

Warner Real Estate Advisors Inc.

# Indian Trails Grove Housing Need Study - Land Based Methodology

7/9/2015

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**Transmittal Letter**

July 9, 2015

Mr. Kevin Ratterree, Vice President  
Palm Beach West Associates I LLLP  
1600 Sawgrass Corporate Parkway STE 400  
Sunrise, FL 33323 2890

Re: Housing Needs Study – Land Based Methodology, Palm Beach County,  
Florida

Dear Kevin,

Enclosed you will find a Housing Needs Study that analyzes and compares the supply of available residential land in Palm Beach County and compares it to projected population growth and housing demand using a land based / per capita methodology, that differs from the units based approach methodology applied in the other Housing Needs Study. This report is a supplemental study for the Indian Trails Grove Future Land Use Atlas Amendment Application and is in addition to the Housing Needs Study based on residential units report.

Sincerely,

Rick Warner,  
Warner Real Estate Advisors, Inc.

## Executive Summary

The purpose of this Housing Needs Study is to analyze if there is sufficient residentially designated land, assuming use of all potential of residentially vacant land, to support the projected 2035 Palm Beach County population. This analysis was performed comprehensively, on a county-wide basis, to determine if there is sufficient vacant and underutilized residentially designated land in Palm Beach County to provide the housing needed for the 318,000<sup>1</sup> additional people who are projected to live in Palm Beach County by 2035. Below is a list of the major findings of this analysis:

1. The need for additional residential capacity is well demonstrated; there is more than enough housing need to support the comprehensive plan amendment request by Indian Trails Grove for a 3,943 unit development.
2. After a significant crash in the real estate market in 2008, the housing need problem is once again becoming acute; building permit activity is up and many new projects are underway.
3. By 2035, the county population is expected to increase by nearly 23%; given current BEBR population projections, 318,000 additional people will be living in PBCO.<sup>2</sup> This new population is equivalent to over three times the current size of West Palm Beach, 104,000, by 2035. By viewing maps of the area, you can readily see there is insufficient vacant land in the eastern area to accommodate this number of new residents. Please refer to Map 8 at end of report and note that for comparison purposes we have used only the eastern portion of West Palm Beach for comparisons.
4. Based on this analysis of available residential land in Urban and Ag Reserve Tiers approximately 15,300 acres of vacant and underutilized land remain available for residential development. By comparing population growth in the area to the housing demand, the current supply of land indicates significant shortfalls.
  - a. Based on historical residential land use demand patterns from 1991 to 2014 we will utilize all available residential vacant and underutilized land before 2025, with no market factor applied. This includes converting nearly all agricultural land, vacant commercial and industrial land, and underutilized residential land. This is based on a detailed review of over 393,000 parcels located in the Urban and Ag Reserve Tiers.<sup>3</sup> No market factor is applied to this approach which has been widely accepted by planners for years.

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<sup>1</sup> Bureau of Economic and Business Research (BEBR) April 2015 Mid Range Estimates, Volume 48 Bulletin 171.

<sup>2</sup> BEBR April 2015 Mid Range Estimates, based on estimated April 1, 2014 population.

<sup>3</sup> Even if you include Minto West, and Highland Dunes which is in the rural tier and Limited Service Tier, in this computation the area will be built out by 2025.

- b. By 2020 nearly all vacant land will be absolved, assuming a minimal 25% market factor. A minimal market factor is essential for price controls of the land and housing prices.
5. Even with conservative assumptions, it is projected that by 2025 the eastern (Urban and Rural Tiers) County will be built out of residential land.
6. The County is already nearly “built out” in the Urban and Ag Tiers of Eastern Palm Beach County. Approximately 97% of the potential total residential land is already built. The 15,300 unbuilt acres are an overestimate of land since the county ExLu data assumed that each parcel/scrap of land.
7. There are large tracts of land in the Rural Tier which should be converted to a higher density. Currently there are approximately 12,000 acres <sup>4</sup> of undeveloped land in the Rural Tier, that have not been committed to a development plan. <sup>5</sup>
8. WREA asserts that some of the assumptions in the Palm Beach County Planning Division’s 2014 ExLu data overestimate the amount of available residential land for the following reasons:
  - a. The major questionable assumption discussed above, is that all vacant properties will be built out as residential, and to the maximum allowable density. In reality, there will always be some vacant land and not all property will be built out to its maximum density. A more reasonable assumption would be to assume that 80% of the vacant and underutilized properties will be built on.
  - b. Many of the parcels are oddly configured and difficult to develop, causing difficulty in site planning and meeting other development criteria found in most land development regulations.
  - c. The conversion of agricultural, equestrian and commercial parcels into residential uses will affect these industries. If all the plant nursery land is converted into residential land, this industry will cease to exist in these areas.
  - d. Similarly, the same problem will occur if Equestrian land becomes residential which is a huge economic driver in our community.
  - e. By converting vacant commercial and industrial land we are reducing the retail and employment areas for this new population. Job sites will be eliminated in the Urban and AG Reserve Tiers.

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<sup>4</sup> Excludes Minto West and Mecca Farms, and Highland Dunes (Not in Rural Tier) and Exurban Tier.

