Booklet #3A
November 16, 2009

BUILD-OUT ANALYSIS

Westbrook

3A

Overview

A build-out is an analysis of the potential development that could occur based on land-use regulations. This build-out analysis was performed to help Westbrook gauge how much new single-family residential development might occur based on current zoning requirements.

New development could occur on vacant land and on land that is under-developed (i.e. a lot has extra acreage). The analysis is useful to understand possible land use patterns and total growth potential in Westbrook.

What is a Build-out Analysis?

A Build-out Analysis is a theoretical exercise which evaluates the potential development that might occur based on local land-use policies.

It is a tool to help a community understand how policies can affect development and where new development may occur.

A build-out can:

- quantify potential growth
- identify potential future demands, and
- focus discussion about how to manage growth.

A build-out <u>does not</u>:

- determine if a particular property can be built on, or identify how many housing units should be built on a particular site,
- have a timeframe associated with it, or
- estimate demographic composition.

Zoning

Residential

- Rural Residential
- Medium Density Residential
- Low Density Residential
- High Density Residential

Business

- Commercial
- Commercial Town Center
- Neighborhood Commercial
- Commercial Boating
- Turnpike Interchange Exit 64
- Turnpike Interchange Exit 65
- Light Industrial
- Industrial

Other

- Coastal Conservation
- Planned Residential Development
- Water Resource
- Flood Plain Zone

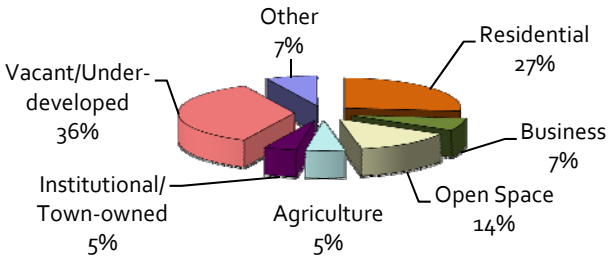
Zoning and Land-use Information can be found in the Conditions and Trends Booklet – Booklet #3

Existing Development

Westbrook is a Town with 10,352 acres of land area. Based on Assessor's Records, Land In Westbrook…

- About 55 percent of the land area in Westbrook is developed as residential, commercial or industrial land-uses.
- Vacant and under-developed land is the largest land-use activity in Westbrook, comprising 3,695 acres (about 36 percent).
- Single-family residential development comprises the second largest existing land use at 2,656 acres (about 26 percent) of the Town.
- The third largest land use, open space, comprises about 1,419 acres (about 14 percent).

Existing Land-use



With vacant land and open space making up about 50 percent of Westbrook, there is a feel of open-ness, especially north of Interstate 95.

While about 36 percent of the land area is currently unused vacant or under-developed residentially-zoned land, this land is in private ownership and is zoned for some type of land-use. There are an additional 296 acres that are zoned residentially, but are used commercially. These properties are also available for residential development.

Of the 10,352 acres of land in Westbrook, the build-out identified 3,991 acres (about 39 percent) zoned residentially which are also available for development. This booklet attempts to identify the potential development yield that might result from the combination of land area and zoning designation.

	Acres
Vacant and under-developed	3,695
Residential-zoned land with a commercial use	296
Total Area Available for Development (acres)	**3,991**
Area of Environmental Constraints (acres)	- 1,766
Net Area Available for Development (acres)	**2,225**

Residential Build-out Results

The land-use survey, in the Conditions and Trend Booklet, identified 3,991 acres of vacant or under-developed residentially-zoned land. Of this amount, 1,766 acres have environmental constraints which are assumed to be not developable. The build-out analysis evaluates the remaining 2,225 acres and indicates that an additional 1,163 housing units could be built under current zoning; this includes vacant, but approved building lots.

The map of the residential build-out reveals the following characteristics about where new single-family units might be located:

- New units on new lots would be primarily located north of Interstate 95
- New units on non-conforming residential lots would be primarily located south of Interstate 95

Along the Coast

● Existing Units

Along Route 153

● Potential New Units

Westbrook Potential Build-out Scenario

A total of 1,163 new single-family units of housing are anticipated to be built under current zoning regulations.

