

4. Land Use and Growth Management

4.1 Overview

The Land Use and Growth Management chapter inventories how land is used in Orleans and analyzes the trends in land use and growth-related development. The chapter integrates the information collected in all subsequent chapters and is compared against the Vision Statement and the community's present and future goals. This vision is consistent with the purpose of the Cape Cod Commission's Regional Policy Plan, which is to "ensure that future growth respects the capacity of the land to absorb the impacts of that growth and its associated facilities." A truly comprehensive Plan should draw connections between the recommendations herein and the Town's zoning, subdivision, health and conservation regulations. The effectiveness of local regulations to guide and manage growth in a manner that supports the Town's Vision Statement is assessed throughout the Plan. Revisions and additions to such regulations are noted where appropriate.

This chapter examines development trends and compares them with the Zoning Bylaw and other regulations to determine if the type of development that is encouraged is indeed the kind of development the Town wishes to foster. The chapter begins with an inventory and assessment of the current land use patterns. An evaluation of past development levels is made by looking at the number and type of building permits issued over the last 27 years. The analysis portion uses development trends to forecast the location and impacts of future development. The final portion recommends specific actions to manage future growth and to properly direct it into appropriate areas.

4.2 Goals & Policies

Goal

To only permit growth and development that is consistent with the carrying capacity of Orleans' natural environment in order to maintain the quality of life in our Town.

Policies

- All development should be designed in such a manner that will retain the semi-rural character of the community.
- Commercial development should be encouraged in concentrated nodes of activity while strip development is discouraged.
- All new commercial and multifamily development should be restricted to appropriate areas where infrastructure (roads, water, sewage disposal, drainage) has or will have the capacity to absorb its impact.

- Residential development of five or more lots should submit an Open Space Residential Development preliminary plan for consideration by the Planning Board.
- All new development should be compatible with the natural environment. The adverse environmental effects of existing development should be catalogued and corrected as necessary.
- Land use regulations should ensure that surface and ground water resources are of the highest possible quality.
- Development and redevelopment should reflect the traditional maritime character and/or architecture typical of the area and should be designed to maintain and enhance views of the shoreline from public ways, access points and existing development.

Goal

To encourage the preservation and creation of village centers and downtown areas that provide a pleasant environment for living, working and shopping for residents and visitors.

Policy

- Villages should be the main foci of business activity, and should provide a safe, attractive and pedestrian-oriented environment.

Goal

To preserve and enhance agricultural uses that are environmentally compatible with Orleans' natural resources in order to maintain opportunities to enjoy the traditional occupations, economic diversity, and scenic resources associated with agricultural lands.

Policies

- New development adjacent to lands in active agricultural production should maintain or provide a thickly vegetated buffer of sufficient width to prevent conflicts between the development and existing agricultural uses. New agricultural operations in developed residential areas should also provide a buffer to minimize impacts on these adjoining areas.

4.3 Current Land Use Pattern

As discussed in the Background chapter of this Plan, the existing land use pattern was dictated by several factors. The early European settlers established several villages around which subsequent development focused. Orleans consists of historically concentrated village centers, beachside summer colonies, and residential areas near coastal areas or forest. Overall density is low, with many tree lined country ways offering access to waterfront locations. The quality of residential life is considered high. There are several neighborhoods located in defined areas, each with its own character and sense of place. Among the most prominent areas are Rock Harbor, Skaket, Nauset Heights, East Orleans, Barley Neck, Pochet, and the several residential areas of South Orleans.

Development is influenced by the availability of appropriate infrastructure. Water service is available to 97% of all homes and businesses. Orleans relies on a sole-source aquifer for all of its drinking water, whether provided by the public water system or a private well. Issues relating to water quality and quantity are fully discussed in the Natural Resources and Community Facilities and Services chapters of this Plan. There are no public sewers in Orleans. All sewage disposal is by individual septic systems, which has had an impact on the intensity of development in the Village Center and the entire downtown area.

Throughout town there are parcels of land protected to some degree by various means, including public and private ownership for conservation purposes, conservation restrictions, and agricultural tax incentives. The largest tracts of protected land lie within the boundary of the Cape Cod National Seashore on the eastern edge of the town and in the town-owned watershed area in the southwest.

Historic village centers, including East Orleans, South Orleans and Orleans Village Center, are noted for their architectural diversity and their role in serving as convening places where residents conduct their everyday business. Lighting, signs, architectural style, pedestrian amenities and landscaping all contribute to the character of the area. Currently, the only settlement areas with historic protection are lands that fall within the Old King's Highway Regional Historic District.

Commercial development in Orleans is primarily located in the northwest area of town. The largest concentrated commercial development is located along Route 6A from exit twelve of Route 6 to the Orleans Rotary.

East Orleans

The East Orleans village is located along Main Street where it merges with Beach Road. While this village contains a variety of uses, it is smaller in area and contains less intensive uses than the downtown Village Center and has a stronger residential component. Main Street in East Orleans is lined with Cape Cod style and Victorian homes, some of which have been converted to small businesses. The area contains a variety of commercial and business services, including a post office, clothing boutiques,

grocery stores, real estate agencies, bed and breakfasts, restaurants and inns. The businesses advertise with low profile signs. The architecture is intimate in scale and of a residential character.

South Orleans

The South Orleans village is situated at the intersection of Route 28, Route 39, and Quanset Road and is the smallest of the three villages. Currently, both residential and commercial development is sparse. The area contains a post office, a general store, a gas station and a few other commercial businesses. Two real estate agencies are also located in the area, although they are outside the Rural Business District. A small commercial plaza is the focus of development near the crossroads of Route 28 and Route 39.

Village Center

The primary focus of the Village Center is along the pedestrian oriented segment of Main Street between Route 28 and Route 6A. This is but one subsection of an extensive downtown commercial area. The area is divided into three zoning districts: General Business, Limited Business, and the Village Center District. The importance of the Village Center is discussed throughout this Plan and many recommendations are tied to the vitality of this area.

Regional Centers

There are several concentrated areas of regional commercial activity, largely due to Orleans' proximity to Route 6, Route 6A and Route 28. These areas contain commercial establishments that typically have a wider service area. Although it has been expressed in the community that some residents do not wish Orleans to serve as the economic hub for the Lower Cape, certain establishments already exist which draw persons from outside of town boundaries. Located at the intersection of Route 6A and West Road is a shopping plaza with a supermarket and other retail stores. In addition, a supermarket and a department store are located on Route 6A, south of the Orleans Rotary. Many of the communities on the Lower Cape do not have these types of establishments and are therefore reliant upon these larger commercial centers.

4.4 Land Use Inventory

The Town of Orleans has a land area of 8,973 acres (approximately 14 square miles). Data presented in this section and tables 1 through 7 are based on 2003 Town of Orleans Assessor data. By analyzing the assessor's data we get a summary of how land in Orleans is currently being used.

The table below summarizes the current land use pattern in Orleans.

Table 4-A: Land Use Summary

Land Use Category	Acreage	Percent of Total Land Area
Multiple Use	62	.69%
Residential	3874	43.17%
Commercial	239	2.66%
Industrial	33	.37%
Forest/Agriculture/Recreation	558	6.22%
Exempt Property	2437	27.16%
Road Layouts and Fresh Water Bodies	923	10.29%
Developable Lands	605	6.74%
Undevelopable Lands	242	2.7%
Total	8973	100%

Source: Orleans Assessors Database, 2003

4.4.1 Residential Use

The most common use of land is for single family homes. The town was originally settled as fishing and farming community with a small central village. As the area

became attractive to summer visitors, cottages and rental rooms were constructed near the shore.

The minimum lot area of 40,000 square feet in the Residential District has helped to create a low-density land use pattern and contributes to a feeling of openness within the community. However, as larger homes are constructed with amenities such as tennis courts and swimming pools, an increasing amount of the land area within each lot is developed.

Multifamily dwellings are primarily located in the center of town. Large apartment complexes are located on Main Street near Mid-Cape Home Center and near Hopkins Lane in East Orleans. In total, there are 642 condominium units throughout Orleans.

The following table details the number of parcels and acreage for the different types of residential uses in Orleans.

Table 4-B: Residential Land Uses

Residential Land Uses	Number of Parcels in Class	Acreage	% of <u>Total</u> Land Area
Single Family	3619	3305.63	36.84%
Two Family	44	49.39	.55%
Condominiums	51	108.71	1.21%
All other types of Residences	265	410.31	13.50%
Total	3979	3874	43.17%

Source: Orleans Assessors Database 2003

4.4.2 Commercial Use

There are currently over 1.2 million square feet of built space used for business purposes. Since 2001, commercial development has been outpaced by residential development. The commercial development that has occurred has primarily involved the redevelopment of property. This trend continues today as obsolete commercial developments get upgraded and retrofitted for new businesses. One of the more recent examples of this upgrading has taken place at Cranberry Plaza where Stop and Shop has redeveloped the site, occupied a larger portion of the plaza, and has upgraded the rest of the existing commercial structure for a new retailer. Table 4-C below shows a breakout of how the 239 acres of property is being used for commercial use.

