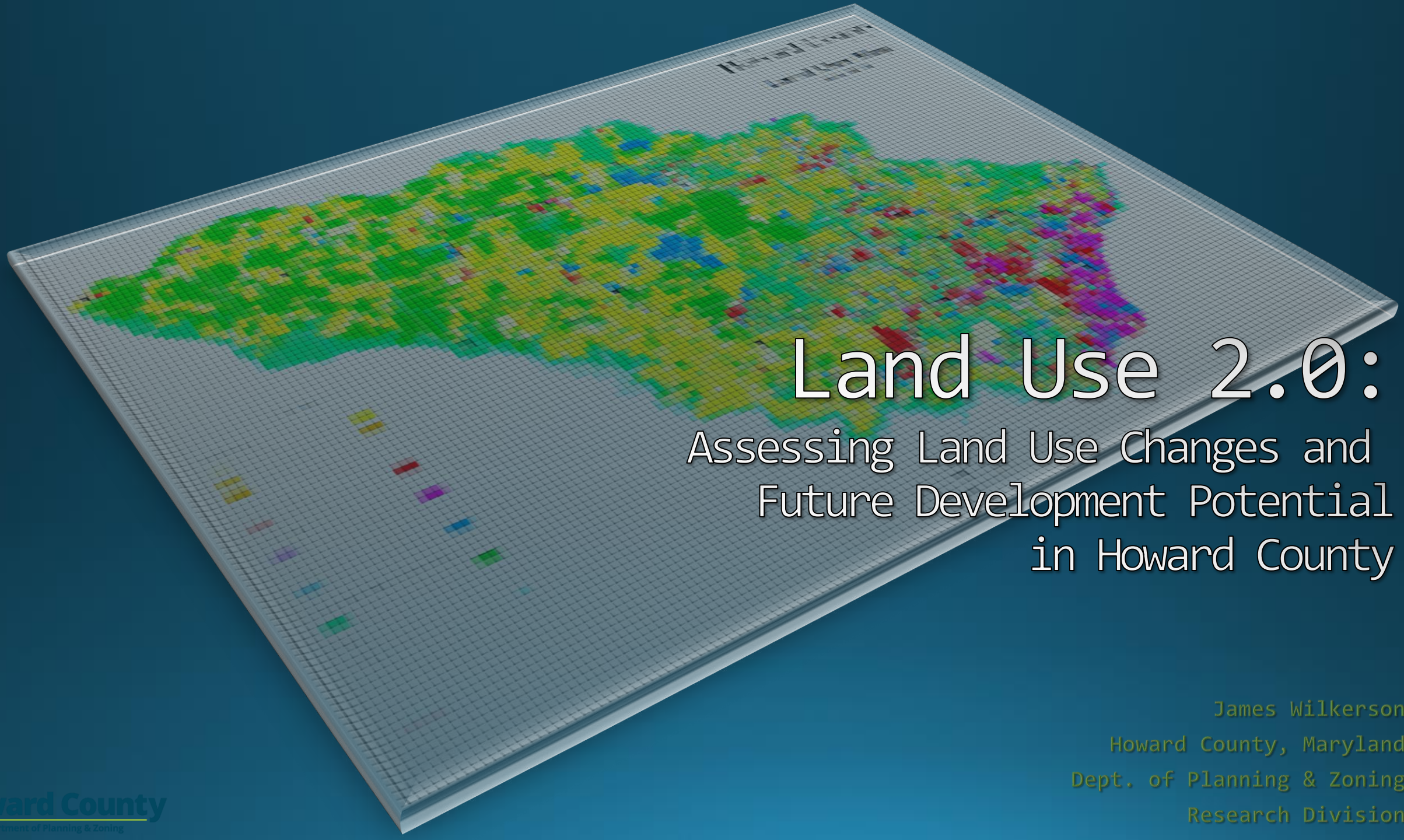


Land Use 2.0:

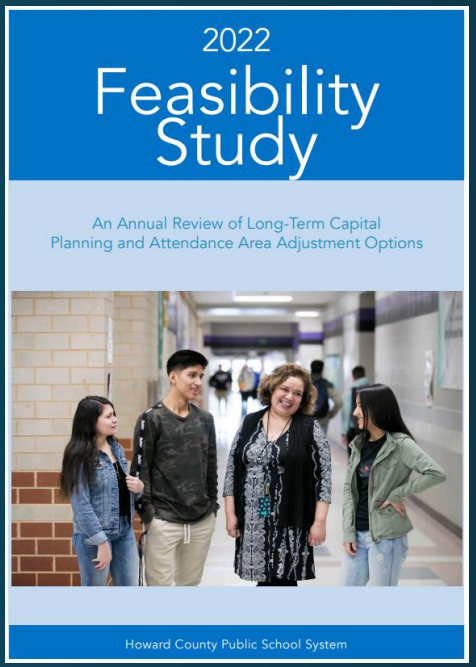
Assessing Land Use Changes and Future Development Potential in Howard County

James Wilkerson
Howard County, Maryland
Dept. of Planning & Zoning
Research Division

Howard County
Department of Planning & Zoning

Holding Capacity and Land Use Potential

- **Questions to Answer**
  - **Where:**
    - is undeveloped land?
      - Parcels unencumbered by active uses and structures
    - is underutilized land?
      - Parcels with both the space and regulatory potential to develop further
  - **How:**
    - much new growth can the County facilitate?
      - General & Master Plans
    - will new growth impact our school districts?
      - Public School Projections
    - many new residents and workers will be on our public roads?
      - Cooperative Forecasting



HOCO BY DESIGN
Every Voice, One Vision

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Land Use 2.0

- **Land Use Database**
  - Over 50 years of continual management
    - 1960s- Countywide inventory of land use recorded
      - Paper maps and Ledgers
      - Ground truthing
    - 1980s- First digital system for maintaining records
    - 2003- Migrated to GIS environment
    - 2019- Migration to ArcGIS Pro
      - Overhauled geometry, attributes, maintenance procedures in
  - Updated Frequency
    - Daily updates to attribute data based on plans and permits
    - Monthly updates to geometry to reflect County parcel fabric