	Today		Future	
	Year-round	Seasonal Units	Low	High
Existing Housing Units	3,242			
Restricted Seasonal Units (CT Water Co.)		398		
Potential New Single-Family Units			**1,163**	**1,163**
Conversion of Restricted Seasonal Units				**398**
Total Potential Units			**4,405**	**4,803**

Existing Housing - 2007 CERC
Seasonal Units – 2009 Connecticut Water Company

Caveats for Residential Built-Out

Factors that could increase build-out potential:

- Reduced setbacks and/or buffers
- Environmental constraints are less extensive
- Sites are developed with multi-family housing
- Seasonal units are converted into year-round units
- Waivers of the "permanent dead-end" length limitation (currently 1,000 feet)
- Increasing the allowed number of houses on a "permanent dead-end" street

Factors that could reduce build-out potential:

- Additional environmental constraints
- Larger setbacks
- Inefficient lot configuration
- Cul-de-sac length limitations
- Costs of development (e.g., paving, septic, ledge)

What Is A Pro Forma?

A *pro forma* is a business tool that models the anticipated results of a transaction, with particular emphasis on:

- projected revenues
- project costs, and
- the return on investment.

plannersweb.com/wfiles/w209.html

Marginal Land

Over the years developers have chosen to develop land that did not have environmental constraints or ledge. Often the remaining land was considered "unbuildable" or marginal land.

Many communities are now experiencing development on these once considered "unbuildable" parcels because the costs for development (e.g. blasting, engineer-designed septic systems) have become more affordable.

Land is a finite resource. As land becomes scarce, the profits from developing on marginal land will increase.

How Development Occurs

It is important to recognize that people see land in different ways. These different perspectives relate to how land is developed and why additional development pressure can be created.

While citizens and planners may look at a parcel of land and not see development potential because of environmental constraints or costs-associated with development, others may see these properties as an opportunity to make money. As development pressure increases in Westbrook, land that was once considered unsuitable to develop is now seen as suitable.

Blasting

Crossing Watercourses

Costs that were once too much to pass along, such as blasting and building a bridge across a wetland, are now built into a developer's pro forma (see sidebar). It is important for Westbrook to consider "marginal land" as developable in a build-out assessment.

There are two primary ways to approach development:

- *Resource-Based Approach* – where the capacity of development is determined by assessing natural resource constraints
- *Market-Based Approach* - where the economics of the development are the driving force.

Most new residential development results from a Market-Based Approach.

Resource-Based Approach	Market-Based Approach
Evaluate Natural Resource Constraints	Evaluate Yield Potential *(highest and best use)*
Apply Local Planning Objectives	Apply Zoning Requirements
Apply Zoning Requirements	Evaluate Natural Resource Constraints
Development Yield is Established	Determine Development Costs (e.g. permitting, infrastructure improvements)
	Determine Profitability
	Development Yield is Established

Potential Future Development

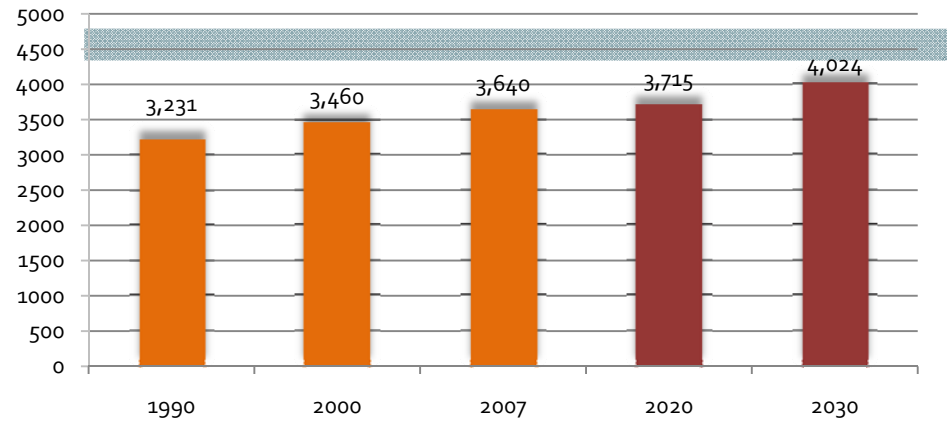
- There were 3,242 year-round units in Westbrook in 2007 (CERC).
- The Build-out Analysis identified that an additional 1,163 housing units can be added, for a total of 4,405 year-round units.
- 1,163 additional year-round housing units would add about 2,419 additional persons based on 2.08 persons per housing unit.
- An additional 828 people could be added if all seasonal units were converted to year-round use and occupied at the 2.08 persons per unit rate.
- The build-out population range is estimated from 9,160 to 10,000.

