RESIDENTIAL SALES DATA METHODOLOGY
CY2005
(Originally Prepared July 2006, Revised August 2007)

A. Source of Data

The Sales data for calendar year (CY) 2005 are derived from the MdProperty View[1] Sales Databases created for Maryland's 23 counties and Baltimore.

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 2005 sales file contains sales with a trade date (TRADATE value YYYYMMDD) for December 10, 2004 - December 09, 2005). 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.

To create CY2005 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 CY2005 database. The May 10, 2006 sales file is used to obtain the records for May 10, 2005 to December 31, 2005 and the December 10, 2005 Sales Database is used to obtain the sales for January 1, 2005 through May 9, 2005. The separate MdProperty View September (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, 2006 Statewide file has 243,326 sales records and the December 10, 2005 has 244,029 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 May 10, 2005 (20050510) and December 31 (20051231) are extracted. (170,061 of the 243,326 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, 2005 (20050101) and May 9, 2005 (20050509), 85,217 of the 244,029 records). When these two extracts are combined they form the initial CY2005 database of all sales records, 255,278 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.

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. (148,155 of the 255,278 records from Step 2)

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[1] *MdProperty View*, first developed by the Maryland Department of Planning (MDP) in 1996 and now in its eleventh 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

Step 4 Improvement Value – From Step 3, only Sales Database records with an improvement value greater than $10,000 (CURIMPVL field, current full market improvement value or SALIMPVL field, sale improvement value) are included. 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. (137,352 of the 148,155 records from Step 3)

Step 5 Residential Sales - From Step 5, 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). (133,764 of the 137,352 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) (68,054 records)
> - Dwelling Description includes single family, split foyer or split lcvel and LU = "R"
>
> Townhouse (Hu = TH) (40,650 records)
> - Dwelling Description includes townhouse
> - Dwelling Description includes townhouse and LU = "U"
> - Dwelling Description is blank or no data and LU = "TH"
>
> Condominium (Hu = CON) (15,551 records)
> - LU = "U" or LU = "R" and Dwelling Description includes condominium (garden, high-rise, penthouse, studio/efficiency) but Dwelling Description is not condominium townhouse
>
> Mobile Home (Hu = MH) (443 records)
> - Dwelling Description is Mobile Home
>
> Unclassified Residential (Hu = UNK or Hu = RENT) (9,066 records)
> - Hu = UNK, Dwelling Description is blank or no data and LU = "R" (7,502 records)
> - Hu = RENT, Dwelling Description is "rental dwelling" and LU = "R" (1,564 records, almost exclusively in Baltimore City)

To the extent possible, sales records initially given a Hu of UNK for Unclassified Residential are reassigned to the Single Family (SF), Townhouse (TH), or Condominium (CON) categories based on lot size (ACRES). Of the 133,764 records from Step 5, 7,502 records or 5.6 percent fall into this category, i.e. dwelling description is blank or no data and LU = "R". Unclassified Residential Sales with a lot size of .125 acres or greater are assigned to Single Family (3,743 records). Of the remaining 3,759 UNK sales records, 1,348 are split between Townhouse and Condominium housing unit type. Specifically sales with acres of .04 or less are assigned to Condominium (483 records) and sales with acres over .04 but less than .125 are assigned to Townhouse (865 records). This leaves a remainder of 2,411 UNK sales records where insufficient data are available

to reassign Hu type. Where Hu = RENT, dwelling description is "rental dwelling", the 1,564 sales records remain Unclassified Residential. As a result of this reassignment of Unclassified Residential housing unit types the revised housing unit type counts for the 133,764 records are:

Single Family (Hu = SF)   (71,797 records)

Townhouse (Hu = TH) (41,515 records)

Condominium (Hu = CON) (16,034 records)

Mobile Home (Hu = MH) (443 records)

Unclassified Residential (Hu = UNK, RENT) (3,975 records of which 3,881 are in Baltimore City)

Step 6 Duplicate Sales – 921 of the 133,764 Residential sales records are determined to have multiple records with the same parcel account number (ACCTID), trade date (TRADATE) and consideration value (CONSIDR1) or purchase price at the time of sale. These records are examined to determine if they are "duplicates". Upon review, the "duplicate" sales reflect instances of transfers involving financial institutions in combination with individual owner purchases or sales.   Removal of the "duplicates" reduces the number of records by 461 to 133,303.

Step 7 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 (2005 Edition for all counties except Anne Arundel, 2004 Edition) are used to improve the x,y values. Even with this improvement recent sales include parcels that have not yet been mapped. For purposes of this analysis, which includes small areas (see Step 10), only sales records that have x,y mapping locations are included:

CY2005 Residential sales records from Step 6 = 133,303
With x,y location = 131,379 = 98.6%

Step 8 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 8 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. (130,356 of the 131,379 records from Step 7)

Step 9 – 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 CY2005, 79 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 CY2006, this resulted in corrections to the CONSIDR1 value for 16 records.

This leaves a balance of 130,356 less 79 or 130,277 sales records.

