GIS and the Interactive Growth Model®

GIS Symposium November 1st, 2018

Metro Forecasting Models

Nationally Recognized Forecasting Firm

- Specializes in land use development forecasting

- Creators of the Interactive Growth Model®

- Used by governments and private industries for over 35 years

- Staff consists of planners, economists, and research specialists

Dr. Paul Van Buskirk, PhD, AICP, PE

David Farmer, AICP, PE, CGC

Forecasting Community Needs

- Commercial and industrial area
- Shopping Centers (Neighborhood, Community, & Regional)
- Parks (Neighborhood, Community, & Regional)
- Schools (Elementary, Middle, High)
- Libraries
- Fire Stations
- Police Stations
- Potable water and wastewater treatment (in MGD)
- Impervious Area/Stormwater Demand

Collier IGM (CIGM) Project

Policy-makers needed to know:

- Growth potential in rural areas at Buildout
- Where growth will be concentrated spatially
- Identify existing & future development and demographic trends
- Spatially identify future needs for commercial and government services in large housing developments

Interactive Growth Model Study Area
Future Land Use Map

Collier County Florida

Future Land Use

Legend
- TAZs
- Rural Lands West
- Ave Maria

URBAN DESIGNATION

MIXED USE DISTRICT
- Urban Residential Subdistrict
- Residential Density Bands
- Urban Coastal Fringe Subdistrict
- Urban Residential Fringe Subdistrict

BUSINESS PARK SUBDISTRICT
OFFICE AND INFILL COMMERCIAL SUBDISTRICT
PUD NEIGHBORHOOD VILLAGE CENTER SUBDISTRICT
RESIDENTIAL MIXED USE NEIGHBORHOOD SUBDISTRICT
- Orange Blossom Mixed Use Subdistrict
- Vanderbilt Beach / Collier Blvd. Commercial Subdistrict
- Henderson Creek Mixed Use Subdistrict

RESEARCH AND TECHNOLOGY PARK SUBDISTRICT
- Buckley Mixed Use Subdistrict

COMMERCIAL MIXED USE SUBDISTRICT
- Hibiscus Residential Infill Subdistrict
- Livingston Road / Radio Road Commercial Infill Subdistrict
- Vanderbilt Beach Road Neighborhood Commercial Subdistrict
- Collier Blvd Community Facility Subdistrict
- Vincentian Mixed Use Subdistrict
- Industrial District

BUSINESS PARK SUBDISTRICT
RESEARCH AND TECHNOLOGY PARK SUBDISTRICT

COMMERCIAL DISTRICT
- Mixed Use Activity Center Subdistrict
- Interchange Activity Center Subdistrict
- Livingston / Pine Ridge Commercial Infill Subdistrict

BUSINESS PARK SUBDISTRICT
RESEARCH AND TECHNOLOGY PARK SUBDISTRICT
- Livingston Road / Eatonwood Lane Commercial Infill Subdistrict
- Livingston Road Commercial Infill Subdistrict

COMMERCIAL MIXED USE SUBDISTRICT
- Livingston Road / Veteran's Memorial Blvd. Commercial Infill Subdistrict
- Goodlette / Pine Ridge Commercial Infill Subdistrict
- Orange Blossom / Airport Crossroads Commercial Subdistrict
- Davis-Radio Commercial Subdistrict

AGRICULTURAL / RURAL DESIGNATION

RURAL COMMERCIAL SUBDISTRICT
- Corkscrew Island Neighborhood Commercial Subdistrict

RURAL FRINGE MIXED USE DISTRICT
- Receiving Lands
- Sending Lands
- Neutral Lands

- Rural Settlement Area District
- Rural Industrial District
- Estates Designation
- Conservation Designation

OVERLAYS AND SPECIAL FEATURES
- Incorporated Areas
- Coastal High Hazard Area
- Bayshore/Gateway Triangle Redevelopment Overlay
- Urban Rural Fringe Transition Area Overlay

Stewardship Areas
- Floway Stewardship Area
- Habitat Stewardship Area
- Water Retention Area