The population of Westbrook is estimated at 6,730 by the Connecticut Economic Resource Council.

At full build-out Westbrook could become a community of between 9,160 to 10,000 residents based on the average household size reported in the CERC Town Profile 2008 (2.08 persons).

Based on Population Projections, Build-out would not occur until after 2030.

Anticipated Housing Units Based on Population Projections



Build-out Range
4,405-4,803 housing units

Actual Housing Data (1990-2000) from US Census
2007 Housing Date is from the Connecticut Economic Resource Council data (cerc.com)
Housing Projections (2020-2030) based on Population Projections by Planimetrics (see Conditions and Trends booklet – page 7)

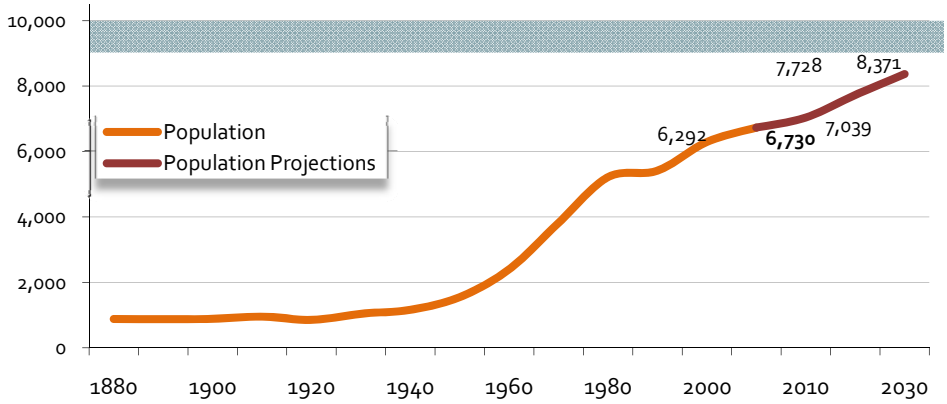
Population

	Total	Projected Change
2010	7,039	
2020	7,728	+689
2030	8,371	+643

Housing Projection at 2.08 Persons Per Unit

	Total	Projected Change
2010	3,640	
2020	3,715	+75
2030	4,024	+309

The build-out population range of 9,160-10,000 is not likely to be achieved during the next 20 years. The following chart shows the projected population trend.



Build-out Population Range
9,160-10,000 people

Actual Population Data (1880-2000) from US Census
Population Projections (2010-2030) by Planimetrics

Design Standards

Design standards for this build-out were determined based on the following "rules":

- lots are the minimum size where possible.
- lots have the minimum width where possible.
- As a result of the prior two "rules", lots have the minimum lot depth needed to comply with zoning area requirements.

	SIZE	WIDTH	DEPTH
RR	87,120	200	436
LDR	43,560	120	363
MDR	21,780	100	218
HDR	15,000	80	188

Dedicated Open Space

Land preserved in perpetuity as open space, often with public use. Includes land owned by Westbrook Land Conservation Trust and the State of Connecticut.

Managed Open Space

Land set aside for some other purpose (such as watershed protection) but that provides some open space value, but it is not dedicated as open space. Includes cemeteries and utility right-of-ways.

Dedicated open space may involve managed land. The difference is that the land is dedicated to remain as open space.

Build-Out Process

The following assumptions were used for this analysis:

- All new housing units would be single-family dwellings.
- Wetlands and watercourses would restrict development.
- Steep slopes (20 percent or greater) and 100-year floodplains would impact where development might occur.
- Town-owned land would not be developed.
- Non-conforming vacant lots would be developed if the buildable area could support a house. Testing was not performed to ascertain whether these lots were indeed capable of supporting a house.

