

## Appendix B

### Identification of buildings in Maryland potentially covered by Building Energy Performance Standards (BEPS)

#### Introduction

To support the emissions impact and economic impact analyses MDE explored available state data from the Maryland Department of Assessments and Taxation (SDAT) and Maryland Department of Planning (MDP). This data is available for download from the MDP website (<https://planning.maryland.gov/Pages/OurProducts/DownloadFiles.aspx>).

#### Methodology

##### *Data Sources*

The primary dataset used is the Maryland Computer Assisted Mass Appraisal (CAMA) Detailed Building Characteristics shapefile, from the third quarter of 2022. The pertinent information provided is building floorspace (in square feet) and building use type.

A secondary dataset used is Maryland PropertyView Parcel Points from the Maryland Parcel geodatabase, of October 2022. The key information utilized from this dataset is building address (for residential buildings) and tax exemption and land use descriptions.

##### *Aggregation*

The CAMA dataset tracks building data at a sub-building level such that multiple use types within a single building (e.g., shopping center) and multiple units within a single building (e.g., condominium) are recorded as individual records.

Commercial buildings were aggregated based on a trim of the CAMA Building Number which, for roughly 90% of records, follows a consistent numbering system to identify separate buildings on a single parcel and multiple uses within a single building. The building square footage was summed across individual buildings (i.e., aggregating multiple uses within a single building).

For residential buildings the CAMA Building Number is not reliable in identifying multiple units within a single building. Residential buildings were instead aggregated based on building address information from Parcel Points. Parcel Polygons were not used because this dataset has a single representative record for residential condominiums whereas Parcel Points has records per individual tax account. The building square footage was summed across individual buildings (i.e., aggregating multiple units within a single building).

##### *Exclusions*

From there the 35,000 square foot threshold was applied and properties potentially excluded were identified. Schools were identified by CAMA Building Type Description and Parcel Tax Exemption Class Description. Parcel Tax Exemption Class Description was used to identify Historical properties. The

CAMA Building Type Description of Industry was equated to manufacturing. And Parcel Land Use Description was used to identify Agricultural properties.

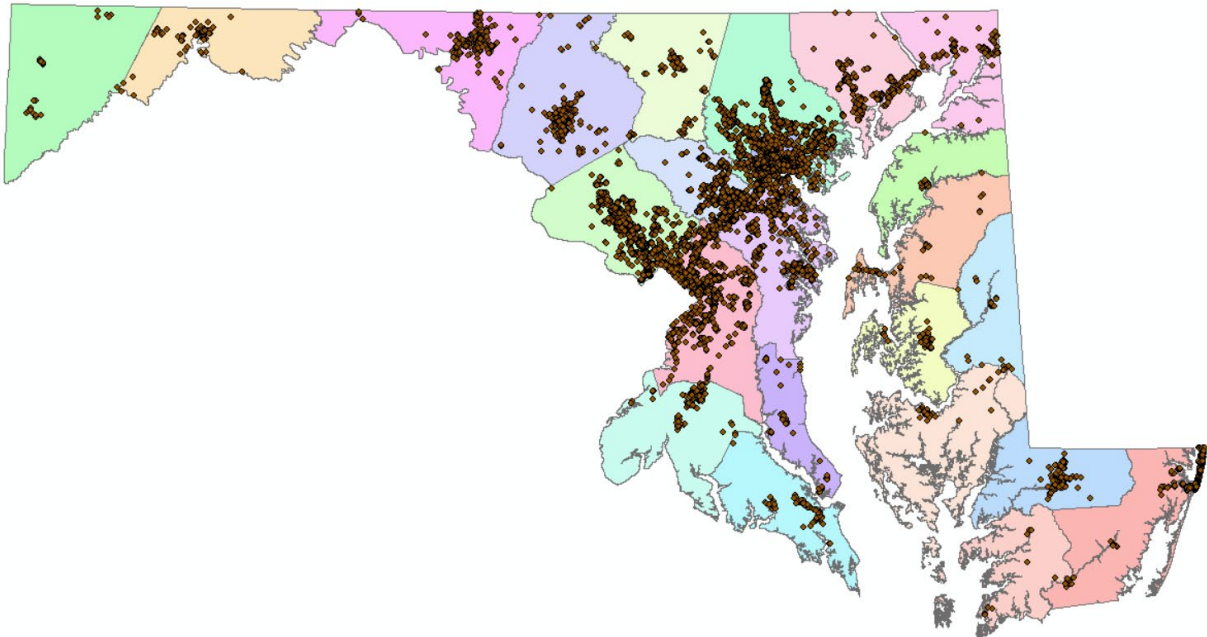
Parking was excluded prior to square footage aggregation using CAMA Building Type Description for commercial buildings and CAMA Building Style Description for residential buildings.