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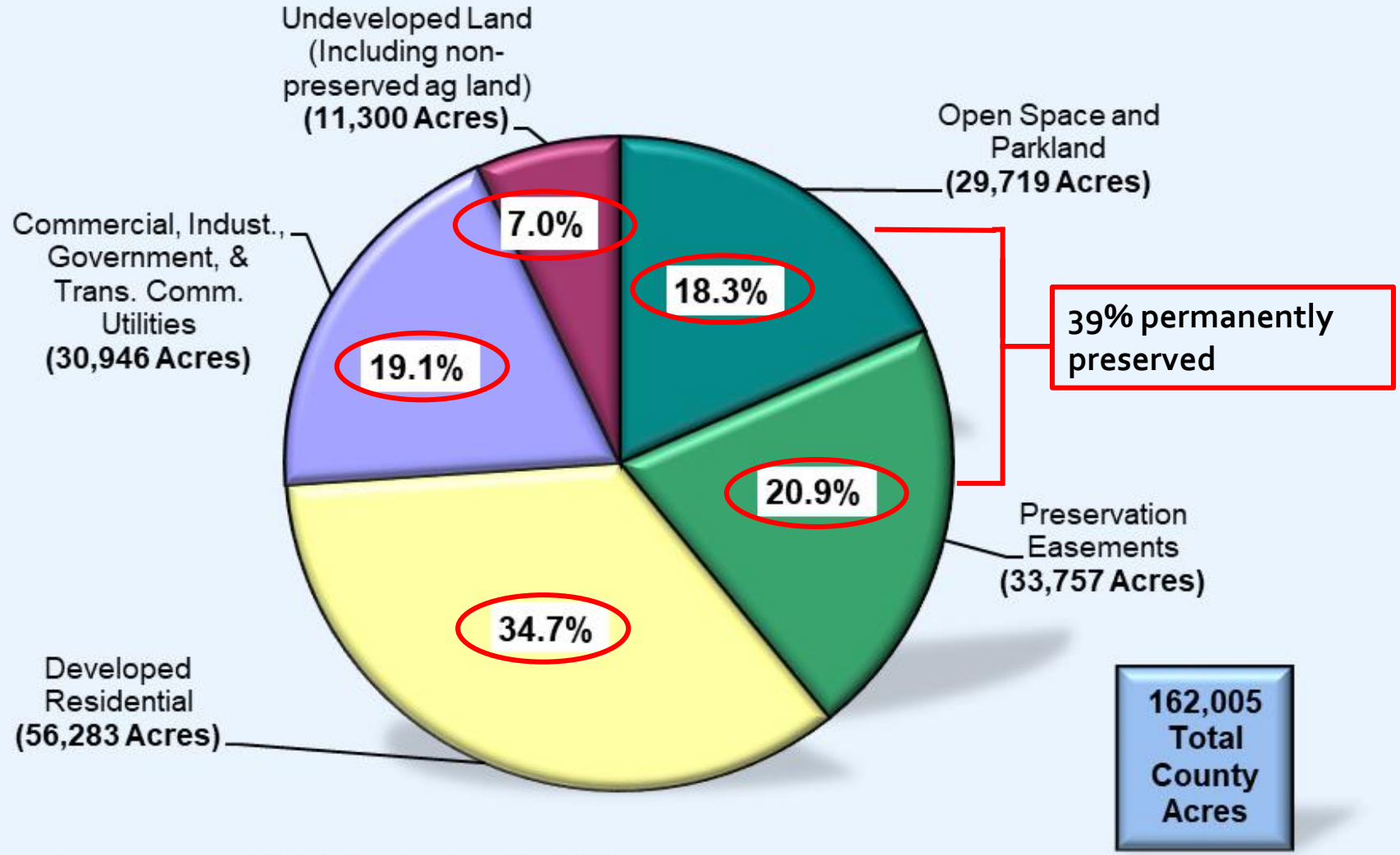
Howard County Land Use - September 30, 2022



Source: Howard County DPZ, September 30, 2022

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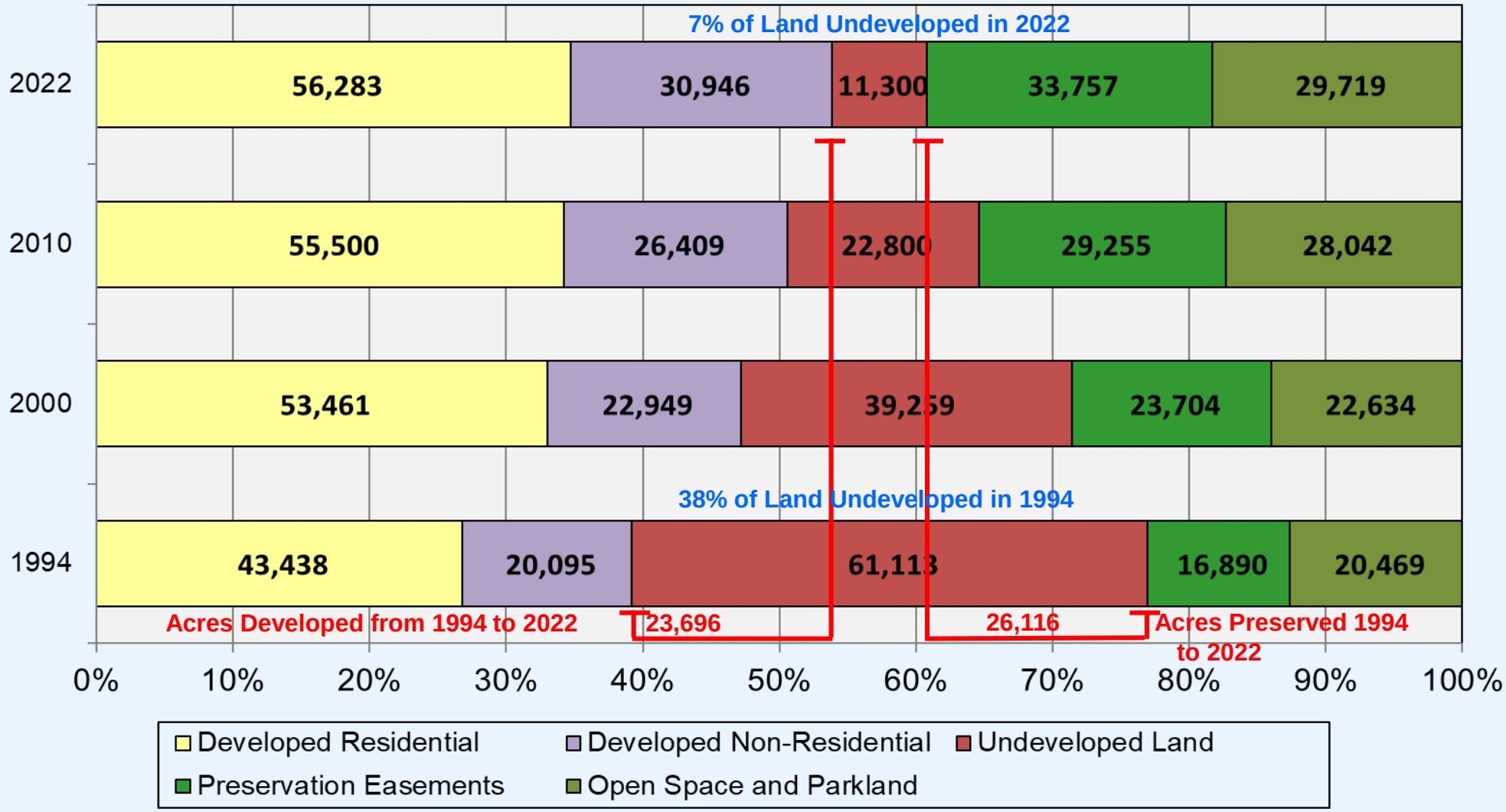
Howard County Land Use Acres, 1994 to 2022



Source: Howard County DPZ Land Use Database

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Managing Land Use by Monitoring Development

- Development Plans
  - Delineate lot lines
  - Quantify housing unit types and counts
  - Specify acreages of growth by type
  - Identify changes in ownership
  - Dictate changes in land use
- Building Permits
  - Demolition
  - Commercial New
  - Commercial Interior
  - Residential New
  - Residential Use & Occupancy
  - Mixed Use

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9/17/2023 End Date 10/17/2023