<sup>5</sup> Rural Tier land is excluded from this analysis since it’s low density supports very low population. Overall the Rural Tier supports approximately 5% of the population with density one unit per 20 acres to one unit per 20 acre. If per capita ratios were developed they would be over many times higher than the Urban Tier.

- f. There is no indication of a market factor, as land become scarce, land and home prices will increase dramatically. This condition can be somewhat ameliorated by more effective utilization of the Rural tier lands.

### **Implications of Housing Needs Shortfall**

1. There will be additional development pressure placed on the only remaining large vacant areas; pressure to change policies to allow residential development within the EAA beyond the 20-mile bend.
2. In the Eastern portion of the County, there will be limited development if any, excluding the Ag Reserve Area, agricultural land, and including commercial plant nurseries.
3. Commercial and industrial land will be converted into residential land uses, thereby reducing economic development opportunities for employment.
4. Palm Beach County will become a leisure market for baby boomers.
5. Housing prices will continue to rise, thus increasing the percentage of working families, teachers, firemen and police unable to afford housing who will be forced to move to St. Lucie County.
6. Traffic density will worsen as workers continue to move out of County where they are required to commute longer distances to Palm Beach County market jobs.
7. Roadway costs will increase as new roads are needed to provide access to more remote counties where housing is affordable, i.e. St. Lucie County.
8. Single person households will be pressured to double or triple up; i.e., people will have to rent rooms.
9. There will be scattered concentrations of additional high rise developments. For example, in Miami Dade County and Broward County, infrastructure cannot adequately supply new higher densities. Likewise, these higher densities are not wanted by the existing neighborhoods who vigorously oppose these developments at public zoning hearings that require reduction of densities to obtain local government approvals.

## **Organization and Scope of This Report**

The primary purpose of this study is to analyze housing needs and to determine if there is a sufficient supply of residential land to support the population to meet the recent BEBR mid-range projections for Palm Beach County. Housing availability and pricing are viewed to operate on a county-wide basis.<sup>6</sup>

### **Demand Population Permanent and Seasonal**

The first step in the study is to determine the demand for new housing. This is done by determining the number of additional people coming to the County over the next 25 years. For this analysis the BEBR 2015 population estimates were used as a base and BEBR projections were used for 2020, 2025, 2030 and 2035.<sup>7 8</sup> From these population projections, residents living within the Glades communities and the Rural, Exurban and Limited Service Tiers (Highland Dunes) were factored out. The seasonal population was incorporated into the permanent population.

### **Supply / Adequacy of Land to Meet Needs**

Land for residential supply was determined through the use of the PBCO Exlu GIS database<sup>9</sup>, Residential Projects for county and municipal databases and the PBCO Property Appraisers 2014 CAMA file, updated with June data downloaded from the county GIS portal.

#### **Demand**

Demand was computed for four time frames for the Urban and Ag Reserve Tiers:<sup>10</sup>

1900 – 1990  
1991 – 2000  
2001 – 2010  
2011 – 2014

Demand was computed by computing the amount of residential land used during each timeframe and then dividing by the population growth which occurred during that period. The time frame of 1900 – 1990 was dropped from the analysis since it did not represent the current development patterns

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<sup>6</sup> This study does divide the County into two markets, Glades Area and eastern County and the eastern county is further sub divided into a separate category of Urban/Suburban and Ag Reserve Tiers. The Rural, Exurban and Limited Service (Highland Dunes) Tiers are excluded.

<sup>7</sup> BEBR Volume 48, Bulletin 171, April 2015. Actual time frame is 21 years since it begins in 2014, however for report purposes we will use 20 and 25 years.

<sup>8</sup> Glades area population was based on review of worksheets from Palm Beach County Population Allocation Models.

<sup>9</sup> Revised October 2014 and laced on GIS portal.

<sup>10</sup> Census 1990, 2000 and 2010 Block GIS databases were used to compute population in these areas.

created by the advent of PUD's, environmental preservation set asides, traffic concurrency etc.

This analysis was based on an extensive detailed review of over 393,000 parcels. Included in the computation of residential lands, were lands included in common areas such as retention areas, golf courses (if part of a golf course community not now being converted into residential units), environmental set asides, and parks, if included as part of the community. Typically, streets were excluded from the analysis, as they generally are not included in the property appraiser's database. By excluding these roads, in many but not all communities, this effectively underestimates the amount of residential land consumed for communities that have public roads.

### **Demand/Supply Comparisons In Urban/Suburban /Ag Reserve Tier**

Using the results from the Supply Analysis and the Demand Analysis comparisons, the following balance was determined:

1. By 2025 or earlier, the County will have exhausted all available residential land, including vacant land under agricultural use, and land which is already built on but is underutilized.
2. This shortfall can be expressed as a geographical comparison, i.e. approximately three more cities with a population the size of West Palm Beach, 104,000, must be located in the County within the next 20 years.



## Demand Analysis

The table below shows total population growth in Palm Beach County from 1970 to 2010 census, inclusive of BEBR's 2014 estimate of population. The population is then allocated between the eastern area and western areas.