### Improvements

This initial exploration of available state will be enhanced to verify aggregation of multiple uses and units, associate building records with street addresses (particularly in cases of multiple buildings on a single parcel), associate building records spatially with buildings footprints, and check for missing buildings.

### Results

Results from this analysis of buildings potentially covered by BEPS are provided in the tables and figures that follow. Figure 1 displays a map of the location of parcels with potentially covered buildings. Tables 1 and 2 provide a summary of building counts and building floorspace by building type and county. Figures 2 and 3 offer a summary of building counts and building floorspace by broader building type categories. A full spreadsheet of the buildings identified in this analysis as potentially covered by BEPS is available for download on the MDE Website (<http://mde.maryland.gov/programs/Regulations/air/Pages/reqcomments.aspx>). The spreadsheet also provides county level building type summaries.



**Figure 1:** Location of buildings identified as potentially covered by BEPS

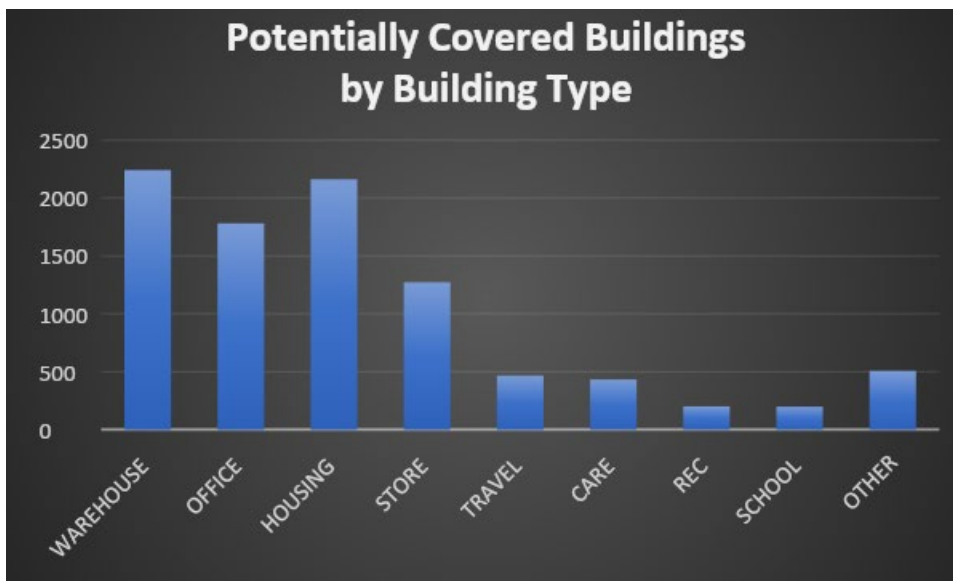
**Table 1:** Summary of buildings identified as potentially covered by BEPS, by building type