Gulf of Mexico

LEE COUNTY
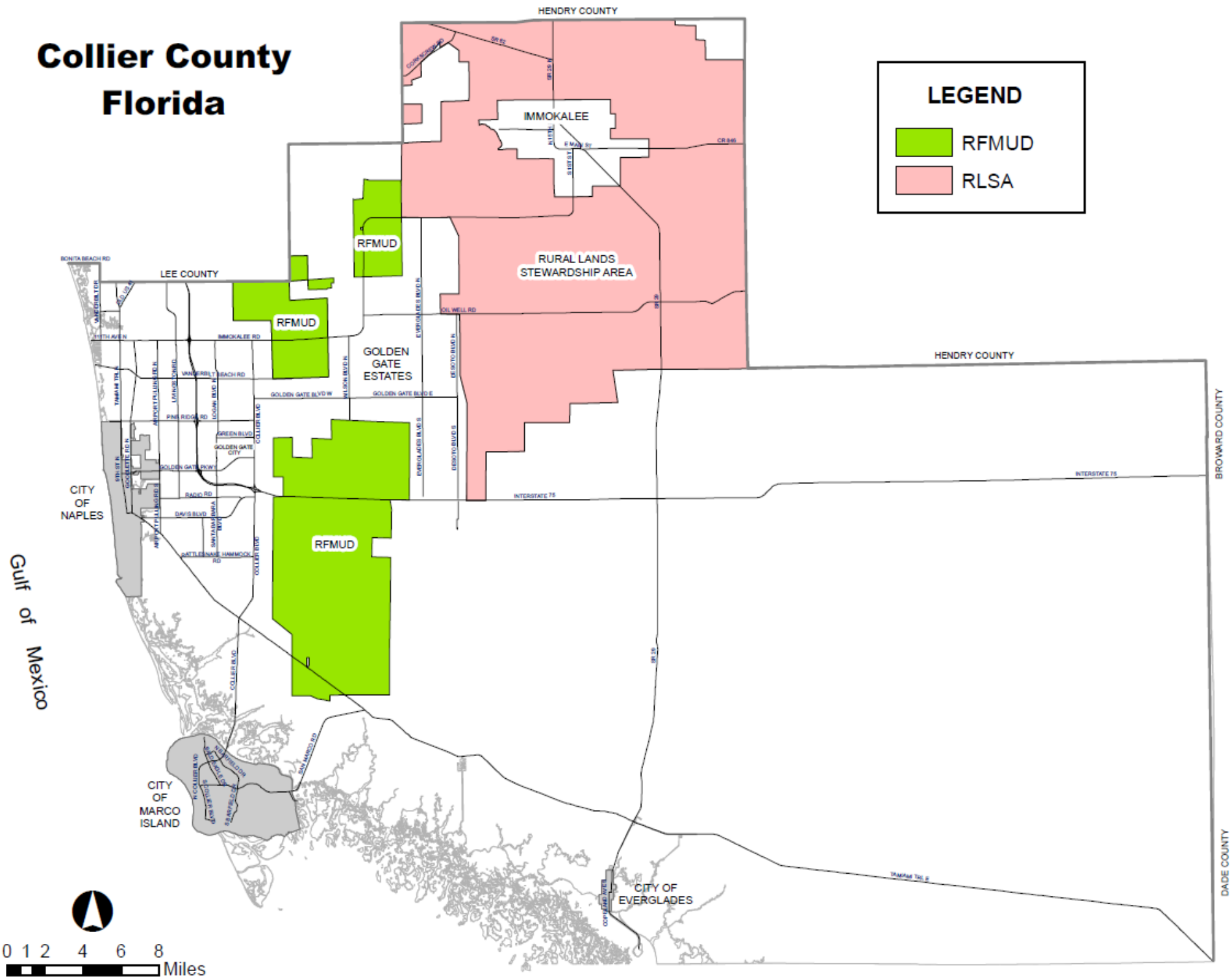HENDRY COUNTY

Prepared by: Beth Yang, AICP
Growth Management Department
DATE: 2/2016
FILE: InteractiveGrowthModel_FLU.mxd

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T 46 S T 47 S T 48 S T 49 S T 50 S T 51 S T 52 S T 53 S