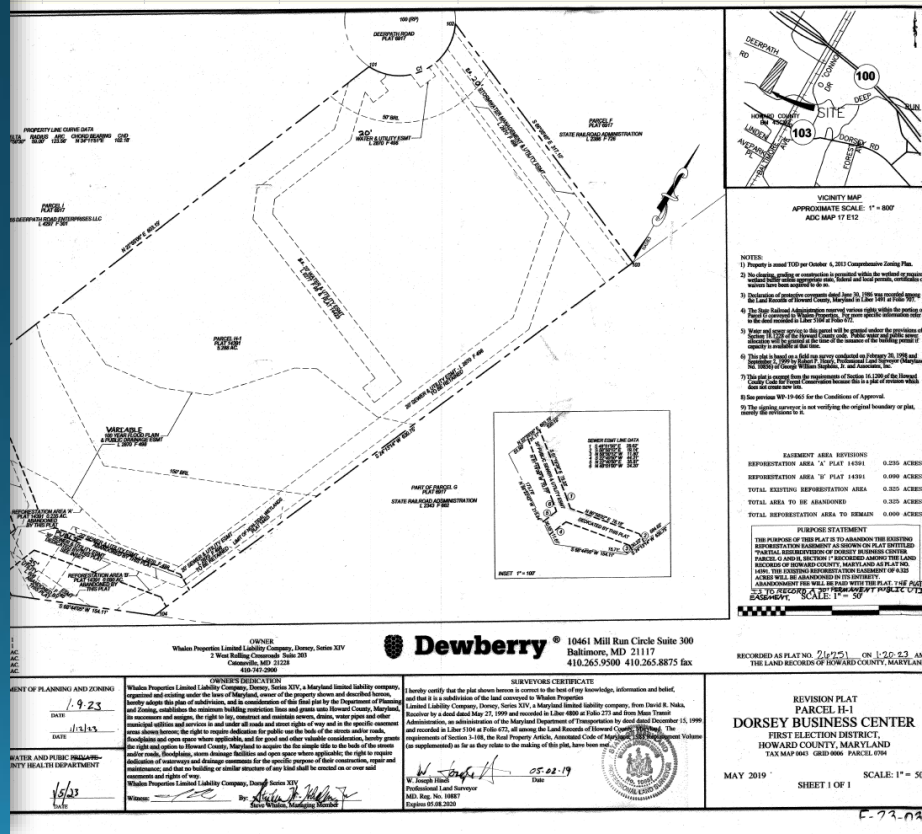
1 of 2 ? 100%

Inspections/Licenses/Permits — New Residential Permits Issue

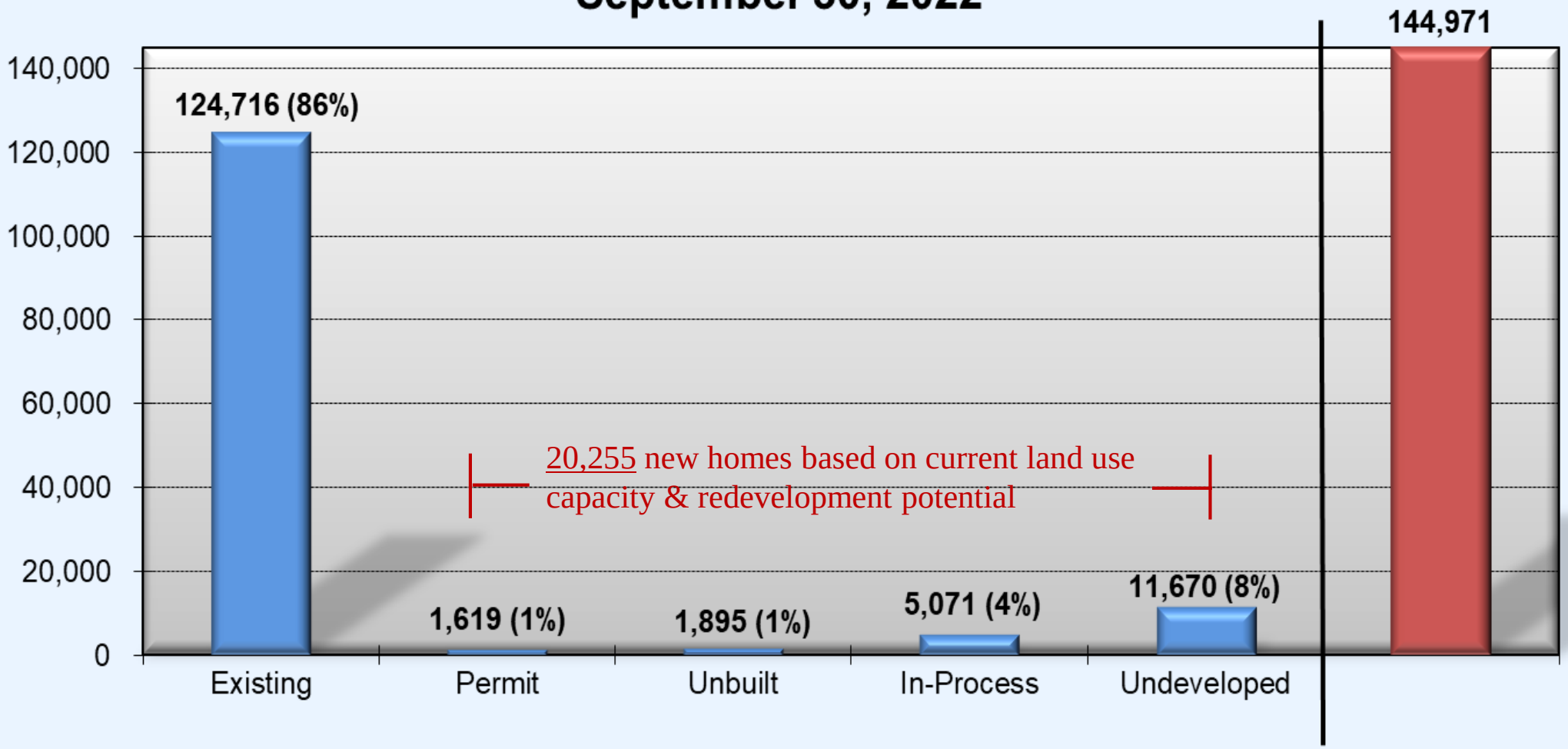
: 9/17/2023 to 10/17/2023

Rows: 43

B1 FILE DD	Permit Issued Date	CAP	Address	Parcel	Lot	Subdivisi
4/24/2023 12:00:00 AM	09/18/2023	Residential/New/SFD/	6405 FRANCIS LN	0731	16	Grace Me
5/15/2023 12:00:00 AM	09/20/2023	Residential/New/SFD/	6409 FRANCIS LN	0731	17	Grace Me
7/21/2023 12:00:00 AM	09/20/2023	Residential/New/SFD/	7470 DECLAN RD	163	358	Wellingto
9/7/2023 12:00:00 AM	09/21/2023	Residential/New/SFD/	9466 VOLLMERHAUSEN DR	351		
8/30/2023 12:00:00 AM	09/26/2023	Residential/New/SFD/	8708 SAWYER DR	0025	13	Patapsco
8/30/2023 12:00:00 AM	09/26/2023	Residential/New/SFD/	8704 SAWYER DR	0025	14	Patapsco
7/10/2023 12:00:00 AM	09/26/2023	Residential/New/Townhouse/	7900 OLIVE BRANCH LN	163	211	Wellingto

