

5.0 LAND USE

5.1 Historical Land Use Patterns

The City of Negaunee's land use pattern, along with the surrounding area, has been shaped by the presence and exploitation of natural resources, principally the iron ore which was discovered in 1844 by a party of government surveyors. Two years later, the Jackson Iron Company opened the first iron ore mine in present day Negaunee. The iron ore deposits were found in what is known as the Marquette Iron Range, which runs east-west through the central portion of Marquette County. The entire City lies within the Marquette Iron Range, and several mines were located wholly or partially within the City. These mines, which have been inactive for years, continue to influence land use in Negaunee. The communities of Negaunee, Ishpeming, Republic, Champion, and Michigamme were all founded around the mines of the Marquette Range, and provided housing and commercial services for miners and their families.

During the first hundred years of ore extraction within the Marquette Range, the iron content of the ore was relatively high; however, the supply of high grade ore in the range area began to decline rapidly in the late 1940s. As a result, the Cleveland-Cliffs Iron Co. in the late 1940s and 1950s established a research facility in Ishpeming to determine the best way to pelletize low grade ore and how to upgrade the pelletized low-grade ore. The research paid off in July of 1965, with the world's first shipment of pelletized underground iron ore, which gave new life to the iron ore industry in Marquette County. In Negaunee Township, from 1965 to 1979, the Pioneer Pellet Plant processed low grade iron ore. The only remaining iron mines in the Upper Peninsula are low grade iron ore mining operations at the Empire Mine in Richmond Township and the Tilden Mine in Tilden Township. A portion of the Empire Mine pit is located in the southeastern corner of the City of Negaunee.

The general land use pattern in the City of Negaunee includes concentrations of residential and commercial development in the north central part of the City, surrounded by extensive areas of land owned by mining companies. The City contains 15 square miles, or about 9,400 acres; of this area, only about three square miles contain development. Extensive caving has occurred on mined lands in the City, and in the past caving has caused houses or even whole neighborhoods to be moved to more stable areas.

Commercial development in the City of Negaunee tends to be clustered close to the major transportation corridors. The corridor along U.S. 41/M-28 east of Teal Lake contains commercial uses which take advantage of the exposure to passing highway traffic, such as restaurants, gas stations, etc. Business M-28 and major downtown streets contain commercial uses which serve the concentration of population in those areas, as well as visitors to the community. Over the past 10 to 20 years, the downtown business district has become less active, while new development has occurred along U.S. 41/M-28. However, since about 1995 downtown revitalization efforts have taken place, resulting in repairs to some buildings and other improvements. Despite the shift of some firms to the highway corridor, the downtown area has not become blighted.

The area available for development in the City of Negaunee is limited by land ownership, and by the physical suitability of vacant lands for development. About 75 percent of the land area within the City is owned or controlled by mining interests, and a significant portion of this land has experienced caving or subsidence. The mining companies which own this land are generally reluctant to sell it, perhaps because of concern over future liability and/or the belief that mineral deposits may still underlie these areas.

5.2 Factors Affecting Land Use

The decision process regarding land use can begin almost anywhere -- with a home buyer, a developer, a land speculator, a business owner, or a governmental unit.

The home buyer or potential business owner tends to base decisions on location, access, quality of surroundings, available public services, and personal satisfaction, among other factors.

The land speculator makes decisions regarding selling land or holding it in anticipation of future profit, based largely on potential profit.

The land developer makes decisions regarding the type and timing of development based on the supply and demand for housing, goods and services, or on industrial needs, as well as other factors.

Owners of business and industrial concerns make decisions to start, expand, or close their operations based on economic feasibility, which depends on a variety of factors. Many of these factors, such as supply and demand for the good or service produced, are beyond local control, while other factors, such as the availability of sites or adequacy of transportation, can be affected by local decisions.

Decisions made at these levels are generally oriented towards a person's or organization's self-interest, and generally do not consider the effects of development on surrounding land uses, utilities, services, etc. This decision-making process can potentially result in discontinuous or incompatible development, since it does not necessarily take into consideration the overall development pattern for a community.

It is left primarily to units of government, then, to consider the overall compatibility and appropriateness of various land uses. Various laws and regulations have been enacted governing land use and development, and provide tools for federal, state, and local governments to use in dealing with land use issues.

The federal government exercises a number of responsibilities that affect land use through various loan and grant programs for community facilities, water and wastewater systems, housing, economic development, and planning. Federal regulations also address environmental concerns, such as air quality, drinking water standards, etc. Although these programs and regulations do not usually directly affect land use and development, they have a significant

indirect effect. For example, a community which lacks sufficient sewage disposal capacity to serve industrial uses may be able to obtain federal funding to assist with expansion of its sewage treatment plant, which in turn may lead to industrial development.