Table 4-C: Commercial Land Uses

Commercial Land Use	Number of Parcels	Acreage	% of Total Land Area
Group Quarters (Motels-Inns-etc.)	16	35.02	.39%
Warehouse and Distribution Facilities	27	17.67	.19%
Retail Trade	105	125.08	1.39%
Office	53	41.23	.45%
Public Service Properties	4	9.98	.11%
Cultural/Entertainment/Recreation	7	7.10	.07%
Commercial Agricultural Land	2	2.9	.03%
Total:	214	239	3.0%

Source: Orleans Assessors Database, 2003

4.4.3 Mixed Use

In some areas of town parcels are commonly used for both commercial and residential purposes. Apartments are allowed over commercial structures in all of the non-residential districts in Orleans. Depending on the primary use of the property it is classified in one of two mixed use categories listed in the table below and makes up less than 1% of the total land area in Orleans.

Table 4-D: Mixed Land Uses

Mixed Land Use	Number of Parcels	Acreage	% of Total Land Area
Mixed Use - Primarily Residential	45	28.51	.31%
Mixed Use - Primarily Commercial	46	33.3	.37%
Total:	91	62	.68%

4.4.4 Industrial Use

Currently, industrial uses are accommodated on nineteen parcels consisting of 33 total acres. The major concentration of industrial land uses exists in the Industrial District off Finlay Road and Lots Hollow Road, in the western part of town. The area is

characterized by warehouses and service buildings, with very little landscaping. Many necessary services, such as landscapers, auto repair shops, and construction contractors, are located in the Industrial District. At present, it is the only zoning district that allows for many of these types of uses.

4.4.5 Agricultural Use

Agricultural uses comprise less than 1% of Orleans’ total developable upland area. There are 31 acres of land in agricultural use (MGL Chapter 61A), and 24 acres in forest land (MGL Chapter 61). Parcels in these programs are protected for a limited period of time in exchange for a reduction in local property taxes. Owners of land in this classification are assessed at the current use value of the property rather than at its development potential, thus encouraging owners to preserve the parcel for agriculture or forestry use. These lands are vulnerable to future development but the Town has the right of first refusal if the parcel is offered for sale.

4.4.6 Governmental/Institutional/Church

Tax exempt lands account for 27% of all developable upland area, the majority of which is used for public open space and/or recreation. This includes Town and federal land in the National Seashore (1,400 acres), Pochet Islands Trust (360 acres), school lands used partially for recreation, and parcels with other municipal buildings. Most of this land has been protected from development by deed restriction. However, the Town needs to retain the ability to use municipal land to meet operational needs in the future. An analysis of future municipal lands needs is recommended and discussed more in the Community Facilities chapter.

Table 4-E: Tax Exempt Lands

Tax Exempt Use	Number of Parcels in Class	Acreage	% of Total Land Area
US Government	28	113.63	1.26%
Comm. of Massachusetts	25	21.15	.23%
Barnstable County	1	9.90	.11%
Municipality	156	1744.82	19.44%
Charitable Organizations-Trusts	172	495.72	5.52%
Churches-Places of Worship	20	31.13	.34%
Housing Authority Property	5	20.4	.22%
Total	407	2437	27%

Source: Orleans Assessors Database, 2003

4.4.7 Open Space/Recreation

Privately owned land in the form of a conservation trust or a conservation restriction is protected from development. A conservation restriction placed on a property allows for the development rights to be held by a federal, state, or town government, or by a non-profit agency. It ensures that land will remain in its natural, open state. Land that is owned by a municipal, state, or federal agency, or a non-profit organization is highly protected so long as the land is owned and managed specifically for the purpose of conservation and/or recreation. Massachusetts law makes it very difficult for a government or non-profit agency to sell or transfer conservation land, or to use it for a different municipal purpose.

Table 4-F: Conservation Lands, Open Space, and Protected Parks

Land Use Type and Ownership	Acres	% of Total Land Area
Privately Owned Open Space Lands		
Orleans Conservation Trust (OCT)		
Holdings of the OCT	427	4.70%
Conservation Restrictions held by the OCT	53.6	.60%
Massachusetts Audubon CR	3.8	.04%
Other Open Space	364.4	4.06%
Publicly Owned Open Space Lands		
State Open Space Lands		
Protected	1.19	.01%
Federal Open Space Lands		
Protected	103.6	1.15%
Town Open Space Lands		
Town Owned Open Space	1725	19.20%
Town-held Conservation Restriction	63.81	.71%
Total of Open Space Acreage	2742.4	30.5%

Source: 2003 Assessors Records

4.4.8 Vacant Land

As of 2003, 6.74% of the total land area in Orleans was classified as vacant developable land. This represents land that is clear and most notably developable land.

Table 4-G: Vacant Developable Land

Land Use Type	Acreage	% of <u>Total</u> Land Area
Residential Land	561	6.25%
Commercial Land	29	.32%
Industrial Land	15	.16%
Total	605	6.7%

Source: Orleans Assessors Database, 2003

Lands classified by the Assessor's Office as "undevelopable" may not be developed at this time due to physical or regulatory constraints. Typically these lands are lowlands, wetlands, bogs, and marshland. It is highly unlikely that any of the 234 acres currently classified as undevelopable in Orleans will ever be developed.

4.5 Trends in Land Use

The MacConnell Land Use Summary presented below shows how land use changed between 1971, 1990 and 1999. The MacConnell series is one of the longest running time series of land use information in the State of Massachusetts. The summary categorizes land uses and creates land use maps and statistics that are based on land cover as seen in aerial photographs. What make the series interesting is that it allows communities to track the land use changes over time back to 1971.

What is notable when looking at the MacConnell summary is the percentage of land devoted to residential purposes. There has been a continued increase in residential development in Orleans that is consistent with the concurrent reduction in other land use types. Between 1971 and 1999 the decrease in Open and Agricultural land corresponds directly with the increase in land put towards residential uses. In 1971, 55% of the total upland area was Open and Agricultural land as compared to only 38% in 1999. The area used for residential purposes increased from 26% to 42% almost doubling in the 28 year time span. In fact, there has only been a slight increase, 1.5%, in both Commercial and Industrial developments further reinforcing the trend of open land in Orleans being used for residential purposes.

Table 4-H: MacConnell Land Use Trends 1971-1999

Land Use Type	MacConnell Land Use Data			
	1971 % of Land Area	1984 % of Land Area	1990 % of Land Area	1999 % of Land Area
Open land & Agricultural	55.0%	46.5%	42.2%	38.35%
Residential	25.6%	34.5%	38.2%	41.7%
Wetlands	12.7%	12.6%	12.6%	12.9%
Recreation	0.3%	0.3%	.35%	.3%
Commercial	2.0%	2.3%	2.6%	2.6%
Transportation	1.2%	1.0%	1.0%	1.0%
Industrial	0.2%	0.7%	1.0%	1.1%