Step-By-Step Residential Build-Out Process

Step 1: Create Land Use Map

- To identify developed and committed land, using:
  - Parcel data
  - Assessor's data
  - Town Staff input

Step 2: Identify Land Use Constraints

- Watercourses, wetlands, conservation easements and 100-year flood zones were mapped

Step 3: Identify Areas With Potential For Build-Out

- Vacant land
- Single-family parcels with additional development potential
- Managed open space (see sidebar)

Step 4: Remove Land Not Likely To Be Developed Residentially

- Town-owned land, dedicated open space (see sidebar) and institutional land
- Non-residentially zoned land

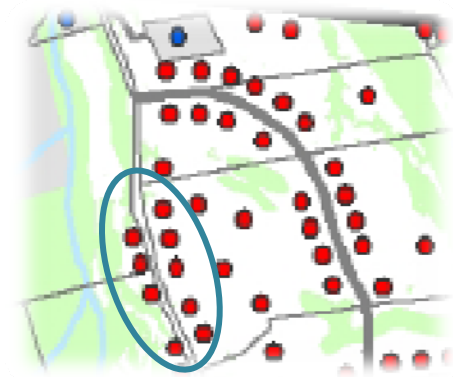
Step 5: Apply Design Standards

- The lot width and size for each potential lot was based on the bulk requirements in the Zoning Regulations
- A minimum buildable square of 15,000 square feet had to be identified for each potential lot

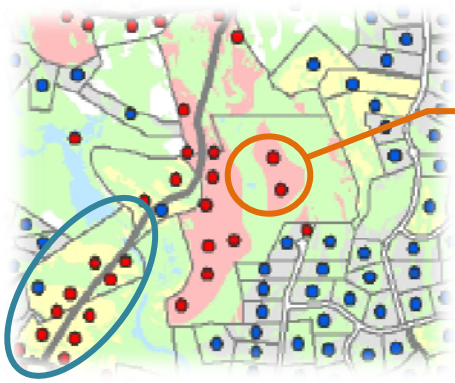
Step 6: Configure a Possible Road Network

- Develop along existing roads first
  It was assumed that a developer would typically try to "lot off" along existing roads first. Potential houses were separated from each other by the lot width design standard
- Develop along potential new roads next
  It was assumed that a developer would try to "lot off" along new roads next. Potential houses were separated by the lot width design standard
  Environmental constraints were evaluated to determine where roads might be located
  Steep slopes were evaluated to determine if roads could be built in these areas.
- "Hinterland" areas were then developed
  It was assumed that a developer would then try to site additional units in remaining areas where they had sufficient area and adequate access. In these areas, potential houses were separated by a "double lot width" design standard due to the question of whether or not a developer would find it cost effective to install a road or other access to each lot. These lots are often referred to as "rear lots" or "flag lots".

Along Existing Roads



Along Potential New Roads

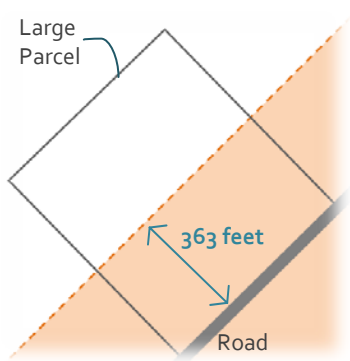


Step 7: Spatially Place Units On Map

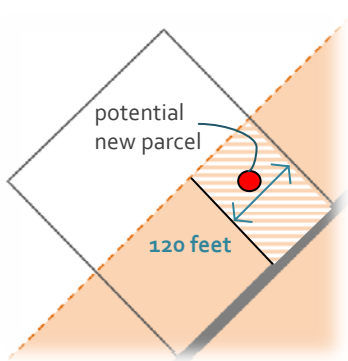
- The build-out software (Community Viz) places units in building areas, providing a minimum spacing identified by the frontage required in the Zoning Regulations (See sidebar for an explanation)

Determining Lot Yield

Creating the "Buffer"



