Comprehensive Plan Appendix: Inventories

NATURAL RESOURCES (January 1987)

Topography

Carlton occupies the "highland" between Hawn Creek and the North Yamhill River both of which flow south approximately 6 miles to enter the main stem of the Yamhill River. The terrain within the Carlton planning area is generally flat. Elevations range from 120 feet along the North Yamhill River to 200 feet in the center of the City. Slopes of 0-5 percent occur over about three-fourths of the area. 5-15 percent slopes are found over approximately one-fifth of the area. The remainder of the City has slopes greater than 15 percent. These are predominantly found along the western fringe of the City and along Hawn Creek (see, Topographic Map).

Geology

Alluvial deposits of Willamette Silt predominantly characterize the Carlton planning area. This formation includes bedded silt and fine sand with occasional layers of clay, and lenses of pebbly fine to medium sand with locally scattered granite and quartzite cobbles. The formation is approximately 50 feet thick in the center of the valleys and thins toward the valley edges. Generally, the formation has a low permeability resulting in a slow transition to wells and springs.

Deposits of a more recent young alluvium are also present in the Carlton area. This includes silt, sand, clay and peat of present floodplains. The average thickness is 20 to 30 feet. The young alluvium formation contains poorly drained swampy areas having a permanently high water table. Young alluvium consists primarily of alternating layers of sand and gravel blanketed by flood plain silts.

Finally, a narrow band of Yamhill formation deposits stretches along the western section of the City. This formation consists of a complicated mix of shale and basalts of volcanic origins. It displays generally low permeability characteristics.

Soils

Through weathering and other processes that act on parent material, soil is formed, thereby providing man, animals and plants with life support requirements. The characteristics of the soil depend upon the parent material, climate, plants, animals, and time. Because many variables

effect soil formation, soil types are numerous. Different soil types are, of course, suited for different uses. One soil may be highly suited for agriculture but, because of certain properties, it may be totally unsuitable as a building site. A soil may be flood-prone or susceptible to landslides, conditions that can be very costly or even impossible to overcome for building purposes, while posing only slight problems for agricultural uses. By determining the various properties of each soil, it is possible to determine for which use(s) each soil is best suited.

Agricultural Land Capability

Class II soils have moderate limitations that restrict their use.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class VI soils have very severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.

There are no Class I, IV or V soils present in the Carlton area.

Building Site Limitations

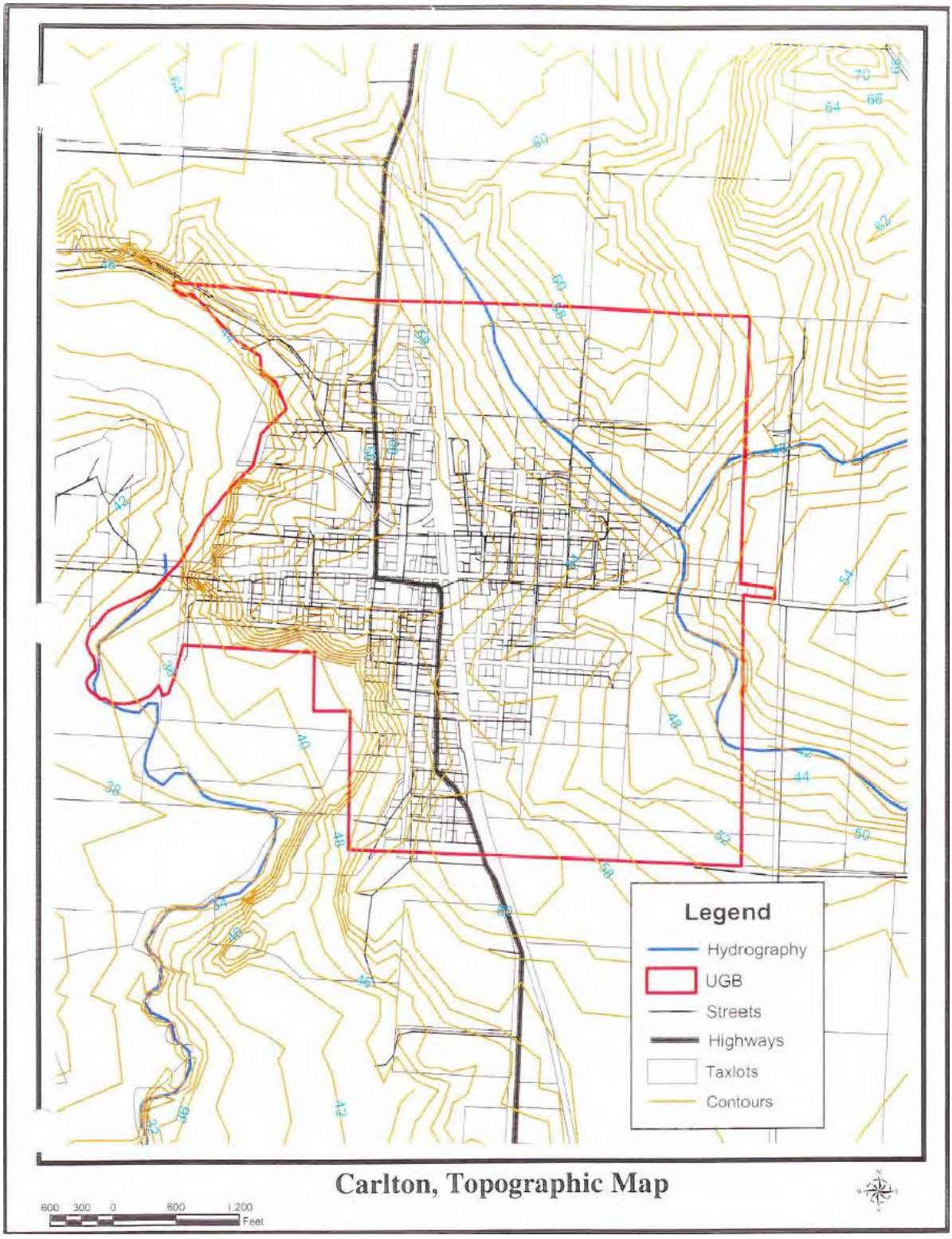
The ratings and limitations are for houses and other buildings that are not more than three stories high.