Source: MacConnell Land Use Inventory 1971, 1984, 1990, 1999

4.5.1 Subdivision Trends

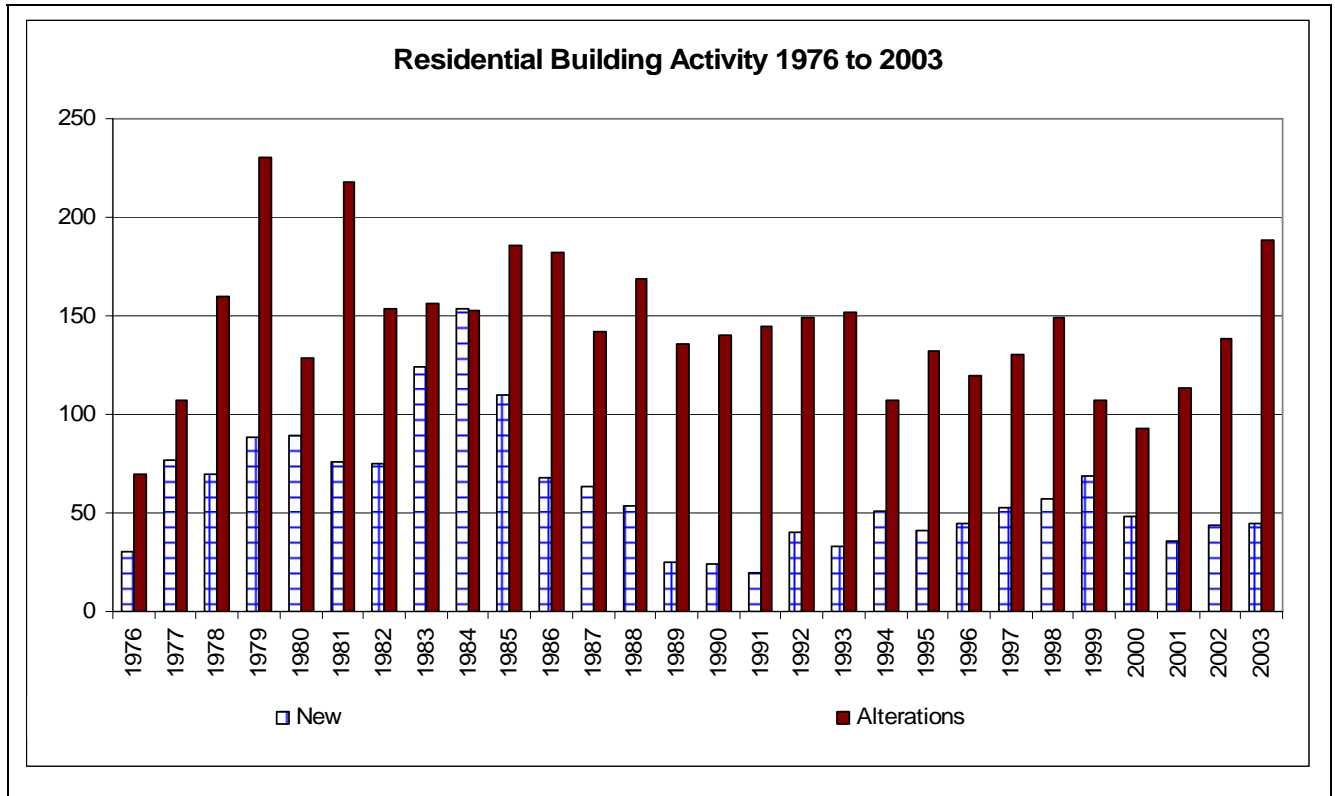
A noticeable trend in development is subdivision activity involving previously approved “paper” subdivisions in the form of lot releases, re-subdivision of previously formulated plans, and road construction. This infill type of development has been experienced in all areas of the town. As areas get closer to their build-out potential, residents may notice a loss of the “rural character” of some neighborhoods.

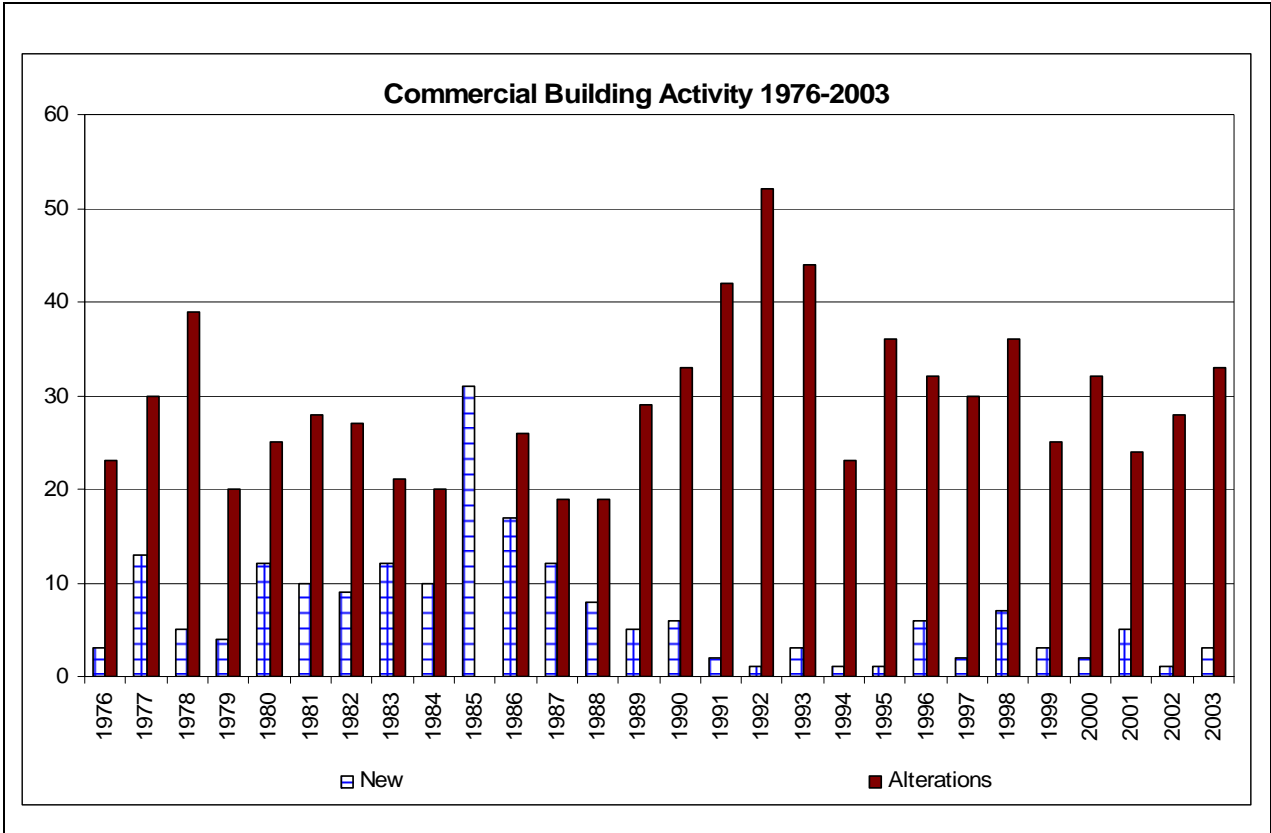
Since 1990, 185 lots have been created through both definitive and ANR subdivision plans. As Orleans moves closer to build-out the Planning Department is seeing smaller scale subdivision plans, creating one or two new lots, and subdivision of lands that would have previously been considered marginal. Subdivision activity since 1990 has been relatively consistent averaging 14 new lots per year.

There currently exist more than 500 building lots in Orleans. Regardless of sub-division activity in the future, there is still significant growth potential throughout the Town.

4.5.2 Building Permits

The issuance of building permits is another indicator of land use change. Even though undeveloped lands may be subdivided for residential development, or zoned for business or industrial development, the impact of the development is generally not felt until the building permits are issued and construction begins.





As residential projects are completed, the Town must assess their impact on natural resources, capital facilities and the character of the community. Part of Orleans’ desirable character is the amount of open space in town. It must be assumed that any undeveloped land that is not permanently protected will be developed in the future. The challenge will be to accommodate additional development without losing the essential scenic and rural qualities that make Orleans feel like a “small town.”

Over the last 25 years, the Town has seen major land use changes both in the increase of residential acreage and the decrease in agricultural, pastoral and forested land. If current zoning and other land use regulations persist, this trend is predicted to continue. In the analysis section, these regulations are assessed to determine their influence on land use decisions and their congruency with the Town’s Vision Statement.

4.6 Current Zoning and Land Use Controls

4.6.1 Zoning Districts

The Zoning Bylaw establishes one residential district, Residence District [R], and six districts in which business uses are permitted:

1. Rural Business District [RB]
2. Limited Business District [LB]
3. Marine Business District [MB]

4. General Business District [GB]
5. Village Center District [VC]
6. Industrial District [I]

In addition, there are six overlay districts addressing environmental concerns:

1. Conservancy District [CD]
2. Seashore Conservancy District [SC]
3. Water Resource Overlay District [WR]
4. Shoreline Overlay District [S]
5. Floodplain Overlay District [F].
6. Residential Affordable Housing Overlay District [RAH]

Each zoning district has a detailed set of regulations that guide the type and density of development. The six overlay districts add special regulations on top of those of the existing zone beneath to ensure appropriate development in environmentally sensitive and hazardous areas.

Since 2001 the town has converted 3 separate areas of the downtown from General Business to Limited Business. These zoning changes provide the Town greater ability to regulate new development and redevelopment through the Special Permit process.

Residential District

Most of the town's land area is included within the Residential District [R], which permits agricultural uses, religious and educational uses, and detached residential dwellings. Congregate housing, marinas, and some accessory uses are allowed by special permit through the Board of Appeals.

The minimum lot size is 40,000 square feet and the building coverage is limited to 15% of the buildable upland area. In addition, the building coverage may not exceed 4,000 square feet without a special permit. The minimum frontage requirement is 150 feet, and front, side and rear setbacks must be at least 25 feet.

As an alternative to the traditional subdivision requirements, the Town also provides an Open Space Residential Development, often referred to as Cluster Development, provision within the Zoning Bylaw. This option can be used by special permit within the Residential District. The objectives of the Bylaw are to preserve open space that provides views and scenery and wildlife habitat, and to ensure that development is in keeping with a site's existing topography and natural features. The design standards allow for a reduction of the minimum lot area to 20,000 square feet provided that the number of dwelling units does not exceed the maximum that would be built under conventional subdivision requirements. At least 35% of the parcel's buildable upland must be conserved as open space.

Business Districts

Rural Business Districts [RB] are located in the villages of East Orleans and South Orleans. **Limited Business Districts [LB]** are in four areas surrounding the Village Center along Routes 6 and 6A. These areas are characterized by a variety of service-oriented businesses located in a relatively dense land use pattern. The commercial uses in these districts are generally less intensive than those in the General Business District (discussed below) but are far less residential in nature than any of the villages.