Building Type Description	Building Count	Total Floorspace (sq. ft.)
AUTO Auto Center	20	1,052,084
AUTO Auto Showroom	8	384,374
AUTO Complete Automobile Dealership	20	1,002,051
AUTO Service Garage	68	4,166,332
AUTO Storage Garage	4	302,424
BANK Branch Bank	1	210,026
BANK Main Bank	4	339,022
BURIAL Mortuary	1	36,548
CARE Convalescent Hospital	173	10,953,971
CARE Day Care Center	4	217,891
CARE General Hospital	64	18,818,701
CARE Group Home	9	786,718
CARE Home for the Elderly	176	15,910,092
CARE Surgical Center	7	509,945
COMMUNITY Branch Post Office	3	127,589
COMMUNITY Church	103	6,186,216
COMMUNITY Library	43	2,722,475
COMMUNITY Main Post Office	8	1,486,480
COMMUNITY Rectory	3	476,032
DWEL Boat Slip	1	88,980
DWEL Center Unit	4	225,069
DWEL Condo Garden	314	19,007,217
DWEL Condo Hi Rise	243	37,082,625
DWEL Condo Studio	36	2,259,623
DWEL Condo Townhouse	26	4,543,438
DWEL End Unit	5	253,460
DWEL Mobile Home	4	553,469
DWEL Parking Space	1	70,686
DWEL Penthouse	15	2,222,572
DWEL Standard Unit	10	437,982
HOUSING Apartment	1,084	139,313,765
HOUSING Mixed Residential / Retail	4	185,764
HOUSING Multiple Residence	409	32,575,755
HOUSING Residential Apartment Units	4	542,953
OFFICE Medical Office Building	186	13,610,261
OFFICE Office Building	1,586	173,801,697
OFFICE Office Condominium	10	726,667
OTHER Building Per Square Foot	8	2,225,493
OTHER Building Per Unit	13	1,056,353
OTHER Condo	1	66,594
OTHER Special Use	1	205,752
PUBLIC Government Building	124	27,549,926
REC Auditorium	24	4,005,983
REC Banquet Hall	1	45,046
REC Bowling Alley	15	610,035
REC Cinema	25	1,621,149
REC City Club	3	191,164
REC Club House	22	1,342,563

REC Country Club	10	669,064
REC Fraternal Building	7	320,484
REC Gymnasium	28	2,013,186
REC Handball / Racquetball Courts	2	112,808
REC Health Club	36	2,413,946
REC Indoor Tennis Facility	9	584,491
REC Skating Rink	10	739,463
REC Theater	9	677,001
RESTAURANT Restaurant	12	620,082
RESTAURANT Tavern	2	91,490
SAFETY Armory	6	328,583
SAFETY Fire Station	7	670,196
SAFETY Jail	29	4,570,714
SAFETY Volunteer Fire Station	2	101,988
SCHOOL Classroom	55	4,508,469
SCHOOL Computer Center	9	885,454
SCHOOL Dormitory	59	4,733,524
SCHOOL Fraternity House	1	79,648
SCHOOL Laboratory Building	31	4,689,250
SCHOOL Manual Arts Building	4	215,161
SCHOOL Multi-Purpose School Building	39	3,710,748
STORE Department Store	91	11,175,191
STORE Discount Store	230	23,667,065
STORE Finish Neighborhood Shopping Center	1	75,100
STORE Mall - Covered	1	40,429
STORE Mall - Enclosed	13	2,629,526
STORE Mall - Open	2	136,912
STORE Market	273	15,836,860
STORE Retail Condominium	3	410,925
STORE Retail Store	138	8,578,263
STORE Shell Community Shopping Center	2	187,560
STORE Shell Neighborhood Shopping Center	2	84,288
STORE Shell Regional Shopping Center	2	158,049
STORE Shopping Center / Community	265	23,455,364
STORE Shopping Center / Neighborhood	174	12,357,590
STORE Shopping Center/ Regional	75	17,393,902
TRANSPORT Hangar	12	650,582
TRANSPORT Storage Hangar	1	125,633
TRANSPORT T Hangar	2	120,650
TRAVEL Hotel	385	38,991,857
TRAVEL Motel	80	3,999,418
WAREHOUSE Cold Storage Facility	26	4,709,685
WAREHOUSE Discount Warehouse	87	10,079,482
WAREHOUSE Distribution Warehouse	688	71,361,527
WAREHOUSE Mega Warehouse	118	56,459,193
WAREHOUSE Mini Storage Warehouse	248	19,010,844
WAREHOUSE Storage Warehouse	1,002	94,655,237
WAREHOUSE Transit Warehouse	25	2,194,818
WAREHOUSE Warehouse Condominium	5	920,565
WAREHOUSE Warehouse Mini Storage Multi Story	43	4,132,899
<b>TOTAL</b>	<b>9,259</b>	<b>988,446,176</b>