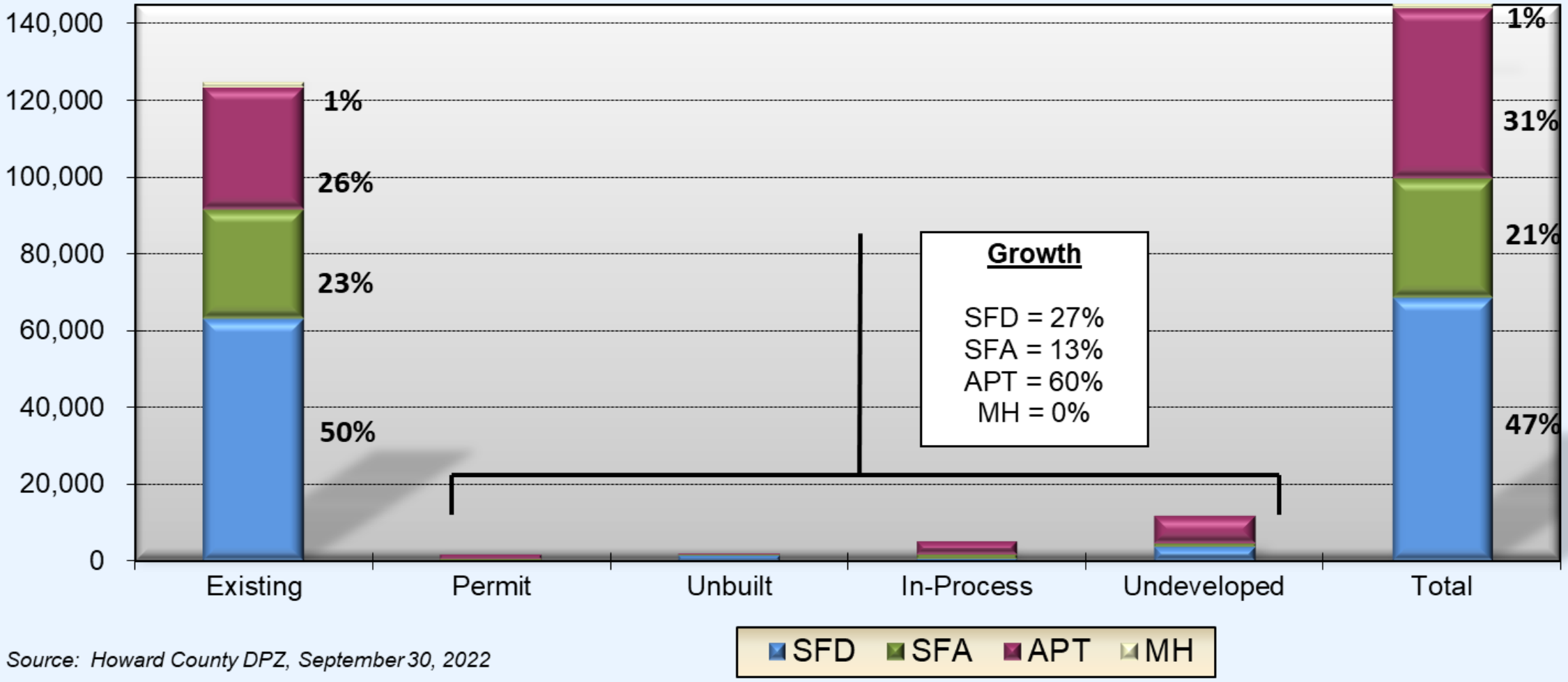


Residential Units by Development Stage in Howard County
September 30, 2022



Source: Howard County DPZ, September 30, 2022

Residential Units by Development Stage in Howard County
September 30, 2022



Source: Howard County DPZ, September 30, 2022

Data Management Relationship with Planning/Development

~3% of Howard County remains undeveloped but developable

- This is fully uncommitted parcels and does not include redevelopment/resubdivision capacity.

Plans submitted for new development dictate major changes

- Use Code
- Project footprint (new parcel boundary)
- Units and Acres

Attribute and boundary progression with plan and permitting

- Undeveloped > In-process > Unbuilt > Permit > Existing

Undeveloped	In-process	Unbuilt	Permit	Existing
No existing use and no plans	Site plan approved	Record plats approved	Construction permit issued	U & O permit issued

UNDEVacre	UNDEVSFD	UNDEVSFA	UNDEVAPT
0	0	0	0

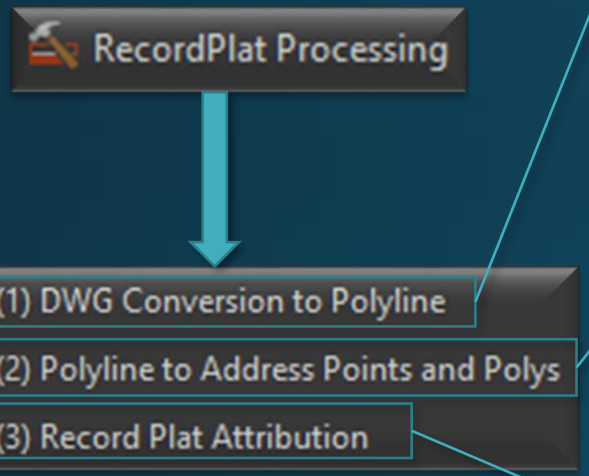
UNBLTacres	UNBLTSFD	UNBLTSFA	UNBLTAPT
0	0	0	0

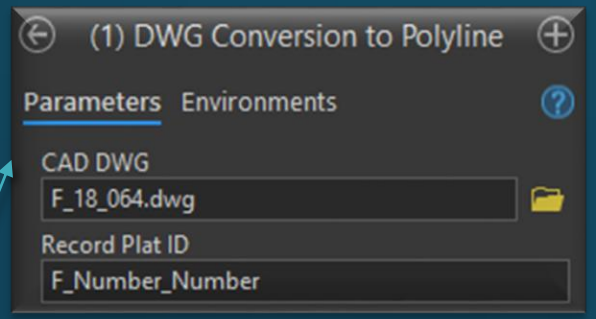
INPacres	INPSFD	INPSFA	INPAPT
0	0	0	0

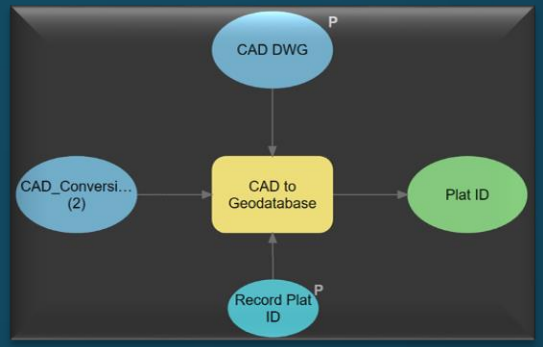
PERMITacre	PERMITSFD	PERMITSFA	PERMITAPT
0	0	0	0

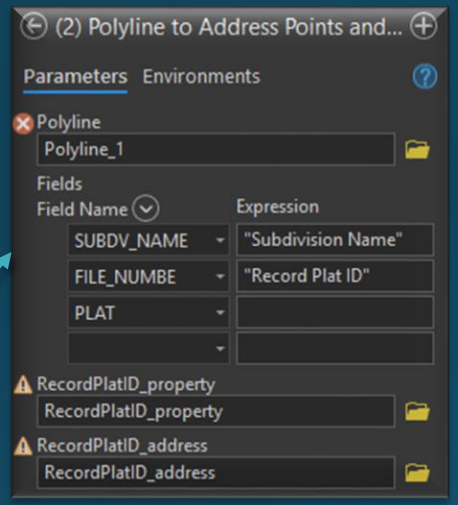
EXacres	EXSFD	EXSFA	EXSFAcondo	EXAPT	EXAPTcondo	EXMH	HOTELunits
0.0471	0	1	0	0	0	0	0

