

# **RESIDENTIAL SALES DATA METHODOLOGY**

CY2009

(Prepared November 2010)

## **A. Source of Data**

The Sales data for calendar year (CY) 2009 are derived from the MdProperty View<sup>1</sup> Sales Databases created for Maryland's 23 counties and Baltimore City

The Maryland Department of Planning (MDP) receives sales files from the State Department of Assessments and Taxation (DAT). The DAT files contain one complete year and are updated monthly (e.g. the December 2009 sales file contains sales with a trade date (TRADATE value YYYYMMDD) for December 10, 2008 - December 05, 2009). MDP assigns x,y mapping coordinates to the sales records based on the latest MdProperty View parcel x,y values at the time of the sales download.

To create CY2009 Residential Sales database with x,y mapping locations the following steps are taken:

Step 1 Statewide Sales Database - It is necessary to combine two separate (12 month) sales files received from DAT to create a CY2009 database. The May 10, 2010 sales file is used to obtain the records for June 2009 thru December 2009 and the December 10, 2009 Sales Database is used to obtain the sales for January 2009 thru May 2009. The separate MdProperty View (12 month) sales files for Maryland's 23 counties and Baltimore City are combined into a Statewide (12 month) sales file. When combined the May 10, 2010 statewide file has 132,494 sales records and the December 10, 2009 has 128,770 sales records.

Step 2 Trade Date – From Step 1, the subset of records from the May sales file where the sales trade date (TRADATE) is between June 1, 2009 (20090601) and December 31, 2009 (20091231) are extracted (85,537 of the 132,494 records from Step 1). Similarly the December sales file is used to extract the records where the sales trade date (TRADATE is between January 1, 2009 (20090101) and May 31, 2009 (20090531), 50,436 of the 128,770 records. When these two extracts are combined they form the initial CY2009 database of all sales records, 135,973 records. This procedure of combining records from two sales files also assures that no records are missed for the calendar year since there is a lag for some jurisdiction in recording and updating their sales records.

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<sup>1</sup> *MdProperty View*, first developed by the Maryland Department of Planning (MDP) in 1996 and now nearing the completion of the fourteenth edition, is an electronic, CD-ROM based GIS (Geographic Information System) tool for accessing information on Maryland's 2.2 million land parcels referenced spatially via x,y points to their location on property maps that can be viewed with other map layers such as State Highway Administration roads. For more information go to [http://www.mdp.state.md.us/tax\\_mos.htm](http://www.mdp.state.md.us/tax_mos.htm)

Step 3 Conveyance Type - From Step 2, only Sales Database records where the method of conveyance at the time of sale is an arms-length transfer of a single parcel (CONVEY1 field values of 1 or 2) are included (51,336 of the 135,973 records from Step 2).

Step 4 Improvement Value – From Step 3, Sales Database records are included with an improvement value equal to or greater than \$10,000 (CURIMPVL field, current full market improvement value). Also included are records where CURIMPVL is less than \$10,000 and the sale improvement value (SALIMPVL field) is equal to or greater than \$10,000. This ensures that the properties included are those that are most likely to have a dwelling unit and that parcels are excluded where there is only land value with little or no improvement value (48,161 of the 51,336 records from Step 3). A new field, IMPVALUE, is created and is populated with the value in CURIMPVL where that field has a value of \$10,000 or more otherwise IMPVALUE is populated with the value in SALIMPVL which has a value of \$10,000 or more).

Step 5 Residential Sales - From Step 4, only residential (excludes agricultural residential) sales records are included in the analysis, i.e. sales records with a LU (Land Use) code of “R” (Residential), “TH” (Townhouse) or “U” (Residential Condominium). (46,949 of the 48,161 records from Step 4)

The Residential Sales records are further grouped into five types based on the Land Use (LU) and the Dwelling Description (DESCDWEL) fields in the Sales Database. The five residential sales Housing Types (HU\_Type) are:

Single Family (Hu = SF) (24,433 records)

- Dwelling Description includes single family, split foyer or split level

Townhouse (Hu = TH) (12,937 records)

- Dwelling Description includes townhouse, LU = “R”, “U” or ”TH”
- Dwelling Description is blank or no data and LU = “TH”

Condominium (Hu = CON) (5,432 records)

- LU = “U” and Dwelling Description is blank
- LU = “U” or “R” and Dwelling Description includes condominium (garden, high-rise, penthouse, studio/efficiency) but Dwelling Description is not condominium townhouse or condominium “single family”
- Also includes 8 condominium storage units that will be deleted in Step 9

Mobile Home (Hu = MH) (132 records)