The RB and LB districts are fairly similar in the types of uses permitted. Both districts allow agricultural uses, residential uses (detached, renting of rooms, residences in structures used for commerce, and conversion of existing dwellings to multiple dwellings by right and apartments by special permit), gift shops, offices, and many types of accessory uses. The differences among these districts vary in the intensity and scale of uses: specific retail uses, marinas, and accessory uses for livestock are allowed as of right within an RB district, but each of these uses is subject to special permit restrictions in an LB district. In contrast, restaurants with entertainment and serving alcohol, service or public utility uses, communication buildings, and retail sale of gardening and agricultural products are allowed by special permit within an LB district but are prohibited in an RB district. The only uses allowed "as of right" within an LB district which are prohibited in an RB district are private clubs, hotels and motels.

There is no minimum lot size requirement in the RB or LB districts except that a building may not cover more than 15% of the lot in the RB district. The RB district also requires a

minimum frontage of 100 feet in most instances, and has side and rear setbacks of 25 feet; 10-foot side and rear setbacks are required in the LB district. Both districts have a minimum front yard setback of 25 feet and a maximum building height of 30 feet. The differences in dimensional requirements are consistent with the residential nature of the RB district as opposed to the more commercial orientation of the LB district.

The **Marine Business District [MB]** is a relatively small district located in the Rock Harbor area. This district permits agricultural uses, religious and educational uses, detached residential units, residences in structures used for commerce, maritime related retail and wholesale uses, restaurants which do not serve alcohol, marinas, and some accessory uses. There is no minimum lot size requirement within this district but building coverage is limited to 15% of the lot area. The dimensional requirements mandate 100 feet of lot frontage and front, side and rear setbacks of 25 feet.

The **General Business District [GB]** is located primarily along Route 6A from the Brewster town line to the Skaket Corners area and from Canal Street, running along 6A, to the Orleans Rotary (i.e. junction of Routes 6 and 6A). This district allows for agricultural uses, religious and educational uses, hospitals, convalescent homes, multiple dwelling units (but not detached units), dwellings in structures used for commerce, gift shops, offices, restaurants, a variety of retail uses, marinas, newspaper printing, service or public utilities, filling stations, places of assembly, hotels and motels, retail sales of agricultural and gardening supplies, communication buildings and appurtenances by right. Industry and light manufacturing uses and most accessory uses are allowed by special permit. There is no minimum lot size or frontage requirement in this district nor are there restrictions for lot coverage. The required minimum front yard setback is 25 feet and the side and rear yard setbacks are a minimum of 10 feet.

The **Village Center District [VC]** encompasses the area between the Orleans Marketplace and Canal Road from west to east, and between Snow's Hardware and the Main Street & Route 28 intersection from north to south. All uses permitted within the GB district are allowed in the VC district, with the exception of drive-ins, drive-throughs and other facilities serving autos; Fast food restaurants are prohibited throughout the Town under current zoning. The VC district has specific provisions for site design, building style and pedestrian amenities that are not included in other districts. There is no minimum lot size requirement within the VC district but front yard setbacks must be at least 15 feet and no more than 25 feet. The minimum front yard may contain pedestrian areas, terraces, landscaped areas and driveways. Buildings in the VC district are required to contain first floor windows that cover at least 1/3 of the facade facing the street. New buildings or buildings requiring alterations must also provide sidewalks and planting areas.

There are several key differences between the commercial areas along Route 6A and the villages in Orleans. The commercial areas feature more intense land uses than one would find in any of the village areas. The strip style developments along Route 6A cater more to the automobile than to the pedestrian. The Village Center, though located adjacent to the GB district, features less intensive land uses and is more pedestrian

oriented. The Village Center provides more pedestrian amenities, such as brick sidewalks along Main Street and features a variety of small-scale businesses.

Industrial District

The **Industrial District [I]** is located south of Finlay Road to the east of Route 6 and serves as the community's industrial area. Agricultural uses, religious and educational uses, dwellings in buildings used for commerce, offices, marinas, newspaper printing, service or public utilities, filling stations, used car lots, places of assembly, dog kennels, retail sales of agricultural and gardening supplies, communication appurtenances and buildings, wholesale, industry and light manufacturing are allowed by right. Congregate housing, retail, places of amusement, communication towers, accessory scientific uses and accessory dwellings are allowed by special permit. With the exception of dwellings in buildings used for commerce and congregate housing, residential uses are specifically prohibited in this district.

Environmental Protection

Conservancy District

The Conservancy District was created to preserve and maintain ground, surface and coastal water quality and reduce the risk of flooding. These districts are located along tidewater and wetlands areas (excluding the areas within the National Seashore boundaries). Permitted uses include fishing and shellfishing, growing and harvesting of crops, erosion control structures, and passive recreation.

Seashore Conservancy District

The Seashore Conservancy District is intended to provide further preservation of the Cape Cod National Seashore by prohibiting commercial and industrial uses in these areas and by preserving the natural amenities for aesthetics, education and recreation purposes. The only uses permitted are related to conservation, traditional fishing activities, and flood control. There are also three overlay districts in Orleans: the Groundwater Protection District, the Shoreline District and the Floodplain District. All uses that are permitted in the underlying zoning district are allowed in the overlay district unless specifically prohibited.

Groundwater Protection Districts

The purpose of the Groundwater Protection Districts is to "promote the health, safety and welfare of Orleans residents by providing a legal framework for the protection of the Town's groundwater resources which will ensure an adequate future supply of high quality Town drinking water." Prohibited uses include landfills, wastewater treatment plants, automobile graveyards, used car lots, storage and disposal of hazardous materials, car washes, boat or motor vehicle repair, animal feed lots, and commercial or recreational uses that require removal of natural vegetation or application of chemicals.

Shoreline Protection Districts

The purpose of the Shoreline Protection District is to “protect the use of shoreline areas and which encourages water dependent uses, public access and visibility to the shoreline and 100’ developmental setbacks from the mean high water mark.” Uses permitted in the underlying district must meet the following criteria to be allowed without a special permit: be functionally dependent upon water body access, provide opportunity for pedestrian access to the water side of any building, cover less than 10% of the lot area with buildings, and place no building, parking area or disposal facility within 100 feet of mean high water unless functionally dependent upon closer proximity.

Floodplain District

The purpose of the Floodplain District is to regulate development in flood prone areas to mitigate environmental and monetary impacts and to minimize the public safety hazard created by development in such areas. No building may be located within areas designated as coastal high-hazard areas; all new construction must be located landward of the mean high tide; and all new construction must be elevated on anchored pilings or columns.

Residential Affordable Housing District

The purpose of the Residential Affordable Housing District is to provide affordable housing for the inhabitants of the Town of Orleans. This overlay district allows for smaller lot sizes, 17,000 sq ft, and a less restrictive frontage requirement of 70 feet. This in turn results in higher densities in the overlay district allowing a developer or developers to build more houses to be sold or conveyed to eligible tenants or buyers.

4.6.2 Subdivision Regulation

Subdivision regulation is used to ensure that new residential and commercial developments meet a minimum set of design standards, including lot configuration, road construction and utilities provision. It is meant to protect the attributes of the existing community while providing for a development that will meet the requirements of future lot owners.

A subdivision is generally defined as the division of a tract of land into two or more lots. The Subdivision Control Law is provided in Massachusetts General Law, Chapter 41, Section 81K-81GG and primarily addresses the construction of new roads within residential subdivisions and the provision for municipal services (primarily to ensure sanitary conditions in the subdivision) that will be necessary as a result of the new development. Subdivision rules and regulations are separate from zoning: the subdivision process renders a lot sellable while zoning renders a lot buildable.

Subdivision regulation in Orleans is similar to that in other communities. The Planning Board reviews all subdivisions to ensure their consistency with the adopted rules and regulations. The specific rules and regulations must be met by all proposed subdivisions unless the Planning Board grants a waiver.

The Town of Orleans Subdivision Rules and Regulations were amended in 1993 and appear to conform to the regulations of the State Statute. The inclusion of design standards, while they cannot specifically be used to approve or deny a subdivision, provides the Town with an opportunity to mold and shape a proposed development. In addition, the flexibility in the types of roads permitted also allows the Town to permit subdivisions that ensure adequate access while preserving the character of the community.

4.6.3 Site Plan Review

Through the Zoning Bylaw, the Town has created a site plan review process. The Site Plan Review Committee, consisting of Town officials (Town Planner, Building Commissioner, Health Agent, Fire Chief, Highway Manager, Conservation Agent, Water Department Manager), has been charged with the duty of site plan review to ensure that proposed projects meet Town building, zoning, health, wetlands, and design standards. The goal of this process is to ensure that a proposed project will be suitable to the neighborhood and surrounding environment.