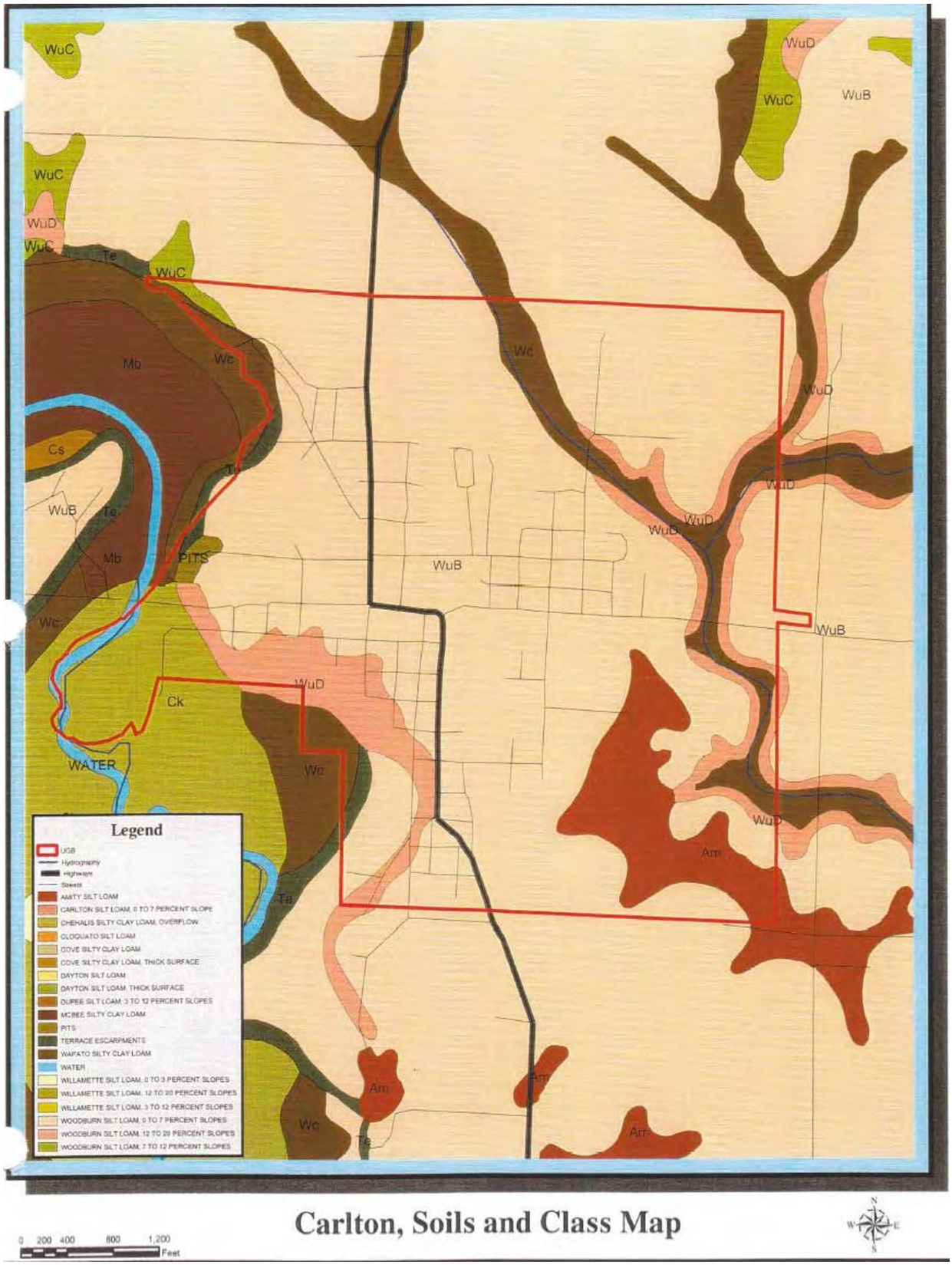
Soils that have **slight limitations** for use as building sites for residences have slopes of less than 12 percent, are well drained or moderately well drained, and are not subject to flooding. Hard rock is at a depth of more than 40 inches.

Soils that have **moderate limitations** for this use are somewhat poorly drained and are not subject to flooding. They have a seasonal high water table, fair stability, or moderate shrink-swell potential in the subsoil. They have slopes of 12 to 20 percent. Moderately rated soils have limitations that normally can be overcome with planning, careful design, and good management.

Soils that have **severe limitations** for this use are poorly drained or are subject to flooding. They have poor stability, high shrink-swell potential, low shear strength, or high slide hazard. They have slopes of more than 20 percent. A severe rating indicates that the particular use of the soil is doubtful and careful planning and above average design and management is required to overcome the soil limitations.

There are seven soil types in the Carlton planning area (see, Soils & Class Map). The important properties and limitations of each soil type are listed in Table 1 to serve as a guide for determining building suitability on the basis of soil characteristics.





Carlton, Soils and Class Map

About 98% of the Carlton planning area is in Class II and III soils which are considered to be potentially suitable land for agricultural purposes. These lands are generally favorable for building sites, as is evidenced by the existing developments on these soils. The agricultural lands have been determined to be necessary for the future urbanization of the City beyond the year 2017. Until such times, as these lands are needed, agriculture could serve as an interim land use within the urban growth boundary.