The role of the state has traditionally been limited to providing enabling legislation for local units of government to regulate growth and development through planning and zoning. The State of Michigan does, however, regulate land use and development in wetlands, floodplains, coastal areas, and other areas of environmental concern. This can have a direct affect on local land use. The State also enforces standards for municipal water systems and wastewater treatment systems which are at least as strict as federal standards, which can affect a community's ability to provide such services.

Local governments can probably exert the most effective influence on land use changes through zoning ordinances, subdivision regulations, building codes, and public investment in roads, water and sewer systems, parks, etc. Local planning efforts which seek to define the most desirable and appropriate uses for the various parts of a community, and anticipate and prepare for growth, can help guide future land use decisions.

Other factors affecting land use include the existing transportation system, taxation and land values, natural features, changing technology, and market factors. Changes in lifestyles, family size, shopping habits, and consumer attitudes also affect land use decisions.

The transportation system which serves a community determines how quickly and easily, and at what cost, raw materials and finished goods can be shipped in and out, a crucial factor to many industries. The expanding highway network in the U.S., together with the proliferation of private automobiles, has enabled residents of rural areas to commute to larger communities for employment and shopping, and has increased the accessibility of many areas to tourists. This increased mobility has in many cases facilitated development of strip commercial areas, "mega" shopping malls, and suburban residential development ("urban sprawl"), sometimes resulting in the conversion of land from agriculture or open space.

Taxation and land values play a part in many land use decisions. Families may move from urban areas because they feel that they are willing to trade off lower taxes and/or user fees for the lack of municipal services and increased distance from employment, shopping, and schools. Land values in rural areas may also be lower, and thus more attractive to residents. Commercial and industrial enterprises are generally less willing to forego municipal services, such as water and sewer, and also tend to locate in areas of concentrations of population rather than in very rural areas; however, tax rates and land values may influence a company's decision to locate in one community versus another.

As a result of changing technology, including computer networking, cellular telephones, fax machines, voice mail, teleconferencing, and electronic mail, some business and industries are able to locate in rural areas which would have previously been considered isolated. In many cases, the quality of life associated with these rural locations is an additional attraction.

Wetland areas can pose significant constraints on development in some areas, due to state and federal regulations and the general unsuitability of wetlands for many types of development. Wetlands are defined as those areas between terrestrial and aquatic systems where the water table is at, near, or above the land surface for a significant part of most years, and include marshes, mudflats, wooded swamps, and wet meadows.

Several different wetland categories are mapped in the inventory. Wetland categories include wooded (dominated by trees over 20 feet in height, seasonally flooded); shrub/scrub (dominated by woody vegetation less than six feet in height); aquatic beds (areas with 30 percent or more vegetative cover of submerged, floating-leaved or floating plants, and less than two meters [6.7 feet] deep); emergent (dominated by erect, rooted herbaceous plants, which are present for most of the growing season); and flats (level or nearly level deposits of sand, mud or organic sediments). See Table 5-1 for the acreage of each category.

Urban and Built Up Areas: Areas of intensive use with much of the land covered by structures is classified as urban or built up. County-wide, this category comprises a relatively small proportion, totaling 37,473 acres, or 3.1 percent. However, this land use category is important because it contains the majority of the residential, commercial, and industrial uses in the County, and because the density and type of uses within this category have the most potential to adversely impact the environment. Most of this cover type is located in the Marquette/Negaunee/Ishpeming urban corridor, although all the townships in the County contain areas of residential development.

Urban and built up is the third-largest category of land use in the City of Negaunee, with 1,172 acres, or 12.5 percent. The City of Ishpeming contains 22.9 percent urban and built up areas, and the City of Marquette has 50.4 percent of its land area in this category. Since extractive uses, which include gravel pits and mining activities, are included in this category, some areas with extensive mining show a disproportionately high percentage of urban and built up lands.

The majority of the urban and built up land in the City of Negaunee is residential in nature. Most of this residential use consists of relatively old housing; the 1990 Census indicates that nearly 60 percent of the City's housing was built prior to 1940. Most of the housing consists of single-family residences, although there are some duplexes and multi-family structures in the City. As is typical of older neighborhoods, many of these homes are located on small lots, with little open space between homes.

Other uses included in urban and built up lands are commercial; industrial; transportation, communications and utilities, such as airports, railroads, highways, etc.; open pit mining areas, such as gravel pits, quarries, mines, etc.; and parks, cemeteries and other forms of open space. Commercial uses in the City are primarily located along the U.S. 41/M-28 corridor or in the downtown. The traditional neighborhoods which provided the majority of residents' needs within walking distance are gone from most communities, including Negaunee.