- Dwelling Description is Mobile Home

Unclassified Residential (Hu = UNK or Hu = RENT) (4,015 records)

- Hu = UNK, Dwelling Description is blank or no data and LU = “R” (3,806 records)
- Hu = RENT, Dwelling Description is “rental dwelling” and LU = “R” (209 records, almost exclusively in Baltimore City)

Sales records initially given a Hu of UNK and RENT (excludes Baltimore City where LU of UNK and RENT are retained as is) are reviewed and assigned to the Single Family (SF), Townhouse (TH), or Condominium (CON) categories based on lot size (ACRES) and the legal description fields (LEGAL1, LEGAL2, & LEGAL3). Parcel Sales records with a lot size of .125 acres or greater are assigned to Single Family. Parcel Sales records with a lot size of .04 or less are assigned to Condominium and sales records with acres over .04 but less than .125 are assigned to Townhouse. Where lot size (ACRES) is not specified, i.e. blank, the LEGAL description fields are used to assign housing unit type, e.g. where the LEGAL description fields include references to “unit” or “bldg”, assigned to Condominium, where “th” assigned to Townhouse and where “lot” or “lt” assigned to Single Family. Similarly sales records with a Hu of CON where the Dwelling Description is blank are reviewed. These parcels are also checked to see if their x,y location is a “stacked point”, i.e. typically multiple condominium records all located at the same x,y location suggesting a multi-unit structure. Where the sales records are not stacked points the lot size (ACRES) is used to classify as stated above for UNK. As a result of the reassignment of housing unit type the revised counts for the 46,949 records are:

Single Family (Hu = SF) (26,557 records)

Townhouse (Hu = TH) (13,476 records)

Condominium (Hu = CON) (5,697 records)

Mobile Home (Hu = MH) (132 records)

Unclassified Residential (Hu = UNK, 878 records or Hu = RENT, 209 records) (1,087 records, most of which are in Baltimore City)

Step 6 Duplicate Sales - There are some instances (less than .5 %) where there are “duplicate” Sales Database records, i.e. multiple records with the same parcel account number (ACCTID), Trade Date (TRADATE) and Consideration Value (CONSIDR1). These records are examined to determine if they are “duplicates”. Upon review, most of the “duplicate” sales reflect instances of transfers involving financial institutions in combination with individual owner purchases or sales. The “duplicates” are removed from the Sales Database records (82 of 46,949 from Step 5, leaving a balance of 46,867).

Step 7 Improvement Versus Consideration Values - For some Sales Database records the improvement value, IMPVALUE (derived from the CURIMPVL or SALIMPVL fields), is considerably higher than the consideration or amount of money paid for the property at the time of the sale (CONSIDR1). To address this issue the data from Step 6 are queried to identify those records where the improvement value exceeds the consideration value by more than 1½ times. These properties are then deleted from the analysis. Also removed are a few records where the CONSIDR1 is less than \$10,000. Thus the residential sales records retained are those where the consideration is two-thirds or more of the improvement value and the consideration is greater than \$10,000. (46,207 of the 46,867 records from Step 6)

Step 8 CONSIDR1 Review – Sales records where the consideration (CONSIDR1) is \$1 Million or more and the Improvement value (IMPVALUE) is 25% or less of the Consideration value (CONSIDR1) are reviewed to determine if the sale is to an owner that is a “business entity”, e.g. LLC. These are likely to be properties purchased for redevelopment or a use other than residential sale and occupancy. For CY2009, 15 such sales were identified and removed from the sales database. Also, all sales where the CONSIDR1 is \$1 million or more and the Improvement Value is 10% or less of the Consideration Value are reviewed to determine if the consideration value is in fact correct. For these sales, the CONSIDR1 from the sales download database is compared to the current posting of the sales data on the DAT website. For CY2009, this resulted in corrections to the CONSIDR1 value for 1 record.

This leaves a balance of 46,207 less 15 or 46,192 sales records.

Step 9 Garage and Parking Spaces, Storage Units and Boat Slips & Piers – The LEGAL description fields are queried for references to “garage” or “parking” or “storage” and then reviewed to determine if any of the referenced sales records are exclusive of a housing unit. Of the sales records identified, 33 had a legal description and consideration values (\$30k or less) that suggest the records are exclusive of a housing unit. Similarly the LEGAL description fields are queried for references to “boat” or “slip” or “pier” or “dock” and reviewed to determine if any of the referenced sales records are exclusive of a housing unit. Of the sales records identified, 22 had legal descriptions and consideration values (\$40k or less) that suggest the records are likely to be exclusive of a housing unit. This resulted in the removal of 55 sales records, leaving a balance of 46,137 for CY2009.