**Table 1 - Historical Population Growth From U.S. Census and BEBR**

Year	Total	Incremental Increase	East	West	Incremental Increase East	Incremental Increase West
1970	348,753		313,878	34,875		
1980	576,758	228,005	541,187	35,571	227,309	696
1990	863,503	286,745	826,932	36,571	285,745	1,000
2000	1,131,191	267,688	1,093,804	37,387	266,872	816
2010	1,320,134	188,943	1,285,333	34,801	191,529	-2,586
<b>April 1, 2014 BEBR Estimate</b>	<b>1,360,238</b>	<b>40,104</b>	<b>1,323,990</b>	<b>34,754</b>	<b>40,104</b>	<b>(47)</b>
<b>Total Increases 1980-02014</b>		<b>1,011,485</b>			<b>1,011,559</b>	<b>(121)</b>

Sources: U.S. Census, BEBR Vol. 48 Bulletin 171 Published April 2015 (note: Belle Glade population is estimated to have declined by 47 people since the 2010 Census.)

## Demand - Estimated Population Growth - BEBR Forecast

Each year BEBR (the Bureau of Economic and Business Research at the University of Florida) prepares population projections on a county-wide basis.

The table below illustrates the following key points:

1. The total County population will increase by approximately 255,000 in the next 15 years.
2. The total County population will increase by approximately 318,000 in the next 20 years.

In comparison, the city of West Palm Beach currently has approximately 104,000 people. Therefore to accommodate 255,000 people by 2030 the equivalent of nearly two and one half new cities with a population the size of West Palm Beach must be housed and provided with services. By 2035 the equivalent of over three cities with a population the size of West Palm Beach must be located within the County.

**Table 2 - BEBR Projections Bulletin 171 released April, 2015**

BEBR Population Estimates April 1, 2014 and Projections for 2015 - 2035							
	April 1, 2014	2015	2020	2025	2030	2035	Growth 2014 - 2035
PALM BEACH	1,360,238						
Low		1,335,100	1,371,000	1,397,800	1,415,700	1,423,300	63,062
<b>Medium</b>		<b>1,377,300</b>	<b>1,463,900</b>	<b>1,543,200</b>	<b>1,615,100</b>	<b>1,678,700</b>	<b>318,462</b>
High		1,431,500	1,560,600	1,689,600	1,817,900	1,942,400	582,162

As noted easier, the time frame base year is 2014 Estimate For Palm Beach County, thus actual time frames are 21 years and 26 years, for this report we will use 20 and 25 years.

**Table 3 - Population East West – Annual Population Growth – Great Recession on Annual Basis**

	Total	West	East	East Growth	Annual East Growth
1980	576,758	35,571	541,187		
1990	863,503	36,165	827,338	286,151	28,615
2000	1,131,191	34,759	1,093,804	266,466	26,647
2010	1,320,134	34,801	1,285,333	191,529	19,153
April 1, 2014 BEBR Estimate	1,360,238	34,754	1,324,380	39,047	9,762
<b>1980 - 2014 Growth</b>	783,480	(817)	783,193	783,193	23,035

Sources: US Census, UF BEBR, WREA Inc. and PBCO Planning Dept.

This table illustrates that the annual growth rate between 2000 and 2014 has declined, owing to the Great Recession and its accompanying economic problems Americans have endured during the last decade.

**Table 4 - Allocation of Population in Eastern Area**

The table below displays the allocation of population within the eastern area. The eastern area is composed principally of Urban/Suburban, Ag. Reserve, Rural and Exurban Tiers. The Rural and Exurban tiers have low density of .8 units per acre for the majority of the area. Based on the analysis below, we project that 95% of future population will be allocated to the Urban/Suburban and Ag. Reserve Tiers.

Years	East	Genus Block Pop.	Per Cent
1990	827,338	802,759	97%
2000	1,093,804	1,043,020	95%
2010	1,285,333	1,222,599	95%
April 1 BEBER Est.	1,324,380	1,260,944	95%

Sources: US Census, WREA Inc., Percentages Rounded 2 decimal places.

**Table 5 - Urban/Suburban and AG Reserve Tier Population Projection**

Based on Historic analysis the 95% of the population growth has occurred in the Urban/Suburban and Ag Reserve Tiers.

Allocated Population Projections									
Year	Total	West	East	East Pop Increase Incremental 2015-2035	Urban / Ag Reserve Allocation	Urban / Ag Allocation Population Adjustment	Urban / Ag Reserve Seasonal Adjustment	Urban / Ag Reserve Allocation	
2015	1,377,300	42,321	1,334,979		-	-	-	-	
2020	1,463,900	44,982	1,418,918	83,939	79,742	6,379	6,379	86,121	
2025	1,543,200	47,419	1,495,781	76,863	73,020	5,842	5,842	78,862	
2030	1,615,100	49,628	1,565,472	69,691	66,206	5,296	5,296	71,502	
2035	1,678,700	51,583	1,627,117	61,646	58,563	4,685	4,685	63,248	
	<b>Total New Eastern Population 2015 - 2035</b>			<b>292,139</b>	<b>277,532</b>	<b>22,203</b>	<b>22,203</b>	<b>299,735</b>	

Sources: Pop Estimates based on BEBR Vol. 48 Bulletin 171. Note Growth between 2014 and 2015 is excluded. Since Database was updated mid year, causing an slight (Conservative) underestimate of growth.