**Table 2:** Summary of buildings identified as potentially covered by BEPS, by county

County	Building Count	Total Floorspace (sq. ft.)
Montgomery	1,577	205,743,888
Prince George's	1,214	121,641,532
Baltimore County	1,197	119,219,491
Baltimore City	1,174	149,390,965
Anne Arundel	883	88,354,017
Howard	824	79,100,972
Frederick	415	35,673,582
Harford	318	41,655,939
Washington	271	32,029,617
Worcester	269	20,885,126
Charles	185	14,174,057
Wicomico	169	12,435,913
Carroll	153	13,892,301
St. Mary's	117	7,418,906
Allegany	104	9,061,980
Cecil	104	18,257,641
Calvert	65	4,198,953
Queen Anne's	48	3,095,326
Talbot	47	2,748,566
Dorchester	43	3,658,617
Caroline	25	1,835,485
Kent	23	1,650,008
Garrett	21	1,384,435
Somerset	13	938,859
<b>TOTAL</b>	<b>9,259</b>	<b>988,446,176</b>



**Figure 2:** Building count potentially covered by BEPS, by building type category

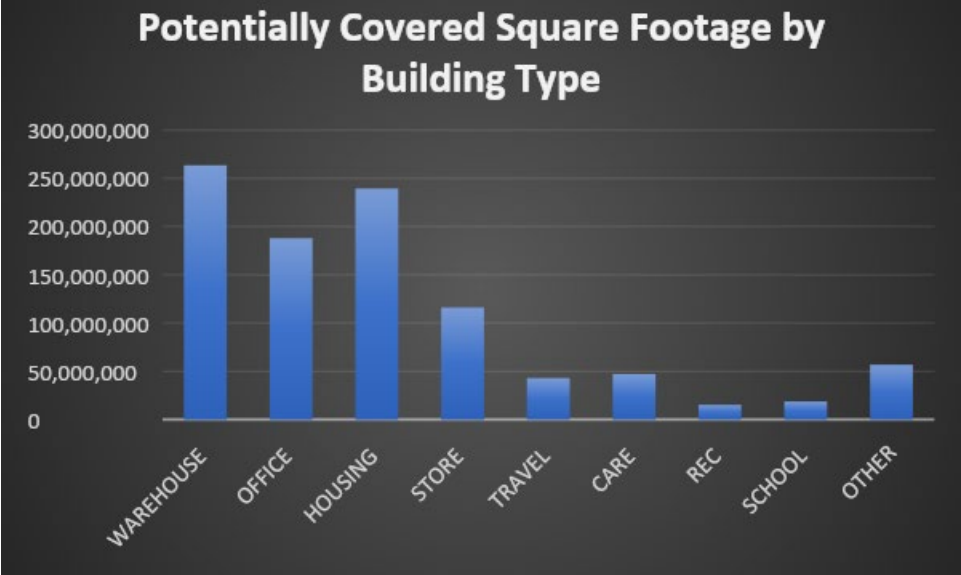


Figure 3: Total floorspace potentially covered by BEPS, by building type category