Collier County
Florida

LEGEND

RFMUD

RLSA

HENDRY COUNTY

IMMOKALEE

RURAL LANDS
STEWARDSHIP AREA

HENDRY COUNTY

BONITA BEACH RD

LEE COUNTY

RFMUD

RFMUD

GOLDEN
GATE
ESTATES

GOLDEN GATE BLVD W

GOLDEN GATE BLVD E

IMMOKALEE RD

VANDERBILT BEACH RD

PINE RIDGE RD

GREEN BLVD

GOLDEN GATE
CITY

GOLDEN GATE PKWY

RADIO RD

DAVIS BLVD

RATTLESNAKE HAMMOCK RD

CITY
OF
NAPLES

INTERSTATE 75

BROWARD COUNTY

RFMUD

INTERSTATE 75

Gulf of Mexico

CITY
OF
MARCO
ISLAND

DADE COUNTY

CITY OF
EVERGLADES

TAMIAMI TRL E

0 1 2 4 6 8 Miles

Collier County
Florida

HENDRY COUNTY

IMMOKALEE

RFMUD

LEE COUNTY

RFMUD

RURAL LANDS
STEWARDSHIP AREA

HENDRY COUNTY

BROWARD COUNTY

GOLDEN
GATE
ESTATES

GOLDEN GATE BLVD W   GOLDEN GATE BLVD E

INTERSTATE 75

CITY
OF
NAPLES

RFMUD

Gulf of Mexico

INTERSTATE 75

CITY
OF
MARCO
ISLAND

CITY OF
EVERGLADES

TAMIAMI TRL E

DADE COUNTY

0 1 2   4   6   8
Miles

Mapping Town & Village Needs
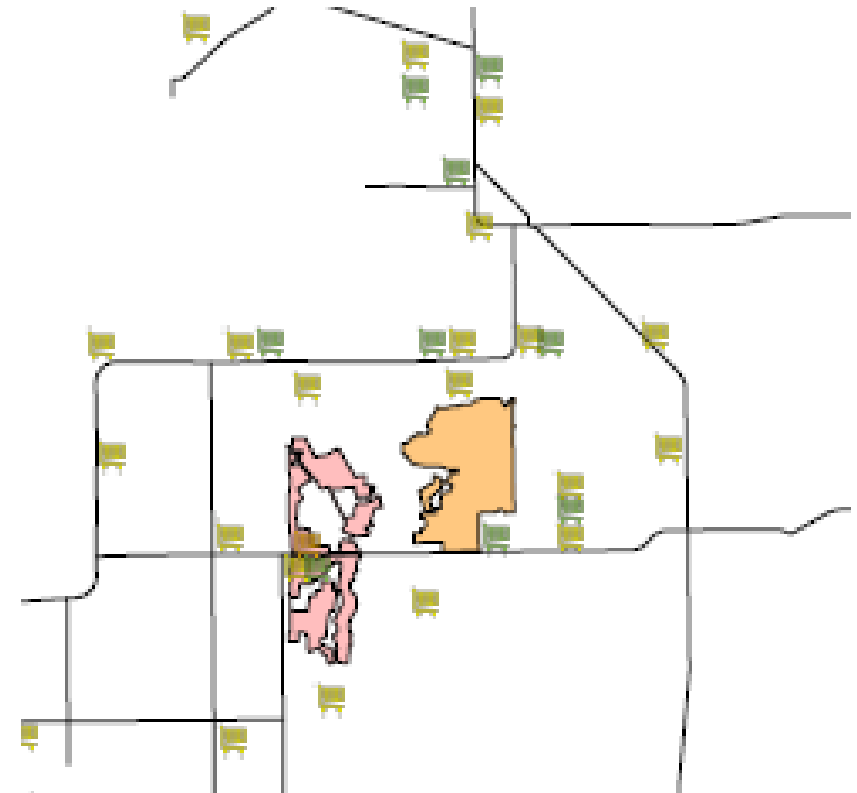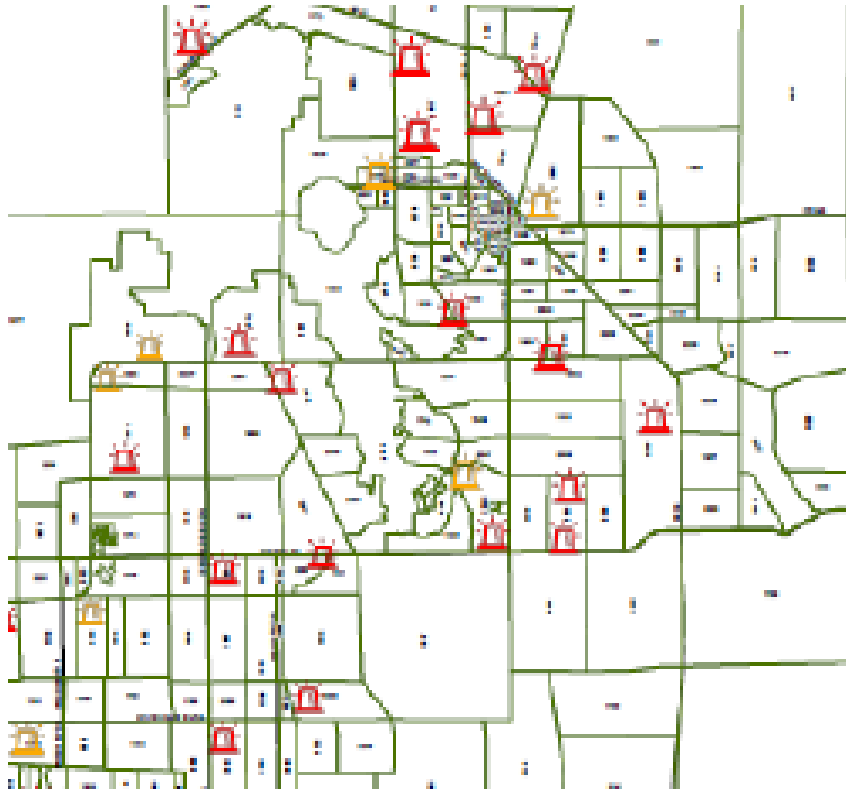
🛒 Neighborhood Shopping Center