### Population Growth in Urban and Ag Reserve Tier – Amount of Land Consumed

The table below allocates the population between the Urban Tier and the balance of eastern Palm Beach County, using the Census Block files from the 1990, 2000 and 2010 Census. The acres developed were computed via use of the PBCO Property Appraiser office 2014 CAMA files, and the Department of Revenue Files. Built dates were tediously added to all common areas, preserve, retention areas etc. consistent with the adjacent residential development. Note the Residential Acres per 1,000 for 1990, is low relative to other time periods. This is because strict water retention requirements were not required until the late 1970's. Furthermore, many of the internal streets are not included as there were no set aside requirements or environmental preservation requirements. Overall, this time period does not represent apples to apples comparison with the other time frames. For a detailed review of this growth, please refer to Appendix A, which on a TAZ by TAZ basis identifies those parcels with have been built by year and displays the vacant and Under Utilized Properties.

**Table 6 – Urban and AG Reserve Tier Population Projection**

Years	Permanent Population	Seasonal Pop Est	Total Population	Res. Acres Developed	Acres Used Per 1,000 Pop
1900 - 1990	802,759	104,359	907,118	88,259	97
1991 - 2000	1,043,020	104,302	1,147,322	31,479	131
2001 - 2010	1,222,599	122,260	1,344,859	32,023	162
2011 - 2015	1,260,944	126,094	1,387,038	5,308	126

Sources: Census 1990 - 2010, PBCO PA Cama Files and NAL Files and WREA, Acres per 1,000 rounded 2 decimal places.

Demand is under estimated because most local streets are not included in the demand analysis, since there often are not in the GIS data.

### Computation of Residential Acres Used Per 1,000 People

The table below displays the results of the information in Table 6. Note that it appears that the high figure of 2001-2010 is consistent with the real estate collapse during the middle to end of this period. Much of the foreclosure activity has been reduce, previously high vacancy of housing is normalizing and overall housing market is in recovery. Due to these improvements the average of the last 25 years is used for future projections of land consumption.

**Table 7 – Urban and Ag Reserve Residential Use in Acres Per 1,000 People**

Urban and Ag Reserve Tiers	Residential Ac. Per 1000 New Population
Period	
1991 - 2000 (April 1)	131
2001 - 2010 (April 1)	162
2011 - 2014	126
25 Year Average	140
Source: Calculated	

Demand is under estimated because most local streets are not included in the demand analysis, since there often are not in the GIS data. See Appendix A.

### Total Demand for Planning Horizon

Based on the population growth for BEBR mid-range projections, a total of nearly 42,000 acres is estimated to be required to meet the population growth for this area. Since there are only approximately 15,300 acres of vacant residential land, there is a significant shortfall.

**Table 8 - Total Estimated Demand In Acres**

Time Frame	Urban Ag Reserve Tier Population Growth With Seasonal	Demand Residential Acres Urban/Ag Reserve
2020	86.1	12,028
2025	78.9	11,014
2030	71.5	9,986
2035	63.2	8,834
<b>Total Demand</b>		<b>41,863</b>

Note: Demand between 2014 and 2015 is excluded since mid year update of built data from property appraiser was incorporated, thus will cause a slight under estimate of total demand.

## Supply Analysis

### Supply - Available Land and Capacity to Build Homes to Meet BEBR Mid-Range Projections - Eastern Palm Beach County

The table below is based on an analysis of the ExLu Database provided Palm Beach County Planning Division along with the Residential Projects for county and municipal databases. WREA has reviewed on a TAZ and parcel by parcel basis and some minor adjustments made for new homes which have been constructed since the Oct. 2014 update, with a few exceptions, it is consistent with the county data for the study area. The detailed analysis was conducted with four separate reviews and is summarized in Appendix A.

**Table 9 - Vacant Residential Land**

East Acres	Residential Ac.
Total Urban and Ag Reserve Tier Acres (Available Acres)	15,339

### Demand Supply Comparison

The above table displays approximately 15,000 acres of vacant residential land. Table indicates that by 2020 there will be an additional 86,000 permanent and seasonal people in the Urban/Suburban Ag Reserve Tiers which will consume approximately 12,000 acres of land. Thus, sometime between 2020 and 2025 the remaining 3,000 acres of vacant residential land will be consumed.