Some of these soils have certain limitations for residential development; as is noted above. Applicants for building permits within areas rated as moderate or severe should be directed to the Soil Conservation Service of Yamhill County for additional information regarding soil management and land use.

Table 1. Carlton Soil Fact Sheet

Soil Name	Agricultural Class	Building Site Limitations	Limiting Soil Characteristics	% of Carlton UGB Area	Existing Land Use
Woodburn Silt Loam **WuB**	IIw	Slight	None	74%	Urban Use (60%) Agricultural & Vacant (40%)
Woodburn Silt Loam **WuD**	IIIe	Moderate	Slopes	9%	Residential (20%) Agricultural & Vacant (80%)
Wapato Silty Clay Loam **Wc**	IIIw	Severe	High water table; Flood hazard	7%	Urban Use (10%) Agricultural & Vacant (90%)
Amity Silt Loam **Am**	IIw	Moderate	Somewhat poorly drained; seasonal high water table	5%	Urban Uses (20%) Agricultural & Vacant (80%)
Chehalis Silty Clay Loam **Ck**	IIw	Severe	Flood hazard	2%	Agricultural & Vacant
Terrace Escarpments **Te**	VIe	Severe	High slide hazard Slope of 20-40 percent	2%	Vacant
Woodburn Silt Loam **WuC**	Iie	Slight	None	1%	Agriculture

Sources: Soil Survey of Yamhill Area, Oregon
U.S. Department of Agriculture, Soil Conservation Service, January 1974.

Climate[1]

The nearest measurement location for climatic factors is the North Willamette Experiment Station (Elevation, 198') located at Aurora. In summary:

Temperature:

Lowest Monthly Average: 32°F - January
Highest Monthly Average: 80°F - August
Driest Month: July
Wettest Month: December

Precipitation:

Average Annual Precipitation: 40.780"

Humidity:

Average July Afternoon Humidity: 57 %
Average January Afternoon Humidity: 84 %

Precipitation averages between 40-45 inches a year with less than 2% in the form of sleet or snow. Approximately three-quarters of the precipitation fall from November through March. Dry periods of 60 to 90 days in the summer with no measurable precipitation occur frequently.

The monthly temperature mean is 52.1°F. Daily temperatures in January range from 31°F to 44°F, and in July they range from, 48°F to 83°F. Humidity values are not available locally. However, for Portland, January's average is 81% and July's is 66%. There is an average growing season of 170 days based on the last occurrence in spring and first occurrence in fall of a temperature of 32°F.

Agricultural Lands

Agriculture is widely practiced in the Carlton planning area. Approximately 280 acres, percent of the City's land area, are devoted to agricultural uses. All 280 acres are SCS Agricultural Capability Class II or III soils. [See, Soils]

[1] Source: Oregon Climate Service, 1996 Special Reports (Climate Data).

Farm crops grown in the planning area range from grains and seed grasses to fruits, wine grapes, and nuts. Grazing lands also make up a significant share of the agricultural activity in the area.

Forest Lands

There are no forestlands in the City of Carlton or its immediate environs. There are a few large clusters of fir and oak trees scattered around the planning area. Trees and brush line the Yamhill River that runs along the western edge of the City, as well as portions of Hawn Creek on the North and East.

Open Spaces

There are areas within the City of Carlton that are desirable to preserve as open spaces. The most notable of these are the agricultural and undeveloped lands surrounding the urban core. However, it should be noted that as a rural community, Carlton is surrounded by scenic farmland and open spaces that lend an overall pastoral setting to the City.

Two small creeks run through the northeast section of the City. These merge and flow out of the southeast corner of the City. The land adjacent to these creeks is primarily used for agriculture, open and wooded space. These areas provide ideal open space settings.

An area that is particularly suited for open space use is the vacant land in the northwest section of the City. This sloping area once overlooked Carlton Lake that also served as a wildlife refuge. The lake was drained in 1972, but the prospect of it being re-established makes this lakeside area a potential site for park development. Other existing uses, which provide open space in Carlton, include school grounds, and City Parks. Scenic views are offered by the number of historic structures in the Community and by the Coast Range Mountains to the west of the City.

Mineral and Aggregate Resources

A study done by the Department of Geology and Mineral Industries in 1981 reported that there had been one quarry for sand and gravel in Carlton. The site was listed as inactive with no reserves of sand and gravel available. No other sources for minerals or aggregates are indicated by the report.

Energy Resources[2]

The Carlton planning area has no identified reserves of fossil fuels such as petroleum, coal, or natural gas. Nor does it have sufficient water resources for hydroelectric generation.

With respect to energy use as a localized natural resource, there is little data available to identify the importance of local energy resources within the planning area. Solar energy is a feasible energy source in this area and is presently utilized in other parts of the County. The use of solar energy is growing rapidly, and within the near future it could be fairly common in the planning area.

The topography of some parts of the City lends itself very well to solar energy use. The area from W. Grant Street south to the city limits falls a total of 60 feet in a linear distance of 500 feet, or a south slope of about 127. This area would be ideal for solar structures.

The area along the southwestern boundary of the City also has a slope of 12% or greater. Part of this slope extends to the west and part to the south. This area also offers ideal solar access.

The rest of Carlton is also relatively well suited to solar structures. There are no steep north slopes that could cause excessive shadow patterns. The basic block pattern of the City is on a north-south grid so that any street running east-west should have good solar access.

Wind power, like solar, is a potential energy source in the County. However, this source of energy is very site specific and no data has been collected regarding its direct application in Carlton.

Wood burning for heating purposes is the most common form of localized energy presently being used.