🛒 Community Shopping Center

🛒 Regional Shopping Center

Baseline

TAZ: 1649
Collier County, Florida

Community	TAZ	2 digit DOR	Number of Parcels	E-911 Address Points	Number of Units	Total Parcel Acre	Heated Area Sq feet	Building Area Sq feet
Unincorporated	1649	97	4	1	0	6	0	0
			7	0	0	121	0	0
			6	0	0	9	0	0
			21	1	0	25	0	876
			1	1	0	0	0	0
			2	5	3	7	11,632	13,881
			13	344	317	12	0	0
			431	431	431	60	740,865	740,865
			22	6	0	4	0	0
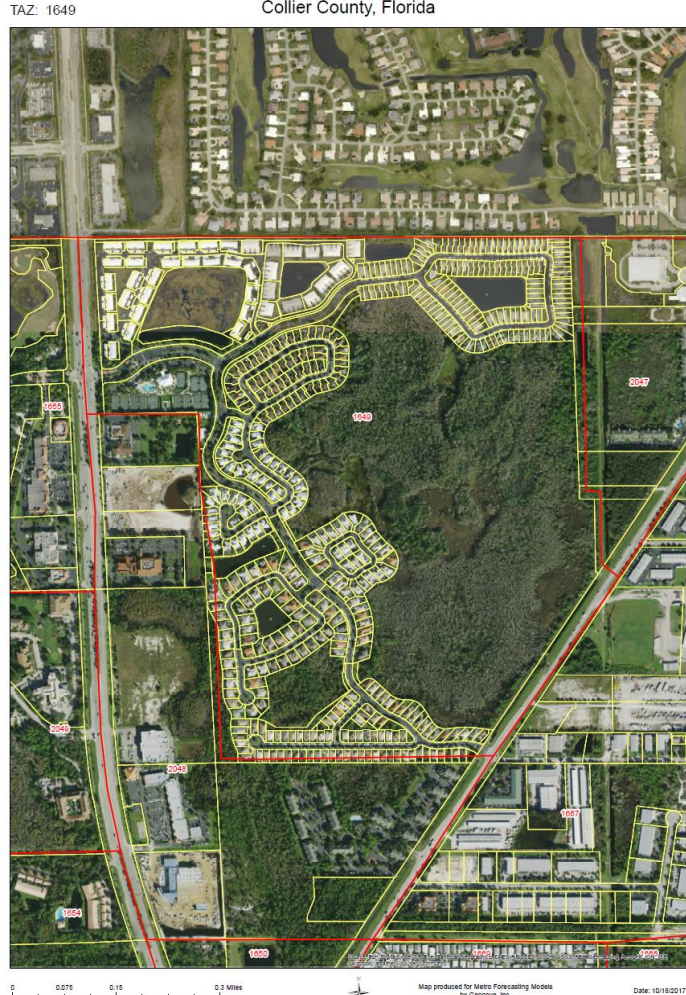
TAZ Aerials