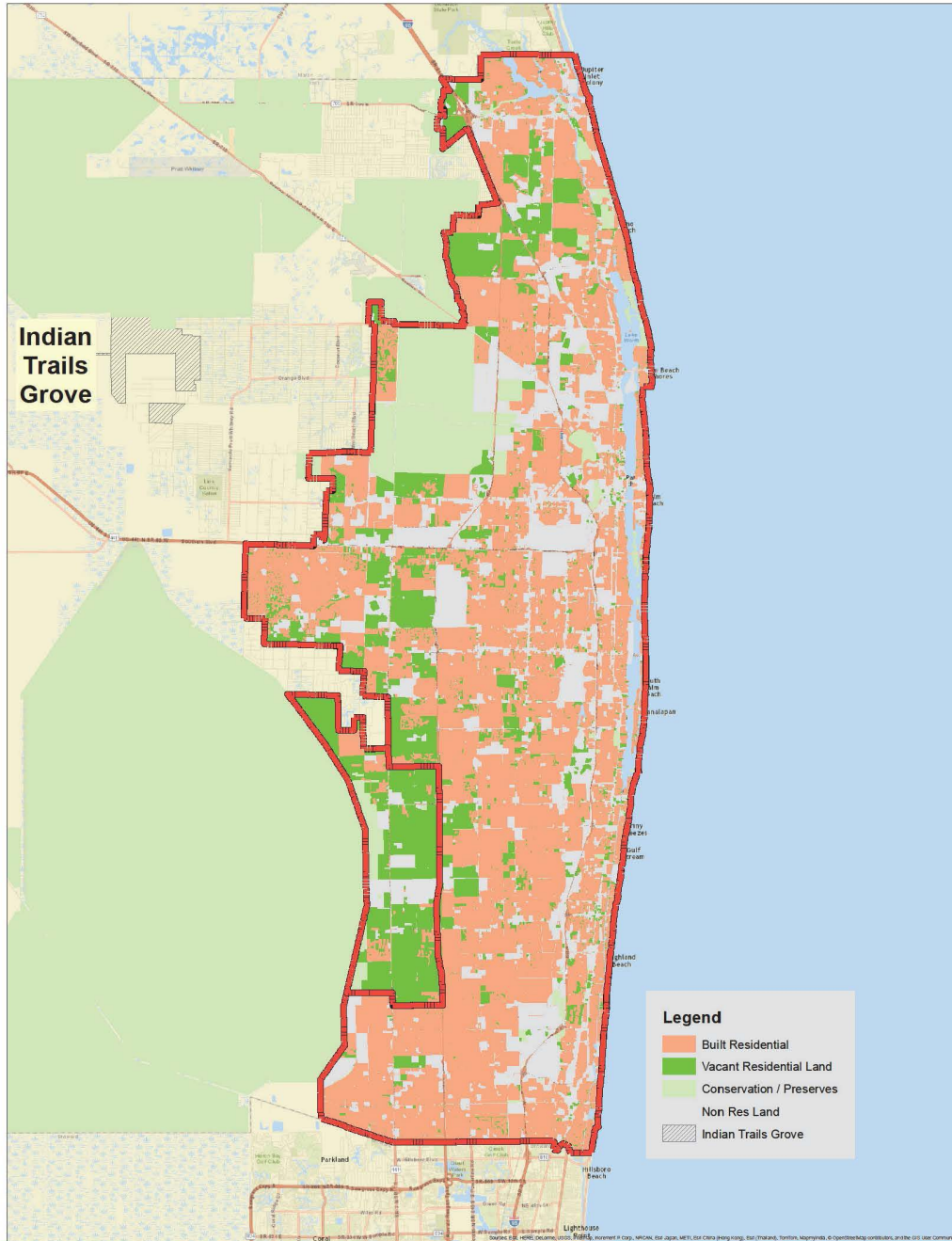






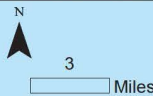
# Map 4 - Time Series Residential Development 1900 - 2000