Fish and Wildlife Resources[3]

Fish habitats in the Carlton Planning Area are the North Yamhill River and Hawn Creek. The North Yamhill River is a large perennial stream with many long, deep pools interspersed with gravel bars. Hawn Creek often becomes intermittent along certain reaches by late summer. It is typically mud-bottom with limited areas of gravel for trout spawning. Channel alteration has occurred in the streams, resulting in a reduction in fish habitat.

[2] Source: Yamhill County Energy Office

[3] Updated to reflect information provided city by ODOFW letter dated May 1, 1997.

Cold water game fish utilizing the North Yamhill River include: Coho salmon, winter steelhead trout, and cutthroat trout. The river serves as a migration route for these species and supports cutthroat trout throughout the year. Higher water temperatures during the summer preclude cold water game fish presence year round.

A small fishery occurs on the North Yamhill at Carlton for winter steelhead. Trout angling on the river takes place primarily in the spring.

Cutthroat trout from the North Yamhill River move into Hawn Creek during the fall and winter months. Small populations of cutthroat will remain in the stream throughout the year wherever sufficient flow is maintained.

Although not federally listed as “threatened or endangered”, winter steelhead and Willamette Valley cutthroat trout are each identified by ODFW as a “a stock of concern”. Owing to a variety of causes, winter steelhead numbers are down substantially throughout the Willamette basin and have recently been proposed for a state listing as “sensitive”. In regards to cutthroat trout, continued degradation and loss of stream habitat within the Willamette Valley, particularly within drainages along the eastern slope of the Coast Range, has led to a suspected decline in overall cutthroat abundance.

Nongame fish specifies found in both streams include: dace, sculpin, stickleback, redside shiner, carp, largescale sucker, and squaw fish. In addition, pacific lamprey and sand rollers are found in the North Yamhill River near Carlton. Pacific lamprey are listed by the state of Oregon as “sensitive” while sand roller have been classified as a “stock of concern” It is likely that both streams harbor several species of warm water game fish such as bluegill and bass.

Wildlife in the planning area consists primarily of small animals such as opossum, rabbits and muskrats, however, occasional sightings of other species including Red Fox have been reported. These generally inhabit the riparian edge of the river and creek but can also be found in areas where sufficient vegetative cover exists.

Numerous small birds and several game birds, such as pheasant, quail and Hungarian partridge inhabit the planning area plus occasional sightings of other species including Blue Heron. These are most commonly found in open space areas that offer some protective vegetation.

No threatened or endangered fish or wildlife species have been identified as living within the Carlton planning area at this time.

The 1994 National Wetlands Inventory [NWI] Map depicts several areas of mapped wetlands along Hawn Creek tributary in the eastern portion of Carlton.[4] Additional areas of un-mapped wetlands along with important riparian areas likely exist along both the North Yamhill River and Hawn Creek. Riparian vegetation is important to protect fish and wildlife habitat and to promote stream bank stability. For fish, riparian vegetation provides shade cover, helps to regulate temperature, and provides food sources. A disproportionate number of wildlife species also use riparian vegetation during at least a portion of their life cycle.

The North Yamhill River is contained along the westerly border of the City and is buffed from development potential by a City Park and the wastewater treatment plant. The Hawn Creek Drainage is in an area of the City that is predominately undeveloped at this time.

It is the responsibility of the city to notify the Division of State Lands [DSL] when certain development proposals occur on wetlands shown on NWI maps or, where developed, on a local wetland Inventory [LWI].

Water Resources[5]

The City of Carlton is located on the North Fork of the Yamhill River. Bordered on the east by the Red Hills of Dundee and on the west by the Coast Range, Carlton lies on the level- to-rolling valley floor between. This "valley floor" provides a major drainage basin for several tributaries of the North Yamhill River. Among these, Panther Creek is the most important to Carlton. Approximately eight miles west of Carlton on Panther Creek, the City maintains a 23 million gallon (MG) impoundment reservoir with design criteria to meet expected population demands to the year 2017. Willamette Industries, a private timber company, and U.S. Bureau of Land Management (BLM) own the Panther Creek Watershed. Logging activities coupled with major storm events has increased siltation within the impoundment reservoir. A survey of the surrounding geologic formations reveals that there are no major water bearing aquifers upon which the City could rely for supply. Well logs of the area around Carlton indicate that yields of 5 to 15 gallons per minute (gpm) are the average with a few yielding as high as 35 gpm. The predominant geologic formations of this area are:

[4] Division of State Lands, National Wetlands Inventory Map 1994.

[5] Updated to reflect results of a Study entitled: *City of Carlton, Panther Creek Watershed Protection.* Michael D. Henry. July 1997.

Young Alluvium – found mostly along waterways, consisting primarily of alternating layers of sand and gravel. It is generally too thin and of too low permeability to yield large quantities of water.

Willamette Silts – permeability generally quite low, resulting in slow transition to wells and springs. It may sustain domestic use but is too slow to sustain irrigation.

Yamhill Formation – a complicated mix of shale and basalts of volcanic origins. It has low permeability and low yields.

The North Yamhill River forms Carlton's western boundary and provides water recreational opportunities throughout the year. Canoeing, fishing, and swimming are a few of the activities local residents reportedly enjoy. River flows fluctuate markedly through the year with summer flows averaging 3.8 cubic feet per second (cfs). A record high of 9,530 cfs was posted during the flood of 1955.[6] The Department of Fish and Wildlife has recommended that a minimum river flow of 10 cfs be maintained in the North Yamhill River to ensure protection of aquatic life. This flow is rarely achieved, however, as irrigation rights of record above Carlton amount to approximately 39.8 cfs.