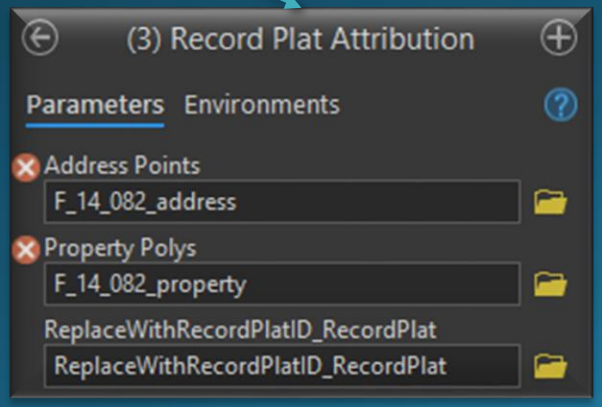
Processing Record Plats

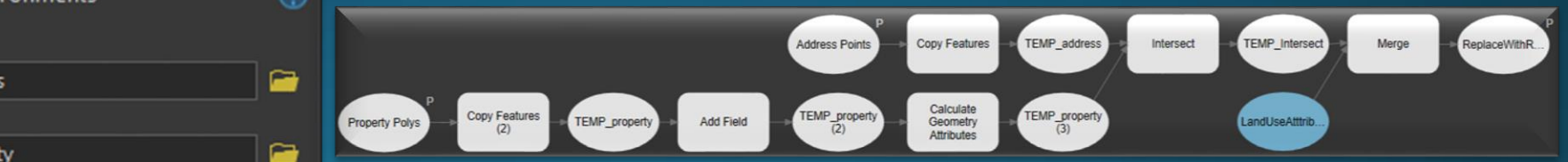












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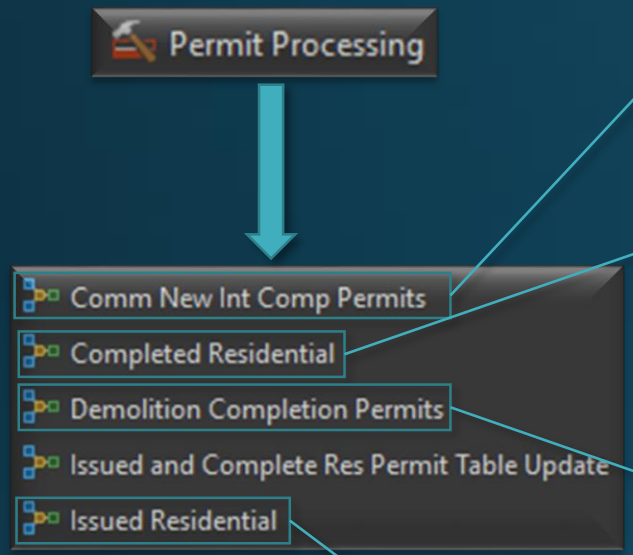
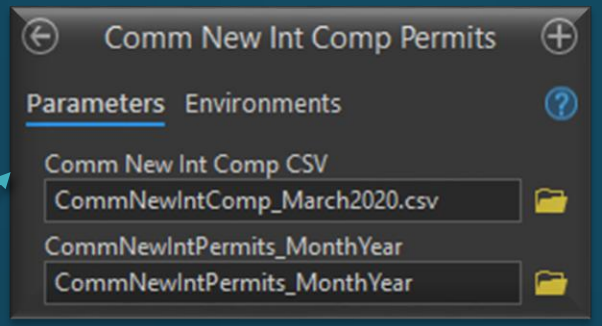
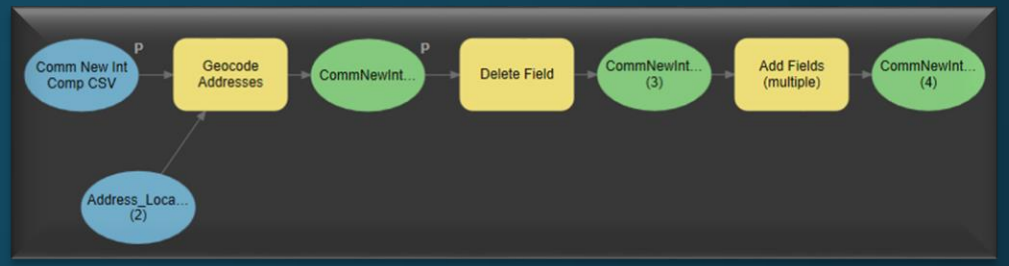
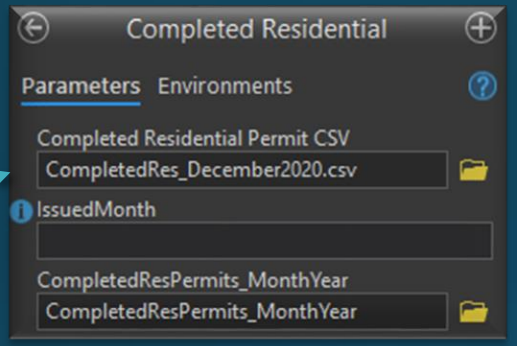
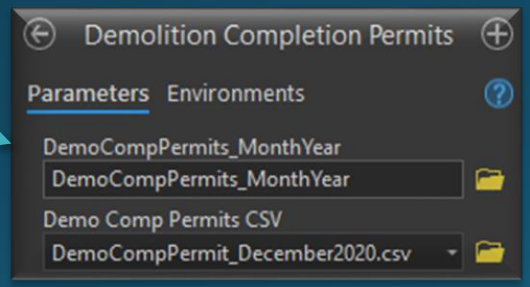
Processing Permits

