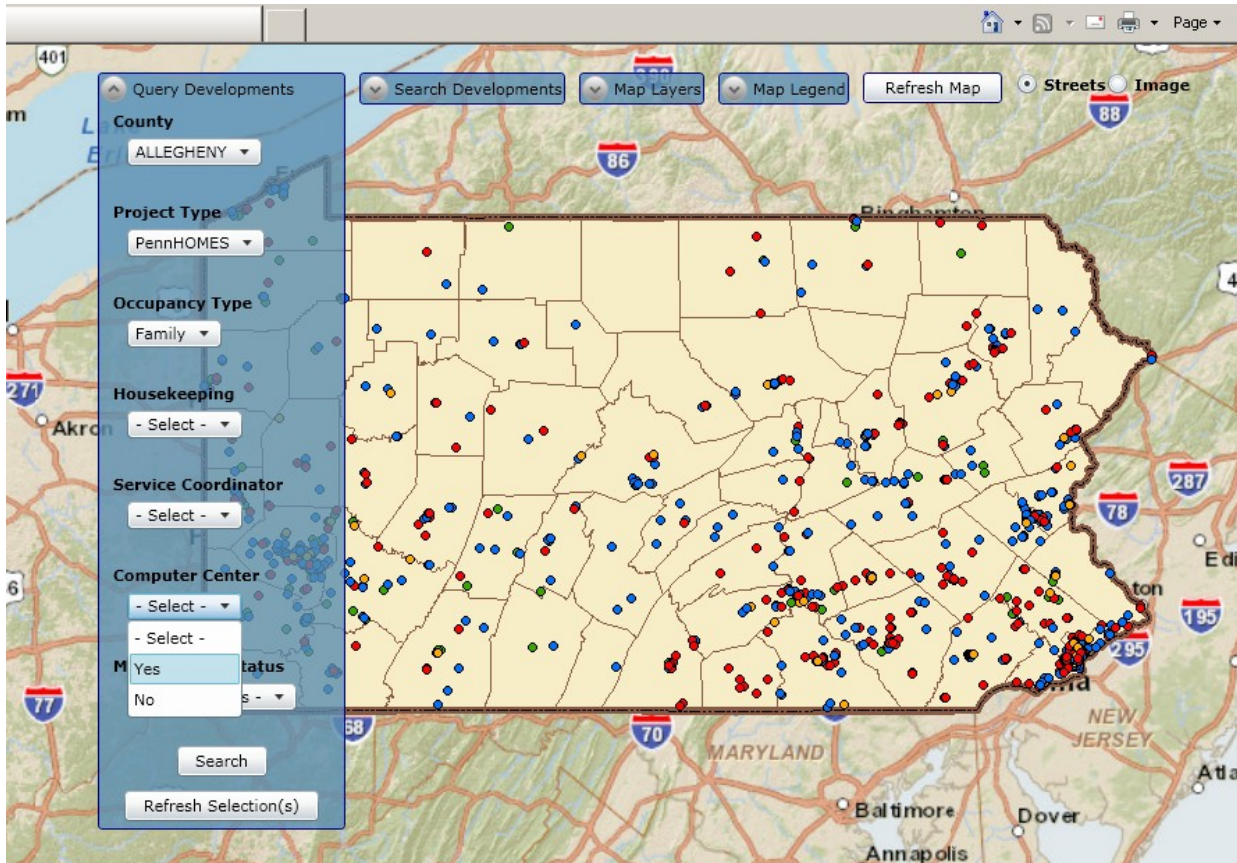
Pennsylvania Housing Finance Agency Multifamily Mapping Application

The Multifamily Mapping Application as it appears in a web browser. The map below displays PHFA multifamily developments (colored points) with state and county boundaries. A world street map serves as a background.



Pennsylvania Housing Finance Agency Multifamily Mapping Application

A query is designed under the **Query Developments** menu. This query will select all family properties with a computer center located in Allegheny County and receive PennHOMES funding. The results will display after clicking the **Search** Button.