The North Yamhill River, downstream of Carlton, is a "water quality limited stream" based on violations of state pH standards during low flows. This is an indicator of excess nuisance algal growth. Water bodies exhibit no major pollution problems; however, water quality is occasionally impaired by soil erosion, urban storm runoff, and seepage of chemical fertilizers and pesticides from nearby agricultural lands. The Oregon Department of Environmental Quality supervises water quality.

Carlton seems to be well situated in terms of water resources. Although the area lacks the necessary geologic formations to produce large groundwater supplies, surface water is plentiful and has been developed wisely. The impoundment on Panther Creek should provide an adequate municipal supply to the year 2017. The close proximity of the North Yamhill River provides excellent aquatic recreational opportunities. Care should be taken in all future planning to ensure the continued development and protection of these valuable assets.

[6] North Yamhill River Station (1419700) at Pike, Lat. 452210, Long. 1231515, approximately 8.7 miles above the Carlton and Smith Bridge.

Historic and Cultural Resources[7]

Carlton had its earliest beginnings in 1844 when Peter Smith and his family settled on their land claim where the town of Carlton is now located. Over time the Smith farm became the site of the Methodist Episcopal Church and the Smith Church School.

In 1872, the Oregon Central Railroad completed construction of a rail line from Portland to St. Joe through this area. Mr. Wilson Carl, a resident of the area, persuaded the railroad company to make a flag stop in the little settlement. By about 1874 a station was built and the settlement became a regular train stop. Because of his efforts, the stop was at first designated as Carl's Town and later shortened to Carlton.

Once the rail stop had been established, the village of Carlton began to experience steady growth. Its first post office and general store were set up in 1874. In about 1875 Carlton School District No. 11 was formed and the first school was held in the Smith Church school building until the district could build its own schoolhouse. The district school was rebuilt or enlarged several times until construction of the present school in the 1950's.

The town of Carlton formally incorporated in 1899. A mayor and city council were elected at that time. This was followed by enactment of ordinances for the protection of the citizens and the municipal concern for the improvement of city streets.

In 1904, a local businessman became interested in the lumber business and built a dam across the North Yamhill River to form the Carlton Lake for log storage. The first mill was built in 1906. To further these logging operations, the Carlton and Coast railroad was constructed to bring logs from the mountains to the mill. The ensuing expansion of the local logging industry brought prosperity to the City.

For many years the state of Carlton's economy was to be dictated by the logging and mill industries. This period saw more businesses open in the area and two large hotels built. Carlton's first City Hall was built in 1913. Following destruction of the local saw mill by fire in 1914, the City's business community experienced a period of recession.

The city of Carlton continued to experience periods of "boom" and "bust". These cycles were associated with events connected to the logging industry. Major forest fires in 1933 and 1939 threatened to severely cripple the City's principle logging operations. Later fires destroyed mills

[7] Source: *Old Yamhill: The Early History of its Towns and Cities,* Yamhill County Historical Society, 1976.

in Carlton. They were rebuilt, but currently (2000) there are no longer any lumber mills in Carlton and there place has been taken by a new and thriving winery industry.

Reminders of Carlton's historic past are still evident in the community today.

The Carlton State Bank and Savings building located on the northwest corner of Main and Pine is listed on the National Register of Historic Places.

The property known as Westerlook Farm (the Charles Ladd Estate) built in 1912 is contiguous to the city limits. It is listed on the Statewide Inventory of Historic Sites and Buildings.

Local historians agree that the wooden barn located on the southwest corner of Park and Taft is the oldest structure in Carlton proper. It was on the farm of John Wennerberg, an early benefactor to the town of Carlton.

Air Resources[8]

To protect the health and public welfare from known adverse effects of air pollution have adopted air quality standards, the Federal and State Governments. There are two divisions within the standards, primary and secondary. The primary standards are to protect the public health and the secondary standards are to protect the public from effects such as visibility reduction, soiling, nuisance and other forms of damage. McMinnville has the nearest air monitoring station and its air quality is well within the Federal and State standards. It can be safely assumed that the air quality of Carlton is also well within Federal and State standards.

Due to topographic and meteorological conditions, this area, as well as the entire Willamette Valley, experiences temperature inversions. Basically, inversions prevent the rising of air currents, thus trapping them near the ground; and by preventing airborne materials from escaping, cause air pollution. Without careful observation and monitoring of air pollutant sources in this area, there is a potential for serious short-term pollutant problems to occur.

During certain periods of the year local agricultural activity, particularly open field burning and tilling, generates suspended particulate matter, which, for a period of time can reduce visibility and be quite irritating. It also can be hazardous to people suffering from respiratory illnesses. Overall, though, the local agricultural pollutant contribution is rather insignificant.