TAZ: 2236

Collier County, Florida
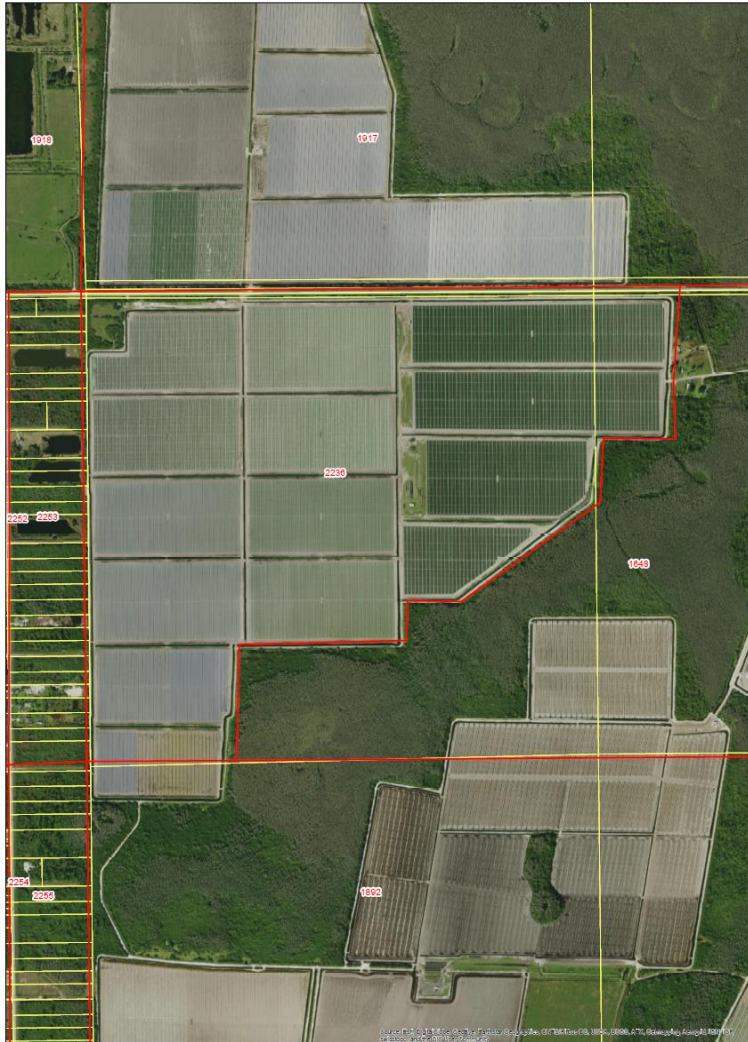