Pennsylvania Housing Finance Agency Multifamily Mapping Application

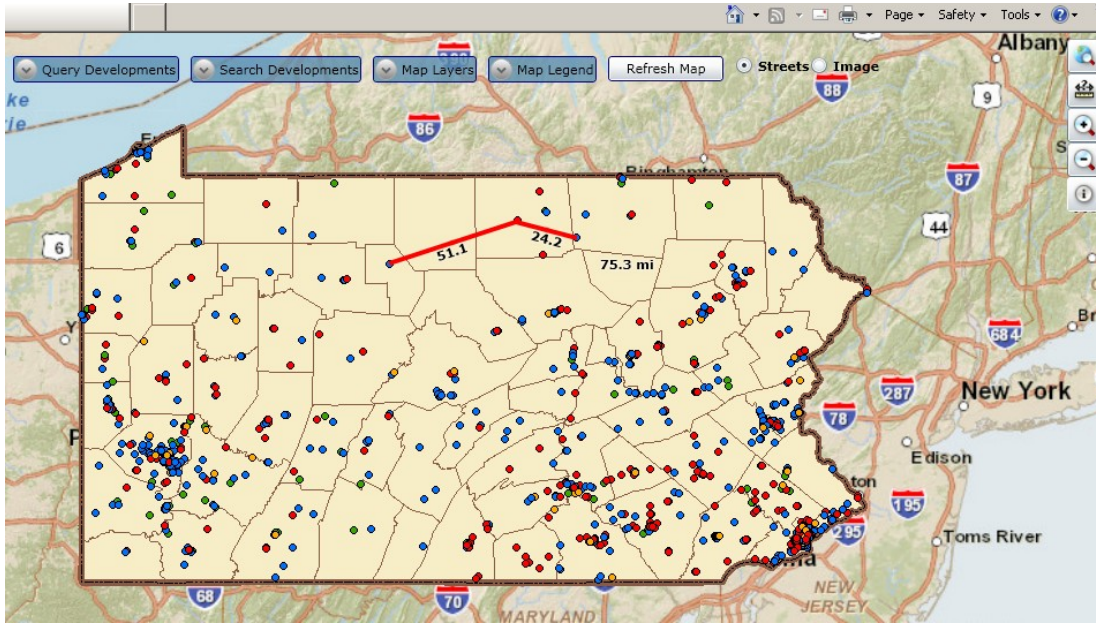
The results of a query that selects senior developments with vacant units are highlighted in yellow and displayed with the nursing home layer (blue plus signs). A portion of the attribute information is shown in the table below the map. The table scrolls up/down and right/left to show additional records and fields.

TCYEAR	TCNUM	PROPERTY	ADDRESS	CITY	ZIP	COUNTY	ONS
	0	CANON HOUSE	121 N Central Ave	Canonsburg	15317-1361	WASHINGTON	724
TC1988	77	PENNSYLVANIAN	21 W 9th St	Erie	16501-1329	ERIE	814
	0	K LEROY IRVIS TOWER	715 Mercer St	Pittsburgh	15219-4147	ALLEGHENY	412
	0	DANIEL FLOOD TOWER	230 Wyoming Ave	Kingston	18704-3535	LUZERNE	570