Applying Minimum Frontage



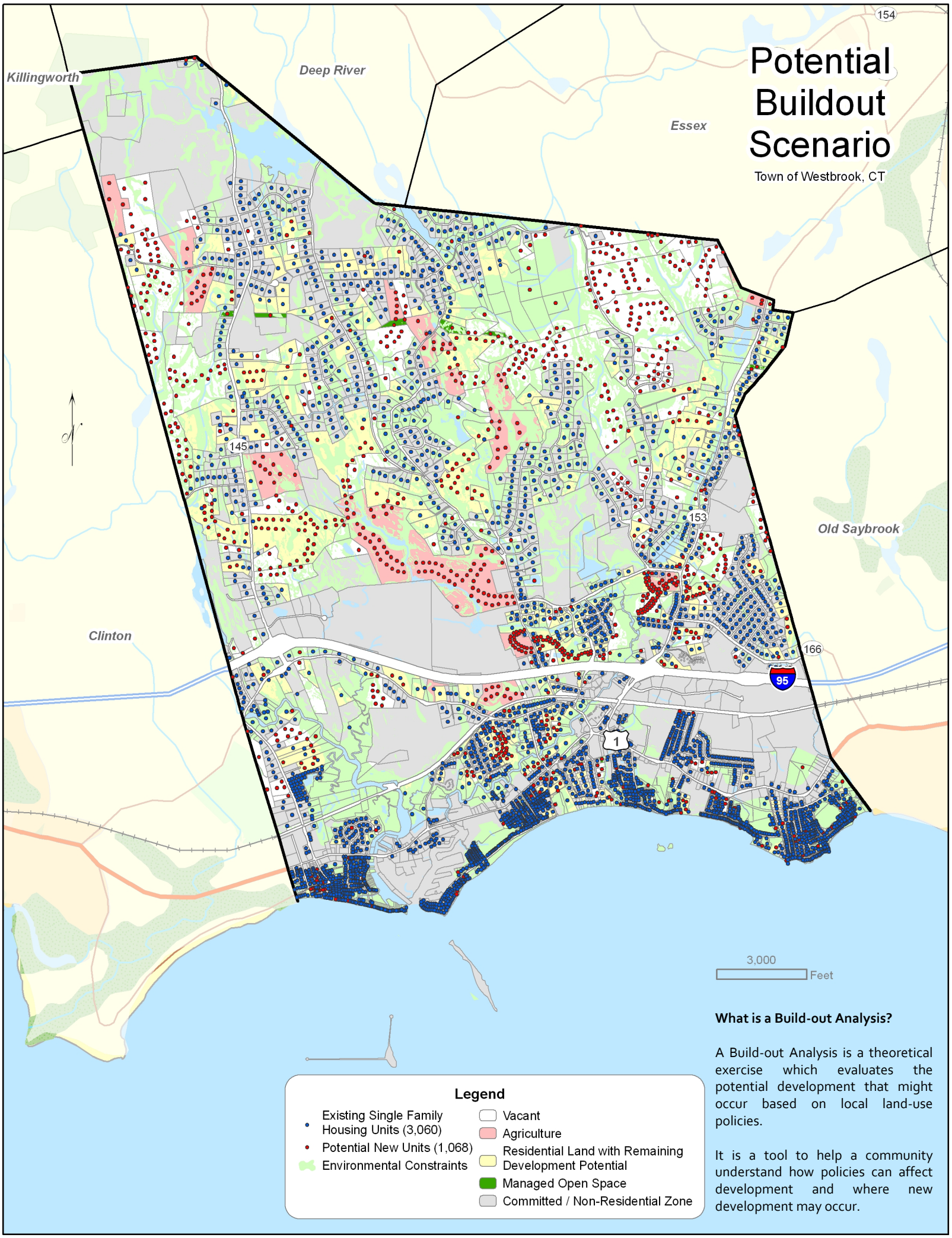
Not to scale

Determining Lot Yield

As part of the analysis, the software calculates lot depth through "buffers" (see image to the left) of existing and potential road locations.

The buffer is calculated by taking the minimum lot size and dividing it by the minimum frontage, as this would be the most efficient use of roads. For example a zoning district with a minimum lot size of 43,560 square feet and minimum frontage of 120 feet would result in a lot depth of 363 feet. 363 feet becomes the buffer distance for properties located in this zone

The software then applies the minimum frontage required in the zone to site individual units.