## Residential Lands Developed By 2000



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### Housing Needs Study

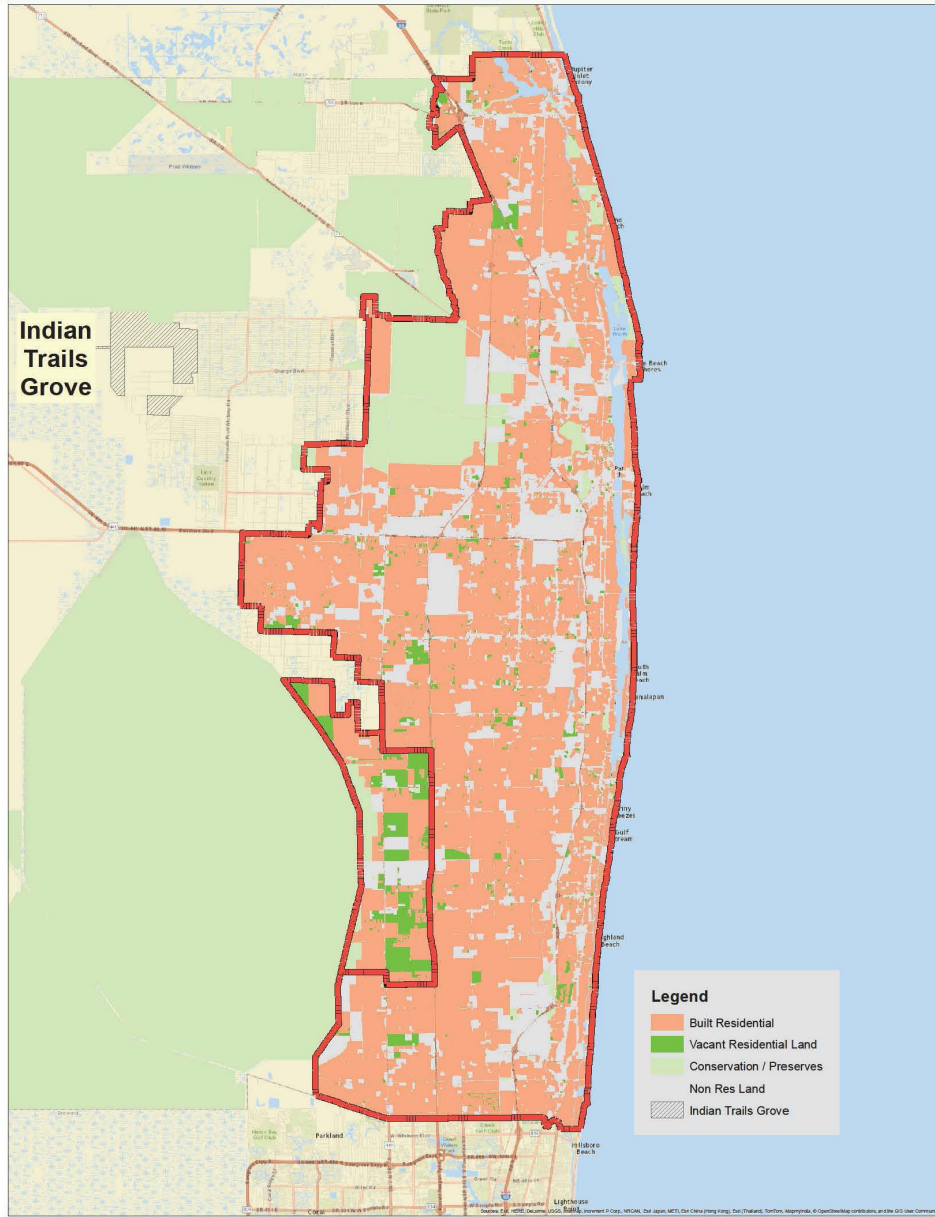


Prepared July 9, 2015  
ESRI Base Map

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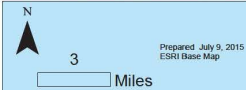
# Map 5 - Time Series Residential Development 1900 - 2014