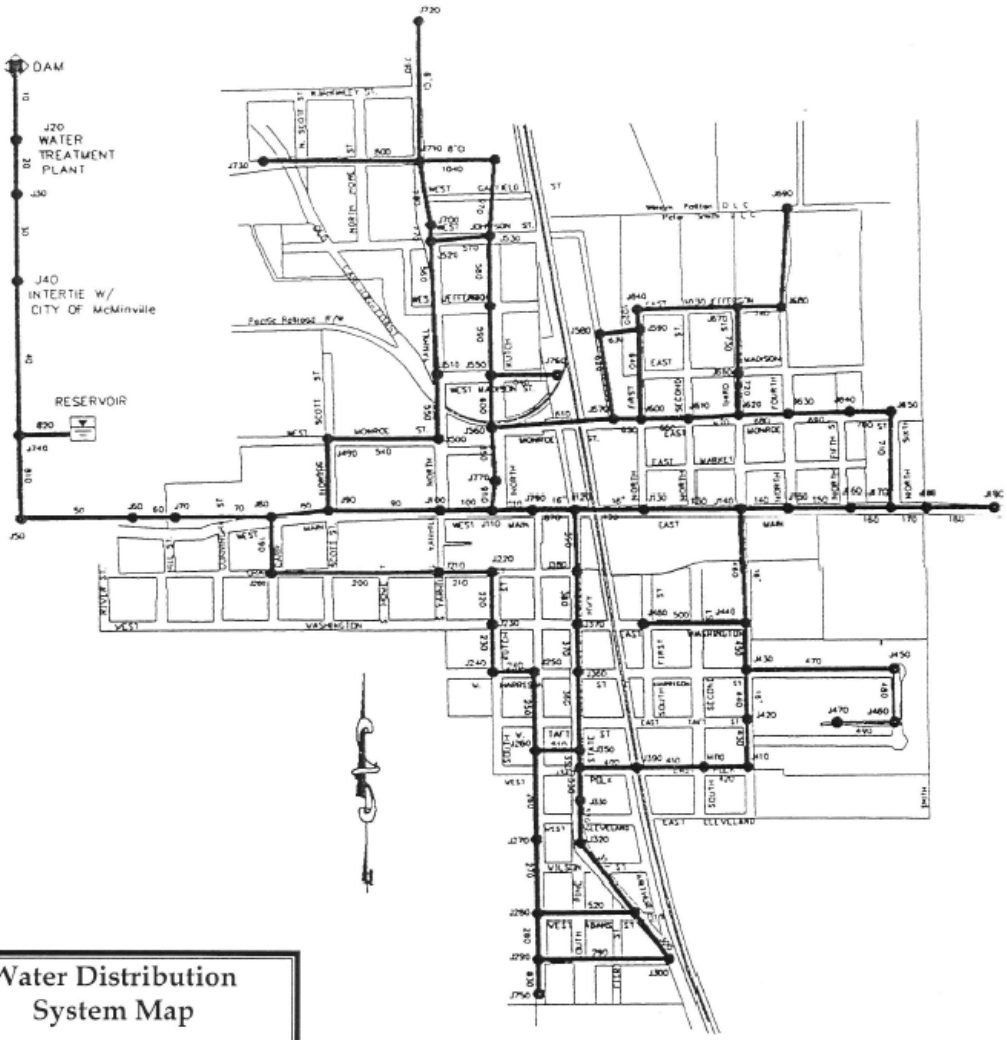
Industrial activity has the potential of creating localized air pollution problems. However, air pollution problems due to industrial activity in the Carlton area have been historically low. One

[8] Source: Oregon Department of Environmental Quality, 1978.

activity in the planning area that monitors source emissions for the Department of Environmental Quality is Madsen Grain Company, located within the City.

Noise Inventory

Within the Carlton Planning Area, significant noise pollutants do not exist. State Highway 47 has the highest potential for providing noise pollution; however, the normal traffic noise generated by motorists has not provided major problems for residents of the City. A good portion of the highway is surrounded by commercial use that is generally not as sensitive to noise levels as residences. In addition, traffic volumes are generally light during the evening hours.



Water Distribution System Map

Junction Nodes [J270, etc]
Prepared: 3-12-96
Reprinted: June 2001
Prepared by:

KPFF, Consulting Engineers
707 S. W. Washington Street, Suite 600
Portland, OR 97205

NOTE: This schematic should be replaced upon completion of automated system mapping.

URBANIZATION (July 2007)

A land use plan indicates the area into which various types of activities are expected to occur. Carlton designates five categories of land uses to be described and located on the land use map.

1. Residential. The Residential Plan designation is implemented through the Suburban Residential (SR), Multi-Family Residential (MR), and Manufactured Home (MH) zones. The maximum density in the Suburban Residential Zone is 5.80 dwelling units per acre. The maximum density in the Multi-Family Zone is 13.75 dwelling units per acre. The Manufactured Housing Zone allows for manufactured home parks at a density of 5.80 dwelling units per acre. Manufactured home parks are also allowed as a permitted use in the Multi-Family (MR) Zone at a maximum density of 10 dwelling units per acre.

2. Commercial. The Commercial Plan designation is implemented through the Commercial Business (CB) and Commercial-Industrial (CI) zones. Commercial uses include all activities of a commercial nature as authorized by the implementing zones.

3. Industrial. The Industrial Plan designation is implemented through the Industrial Zone. Industrial use covers the range of manufacturing, warehousing, and wholesaling activities. The Commercial-Industrial (CI) Zone also allows a number of industrial uses.

4. Public Facilities. The Public Facilities Plan designation includes all government and semi-public lands and uses, including park land. The Public Facility (PF) Zone implements this Plan designation.

5. Agricultural Holding. The Agricultural Holding Plan designation is implemented through the Agricultural-Holding (AH) Zone. The Agricultural- Holding Zone includes areas for future growth within the Carlton Urban Growth Boundary (UGB) and allows an orderly phasing of urban development of land. The AH Zone is a holding district that allows agricultural uses to continue until such time that the agricultural lands are needed for urban uses and public facilities and services are available. Conversion of AH property to a non- agricultural use requires a zone change.

The land use designations in the Comprehensive Plan are of a general nature and are intended to indicate the expected community growth pattern. Implementation of the plan occurs through more specific actions such as zoning, subdivision control, annexation review, Urban Growth Boundary administration and public facilities planning. Although the plan is designed to

be somewhat flexible, it must be understood that it is a significant policy statement and a great deal of responsibility must be exercised in its use and updating.

In 2007, the city conducted a buildable lands inventory. Table 2 shows the amount of developed acreage by zoning designation within the city. Approximately 224.6 acres are currently developed within the Carlton urban area.