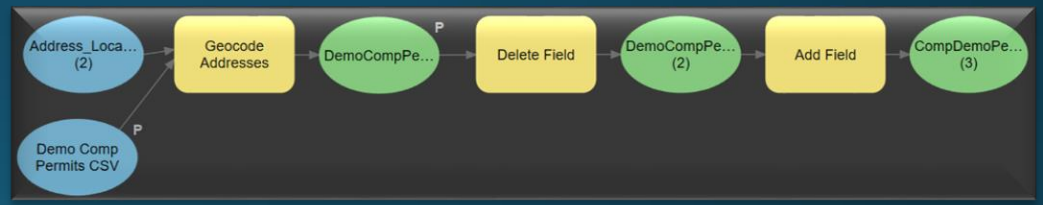


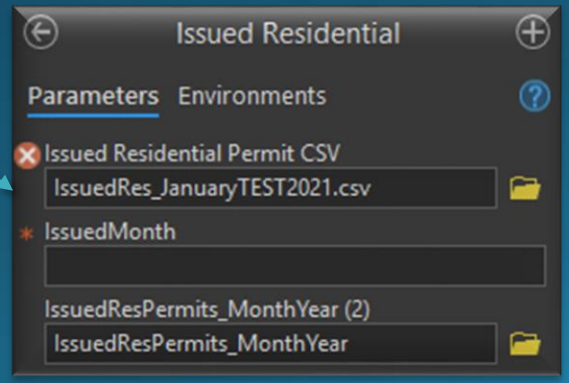












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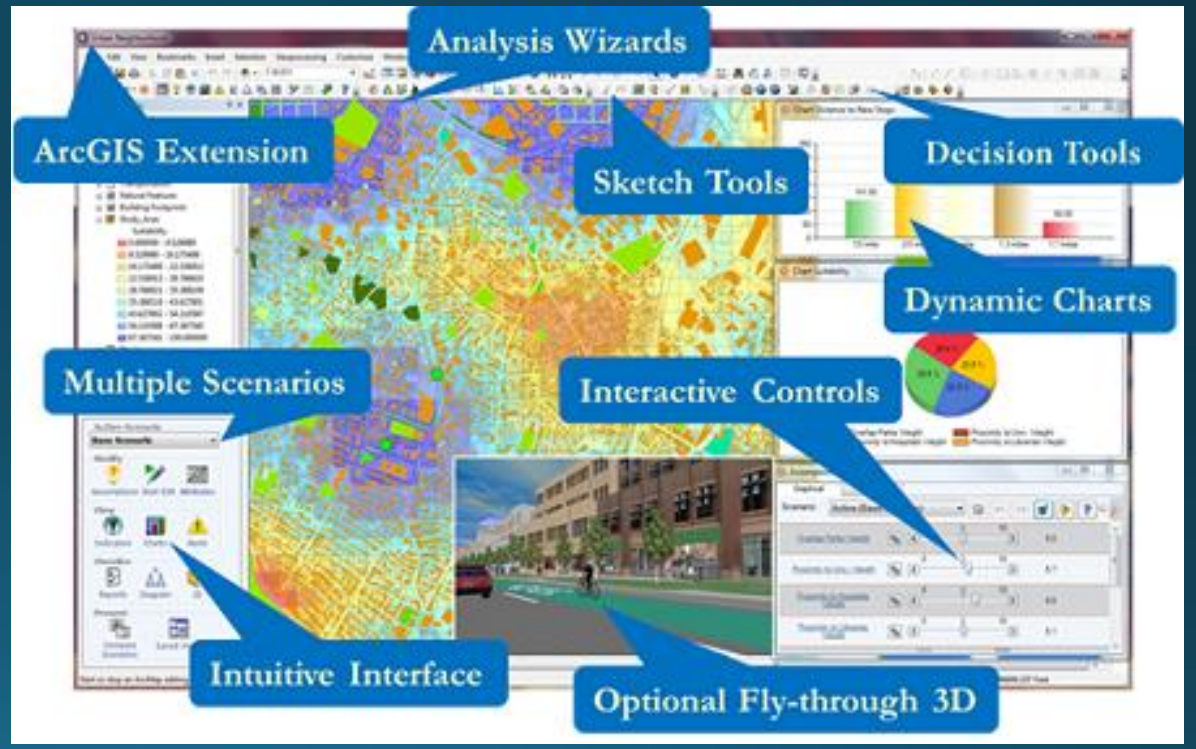
CommunityViz

- **What is CommunityViz?**
  - ArcGIS Extension
  - CommunityViz is a land use modeling software that runs within ArcGIS Desktop



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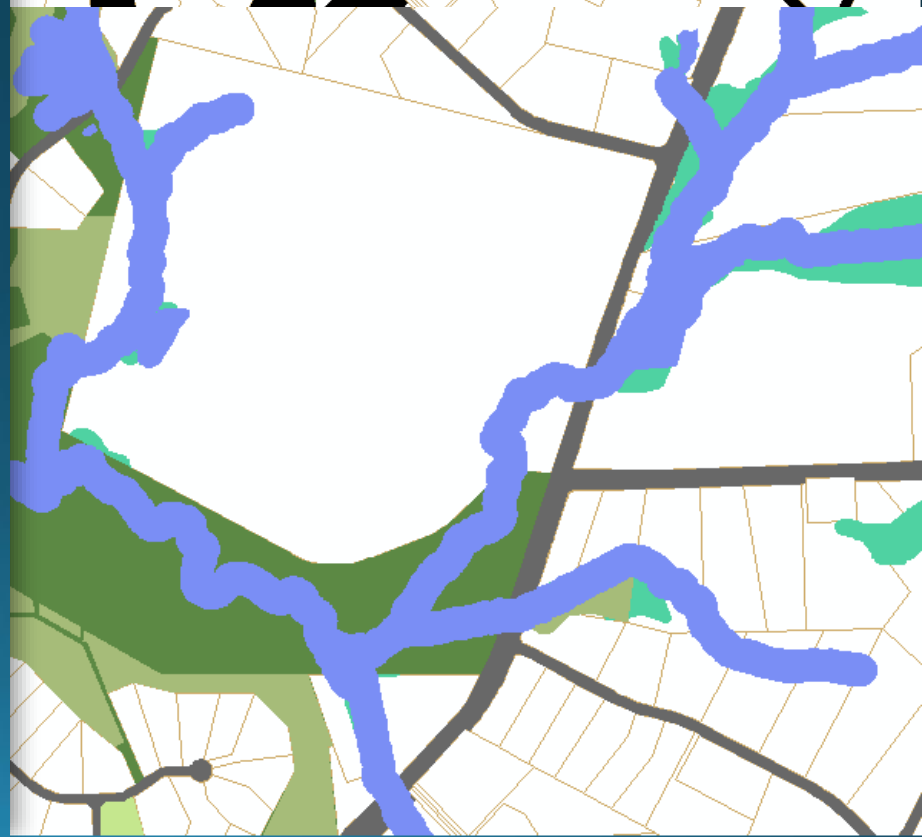
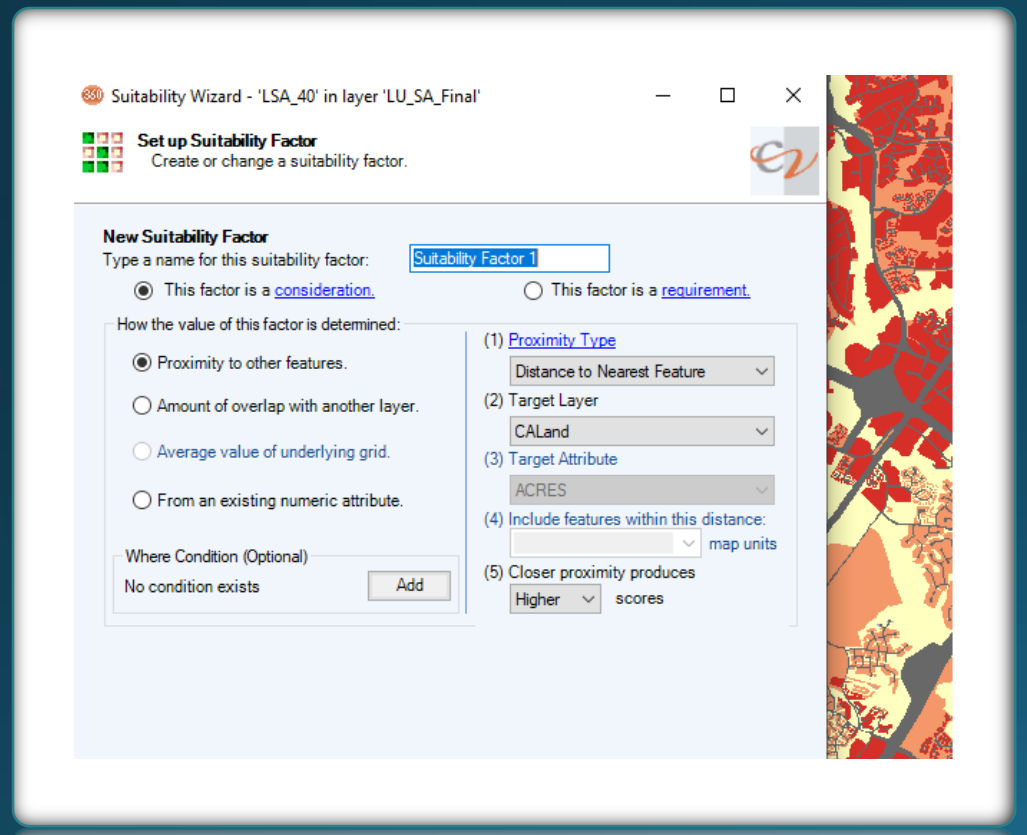
Carrying Capacity

- Removes land that can never be developed from future model calculations
  - Steep Slopes
  - Highly Erodible Soils
  - Easements
  - Parkland
  - Streams and Buffers



Land Suitability Analysis (LSA)