Developments which meet a certain threshold (including those that require a special permit, create a certain amount of new parking, add 1,000 square feet of floor area, affect drainage or utilities, or change use) are referred by the Building Commissioner to the Site Plan Review Committee, first for an informal review, and then a formal review. An applicant must gain approval at the formal review prior to issuance of a building permit.

4.6.4 Architectural Review

The Zoning Bylaw provides for the creation of the Architectural Review Committee. The Committee consists of five members appointed by the Board of Selectmen, and is charged with the review of all building and special permit applications for additions, renovations, alterations, and demolitions. It also applies to exterior alterations not requiring a building permit, including changes in color, design, building materials, windows, doors, signs, light fixtures, and other elements. This review does not apply to one- and two-family residences intended to remain in residential use. It does not apply to applications in the Old Kings Highway Historic District or the Industrial District.

The purpose of architectural review is to preserve and enhance the Town's cultural, economic and historic resources by preventing new construction and alterations that are incompatible with older existing building styles, and by promoting conservation of aesthetically and historically significant buildings. Building and/or special permits are issued only after Committee approval.

4.7 Analysis

4.7.1 Trends in Land Use and Development

Residential density is primarily determined through zoning regulations, which currently limit residential development to one dwelling unit per acre. However, nearly two-thirds

of the existing homes were constructed on smaller lots. Either the homes were built, or the lots were created and “grandfathered” as buildable lots prior to zoning. These legal, nonconforming lots have an average lot size of 24,000 square feet, with several dozen homes located on lots which are less than 10,000 square feet. Because the Town does not provide public sewer service, higher development densities result in a higher density of wastewater, which eventually discharges into the groundwater table.

A noticeable trend in Orleans’ housing stock is the conversion of seasonal units to year-round homes. This appears to be at least partly a natural progression as summer homeowners choose to retire to Cape Cod. Building Code issues may also play a role, forcing all construction to attain certain minimum standards that are more consistent with a year-round dwelling than a seasonal home.

The Building Commissioner has reported that there has been an increase in the number of larger homes. The average size of a home in Orleans is 1,876 square feet. However, new residences constructed between 1994-2003 averaged 2,456 square feet in size.

Commercial development occurs in designated business districts. Because of the high seasonal influx on Cape Cod, the town has more businesses than could be reasonably supported by the year-round population. Changes in the business districts have not been as noticeable as in the residential areas. The major change has been the conversion of single-family homes to business use. For example, the General Business District along Route 6A has changed from primarily residential uses to an area with few homes remaining and an increasing number of business establishments.

As discussed elsewhere in this Plan, wastewater disposal issues have had an impact on the intensity and types of commercial development in the downtown. Lack of wastewater solutions can prevent some types of development in the village center. Many of the recommendations of this Plan focus on efforts to improve the appearance, function, and economic vitality of the Village Center. The lack of a public sewer system is a major obstacle to this objective. In conjunction with the town-wide wastewater management study, the Town is exploring alternative means of wastewater disposal to permit diverse business opportunities in business nodes, including the Village Center. (CF-27)

Industrial uses are restricted to the Industrial District off Finlay Road. This area has experienced an increase in development over the last two decades but many parcels remain underdeveloped. However, development of this area is expected to continue in the future.

4.7.2 Build-out Analysis

In assessing current and future land use, it is important and useful to develop an understanding of the future growth potential. A *buildout analysis* is an estimate of how much growth can occur under existing regulations. Buildout findings are used to anticipate community infrastructure needs and demands for public services.

In Orleans, a buildout analysis was completed for the 1999 version of this Plan, and estimated potential growth in the Residential District only. The information has been and continues to be enormously helpful in many areas of community planning. The buildout has become the basis for several growth management initiatives that were approved at Town Meeting.

In 2004, a more refined buildout analysis was completed and continues to be maintained. The most significant change in the updated buildout was expanding the forecast to include multifamily potential in the downtown area as well as accessory apartments development and zoning provisions that allow two homes on certain one-acre parcels. The commercial buildout analysis was also completed on a parcel by parcel basis, based on Zoning constraints such as building height, lot coverage, and parking requirements.

The findings of the buildout analysis were used throughout this plan, and are summarized below.

Residential Build-out Findings

The following assumptions were made in the analysis:

1. Minimum lot size would remain at 40,000 square feet;
2. All further subdivision of land would be done to create the maximum number of building lots;
3. All large lots with existing homes would eventually be subdivided to the greatest extent allowed by law;
4. Wetland areas would not be developed;
5. 15% of the lot areas would be used for roadways and other infrastructure.

The amount of developable land, and land with additional development potential, was determined by analyzing all parcels in the assessor’s database. Land that was physically constrained and/or no longer available for development was removed from the calculations resulting in the amount and location of buildable upland that is both suitable and available for development. The remaining land was categorized by its zoning district to determine just how much development it could support under current zoning regulations.

Table 4-I: Town-Wide Buildout Potential

	Theoretical Buildout	Practical Buildout
Existing Dwellings	5,069	5,069
Potential Dwellings	1,820	1,645

Potential Accessory Apartments	1,267	317
Buildout Potential (in dwellings)	8,156	7,031

Source: Orleans Planning Department, 2004

Existing dwellings – includes single family homes, condominiums, apartments, accessory apartments

Potential dwellings – Represents total allowable development under present Zoning regulations, and consists of SFH, apartments, condominiums, apartments in Commercial Structures.

Potential Accessory Apartments – Under present Zoning, lots with 40,000 square feet of upland may construct one accessory apartment not larger than 800 square feet.

The total development potential is described above. However, it is estimated that a lower level of development will be the maximum “practical buildout” of the Town. This is based on many public discussions, knowledge of development trends, and anticipation of continued open space protection efforts. In addition, stricter development regulations would also have a lessening effect on potential buildout.

Theoretical buildout will likely be very difficult to reach. If historic building trends continue a more moderate level of build-out would be reached around 2040. At this time development activity would slow and become limited.

The development of community infrastructure such as public drinking water, sewer systems, and road networks requires an accurate projection of system demands. For such projects, a “planning horizon” is often anticipated based on a pro-rated percentage of overall buildout. In the case of wastewater management planning, discussed elsewhere in this Plan, the planning horizon is set at 2030, under the supposition that any capital facilities will be designed to serve community needs for at least 20 years after completion.

Commercial/ Industrial Build-out Findings

The Cape Cod Commission's 1996 Monomoy Capacity Study evaluated the full extent to which business properties could be developed in the future. A development potential formula was applied to each parcel in a business district. The process is described in greater detail in the Monomoy Capacity Study. The study reported Orleans as having the potential to support an additional 4.4 million square feet of commercial space. This forecast seemed high and since 1996 Orleans has implemented a number of zoning changes that would affect the potential of parcels to support new commercial and industrial space. Through a close examination of the Assessors records an estimate of the Commercial and Industrial Build-out is described in the table below:

Table 4-J: Commercial & Industrial Build-out Potential

	Theoretical Building Space Potential	Practical Building Space
Existing Commercial/ Industrial Space	1,300,000 s.f	1,300,000 s.f.
Potential New C/I Space	400,000 s.f.	275,000 s.f.
Total Potential Commercial/ Industrial Space	1,700,000 s.f	1,575,000 s.f.

Source: Orleans Planning Dept. / 2004 Assessors Data.

Under present zoning regulations, total commercial and industrial space in the town has the potential to increase more than 30%. In the last 15 years, however, Orleans has averaged only 6,700 square feet of new commercial space per year. Based on this figure, a “practical buildout” of commercial facilities is likely to be significantly lower, as shown in Table 4-J. Remaining commercially zoned land will likely be under-utilized or will be used for residential purposes.

Village Growth Centers

Village Growth Centers are defined as “Small, pedestrian oriented settlements which are suitable for a mix of residential and compatible small-scale commercial uses” (Cape Cod Commission, 1991). The potential for further development within village centers was determined by the using 2003 assessor’s data, MacConnell and Department of Environmental Protection (DEP) land use maps, and the Orleans Zoning Map. The analysis identified commercial development and vacant commercially developable land. The potential for further development was then determined for each parcel. Certain parcels are classified as having more than one development potential category. This may be due to their proximity to wetlands or other natural resources. As such, total parcels by development type (i.e. existing commercial property, vacant or developable commercial property, State Class Code parcels, and existing commercial property outside of a zoning district) may be less than the total development potential areas for that category.

East Orleans

The East Orleans Rural Business District has the potential for further growth. The following table describes both the existing and vacant commercial parcels in terms of their development potential. Not listed in the table is the potential for wholesale redevelopment in the district. Recently two commercial properties in the East Orleans RB district have been re-developed for residential use. This trend may continue as long as it is an allowed use in the RB zoning districts.

Table 4-K: Existing and Potential Commercial Development in the East Orleans Rural Business District

	Total Parcels
Existing commercial property	20
Vacant or developable commercial property	6
Properties developed for residential use	13
Total Parcels	39

Source: Town of Orleans, 2003

South Orleans

The South Orleans Rural Business District contains 6 parcels. Two of the parcels are currently developed for commercial uses, including a shopping plaza and a motel. Three parcels are currently undeveloped, although one is Town-owned and is used for a park. The final parcel within the district is developed for a single family home. Two properties adjacent to the Rural Business District contain office uses and have minimal development potential.

