

# **RESIDENTIAL SALES DATA METHODOLOGY**

CY2007

(Prepared June 2008)

## **A. Source of Data**

The Sales data for calendar year (CY) 2007 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 2007 sales file contains sales with a trade date (TRADATE value YYYYMMDD) for December 10, 2006 - December 09, 2007). 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 CY2007 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 CY2007 database. The May 10, 2008 sales file is used to obtain the records for June 2007 thru December 2007 and the December 10, 2007 Sales Database is used to obtain the sales for January 2007 thru May 2007. 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, 2008 statewide file has 158,073 sales records and the December 10, 2007 has 176,445 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, 2007 (20070601) and December 31, 2007 (20071231) are extracted (99,946 of the 158,073 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, 2007 (20070101) and May 31, 2007 (20070531), 81,597 of the 176,445 records. When these two extracts are combined they form the initial CY2007 database of all sales records, 181,543 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 twelfth 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 (95,055 of the 181,543 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 (88,254 of the 95,055 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). (85,743 of the 88,254 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) (42,145 records)

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

Townhouse (Hu = TH) (26,153 records)

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

Condominium (Hu = CON) (11,489 records)

- LU = “U” and Dwelling Description is blank (10,453 records)
- 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” (1,036 records)

Mobile Home (Hu = MH) (319 records)

- Dwelling Description is Mobile Home

Unclassified Residential (Hu = UNK or Hu = RENT) (5,637 records)

- Hu = UNK, Dwelling Description is blank or no data and LU = “R” (4,683 records)
- Hu = RENT, Dwelling Description is “rental dwelling” and LU = “R” (954 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 85,743 records are:

Single Family (Hu = SF) (44,784 records)

Townhouse (Hu = TH) (27,060 records)

Condominium (Hu = CON) (11,588 records)

Mobile Home (Hu = MH) (319 records)

Unclassified Residential (Hu = UNK, 1,043 records or Hu = RENT, 949 records) (1,992 records of which all 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 (306 of 85,743 from Step 5, leaving a balance of 85,437).

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. (84,568 of the 85,437 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 CY2007, 53 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 CY2007, this resulted in corrections to the CONSIDR1 value for 12 records and the deletion of one additional record no longer shown as arms length.

This leaves a balance of 84,568 less 54 or 84,514 sales records.

Step 9 Garage and Parking Spaces, Storage Units and Boat Slips – 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 61 sales records identified, 36 had a legal description and consideration values (\$25k 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” and reviewed to determine if any of the referenced sales records are exclusive of a housing unit. Of the 59 sales records identified, 27 had legal descriptions and consideration values (\$50k or less) that suggest the records are likely to be exclusive of a housing unit. This resulted in the removal of 63 sales records, leaving a balance of 84,451 for CY2007.

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 (2007 Edition for all counties except Anne Arundel and Wicomico, 2006 Edition) 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:

CY2007 Residential sales records from Step 9 = 84,451

With x,y location = 83,580 = 99.0%

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 MdPV2007 for all jurisdictions except Anne Arundel and Wicomico, MdPV2006).

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 the 2007 USPS Zip Codes (2006 Zip Codes for Montgomery, Anne Arundel and Wicomico), 2000 Census Tract and 2000 Block Group (block groups are subsets of census tracts) in which it is located. 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 June 20, 2008. 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 MdPV2007 (all counties except Anne Arundel and Wicomico, MdPV2006) where the YEARBLT field is not specified (i.e. blank) in the sales record and is populated in MdPV. The values in this field are reviewed and edited for any YEARBLT values that are out of range. Using this procedure a YEARBLT value is assigned to 80,486 of the 83,580 residential sales records from Step 10, leaving 3,094 records with a year built not specified.

Step 13 Revised Housing Unit Type – Using the latest MdPV 2007 property database records (MdPV2006 for Anne Arundel and Wicomico) 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 83,580 residential sales records from Step 10, 151 have a LU type that is no longer residential in MdPV. These records are removed from the residential sales database leaving a balance of 83,429. The final Statewide breakdown of the 83,429 CY2007 Residential Sales Database records by housing unit type is:

Single Family (Hu = SF) (43,652 records)

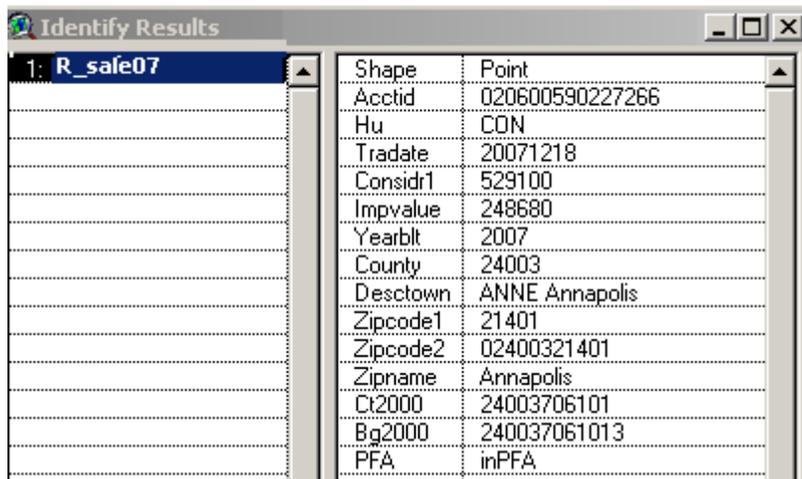
Townhouse (Hu = TH) (27,163 records)

Condominium (Hu = CON) (10,603 records)

Mobile Home (Hu = MH) (307 records)

Unclassified Residential (Hu = UNK, 867 records or Hu =RENT, 837records) (1,704 records of which all are in Baltimore City)

Step 14 Final Residential Sales Database for CY2007 – Selected fields from Step 13 for the 83,429 records are written out to the final sales database as a shapefile, R\_sale07.shp, with the following field content:



The screenshot shows a window titled "Identify Results" with a table of data for record 1. The table has two columns: "Shape" and "Point". The data is as follows:

Shape	Point
Acctid	020600590227266
Hu	CON
Tradate	20071218
Considr1	529100
Impvalue	248680
Yearblt	2007
County	24003
Descctown	ANNE Annapolis
Zipcode1	21401
Zipcode2	02400321401
Zipname	Annapolis
Ct2000	24003706101
Bq2000	240037061013
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 CY2007 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.