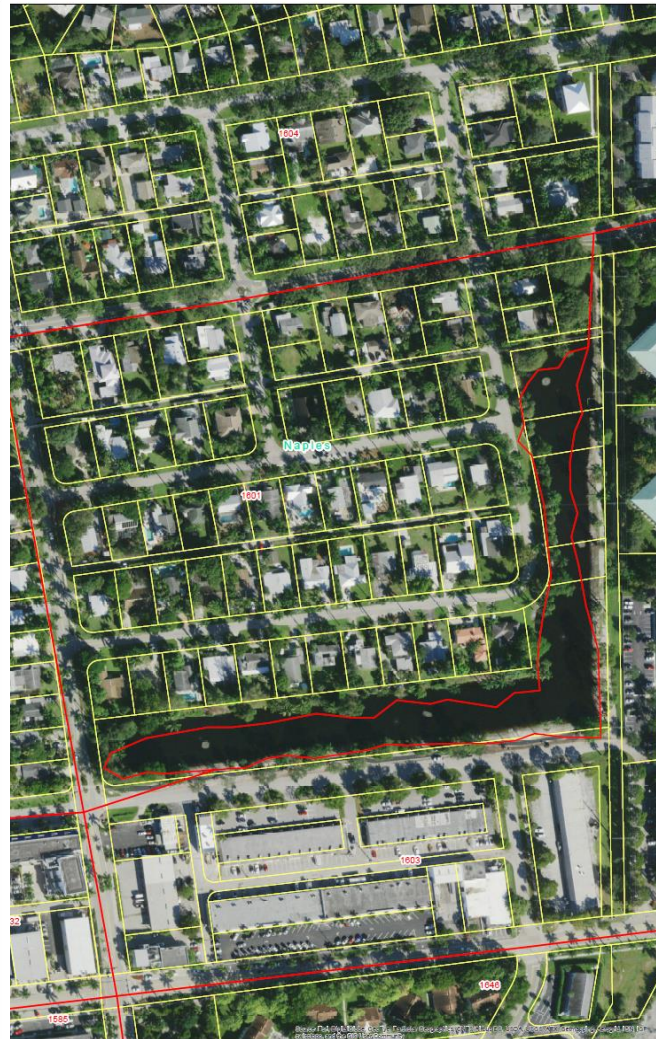
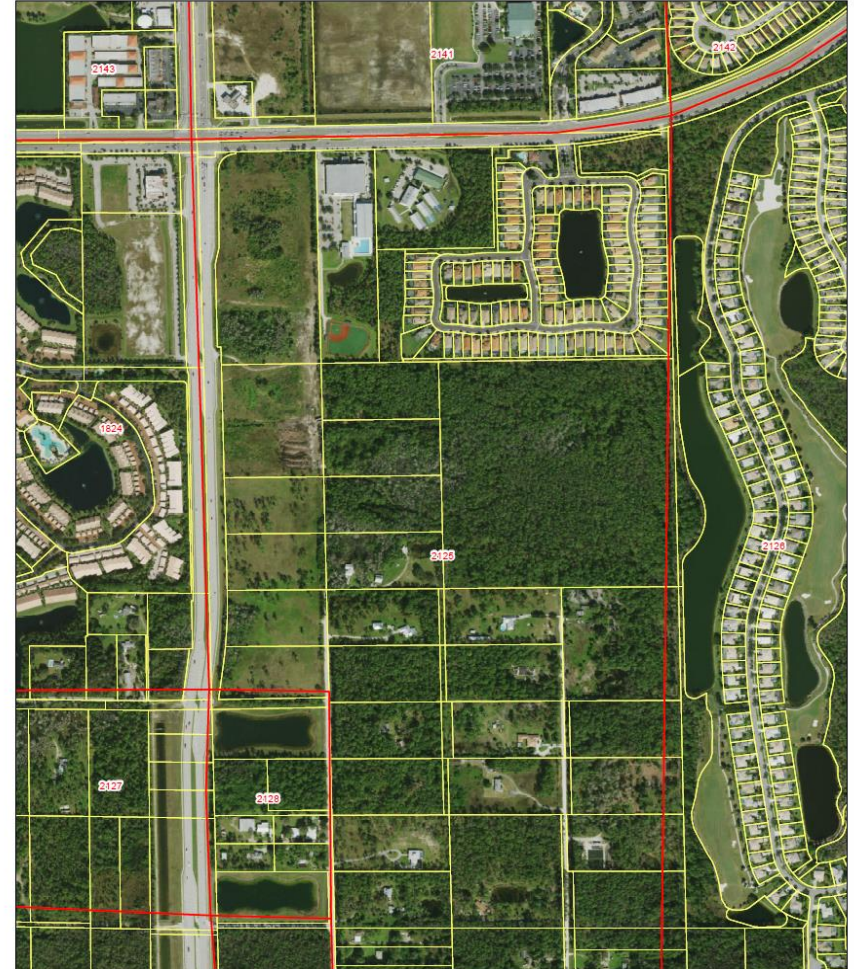Collier County, Florida