Further business development in South Orleans would have the potential to create increased traffic in close proximity to a major intersection. The RB district is located adjacent to the intersection of Routes 28, 39 and Quanset Road. This Rural Business District serves a growing area of the Town. It contains a post office and serves as a gathering place for residents of the area. The area should be studied for analysis of traffic issues and to determine the types of businesses that would be appropriate for the location. (LU-1)

Village Center

The table below inventories the existing development and the potential for new development within the downtown. The area is divided into three zoning districts, the General Business, the Limited Business and the Village Center District.

Table 4-L: Existing and Potential Commercial Development in the Downtown Area

	Total Parcels
General Business District	
Existing Commercial Property	60
Potential Future Commercial Property	11
Total Parcels, GB Zone	120
Limited Business District	
Existing Commercial Property	44
Potential Future Commercial Property	9
Total Parcels, LB Zone	130
Village Center District	
Existing Commercial Property	71
Potential Future Commercial Property	1
Total Parcels, VC Zone	106
Total	356

Source: Town of Orleans, 2003

Anticipated Population Change

From the residential build-out information presented above, it is possible to project population growth. The 2000 U.S. Census data were used to determine the year-round/seasonal occupancy ratio and the average number of persons per unit. If it is assumed that the year round occupancy ratio and number of residents per household will remain constant, build-out can be projected as shown in the following table. At build-out, the number of persons residing in Orleans is expected to increase by 32 percent over the 2002 population to a total of 9,135.

Table 4-M: Anticipated Population Change

Year-round Population (2004)	6,692
Number of Homes Occupied Year-round	3,117
Average # Residents Per Year-round Home	2.1
Percent of Home Occupied Year-round	60.8%
Total Potential New Dwellings	1,820
Total Potential New Year-round Dwellings	1,106
Potential Number of New Residents	2,322
Projected Population at Build-out	8,870

*:this does not include any accessory apartment development that would increase the projected population.

If, however, the ratio of year-round homes to seasonal dwellings continues to increase, as has been the trend over the past two decades, the build-out population could exceed 10,000 residents.

Residential Development Trends

The number of single-family building permits issued over the last twenty years has fluctuated around an average of 61 per year. The single-family home is the predominant form of development the town can expect in its future. Cape Cod is desirable as a retirement location and contains prime parcels available for residential development. Future residential development has the potential to significantly impact the quality of life for residents.

With the exception of the Village Center, all sections of the Town contain tracts of undeveloped land that could be subdivided for residential development. However, new development is most likely to occur as infill housing within existing subdivisions. The infill development of these areas will increase the residential density and inevitably result in a reduction of the semi-rural character of the community. In areas where development and redevelopment are possible, the town should encourage cluster development options in order to retain as much open space as possible. Most large lots with subdivision potential have already been divided or removed from available land through open space purchase or conservation restriction. Less than a dozen lots of 10+ acres exist which could be divided.

Land use regulations currently in effect are for the most part sufficient to preclude development from destroying environmentally sensitive areas, but remaining buildable upland will still be subject to development pressures. One way to reduce the build-out potential of the community is to acquire the development rights to parcels, either through acquisition or gift, creating conservation restrictions. Town residents have long recognized the importance of purchasing open space. The Town should continue to make open space acquisition a priority to protect the quality and character of the community. (OS-1, OS-3, OS-6)

Commercial Development Trends

Strip development is now perceived to be undesirable in Orleans due to its inconsistency with historic village patterns of development and the desire to create concentrated business locations. Strip style developments along Route 6A are automobile-oriented as opposed to the pedestrian-orientation of Orleans' villages. For instance, these commercial areas contain large parking lots in front of shopping centers and numerous curb cuts along the street. This results in a conglomeration of business signs and curb cuts along the streets corridor. Furthermore, the size and types of businesses located in these areas have a more regional focus, and therefore are dependent upon customers traveling by automobile. Left hand turns from Route 6A into business areas intensify traffic congestion in the summer months and cause drivers to take risks entering and exiting the flow of traffic.

A more desirable way to organize business activity is within specific nodes of development. In this type of arrangement, several businesses would be located in a central area. By clustering businesses, shoppers can park once and walk to a number of locations. This pattern of development will also result in fewer curb-cuts improving safety.

Three major nodes of business development and two minor nodes exist at this time. Major nodes include the Village Center, Skaket Corners, and the Cranberry Cove Plaza. Minor nodes of activity exist in the East Orleans and South Orleans Rural Business Districts. The Town should encourage new business development to occur in these areas and use zoning to discourage further strip commercialization. (ED-5) This issue is discussed further in the Growth Management Section of this chapter.

Orleans has long been regarded as the commercial hub of the Lower Cape. This will likely continue into the future, meaning that Orleans will continue to support more business activity than is needed to serve its own population. Encouraging development in development nodes should minimize the adverse impacts on the town serving as the business hub.

As seen in the business/industrial build-out analysis, Orleans had 1.2 million square feet of commercial space in 1996, with the potential to increase by an additional 60 percent. The potential for future business development is much higher than the potential for residential development. Residential growth at build-out is estimated to increase the population by over 30%. It appears that the amount of land zoned for business uses exceeds the expected market to be created by projected future residential growth. Although businesses generally do not maximize the development potential of a commercial lot (resulting in a somewhat inefficient consumption land for each development), there is still an over abundance of land zoned for business purposes. A percentage of existing General Business zoned land should be rezoned for other uses. (LU-2, ED-5)

Industrial Development Trends

The Cape Cod Commission defines industrial Growth Centers as “special districts designed to accommodate manufacturing, warehousing, transportation terminals, wholesale business and related uses.” Industrial development is permitted only in the Industrial District, located off Finlay Road. This is the area the Town has designated for construction and support services such as vehicle and machinery repair. In most cases, the businesses are purely functional, with little attention given to landscaping or other aesthetics. This gives the District an unattractive look. To the extent the Town may wish to attract more high technology businesses, it should seek methods of improving the appearance of the Industrial District. (ED-9, HC-14) This, in addition to incentives that could be provided to prospective companies, could provide the Town with a stronger economic base in the light industry sector. (ED-10, ED-11) This is discussed in greater detail in the Economic Development Chapter.

4.7.3 Impacts of Development Trends

The anticipated population growth and residential and commercial development will have an effect on the availability and efficiency of Town facilities and services, and will impact the town's appearance. Areas that will be impacted by growth include the Town's water supply, its transportation system, its amount of open space, the groundwater and coastal water quality, and its natural areas. Following is a brief discussion of the primary facility impacts of continued development and population growth. A more complete discussion of facility needs is provided in the Community Facilities and Services chapter.

Water Supply System

An increasing population will result in a corresponding increase in demand for water. Annual water use is expected to increase from a 2003 level of 231 million gallons (MG) to a 2020 level of 324 MG per year. Increases in demand become crucial when maximum daily demand approaches the daily system capacity. The Water Department is already responding to anticipated demand by beginning the regulatory approval process of adding a new well to the existing 7 well public water system. Orleans has also constructed an Iron and Manganese filtration plant to serve the wells, and enhance water quality. (CF-21, CF-22) These efforts will ensure that the Town is able to meet the water needs of the community in the foreseeable future. See the Community Facilities chapter for a complete discussion of water supply issues.

Wastewater

The current method for managing wastewater in Orleans is by individual septic system. Limited wastewater treatment options impact future land use by limiting the intensity and types of development that could be allowed in the Village Center and other development nodes. Desirable types of development, such as medical offices and theatres, are prevented from operating due to stringent state septic requirements. The costs of individual systems for these types of uses make such development unattractive.

This inability to concentrate development contributes to developmental sprawl. The Town has started to plan for alternative wastewater treatment options. As recommended and further discussed in the Community Facilities and Services chapter, the Town is developing a town-wide wastewater management plan to determine the appropriate treatment alternatives for various areas. (CF-27) Wastewater issues are discussed in more depth in the Community Facilities and Services and Natural Resources chapters.

Transportation

Transportation problems, including traffic congestion, are most pronounced during the summer season. However, projections by the Cape Cod Commission anticipate that off-season traffic congestion in 2015 will be equal to present summer traffic. These projections are alarming, and call for a comprehensive approach to transportation

planning that includes road capacity improvements, traffic management measures, and alternative modes of transportation. The growing transportation system, and corresponding road maintenance programs will continue to put additional demands on Highway Department staff and Town resources.

Enhancements, such as directional signs, would help to improve traffic circulation. (T-16) The existing parking regulations should also be reviewed to assure that they are appropriate for the community and that they encourage shared parking lots and driveways when feasible. (T-20) As the Cape Cod population continues to grow toward build-out, the transportation system will play a critical role in maintaining a healthy local economy and a high quality of life for Orleans residents. Transportation issues are discussed in more depth in the Transportation chapter.