Step 10 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 MdPV2006 for all jurisdictions except Anne Arundel, MdPV2005 in July 2007).

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 9 is assigned identifiers for the 2006 USPS Zip Codes, 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 and 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 postions 3-5 are the jurisdiction FIPS code), DESCTOWN (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 July 20, 2007. A sales record is either inside the PFA (inPFA), in a PFA Comment Area (inPFAc) or outside the PFA (outPFA).

Step 10 Year Built - The year built (YEARBLT field) is initially 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 and then supplemented with the year built field values from MdProperty View. Specifically, the YEARBLT field is given the value in MdPV2006 where the YEARBLT field is not specified and is now populated in MdPV 2006. 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 126,167 of the 130,277 residential sales records from Step 8, leaving 4,110 records with a year built not specified.

Step 11 Residential Sales Database for CY2005 – Using the latest MdPV 2006 property database records where there is both a Land Use (LU) and dwelling description (DESCDWEL) the value for the HU from Step 5 is revised (July 2007). The final Statewide breakdown of the CY2005 Residential Sales Database by housing unit type is:

Single Family (Hu = SF)   (70,581 records)

Townhouse (Hu = TH) (41,115 records)

Condominium (Hu = CON) (14,195 records)

Mobile Home (Hu = MH) (403 records)

Unclassified Residential (Hu = UNK) (2,358 records), (Hu =RENT) (1,625 records) (3,969 records of which 3,983 are in Baltimore City)

Selected fields from Step 11 for the 130,277 records are written out to the final sales database as a shapefile, R_sale05.shp, with the following field content:
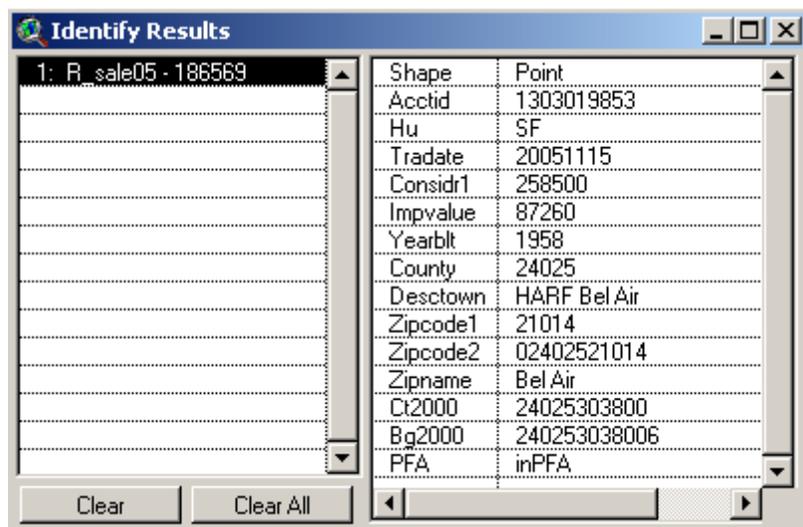
The residential sales records for a jurisdiction are included as shapefiles with the *MdProperty View* and the *FINDER* CDs for that jurisdiction. For example in Harford County for 2005 sales

for *MdProperty*:

\Harf2007\OVERLAYS\ResSale\Harf_sale2005.shp

and for *FINDER*:

\Harf07F\LAYERS\ResSale\r_sale2005.shp

The sales database can also be used to generate map layers with summary data for residential sales by year for small geographic areas (e.g. 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).

An example of such a shapefile and its attribute contents are shown below where the sales data is summarized and mapped by 2000 Census Tract. Separate shapefiles are included for all sales (HuType = TOT), Single Family sales (HuType = SF), Townhouse Sales (HuType = TH) and Condominium Sales (HuType = CON).

The attribute fields for each Census Tract (Ct2000) are the Number of Sales by year for the housing unit type (Sales2006 thru Sales2002), the Median $ Value of Sales by year (Med_2006 thru Med_2003) and the Mean $ Value of Sales by year (Mean_2006 thru Mean_2002). Medians and means are only calculated if there are 5 or more sales.

Identify Results	
1: Ct_tot_sales.shp - Harford C	

Field	Value
Shape	Polygon
Cntyname	Harford County
County	24025
Ct2000	24025303201
Hutype	TOT
Sales2006	79
Sales2005	111
Sales2004	84
Sales2003	97
Sales2002	113
Med_2006	383215
Med_2005	360000
Med_2004	352750
Med_2003	322450
Med_2002	276400
Mean_2006	430950
Mean_2005	412286
Mean_2004	378854
Mean_2003	337249
Mean_2002	289367

The Statewide summary sales map layers for census tracts are included as shapefiles with the *MdProperty View* and the *FINDER* CDs. For example in Harford County

for *MdProperty*:

\Harf2007\OVERLAYS\ResSale\Ct_Sales_Summary\

and for *FINDER*:

\Harf07F\LAYERS\ResSale\Ct_Sales_Summary\