## Residential Lands Developed By 2014



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WREA\_INC@BellSouth.net

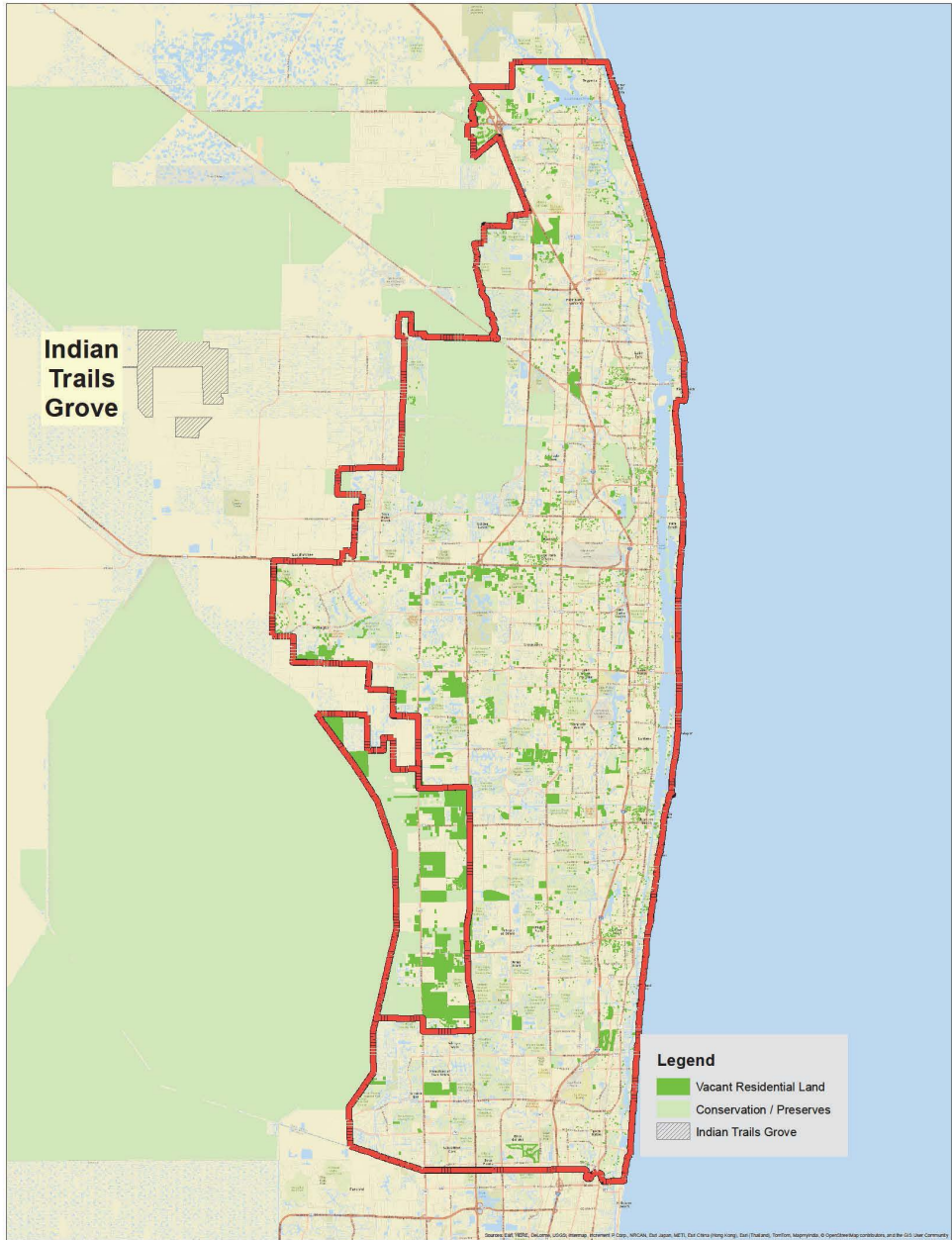
Housing Needs Study



© 2015 Indian Trails Housing Needs\_2015 Exhibit 5\_Parcels\_1900-2014.mxd

# Map 6 – Vacant Land

## Available Vacant Residential Lands



**Warner Real Estate Advisors, Inc.**  
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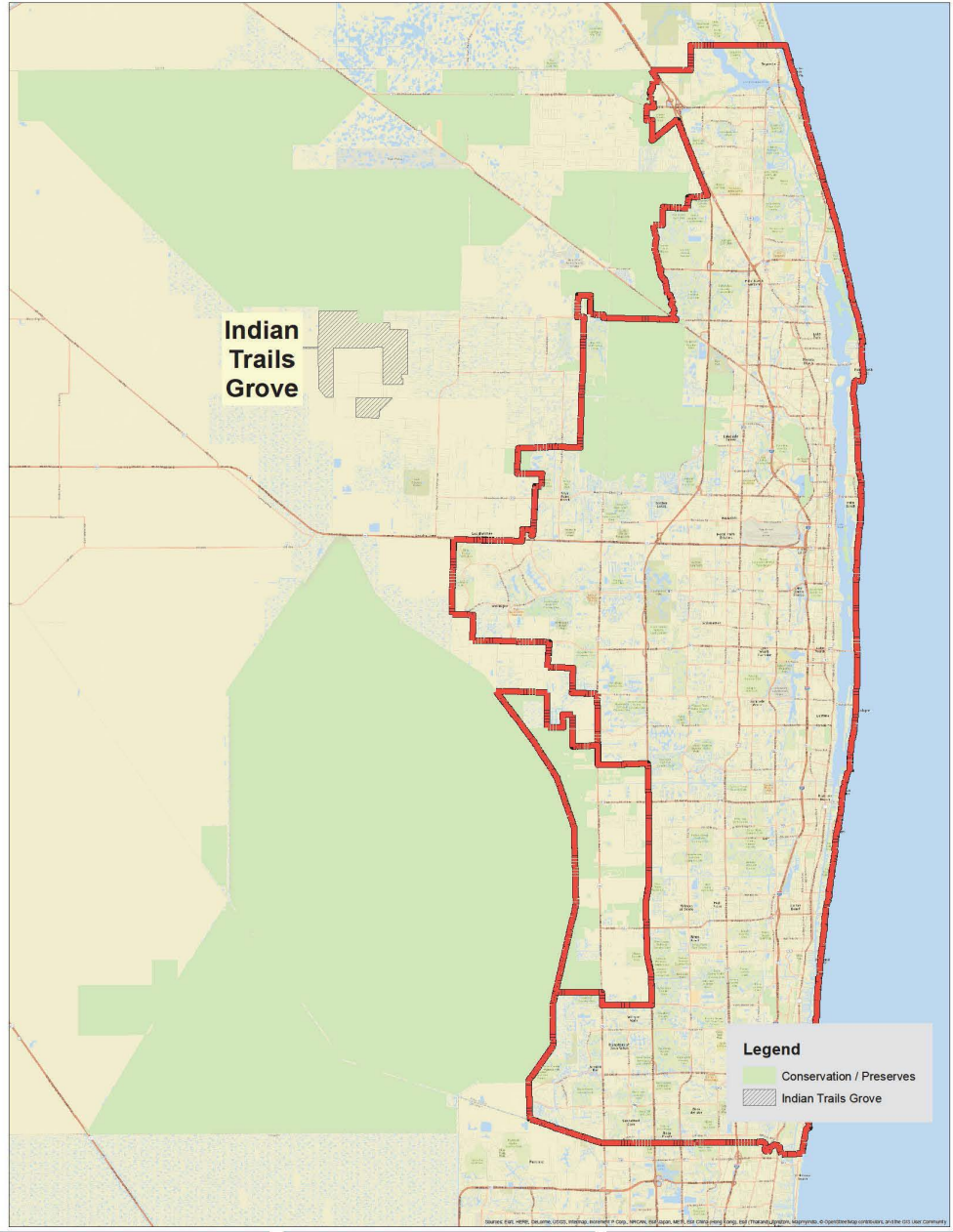
### Housing Needs Study

N  
3  
Miles  
Prepared July 9, 2015  
ESRI Basic Map

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# Map 7 – Conservation and Preserved Land