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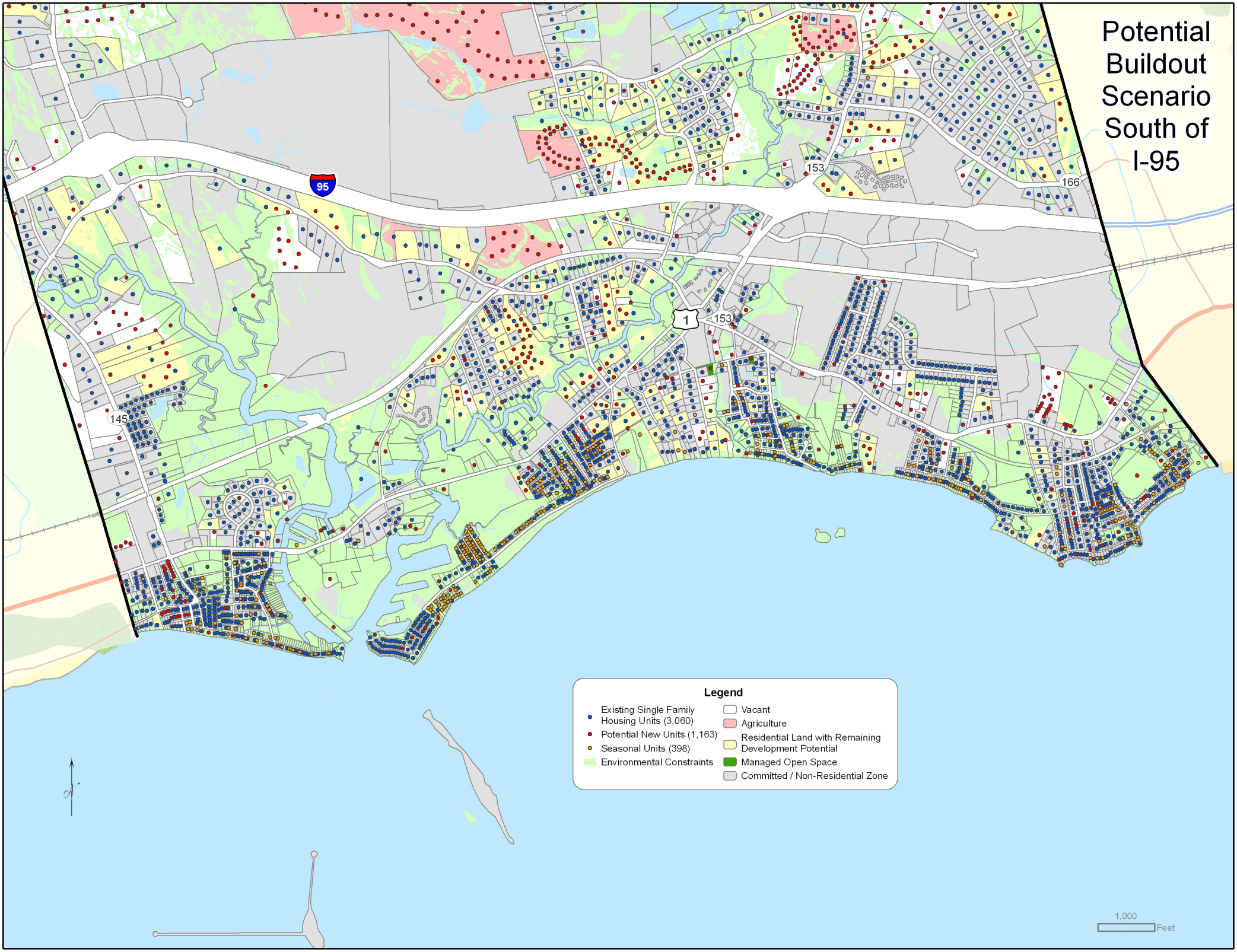
Potential Buildout Scenario South of I-95
95
153
166
1
153
145
Legend
Existing Single Family Housing Units (3,060)
Potential New Units (1,163)
Seasonal Units (398)
Environmental Constraints
Vacant
Agriculture
Residential Land with Remaining Development Potential
Managed Open Space
Committed / Non-Residential Zone
1,000
Feet

Notes & Comments

Planimetrics
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