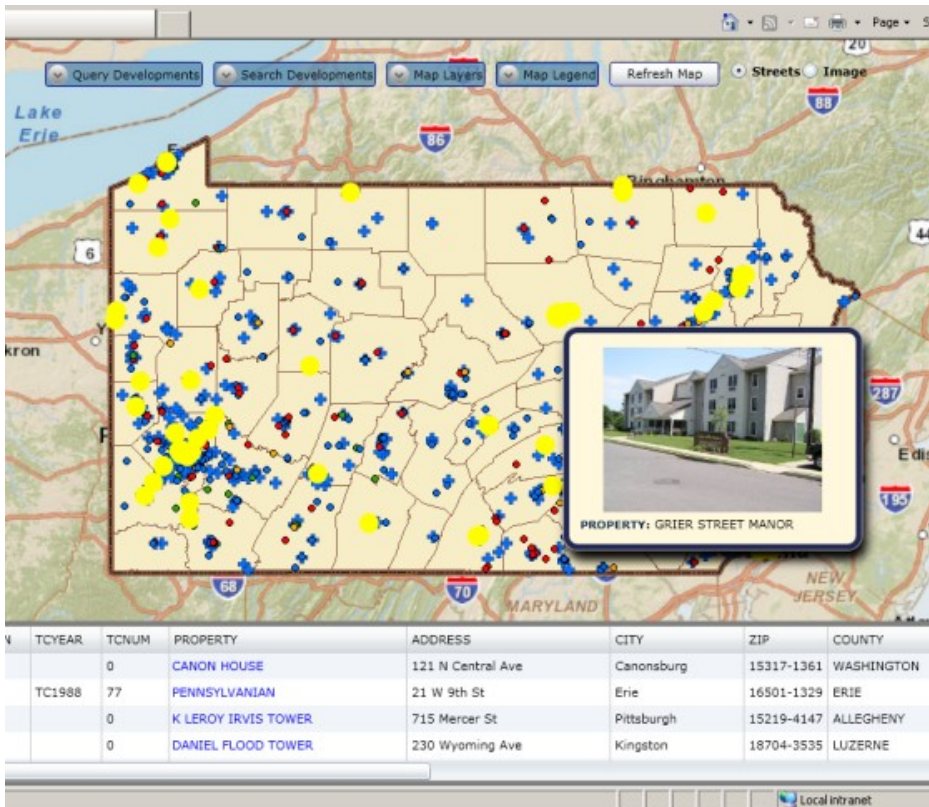
Local intranet

Pennsylvania Housing Finance Agency Multifamily Mapping Application

The **Measure Tool** located on the vertical **Toolbar** (upper right corner) is used to measure distance in miles by clicking on the map. The distance of each red segment is displayed along with the total distance.

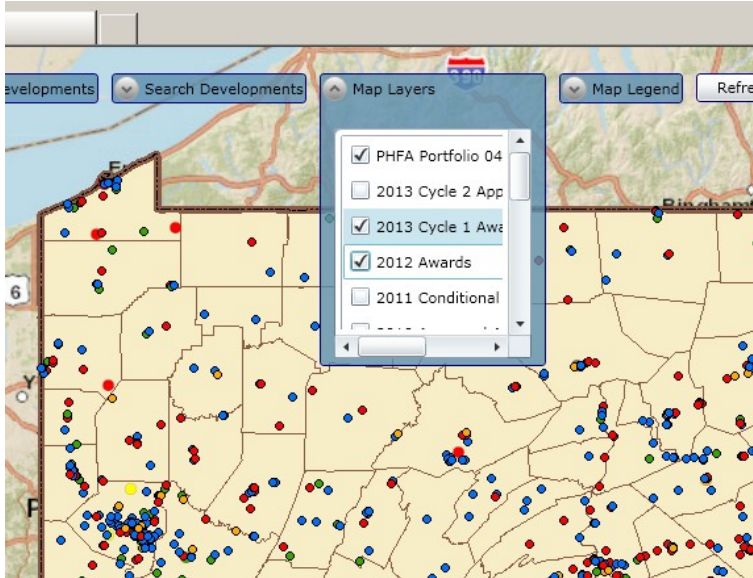


The property name and thumbnail image appear when the mouse cursor is held over a highlighted point.