Collier County, Florida

Buildout

- DOR Code
- Zoning
- Future Land Use
- Property Appraiser data
- Enhanced 911 data (E 911)
- Wetland database information
- Avg. distance to municipal utilities


TAZ: 2125   Collier County, Florida

Community	TAZ	2 digit DOR	Zoning	FLU	Number of Address Points	Number of Units	Total Parcel Acre	Percentage of Wetland Area	Average Distance to Sewer Lines (feet)	Average Distance to water Lines (feet)
Unincorporated	2125	01	A	Residential Density Bands	11	11	57.8	2.9%	1,721.54	1,691.17
Unincorporated	2125	01	RPUD	Mixed Use Activity Center Subdistrict	10	10	2.6	4.2%	0.34	122.32
Unincorporated	2125	35	RPUD	Residential Density Bands	2	1	0.8	0.0%	78.05	50.61
Unincorporated	2125	67	A	Residential Density Bands	5	2	27.4	10.1%	1,111.22	1,075.09

Convenience Retail - CCIGM
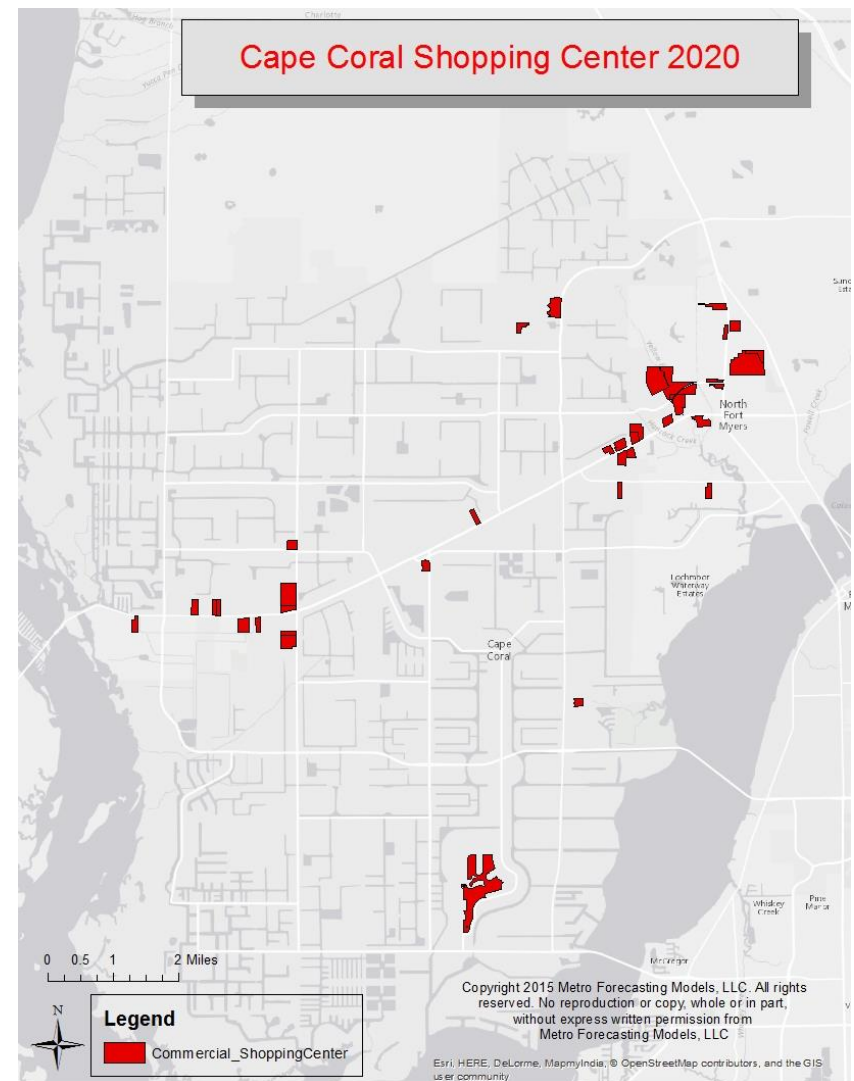
Using MFM data and GIS, GeoCove ran a query for:

- Vacant land zoned commercial

- Greater than 2 acres

- Within 200 ft. of an arterial roadway

- Unmet demand of at least 50,000 sqft (MFM)

Cape Coral Convenience Retail 2020
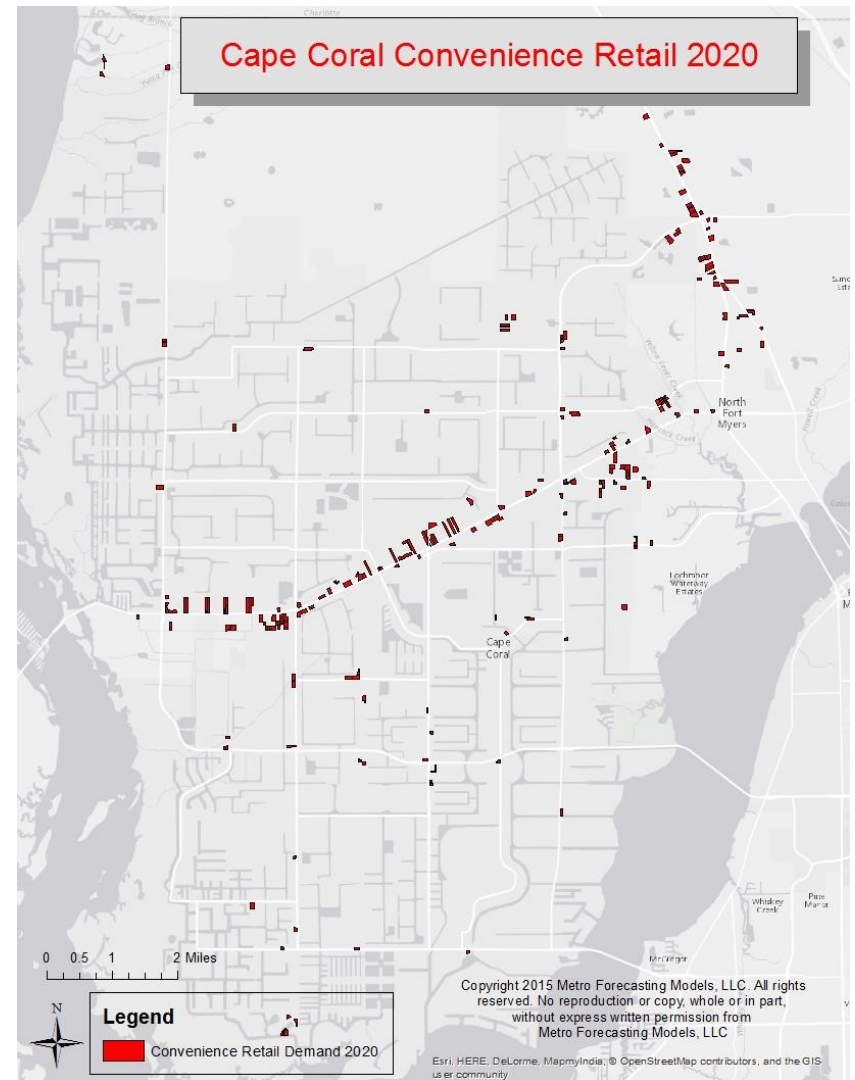
Shopping Centers - CCIGM