- **Spatial index scoring based on multiple layers, creating a combined score from individual scores**
  - Direct values in an attribute field
  - Proximity to a layer
  - Overlap with a layer
- **Positive or Negative Relationship to final combined score**
- **Purpose:**
  - Areas likely to grow
  - Areas suitable for preservation
  - Areas for redevelopment
  - Other

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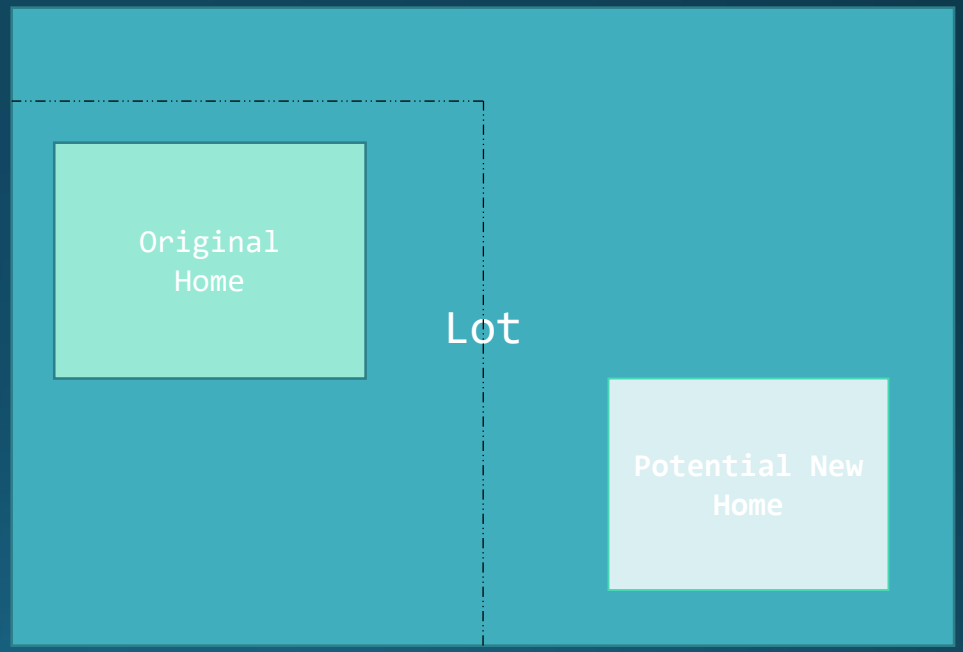
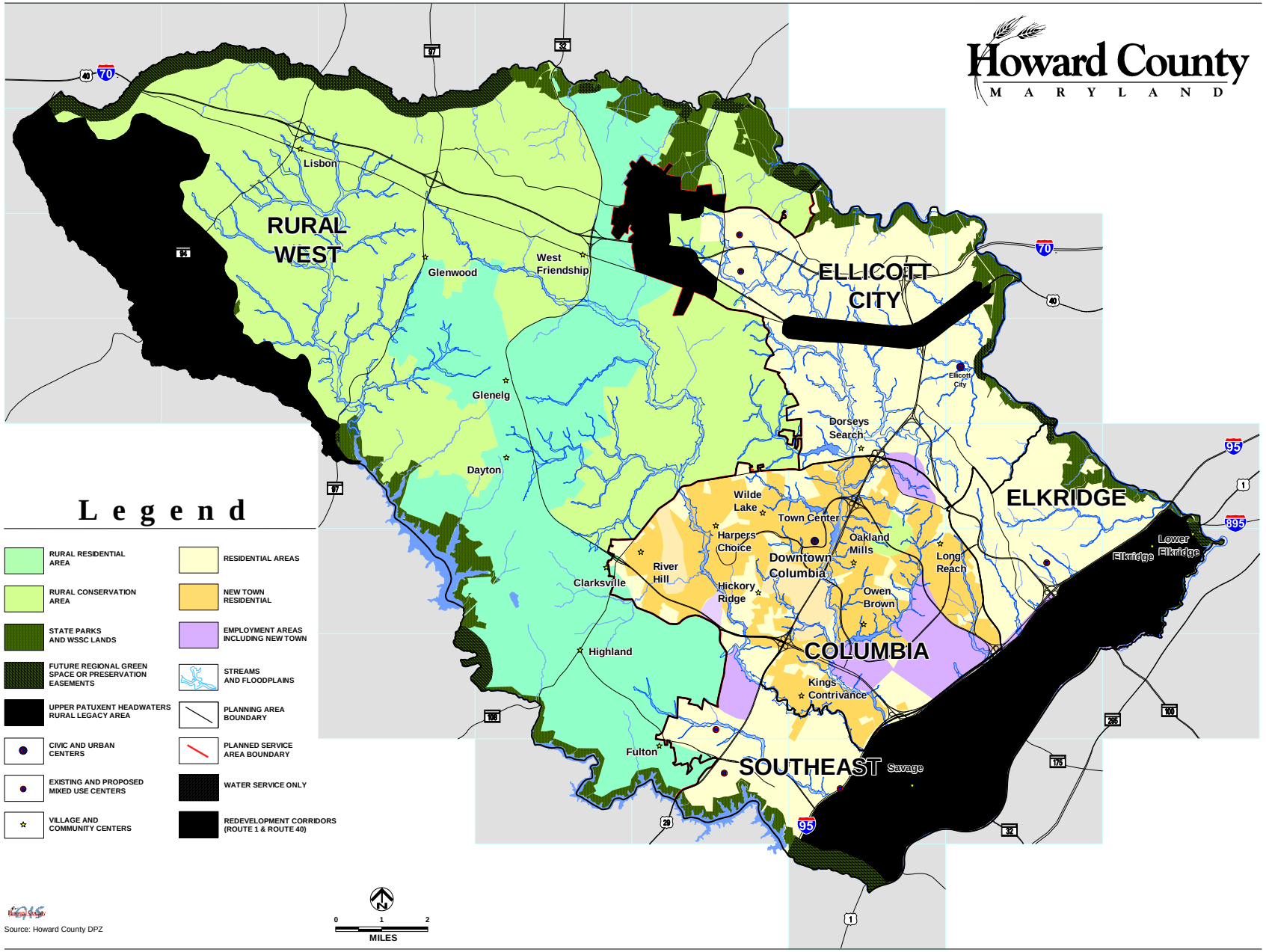
Development Status

- Development Status – controls whether and how land is developed
  - Developed – model skips, leaves un-allocated
  - Undeveloped – model can apply growth to entire parcel
  - Redevelopment Potential - model can apply growth to entire parcel
  - Re-subdivision Potential - where developed parcels, based on existing zoning, can re-subdivide to create a new single family detached home



Growth Allocation

- Incorporates:
  - Land use
  - Development status
  - LSA scoring for growth
- Applies growth through a given horizon year
- Excel-based development lookup table
    - Density limits
    - Open Space requirements
    - Proportion of Unit/Use Types
  - Control Totals lookup table
    - Maximum amount of growth by type