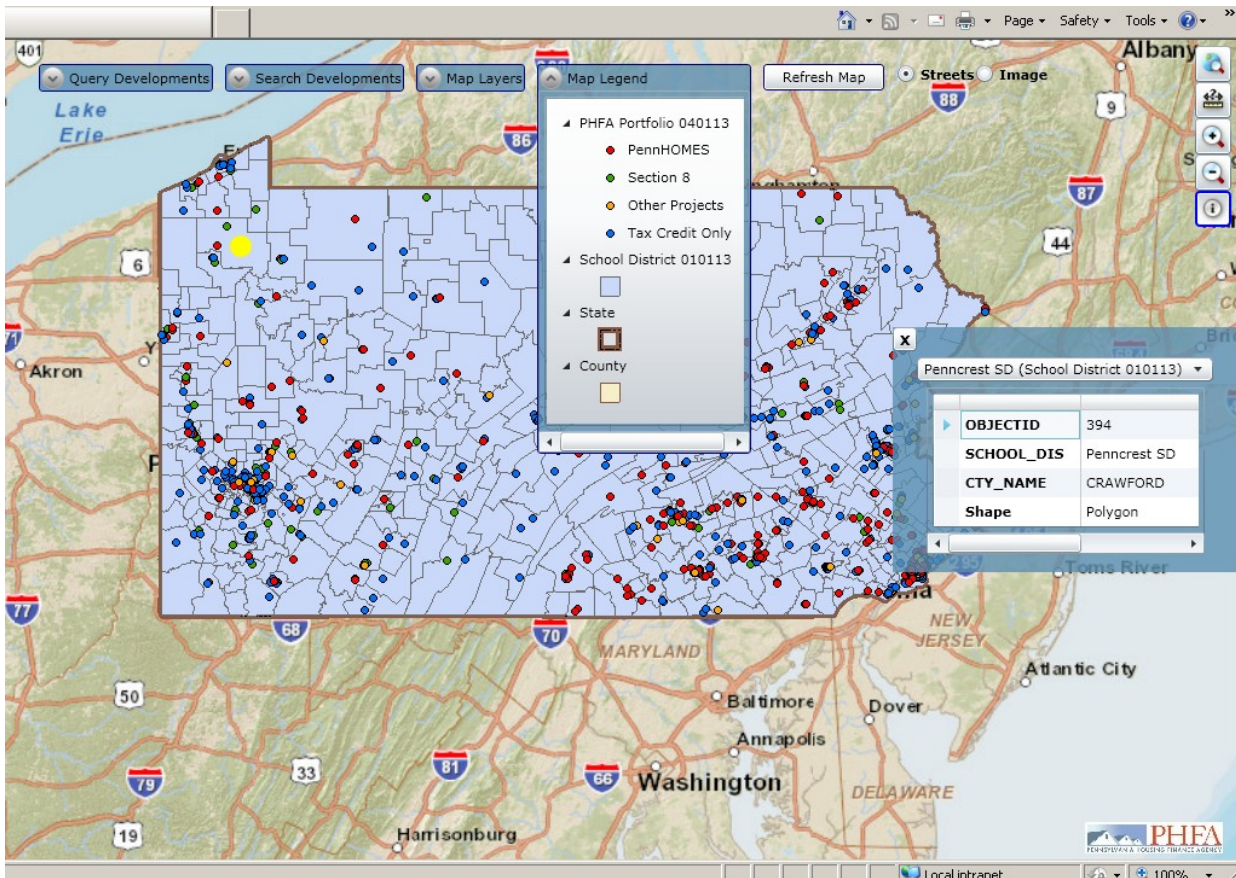


Pennsylvania Housing Finance Agency Multifamily Mapping Application

Turn Layers on and off by checking and un-checking the boxes under the **Map Layers** menu.



Multifamily developments are symbolized by color and overlay school district boundaries. The **Map Legend** shows the current visible layers. Selecting the **Identify Tool** from the **Toolbar** and clicking on the map displays the school district name in the identify box appearing on the right side of the map.



Pennsylvania Housing Finance Agency Multifamily Mapping Application

Multifamily developments displayed on a zoomable street map and satellite image. Users can change the background by clicking the **Streets** and **Image** radio buttons located across the top of the map.