Table 2. Developed Land Uses within the Carlton UGB By Zone, 2007

Zoning Designation	Acres*	Percent of Total Area
Suburban Residential	145.9	65.0%
Park/Open Space	18.0	8.0%
Multi-Family Residential	11.1	4.9%
Commercial Business	10.9	4.9%
Agricultural Holding	9.5	4.2%
Public	9.2	4.1%
Commercial-Industrial	7.7	3.4%
Manufactured Housing	7.2	3.2%
Industrial	5.1	2.3%
Total	224.6	100.0%

Source: MWVCOG, 2007.

*Acreage data is from the Yamhill County Assessor and does not includes public rights-of-way.

Buildable Lands Inventory

Buildable lands were inventories for each land type - residential, commercial, and industrial. The analysis of each land type includes totals for land that is completely vacant and redevelopable. The following parameters are used to determine whether land is vacant or redevelopable.

- Vacant residential land includes all parcels that are at least 5,000 square feet (0.11 acres) in size with improvement values of less than $5,000. The minimum lot size for

new residential parcels in the Suburban Residential (SR) Zone is 7,500 square feet, however the City allows development of existing lawfully created lots that are smaller than the minimum lot size. The minimum lot size in the Multi- Family (MR) Zone is 5,000 square feet.

- Vacant commercial or industrial land includes all parcels with improvement values of less than $5,000.
- Redevelopable residential land consists of residential-zoned parcels that are at least 0.50 acre in size with an improvement value of at least $5,000. This analysis assumes that 0.25-acre is devoted to the existing house, with the remainder considered vacant (redevelopable).
- Redevelopable commercial and industrial land includes parcels in commercial and industrial zones where some limited improvements have been made, but where potential for redevelopment for more intense uses is probable. For the purpose of this analysis, redevelopable land is defined as commercial or industrial parcels with improvement values of at least $5,000, where the ratio of land value to improvement value is 1:1 or greater.

The analysis also includes an assessment of land that is not buildable due to physical constraints such as steep slopes, riparian buffers, floodways, and wetlands. These areas have been subtracted from the amount of gross acreage that is considered buildable.

Residential Land

Table 3 shows the amount of buildable land for each residential zoning district within the Carlton urban area. All of the residential land included in this table is located within the existing city limits. In Carlton, the city limits and urban growth boundary are in the same location.

Approximately 90.1 buildable acres are available for residential development within the urban area. Approximately 166.5 acres within the Carlton UGB are currently developed for residential use.

Table 3. Buildable Land Inventory, Carlton, 2007

Zone	Vacant (acres)	Redevelopable	Total
Suburban Residential (SR) Zone	58.9	30.7	89.6
Multi-Family Residential (MR) Zone	0.4	0.0	0.4
Manufactured Home (MH) Zone	0.1	0.0	0.1
Buildable Acres Within the Urban Area	**59.4**	**30.7**	**90.1**

Source: Yamhill County Assessor data, MWVCOG, 2007.

Commercial Land

Table 4 shows that approximately 8.1 vacant acres are available for commercial development within the Carlton city limits. Approximately 1.9 acres designated for commercial use can be considered redevelopable. Approximately 18.6 acres within Carlton are currently developed for commercial uses.

Table 4. Buildable Commercial Land[1] Carlton, 2007

Zone	Vacant (acres)	Redevelopable	Total
Commercial Business (CB) Zone	6.0	1.0	7.0
Commercial-Industrial (CI) Zone*	2.1	0.9	2.9
Buildable Acres within the Urban Area	**8.1**	**1.9**	**10.0**

Source: Yamhill County Assessor data, MWVCOG, 2007.

*The Commercial-Industrial (CI) Zone also allows all of the industrial uses permitted outright in the General Industrial (GI) Zone. These uses include mini-warehouse storage; assembly, including light manufacturing, processing, packaging, treatment, fabrication of goods or merchandise; laboratories, offices, bottling and distribution centers, light repair facilities, wholesale businesses, and similar uses.

Industrial Land

Table 5 shows the amount of buildable industrial land within the Carlton urban area. Approximately 1.5 acres of vacant or redevelopable industrial land are available within Carlton. An additional 2.0-acre vacant industrial-zoned parcel has recently been purchased by the Carlton Fire District for development of a new fire station. Approximately 5.1 acres within Carlton are currently developed for industrial uses.

Table 5. Buildable Industrial Land, Carlton, 2007

Zone	Vacant(acres)	Redevelopable	Total
General Industrial (GI) Zone	1.0	0.5	1.5
Buildable Acres Within the Urban Area	**1.0**	**0.5**	**1.5**

Source: Yamhill County Assessor data, MWVCOG, 2007.

Land for Future Development

The Agricultural-Holding Zone includes areas for future growth within the Carlton UGB. The AH Zone is a holding district that allows agricultural uses to continue until such time as these lands are needed for urban uses and public facilities and services are available. Table 6 shows that approximately 190.6 acres are available for future development in the Agricultural Holding (AH) Zone.

Table 6. Buildable Land for Future Development Carlton, 2007

Zone	Vacant (acres)	Redevelopable	Total
Agricultural Holding (AH) Zone	107.4	83.2	190.6
Buildable Acres Within the Urban Area	107.4	83.2	190.6

Source: Yamhill County Assessor data, MWVCOG, 2007.

Land Needs Analysis

The buildable lands inventory is used in conjunction with the 2027 population projection to determine if adequate land is available for future residential, commercial, and industrial development.