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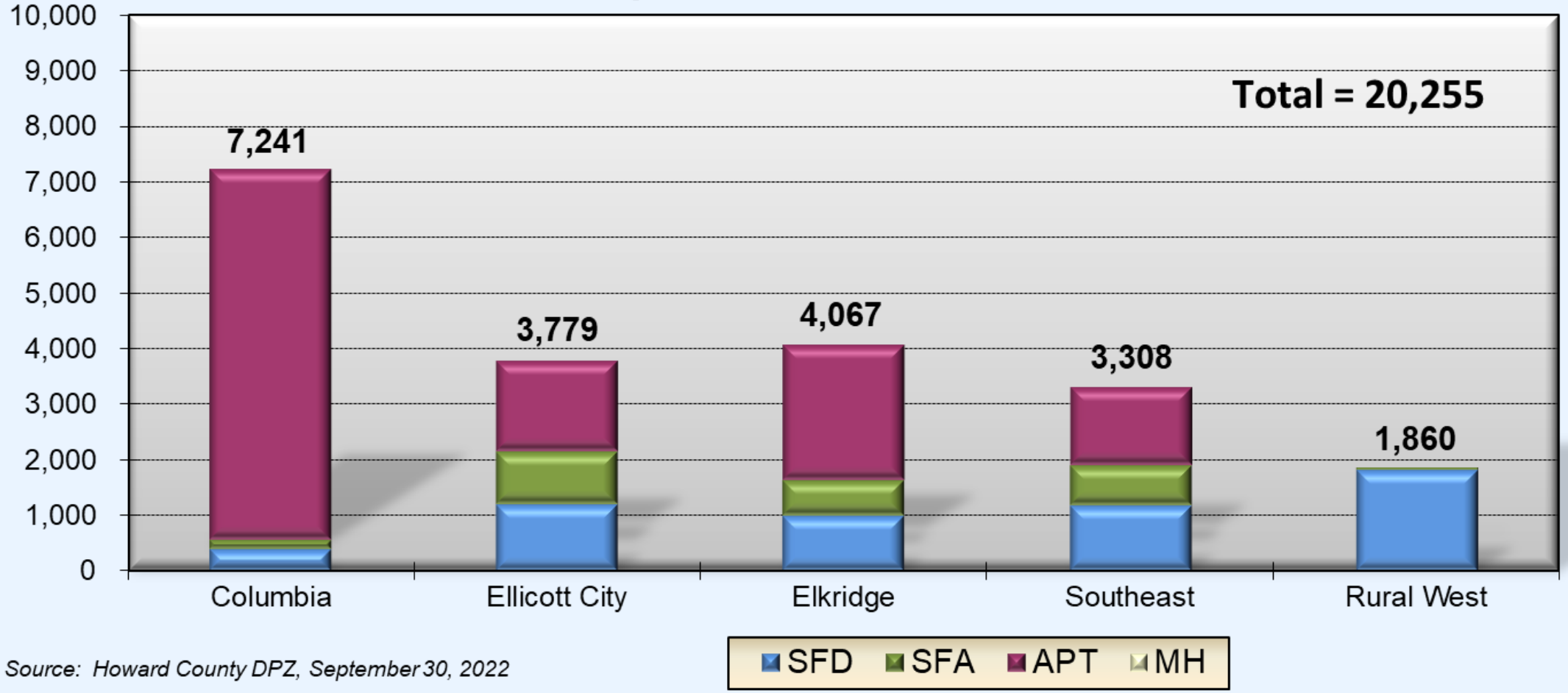
New Unit Potential in Howard County Between September 30, 2022 & Buildout



Source: Howard County DPZ, September 30, 2022

Reporting in Power BI

Land Use Master Reporter

For Internal Use and Distribution Only

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The data contained within this report is sourced from the Department of Planning & Zoning's (DPZ) Land Use database, known as Land Use 2.0, whose source data is contained within the LandUseProcessing.gdb and the LandUseMaster feature class within the LandUseData feature data set. This data is managed solely by the Research Division of DPZ. While the source land use data is updated almost daily, with monthly and twice annual critical updates, the data within this report is updated less often and accurate as of the stated date.

Data Management, Analysis and Design by:
Howard County Dept. of Planning & Zoning
Research Division
Last Update: July 2021
Email: JWilkerson@howardcountymd.gov

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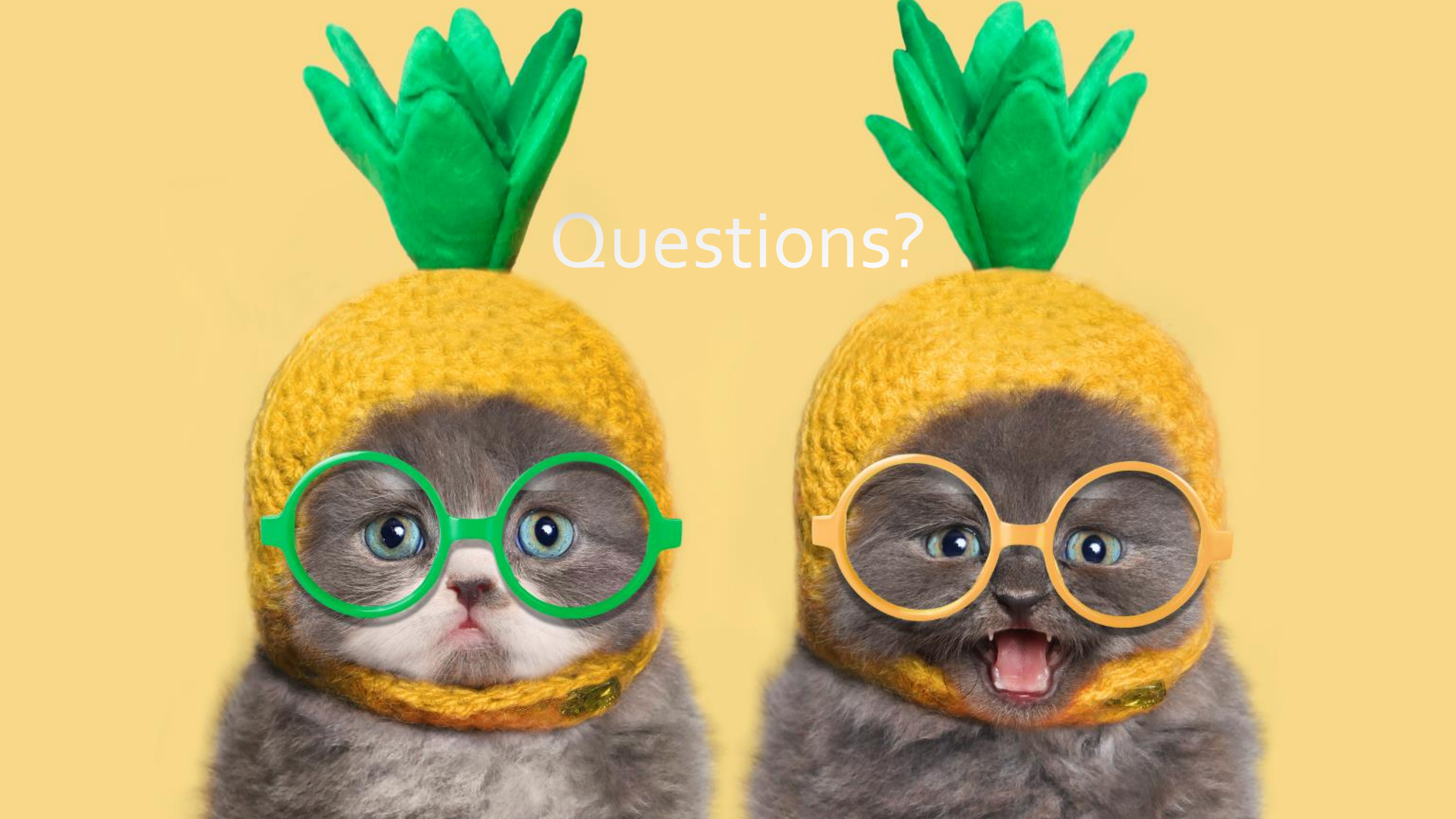
Department of Planning & Zoning

Questions?