Emergency Services

The Fire/Rescue and Police Departments will have to expand to meet future needs. As build-out is approached, both departments will require additional staffing and equipment. (CF-32) An addition to the Fire Station should be considered, as well as an expanded or new Police Station. With the larger population to serve, and the associated increase in traffic, a Fire/Rescue and/or Police substation should be considered for South Orleans. See the Community Facilities and Services chapter for a full discussion of these issues.

Education

Historically the majority of the population increase that Orleans has experienced as it approaches build-out consists of retirees, resulting in minimal impact on school enrollment. This trend is still dominant, but Orleans school forecasts show there will be nearly 400 additional elementary school age children at build-out. Even with the continued shift towards more retirees, additional school capacity may be required in the future. School enrollment projections presented in the Community Facilities and Services chapter reflect this trend.

Other Public Services

The fiscal impacts of new residential development in most communities are negative; that is, new residences usually create more demand for community services than they pay for in property taxes. The largest component of these costs is for the public school system. In Orleans, however, most new residential development accommodates retirees and seasonal residents who do not send children to the public school system. Development adds value to the tax base, increasing the overall assessment and lowering the tax rate. High value seasonal homes generally contribute more in taxes than they receive in Town services. Therefore, residential development in Orleans could be considered to have a positive fiscal impact if it continues to be consistent with past trends.

As the population grows, other community services will need to be supplemented including: Health and Human Services, the Council on Aging, Parks and Beaches, and

the Recreation Department. Town departments will be expected to expand facilities and services to meet the needs of a growing population. An in-depth discussion of current and future Town facilities needs is provided in the Community Facilities and Services chapter.

Community Character

Future development will also have a significant impact on the character of the town as natural areas are developed. This will be especially acute when infill lots in existing neighborhoods are developed. The benefits of open space dictate that the Town make a continued commitment to preserving natural resource areas to preclude population congestion and retain the semi-rural character of the community.

Opening access to the waterfront has the potential to dramatically improve residents' visual experience in the downtown. Also essential is the appearance of, and type of development along Route 6A and the downtown. Limiting sprawl patterns of development along parts of Route 6A through zoning provisions is recommended (ED-5)

In order to reduce the impacts of expected population growth, the Town must take action to manage future development in the community. This will require a combination of revising land use regulations and vigorously pursuing protection of open space. It is recommended that open space acquisition be a priority within the Town's overall land use plan. (OS-3)

Natural Resources

New development is impacting the water quality in our ponds and estuaries. Several water bodies in the town already show evidence of reduced water quality, including Arey's Pond, Kescayogansett Pond, and Mill Pond. The primary problem is cumulative nutrient loading from septic systems. The Town should continue to purchase land within the watersheds of sensitive water bodies, wherever possible, to reduce the development potential of these areas. Other options such as dredging to improve the flow should also be considered. As discussed above, the town-wide wastewater management study is under development and expected to be completed in 2008.. (CF-27)

4.7.4 Growth Management

The combination of a Town's zoning, subdivision, and other land use regulations and tools constitute its growth management strategy. These tools should be used in a coordinated, comprehensive way in order to reach land use goals. This section presents Orleans' growth management strategy and addresses many of the issues described in this chapter.

As a means for dealing with the anticipated impacts of population growth and the resulting demand for development of various types, and to protect and preserve Orleans' small town character, changes to existing land use regulations should be

considered. The recommended changes are intended to make regulations more consistent with the goals of promoting growth that does not adversely impact community values or environmental resources. This includes promoting growth that will be sensitive to Orleans' landscape and environmental resources, as well as preserve existing village centers, residential neighborhoods, historic resources, and agricultural uses.

Rules and regulations related to zoning, subdivision controls health regulations and conservation requirements help to guide where and how development may take place. However, revisions to existing regulations are needed if the Town wishes to enhance its residential, commercial, industrial and village areas. As discussed above, this can be accomplished by developing growth centers, or nodes. Focusing development in specified nodes will reduce the potential for strip commercial development and other types of development sprawl. The primary tool for creating and expanding these nodes is the Zoning Bylaw.

Transfer of Development Rights (TDR) is a planning tool by which the development rights for a parcel are conveyed to another location. The former parcel is preserved in a natural state and the density limit is increased for the "receiving" parcel. Because of high real estate values, this method may not work for land conservation, but it may be effective as a method for limiting nitrogen loading in sensitive watershed areas. This would require that a proposed development would have to offset the nitrogen loading impacts of the development by preserving other land within the watershed as open space. This concept should be further explored as part of the wastewater management planning process.

When public sewer is provided in a community, it often has the effect of spurring development. A betterment is charged to properties which gain frontage on the sewer line (and therefore have opportunity to connect). For commercial properties, this becomes an added business cost, and many business owners will wish to expand to generate addition revenue to offset the cost. At present on-site septic system requirements work as a development constraint on small business lots or businesses that require high wastewater disposal capacity, such as a restaurant or public assembly hall. Sewering eliminates the constraint. It is therefore important that the Town review and align other local bylaws and regulations while wastewater treatment recommendations are being formulated, so that growth is properly managed (LU-15).

Zoning Bylaw Revisions

Zoning Bylaw Definitions

To describe more accurately the type of development that is desirable in a particular area of town as well as to reflect changes in demographics and business types, several definitions should be reviewed, revised or added to the Zoning Bylaw as needed (LU-3), including:

- Customary or Self-Employed Home Occupations
- Hotel, Motel or Motor Inn

- Bed & Breakfast
- Restaurants
- Restaurant, Drive-in
- Restaurant, Fast Food
- Dog Kennels or Veterinary Hospitals
- Commercial Recreation vs. Amusement Park
- Theaters
- Dwelling unit
- Light Industry or Manufacturing
- Wholesale business

Revisions to Zoning Requirements

Residential District

It is recommended that the current minimum lot size of 40,000 square feet be maintained for residential development, and that alternatives to the traditional subdivision, including cluster development, should be encouraged. (LU-5)

As the Town moves closer to build-out, the zoning provision in chapter 164-22.A.7 should be given careful consideration for either revision or removal from the Zoning Bylaw. The provision allows for a second dwelling on a one acre lot that meets the criteria defined in the bylaw. This local exemption contradicts the town's one acre zoning by allowing a density that has not been supported by residents since 1982.

Business Districts

There are several issues relating to the business districts as they exist that should be addressed through Zoning Bylaw changes.

The uses allowed in the Village Center District should be carefully considered. (LU-6) It is recommended that the Town work with the property owners in the Village Center to identify additional zoning amendments that would enhance desirable characteristics. (LU-7)

- Zoning revisions should include provisions to encourage mixed-use developments in the Village Center. Mixed-use should be defined as "a planned development containing both business and residential land uses on a single lot." (ED-7) Detailed guidelines should be provided for these types of development to ensure that they are compatible with the village character.

District Designations

Business Districts

As mentioned previously, concentrated nodes of business activity should be encouraged in order to reduce the potential for strip development. Business nodes should be of sufficient depth to allow for options in site layout. This will allow for businesses to locate parking to the rear of the building and increase opportunities to take advantage of shared driveways reducing the number of curb cuts. The creation of business nodes also creates a pedestrian friendly environment and begins to define a sense of place along major transportation corridors.

Amendments to the Rural Business District boundaries in East Orleans should be considered in order to remove parcels from the district that are currently being used in a residential capacity. (LU-10)

Subdivision Rules and Regulations

The Subdivision Rules and Regulations currently lack a defined decision making process. Consideration should be given to adding a section that clearly states the criteria for Planning Board review. (LU-11) The criteria could be as follows:

1. Completeness and technical adequacy of all submissions;
2. Elimination of safety, health and/or traffic hazard, or other environmental degradation;
3. Conformity with Design Guidelines and the Zoning Bylaw
4. Efficient determination of proper environmental protection.

It is recommended that all new subdivisions of 10 or more lots be required to submit an environmentally sensitive development plan according to the provisions of the Open Space Residential Development provision of the Zoning Bylaw. (LU-5) This will allow smaller building lots, preserve open space and reduce infrastructure costs without allowing for an additional number of units above that permitted in a conventional subdivision.

Road Standards

Road standards are a primary tool for shaping the appearance and functioning of future development. The following is a discussion of the standards currently employed by the Town.

The Town currently has many unpaved roads that contribute to the rustic quality of particular areas within the community. In keeping with this characteristic, a rural road alternative is available for subdivision roads that serve no more than four dwellings. In general, a subdivision road servicing 1-4 dwellings must provide a road surface type that is hardened or contains gravel with a hardening base. Roads in this size subdivision must also provide a right of way of 33 feet and a road surface width of 14 feet. Roads

servicing five or more dwellings must be of bituminous concrete, 18-20 feet wide, and provide a 40-foot right of way.