Future Residential Land Needs Residential Densities

To determine the amount of land needed for future residential development, it is necessary to determine residential densities for single-family and multi-family housing developments. The Carlton Development Code specifies the following maximum densities for residential zones:

- Suburban Residential (SR) Zone – 5.8 dwelling units per acre
- Multi-Family Residential (MR) Zone – 13.8 dwelling units per acre

To determine land needs for residential development, net densities were developed for these zones. This net density is determined by subtracting 25 percent of each developed acre for public facilities, such as street rights-of-way, then applying the minimum lot size to the remainder. The resulting net densities for each zone are as follows:

- Suburban Residential (SR) Zone – 4.4 dwelling units per acre
- Multi-Family Residential (MR) Zone – 10.3 dwelling units per acre

The housing needs analysis identified 233 new residential units that will be needed to accommodate the projected 2027 population of 2,379 persons, as shown in Table 7. Of these 233 new residential units, 176 single-family dwelling units and 57 multi-family dwelling units will be needed. The table is shown again below.

Table 7. Additional Dwelling Units Needed in Carlton by 2027

Dwelling Units Needed by 2027	Single-Family Units	Multi-Family Units	Total
Dwelling Units Needed to Meet 2007 Rental Demand	9	18	27
Rental Units Needed by 2027	18	39	57
Owner-Occupied Units Needed by 2027	149	0	149
Total	176	57	233

Source: MWVCOG, 2007.

Table 8 shows the amount of buildable residential land needed through 2027 to accommodate various types of housing, including multi-family housing. Based on the densities described above, approximately 83.1 acres will be needed to provide for residential development in Carlton trough 2027.

Table 8. Projected Housing Mix and Residential Land Needs Carlton, 2027

Housing Type	Units Needed 2027	Percent of New Units	Density (units/acre)	Acres Needed 2027
Single Family	176	75.5%	4.4	40.0
Multi-Family	57	24.5%	10.3	5.5
Total	233	100.0%		45.5

Source: MWVCOG, 2007.

Looking back at Table 3, approximately 67.1 acres of vacant or redevelopable residential land is available to accommodate future housing needs within the existing urban growth boundary. An estimated 45.5 acres will be needed to accommodate residential growth through 2027. This includes approximately 5.52 acres designated Multi-Family Residential to accommodate multi-family housing needs. An additional 40 acres will be needed to provide for single-family housing development.

To meet the need for multi-family residential development Carlton amended the Comprehensive Plan Map designation and rezoned two (2) properties that were identified as redevelopable in the buildable lands inventory. Table 9 shows the properties that have been rezoned to meet future residential land needs. The amount of buildable acres is a net figure, with 0.25 acres subtracted from the total area of each tax lot to account for the existing dwelling on each property.

Table 9. Residential Land Re-designations to Meet Projected Need For 2027

Assessor Map/Tax Lot	Current Plan Designation	Current Zoning	New Plan Designation	New (Proposed) Zoning	Buildable Acres
3422CC 1100	Residential	Suburban Residential	No change	Mixed-Density Residential	4.7
3422CC 1101	Agricultural Holding	Agricultural Holding	Residential	Multi-Family Residential	0.7
3422BC 300	Residential	Suburban Residential	No change	Mixed-Density Residential	1.8
Total					**7.3**

Source: MWVCOG, 2007.

Table 10 shows the buildable residential land within the urban area after properties have been re-designated to meet projected housing need through 2027. Approximately 62.2 acres is available for single-family residential development in the Suburban Residential Zone where an estimated 40 acres is needed. Approximately 6.3 acres will be available for multi-family development in the Multi-Family Residential (MR) Zone. The city has provided sufficient land for various housing types and densities in response to projected need.

Table 10. Buildable Residential Land after Re-designations Carlton, 2007

Zone	Vacant (acres)*	Redevelopable	Total	Acres Needed 2027
Suburban Residential (SR)	57.1	30.0	88.9	40.0
Multi-Family Residential (MR)	0.4	0.7	1.1	5.7
Mixed-Density Residential (MX)**	1.8	4.7	6.5	
Manufactured Home (MH)[1]	0.1	0.0	0.1	NA
Total	**59.4**	**35.4**	**94.8**	**45.7**

Source: MWVCOG, 2007.

*No specific analysis of future need in the Manufactured Home (MH) Zone is required as manufactured home parks with a maximum density of 10 units per acre are allowed as a permitted use in the Multi-Family Residential Zone.

**The MX Zone provides for a mixture of housing types with a maximum density of nine (9) dwelling units per acre.

Future Commercial and Industrial Land Needs

The Economy of the City section of the Comprehensive Plan includes a 2027 projection of local employment (see Table 8). One purpose for forecasting local employment is to determine if sufficient land is currently designated in the Comprehensive Plan to accommodate projected commercial and industrial development. Table 7 of the Economics Element shows the projected amount of land need for commercial and industrial uses through 2027. That information is also included in Table 11 below.

Table 11. Comparison of Supply and Demand for Commercial and Industrial Land Carlton, 2027

Land Use Type	Vacant/ Redevelopable Acres
Supply	
Commercial	9.5
Industrial	2.5
Total Supply	**12.0**
Demand	
Commercial	4.6
Industrial	13.3
Total Demand	**17.9**
Surplus (Deficit)	
Commercial	4.9
Industrial	(10.8)

Source: MWVCOG, 2007.

To meet the need for future industrial growth, Carlton amended the Comprehensive Plan Map designation and rezoned a 11.0-acre portion of a 21.8-acre property that was formerly designated and zoned Agricultural Holding as shown in Table 46.

Table 12. Residential Land Re-designations to Meet Projected Need For 2027

Assessor Map/Tax Lot	Current Plan Designation	Current Zoning	New Plan Designation	New (Proposed) Zoning	Property Size (acres)	Area Proposed for Redesignation Rezoning (acres
3421 300	Agricultural Holding	Agricultural Holding	Industrial	General Industrial	21.8	11.0
Total						**11.0**