Step 10 Sales with x,y Location - At the time the sales records are extracted they are assigned x,y mapping locations based on the currently available MdProperty View parcel x,y points. To improve the mapping, the most recent MdProperty View edition year x,y mapping coordinates (2009 Edition for all counties) are used to improve the x,y values. Even with this improvement, some of the more recent sales records have not yet been mapped. For purposes of this analysis, which includes small areas (see Step 11), only sales records that have x,y mapping locations are included:

CY2009 Residential sales records from Step 9 = 46,137

With x,y location = 45,855 = 99.4%

Step 11 Small Geographic Area Assignments – Every sales record is assigned a jurisdiction identifier (23 counties and Baltimore City) and, where applicable, a municipality identifier based on fields that are in the Sales Database record. The town code description (DESCTOWN) identifies the municipality. (Updated based on MDPV2009 for all jurisdictions).

In addition, the Sales records are also tagged with small geographic area identifiers for purposes of tabular analysis and map display.

Each sales record from Step 10 is assigned identifiers for 2009 USPS Zip Code, 2000 Census Tract and 2000 Block Group (block groups are subsets of census tracts).

MdProperty View contains boundary files (polygons map layers) for the three geographic areas. Using a spatial join the identifier for the Zip Code, Census Tract and Block Group are assigned to each sales record based on its x,y location and its intersection with the respective polygon boundary file.

The geographic area identifier fields included on the calendar year sales record files are: COUNTY (positions 1-2 are the State Code, 24, and positions 3-5 are the jurisdiction FIPS code), DESC TOWN (Town Code Name preceded by a four character County abbreviation), ZIPCODE1 (5 digit USPS Zip code), ZIPCODE2 (5 digit USPS Zip code preceded by 5 digit County Code), ZIPNAME (Zip Code Description), CT2000 & BG2000 (2000 census tract and block group, the first 5 positions are the County code, positions 6-11 are the census tract and position 12 is the block group).

Each sales record is also tagged with its PFA (Smart Growth Priority Funding Area) identifier based on the Priority Funding Area as of August 24, 2010. A sales record is either inside the PFA (inPFA), in a PFA Comment Area (inPFAc) or outside the PFA (outPFA).

Step 12 Year Built - The year built (YEARBLT field) is determined based on the values for year built field found in the year built field in the Sales database records provided to MDP by DAT. These values are supplemented with the year built field values from MdProperty View. Specifically, the YEARBLT field is given the value in MdPV2009 where the YEARBLT field is not specified (i.e. blank) in the sales record and is populated in MdPV. Where the MdPV and Sales YEARBLT fields are both populated and have different values the one with the more recent year built is used. The values in this field are also reviewed and edited for any YEARBLT values that are out of range. Using this procedure a YEARBLT value is assigned to 45,109 of the 45,855 residential sales records from Step 10, leaving 746 records with a year built not specified.

Step 13 Revised Housing Unit Type – Using the latest MdPV 2009 property database records the sales record (LU) and dwelling description (DESCDWEL) fields are compared to the same fields in MdPV. Where they are different the MdPV fields are used to improve the housing unit type (HU) assignments from Step 5. Of the 45,855 residential sales records from Step 10, 6 have a LU type that is not residential in MdPV. These records are removed from the residential sales database leaving a balance of 45,849. The final Statewide breakdown of the 45,849 CY2009 Residential Sales Database records by housing unit type is:

Single Family (Hu = SF) (25,908 records)

Townhouse (Hu = TH) (13,348 records)

Condominium (Hu = CON) (5,423 records)

Mobile Home (Hu = MH) (132 records)

Unclassified Residential (Hu = UNK, 840 records or Hu =RENT, 198 records) (1,038 records, most of which are in Baltimore City)

Step 14 Final Residential Sales Database for CY2009 – Selected fields from Step 13 for the 45,849 records are written out to the final sales database as a shapefile, R\_sale09.shp, with the following field content:

R_sale08.shp	Shape	Point
	Acctid	020680990045400
	Hu	CON
	Trdate	20080630
	Considr1	412000
	Impvalue	190380
	Yearblt	
	County	24003
	Descdown	ANNE Annapolis
	Zipcode1	21403
	Zipcode2	02400321403
	Zipname	Eastport
	Ct2000	24003706402
	Bg2000	240037064021
	PFA	inPFA

This database is available for use with *MdProperty View* and *FINDER*. The database can also be used to generate aggregate statistical reports on residential sales for CY2009 for the State, 23 counties and Baltimore City, municipalities, zip codes, census tracts and block groups as well as areas in and out of Priority Funding Areas.