

## *How To Conduct A Build-Out Analysis*

A build-out analysis is used to estimate and describe the amount and the location of future development that may be allowed to occur within a specified area or a given community under current development regulations. Through a series of maps and charts, the build-out analysis provides an estimate of the total number of houses, commercial/industrial square footage, and population that could result if all the unprotected, buildable land within a community or specified area is developed, if no more land is permanently protected, and if local zoning and subdivision regulations remain unchanged. This information is instrumental for estimating future demands on public infrastructure and the environment. It is also beneficial in allowing a community to test its development regulations – to get a glimpse of its possible future when all the remaining buildable land is developed to the maximum extent allowed under existing regulations.

In evaluating future development possibilities, a build-out analysis can help answer such questions as

- How much land area can be developed under existing land use regulations, and where will this growth occur?
- How many residential lots could there be, and how much will the population of the community increase at full build-out?
- Are there areas projected for development that the community would prefer not to develop, or to develop at lower densities?
- Are there areas that the community would prefer to develop at higher densities?
- What steps should the community be taking now to accommodate future growth?

When using a build-out analysis, a number of different future development scenarios can be compared, and a community can gain a better sense of the type of development pattern it would like to achieve. This in turn helps to remind us that we should plan if we desire to effect a different end result.

**Helpful Hint:** It is recommended that a build-out analysis be conducted primarily for those communities experiencing rapid growth and a dwindling supply of vacant land. It is not recommended for those communities that have preserved large amounts of vacant land because the analysis could result in misleading representations of the amount of buildable land available.

## **How to Conduct a Build-Out Analysis**

There is a wide range of techniques and models used to conduct a build-out analysis, but basically such an analysis boils down to a two-phase process that involves mapping and quantitative estimates. The use of GIS significantly improves the process and makes it more efficient to complete. The following instructions are provided to assist small communities that may desire to undertake a simple, manual build-out analysis. Larger

cities and towns will want to use GIS. The methodology remains the same, except where noted.

### Stage I: Mapping and Interpretation

The first step is to prepare a large base map of your community, which can be mounted on hard backing or on a wall, along with four clear overlay sheets. Additional overlay sheets will be added later to illustrate possible future development scenarios for your community.

The base map should show the following:

- the boundaries of your community
- a north arrow and map scale
- existing streets
- tax parcel boundaries
- surface water areas (lakes, rivers, streams)

On separate overlay sheets:

1. Delineate all the land area within your community that cannot be developed due to public ownership, conservation easements (deed restrictions), utility easements, or natural factors such as wetlands, floodplains, and steep slopes over 25%. This information should already be available from your natural resources inventory maps and your development constraints map.
2. Delineate all the undeveloped land area within your community that could be developed in the future. This information should already be available from your development opportunities map. It is important when delineating this information that you include both vacant lands and buildable lands. Buildable lands are those that are suitable for development, i.e. free from any development constraints.
3. Delineate all the land within your community that has already been developed and contains existing buildings and structures and lot lines. This information will be available from your existing land use map. You do not need to show each residential, commercial, or industrial land use type. You can combine all your developed land together as one overlay.
4. Delineate the zoning district boundaries from your community's zoning map. All you need to do here is just show the zoning district boundary lines.

When you have completed all four sheets, lay these sheets on top of your base map. Each one of the overlay sheets represents a data layer, if you are using GIS. Divide your community into equal geographical sections or regions. Within each section, take a close look at the undeveloped but buildable land area and how it is currently zoned. Identify the