Determining the pavement width of streets is of great importance in designing a residential area. Pavement widths have an impact on vehicular speeds, visual scale, the cost of construction, and maintenance. The width of the street should be based on the volume and type of traffic. Generally, the minimum width that will reasonably satisfy all realistic needs should be used.

The right-of-way width should only be as wide as necessary to accommodate the street pavement and other facilities and uses such as sidewalks, utilities, drainage, snow storage and grading. In instances where utilities are to be located under the street pavement and if sidewalks will not be included, a narrower right-of-way can be provided. Orleans requires that utility lines be placed underground in subdivisions with two or more dwellings and does not require sidewalks in subdivisions. Therefore, the right-of-way may be reduced from the standards above. However, if sidewalks are installed the current right of way width may be warranted.

The road standards discussed above are appropriate to adequately manage future subdivision development. No changes are recommended.

Erosion Control

As new development is forced to target less desirable building sites, slopes and other land characteristics can make the development more prone to causing erosion of sediments. Prevention of erosion, both during and post-construction is especially important near wetlands and other environmentally sensitive areas. In some cases sediment washes off construction sites into roadways, creating a public hazard. For these reasons, the Town should adopt a soil erosion and sediment control bylaw to mitigate the impacts of new development (LU-14).

4.7.5 Future Needs for Various Types of Land Uses

The following is a discussion of some of the land use needs that Orleans is facing. Some of these issues were also addressed in the Growth Management section above.

Affordable Housing

There is a demonstrated need for more affordable housing opportunities for young families. Orleans is in the midst of a trend toward larger homes with seasonal and retirement populations. Young working families are being priced out of the market.

The town should work with private developers to create an affordable housing component and allow apartments as a mixed use project in village areas. These issues are discussed in depth in the Affordable Housing Chapter.

Commercial

As stated above, the land currently zoned for General Business development would accommodate a 60% increase in business space. This seemingly exceeds the anticipated demand for business space based on build-out projections. In the past land has been rezoned from General Business to the more restrictive Limited Business zone and Village Center zone. Both zones allow many business opportunities but the rezoning effort removed what was perceived to be a surplus of land zoned for General Business purposes.

Industrial

The Town's Industrial District provides the location for support and service industries such as landscaping, vehicle repair, and warehousing/storage. These types of businesses are needed in the community. As the population continues to grow, the demand for support services will grow accordingly.

While there are opportunities for redevelopment, there are currently few vacant parcels in the Industrial District. Land for expanding the district in the future is unavailable because it is surrounded by the public watershed, the soon-to-be-capped landfill, and a residential neighborhood. It is therefore important that the land in the district be used efficiently to ensure that the service needs of the community can be met in the future.

Institutional/Government

As discussed in the Community Services and Facilities chapter, the Town will need new and expanded facilities to meet the needs of a growing population. This plan has identified the need for a new Highway Department/Public Works facility. Orleans will also likely need to accommodate wastewater facilities or components of facilities in the future such as sites for pumping stations, treatment plants or local package treatment plants, and areas for effluent disposal. There is also a need for the Town to acquire land in the Village Center for public parking space. The Town should conduct an assessment of all Town-owned facilities and properties to determine their potential to accommodate anticipated needs. (CF-1) Additional land should be identified and acquired as needed.

Open Space/Recreation

Orleans residents have expressed a strong desire to acquire and maintain additional open space acreage. This was exhibited in the results of the survey recently conducted for the Conservation, Recreation and Open Space (CROS) Plan, which indicated that 84% of respondents were in favor of Town-supported land acquisition. The primary purpose for such acquisitions, as cited by respondents, was for water supply protection and natural habitat conservation, as well as shoreline access. Open space preservation is discussed in more depth in the Open Space and Recreation chapter.

4.7.6 Areas in Need of Redevelopment/Revitalization

Village Center

The Village Center is the central gathering place in the community. It is the focus of community events and plays a role in the daily life of many residents. A recurrent theme in this Plan is to foster a vibrant community center that is attractive, functional, and meets the needs of residents and visitors alike. The Town should continue to pursue a vision for the Village Center that will maintain its character and economic viability into the future.

It may be appropriate to encourage some types of growth in this area in the future. Residents of the town have consistently supported efforts to make the area a more interesting, attractive, and economically vibrant place. The Village Center is also considered an appropriate location for apartments. Having people live/work in the village brings life to the area and fosters an active environment.

Orleans presently allows up to 3 apartments in commercial buildings within the Village Center, provided the primary use remains commercial. More units are permitted only if a parcel contains 60,000 square feet, and then only upon the granting of a Special Permit by the Zoning Board of Appeals. Few parcels in the Village Center contain the necessary land area. Consideration should be given in the near future to allowing more apartments on smaller parcels, in conjunction with community wastewater treatment availability, to encourage a stronger residential component of the Village Center (LU-16).

Industrial District

There are a number of underutilized parcels in the Industrial District. These have the potential for better organization to consolidate existing uses and allow for new uses on the remaining land. The appearance of the district also needs improvement, a process that is being accomplished over time through the Site Plan Review process as new uses are added to existing parcels.

4.7.7 Efforts to Conserve Energy

It is important that efforts be made to ensure that future development is responsive to the need to conserve energy. This Plan contains several recommended local actions to foster good energy conservation practices. The Town will incorporate efficiency into the design of Town facilities (CF-9). New developments will be required to place utility wires underground (HC-7). Increasing bicycle and walking networks is a top priority (T-29). The Town also vigorously enforces the energy efficiency requirements of the State Building Code.

4.8 Implementation Program

	Action	Time for Completion	Resources Required	Lead Responsible Agency
LU-1	Study traffic issues and determine appropriate uses for the Rural Business District that serves South Orleans residents.	FY 07-10	L	Planning Board
<i>LU-2</i>	<i>A percentage of General Business zoned land should be rezoned for less-intensive uses.</i>	<i>Addressed See Appendix</i>	<i>M</i>	<i>Planning Board</i>
LU-3	Consider revision of the Zoning Bylaw to include or modify definitions for the following: <ul style="list-style-type: none"> • Customary or self-employed Home Occupations • Motels/Hotels • Inns • Bed & Breakfasts • Restaurants • Restaurant, Drive-in • Restaurant, Fast Food • Dog kennels • Veterinary hospitals • Commercial recreation • Amusement Park • Theaters • Dwelling units • Light industry • Manufacturing • Wholesale business 	FY 07-10	L	Zoning Bylaw Task Force
<i>LU-4</i>	<i>Revise the Use Table of the Zoning Bylaw to reflect the following:</i> <ul style="list-style-type: none"> • <i>The Use Table should be reconfigured to provide better readability.</i> • <i>Apartments associated with commercial buildings within the Industrial District should be limited to 1-bedroom units.</i> 	<i>Addressed See Appendix</i>	<i>L</i>	<i>Zoning Bylaw Task Force</i>

LU-5	<i>Require all new subdivisions of 10 or more lots to submit an environmentally sensitive Open Space Residential Development plan.</i>	<i>Addressed See Appendix</i>	L	<i>Planning Board</i>
LU-6	Revise the Use Table of the Zoning Bylaws as it pertains to the Village Center District in order to emphasize the village as a unique area and to encourage uses that are consistent with a village setting.	FY 07-10	M	Zoning Bylaw Task Force
LU-7	Work with property owners in the Village Center to identify zoning amendments that would enhance desirable village characteristics.	FY 07-10	L	Planning Board
LU-8	<i>Evaluate zoning districts along Old Colony Way, considering existing land uses, traffic, and future growth potential.</i>	<i>Addressed See Appendix</i>	L	<i>Planning Board</i>
LU-9	<i>Expand the boundaries of the Village Center as appropriate to incorporate businesses on both sides of Main Street and Route 28.</i>	<i>Addressed See Appendix</i>	L	<i>Planning Board</i>
LU-10	<i>Amend the Rural Business District in East Orleans to remove parcels that would more appropriately be zoned for residential use.</i>	<i>Addressed See Appendix</i>	L	<i>Planning Board</i>
LU-11	<i>Revise the Subdivision Rules and Regulations to include a defined section that explains the decision making criteria for approval or denial of a subdivision plan.</i>	<i>Addressed See Appendix</i>	L	<i>Planning Board</i>
LU-12	Amend Subdivision Regulations to require submittal of an Open Space Residential Development Preliminary Plan for all subdivisions of five or more lots. Such amendment should include review criteria by which the Planning Board will determine the most appropriate type of subdivision.	FY 07-10	L	Planning Board
LU-13	Add Conservation Restrictions to municipal lands that are not needed for other municipal uses.	FY 07-10	M	Board of Selectmen
LU-14	Adopt a soil erosion and sediment control ordinance to minimize adverse impacts of development on adjacent and neighboring properties.	FY 07-10	L	Planning Board
LU-15	Amend Zoning Bylaw to mitigate possible unintended building growth from effective wastewater management facilities.	FY 07-10	M	Planning Board
LU-16	Expand apartment zoning in the Village Center, provided the street level is used for business purposes.	FY 07-10	L	Planning Board