Using MFM data and GIS, GeoCove ran a query for:

- Vacant land zoned commercial

- Greater than 8 acres

- Potential for shopping center

Cape Coral Shopping Center 2020

Legend
■ Commercial_ShoppingCenter

0   0.5   1   2 Miles

Residential Multifamily - CCIGM

Using MFM data and GIS,
GeoCove ran a query for:

- Vacant land

- Greater than 5 acres

- Multifamily residential
  potential

Cape Coral Alternative Sites 2020

Legend

DORCode
- 00
- 54; 60; 61; 62; 67; 68; 69
- 99

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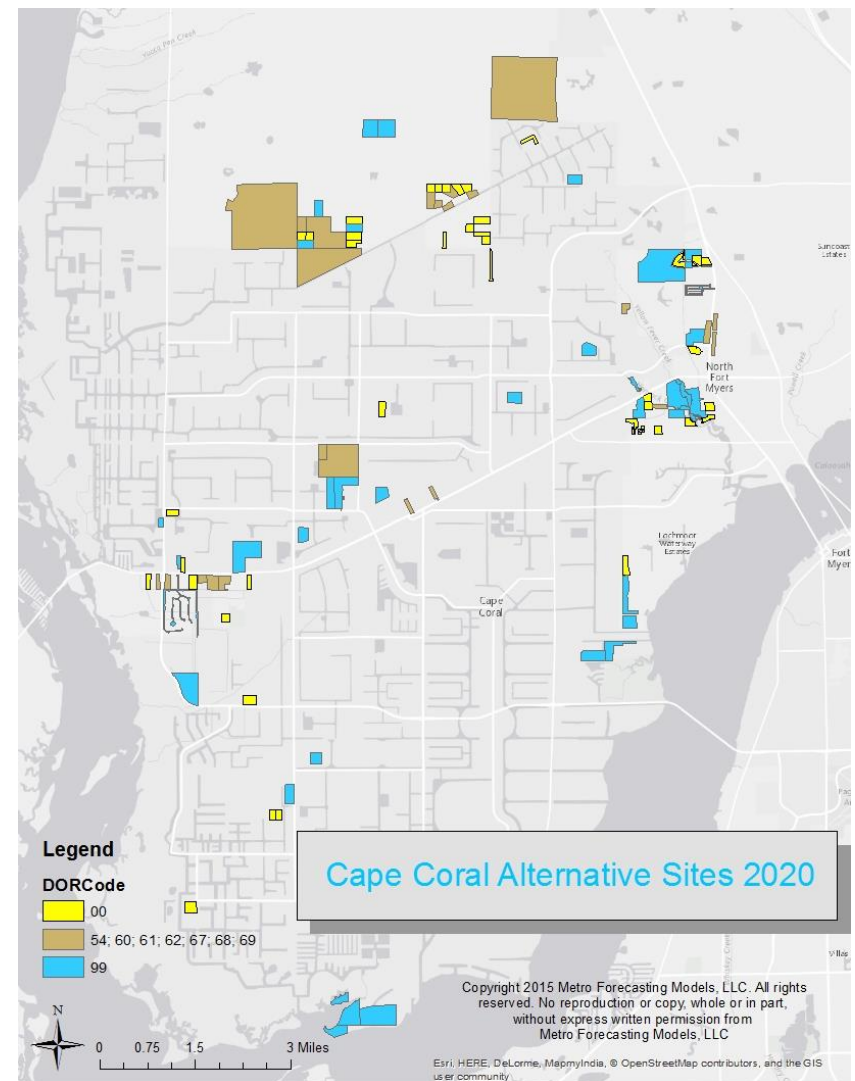
Results

- Using GIS and forecast data to assist sheriff's office with in-depth analysis of future law enforcement needs

- Identified co-locates for Emergency responders, saving taxpayer valuable dollars

- Alternative development scenario analysis (testing density/intensity)

- Spatially located future needs for 29 elementary, 10 middle, and 8 high schools

QUESTIONS?

PLEASE CONTACT US FOR MORE INFORMATION.

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METRO FORECASTING MODELS

MFM

Precise Data | Expert Analytics | Optimal Solutions