## Conservation Land



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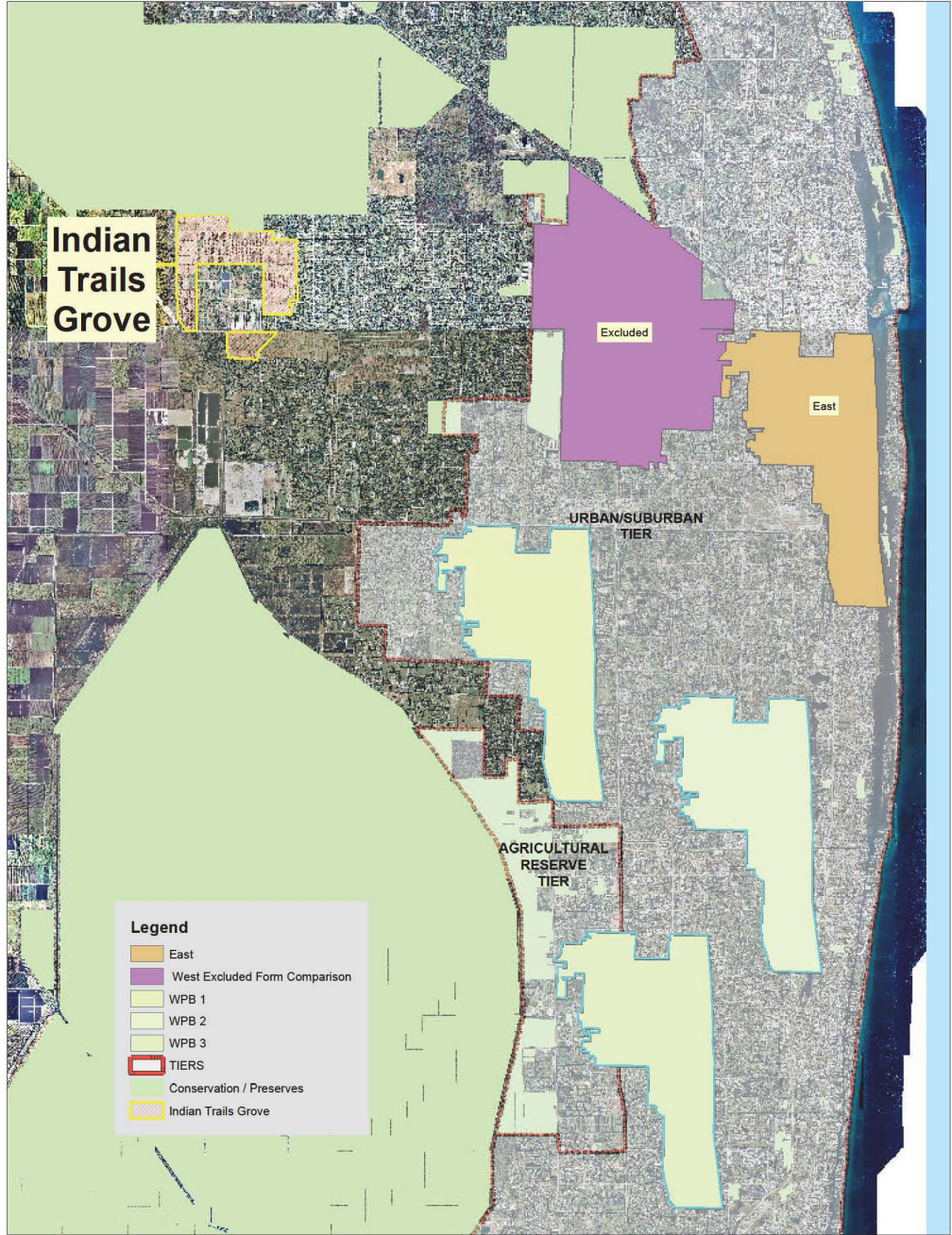
Housing Needs Study

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3  
Miles  
Prepared July 9, 2015  
ESRI Base Map

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# Map 8 – Population Growth - WPB Comparison

## Study Area - WPB Overlay



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**Housing Needs Study**

N  
 2  
 Miles  
 Prepared May 30, 2015  
 ESRI Base Map

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## **Is there Sufficient Land for Housing in the Urban and Ag Reserve to Accommodate the Projected Population Growth?**

Based on this analysis, there is insufficient residential land within the Urban/Suburban and Ag. Reserve Tiers to support the housing needs of the projected population. To increase this capacity, and lessen the shortfall, the remaining undeveloped large tracts in the Rural Tier should be increased in density so they can support a larger population.

### **Disclaimer**

This report, analysis and its conclusions represent the opinion of Warner Real Estate Advisors, Inc., and are based on data provided by published sources including the U.S. Census Bureau, the University of Florida's Bureau of Economic and Business Research, the Palm Beach County Property Appraiser, and Palm Beach County Planning Division in combination with our own in-house expertise. An effort has been made to obtain the latest applicable data from reliable sources. Any changes within the study area, such as unknown developments and changes in economic conditions could influence projections and conclusions. For these reasons, no representation or warranty, expressed or implied, is herewith being made, as to the accuracy or completeness of this report.