

RESIDENTIAL SALES DATA METHODOLOGY

CY2010

(Prepared April 2012)

The Sales data for calendar year (CY) 2010 are derived from the *MdProperty View*¹ 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 (SDAT). The SDAT files contain one complete year and are updated monthly (e.g. the December 2010 sales file contains sales with a trade date (TRADATE value YYYYMMDD) for December 10, 2009 - December 07, 2010).² 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 CY2010 Residential Sales database with x,y mapping locations the following steps are taken:

Step 1 Statewide Sales Database - It is necessary to combine three separate sales files received from SDAT to create a CY2010 database. The December 2010 sales file was used to obtain the records for January 2010 thru December 2010. The file contained a total of 136,903 records. The December 2011 sales database was used to obtain the sales for December 2010 and contained 128,387 records. The March 2011 sales database was used to obtain the March 2010 through December 2010 records. This file contained 128,876 records. The separate *MdProperty View* (12 month) sales files for Maryland's 23 counties and Baltimore City were combined into a Statewide (12 month) sales file that contained 394,166 records.

Typical processing of sales transactions would use the December 2010 and May 2011 sales files in order to best capture the entire 2010 calendar year sales. Those two files are used because there is a lag of three or four months in the recording of property sales. Usually the May 2011 file (which would contain records for May 2010 to May 2011) would be used to ensure complete coverage of the last three to five months of 2010. However, because of the installation of a new system by SDAT, no monthly sales file was generated between March 2010 and December 2010. As a result, there is a strong likelihood that coverage for the latter part of 2010 is incomplete so that the 2010 calendar year sales data may not be directly comparable to prior year sales data.

¹ *MdProperty View*, first developed by the Maryland Department of Planning (MDP) in 1996 and now nearing the completion of the fifteenth 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://planning.maryland.gov/OurProducts/PropertyMapProducts/MDPropertyViewProducts.shtml>

² When the SDAT converted their data system to the Manatron, Inc. GRM customCAMA Integrated Property Tax Software System in 2011, there was a delay in receiving an entire year of sales data. To ensure that all the records for CY 2010 were included, it was necessary to include 2010 sales from the March 2011 sales download.

Step 2 Trade Date – From Step 1, the statewide file was queried to obtain only the records with a sales trade data (TRADATE) between January 1, 2010 (20100101) and December 31, 2010 (20101231). These records were extracted to create the statewide 2010 sales file which contained 260,977 records.

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 (96,957 of the 260,977 records from Step 2 are kept.)

Step 4 Duplicate Sales - There is a review of the database for “duplicate” sales database records, i.e. multiple records with the same parcel account number (ACCTID), Trade Date (TRADATE) and Consideration Value (CONSIDR1). Upon review, most of the “duplicate” sales reflect instances of transfers involving financial institutions or home builders in combination with individual owner purchases or sales. The “duplicates” are removed from the Sales Database records. In cases where there was more than one group of duplicates, the record with the highest transaction number (TRANSNO1) was retained. (52,961 of the 96,957 records from Step 3 are kept.)

Step 5 Residential Land Use – 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). (51,322 of the 52,961 records from Step 4 are kept.)

Step 6 Improvement Value – From Step 5, 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 (49,786 of the 51,322 records from Step 5 are kept.) A new field, IMPVALUE, is created and is populated with the value in CURIMPVL where that field has a value of \$10,000, or is populated with the value in SALIMPVL (with a value of \$10,000 or more) if CURIMPVL is less than \$10,000.

After an initial review of the records, it was determined that a significant number of records contained zeros in the current improvement value (CURIMPVL) and the sale improvement value (SALIMPVL) because SDAT did not have the data available; this affected 6,502 records. To ensure the greatest number of records in the total database, the new full market improvement value (NFMIMPVL) from the March 2012 statewide parcel dataset download was used to populate the improvement value field (IMPVALUE) for the affected records.

At the end of processing, the IMPVALUE field is populated by values from current improvement value (CURIMPVL), sale improvement value (SALIMPVL), or new full market improvement value (NFMIMPVL) in that order, as long as the value is \$10,000 or greater.

Step 7 Duplicate Account Numbers - Records were reviewed again for duplicate occurrences of the same account numbers to eliminate records where business entities, banks, home builders or mortgage companies were listed as the owner of the property rather than a private

individual(s). Account number duplicates were deleted if the owner was determined to be a business, bank, home builder, or mortgage company which resulted in keeping records with a private individual(s) as the owner. For all duplicate transactions where the records meet the above criteria, records were deleted if the consideration (CONSIDR1) was less than 60% of the current total value (CURTTLVL). (48,332 of the 49,786 records from Step 6 are kept.)

Step 8 Residential Sales – When the State Department of Assessments and Taxation (SDAT) converted their data system to the Manatron, Inc. GRM custom CAMA Integrated Property Tax Software System in 2011, they took advantage of the opportunity to substantially reformat their core datasets. One of the changes they made was to redevelop the structure grade, type of construction, number of stories/style and building type codes used to identify the specific characteristics of buildings found on a given property. Structure codes and descriptions have changed significantly as compared to earlier Edition years of *MdProperty View*.

For this reason, a special statewide extract of all structure codes and their accompanying descriptions was created from the February 2012 Statewide Parcel extract downloaded from the SDAT website. This structure code extract was then matched to *MdProperty View* 2010 Edition, and the redeveloped structure codes were used to produce the 2010 Residential Sales extract, with the structure codes used in *MdProperty View* 2010 Edition only being used in the absence of matched structure codes and descriptions from the structure code extract.

A new field (HU_Type) is added to the database and the residential sales records are grouped into six types based on Dwelling Description (DESCDWEL) fields from the new structure codes and descriptions in the sales database. The six residential sales housing types are:

Single Family (Hu = SF) (28,557 records)

- Dwelling Description includes standard unit, split foyer or split level

Townhouse (Hu = TH) (14,770 records)

- Dwelling Description includes end unit, center unit, or condominium townhouse

Condominium (Hu = CON) (4,197 records)

- Dwelling Description includes condominium garden unit, high-rise, penthouse, studio

Mobile Home (Hu = MH) (127 records)

- Dwelling Description is mobile home

Unclassified Residential (Hu = UNK or Hu = RENT) (630 records)

- Hu = UNK, Dwelling Description is blank or no data (52 records)
- Hu = RENT, Dwelling Description is "rental dwelling" (578 records)

Other (Hu = OTH) (51 records)

- Dwelling Description includes parking space, storage unit, or boat slip
- These records are deleted from the dataset. This leaves a balance of 48,281 records.

Step 9 Current Total Values Versus Consideration Value - For some sales database records the current total value (CURTTLVL) 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 8 are queried to identify those records where the current total 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. (45,609 of the 48,281 records from Step 8 are kept.)

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 (2010 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 12), only sales records that have x,y mapping locations are included:

CY2010 Residential sales records from Step 9 = 45,609
With x,y location = 45,371 = 99.5%

There were also records where the account number did not have a corresponding record in *MdProperty View* 2010 Edition. These records were deleted leaving a balance of 45,354 records.

Step 11 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 CY2010, 63 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 SDAT website. For CY2010, this resulted in a correction to one record.

This leaves a balance of 45,291 records.

Step 12 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 MdPV2010 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 11 is assigned identifiers for 2010 USPS Zip Code, 2000 and 2010 Census Tract and 2000 and 2010 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), CT2010 (2010 census tract), and BG2010 (2010 block group). For census tract and block group data, 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 April 10, 2012. A sales record is either inside the PFA (inPFA), in a PFA Comment Area (inPFAc) or outside the PFA (outPFA).

Step 13 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 SDAT. These values are supplemented with the year built field values from *MdProperty View*. Specifically, the YEARBLT field is given the value in MdpV2010 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 44,296 of the 45,292 residential sales records from Step 11, leaving 996 records with a year built not specified.

Step 14 Revised Housing Unit Type – Using the latest MdpV 2010 property database records, the sales record land use (LU) field is compared to the same fields in MdpV. Where they are different, the MdpV fields are used to improve the LU field and eliminate records where the land use is not residential. Of the 45,292 residential sales records from Step 11, 182 have a LU type that is not residential. These records are removed from the residential sales database leaving a balance of 45,109. The final statewide breakdown of the 45,109 CY2010 Residential Sales Database records by housing unit type is:

Single Family (Hu = SF) (26,762 records)

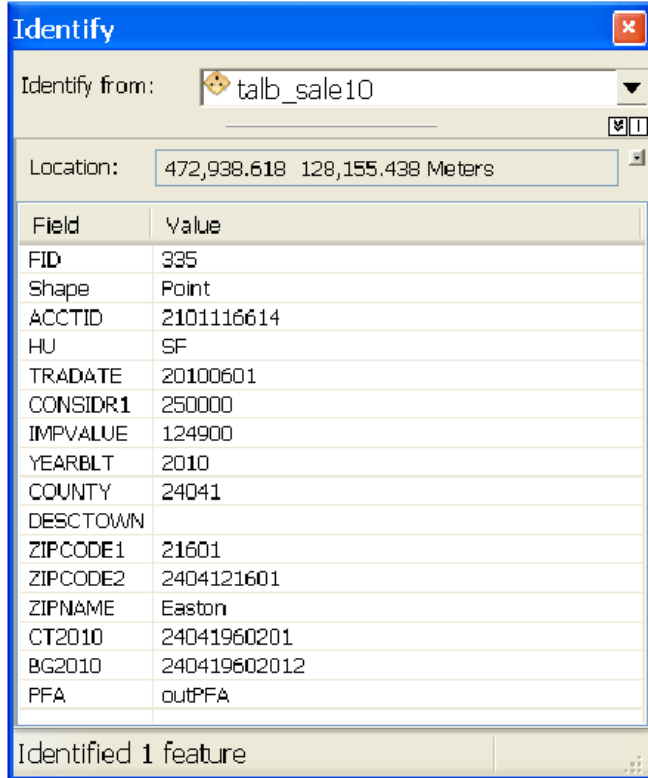
Townhouse (Hu = TH) (13,775 records)

Condominium (Hu = CON) (3,942 records)

Mobile Home (Hu = MH) (107 records)

Unclassified Residential (Hu = UNK, 30 records or Hu = RENT, 493 records)

Step 15 Final Residential Sales Database for CY2010 – Selected fields from Step 14 for the 45,109 records are written out to the final sales database as a shapefile, for example, talb_sale10.shp, with the following field content:



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 CY2010 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.