Market factors, and the ongoing shift to a more service-oriented economy, are factors which are beyond the capacity of an individual community to control. However, an awareness of such factors is important to planning and land use decisions at the community level.

Finally, changing lifestyles have affected land use patterns throughout the nation. Americans live longer, have smaller families, and are more mobile than previous generations. As a whole, the population is growing older, and our housing preferences, shopping habits, and employment patterns have changed significantly. From a land use standpoint, some of the pertinent issues are the desire for larger homes on larger lots by many young professionals and families; the demand for housing suitable for elderly residents, including so-called "snowbirds;" and the willingness to commute longer distances to work in order to live in certain residential areas.

5.3 Current Use Inventory

This section will examine the current land use patterns for the City of Negaunee and Marquette County, based on the Michigan Resource Inventory System (MIRIS) Current Use Inventory. The inventory describes land use or cover according to seven broad categories, with numerous subdivisions within those categories.

Forest: The majority of the City's land area is classified as forest, with 5,238 acres, or 55.8 percent. This reflects the large areas in corporate ownership within the City limits.

By way of comparison, the neighboring City of Ishpeming has about 33 percent of its land area in forest, again because of corporate ownership. The City of Marquette has about 40 percent of its area in forest, but corporate ownership is less of a factor in Marquette.

Forestland is defined as lands at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest uses. These lands are further broken down into several different types of forest cover.

Predominant forest cover types in both the City of Negaunee and Marquette County are northern hardwood and aspen, birch and associated species. There is a significant amount of lowland conifer cover type in the City, as well. Other forest types are also present, and the relative proportions of the various cover types are shown in Table 5-1.

Agricultural: Broadly defined as lands which are used for the production of food and fiber, this is the second-lowest land use category in the City of Negaunee. Only a total of 68 acres of cropland was identified in the Current Use Inventory, less than one percent of the City's land area.

Wetlands: Wetlands represent the fourth-highest proportion of the City's land cover, at 753 acres or eight percent. These wetlands are primarily located in the western and southern portions of the City, in or near the caving areas.

Nonforested: Nonforested lands make up 15.9 percent, or 1,489 acres of the City's land area. This is the second-largest category of land use in the City. These lands are open lands or rangelands, characterized by grasses and shrubs, but not including those lands showing obvious evidence of seeding, fertilizing, or other agricultural practices. As with the forested areas in Negaunee, most of the nonforested lands are located on corporate lands, often in caving areas.

Water: Just over six percent of the City of Negaunee, or 582 acres, is classified as water. Areas of water in a community have an effect on adjacent land use, by supplying sites for water-dependent industry, water-based recreational sites, and residential or commercial development. Many inland lakes and rivers offer public recreational access. The largest water body is Teal Lake, located in the northwestern corner of the City. Other lakes include Lake Miller, Gunpowder Lake, and Rolling Mill Pond. Some of the caving areas in the central part of the City have also filled with water over the years.

Barren: About one percent of the City is classified as barren. Barren lands include beaches, riverbanks, sand dunes, and exposed rock. Exposed rock makes up all of the 92 acres of barren land in the City, which occurs in scattered locations in the northwestern portion of Negaunee.

5.4 Public and Quasi-Public Land Use

Public land uses in the City of Negaunee include parks, public buildings, schools and tracts of publicly-owned lands. Many of these uses are discussed in more detail in other chapters of this plan; however, the land use considerations associated with these uses will be discussed here.

The City owns or leases and maintains several park and recreation sites, including Teal Lake Waterfront, Miner's Park, Jackson Park, the Community Play Field, and several smaller parks throughout the City. There are also three schools in the City, the Negaunee High School, Negaunee Middle School, and Lakeview Elementary. A large tract of CCI-owned land lying in both Negaunee and Ishpeming is leased by the Ishpeming Ski Club, and contains the Superior Nordic Training and Recreation Complex (SUNTRAC), formerly known as Suicide Bowl. The City, together with the City of Ishpeming, has applied for funding from the Michigan Department of Natural Resources to acquire several hundred acres around Teal Lake. This property would be retained in public ownership for recreational uses, and would include the scenic north shore of Teal Lake.

Other public land uses in the City include public buildings such as City Hall, which are discussed in more detail in Chapter 6, Community Facilities. As a general rule, these buildings do not occupy large tracts of land; their primary impact on land use is related to traffic and parking.

Examples of quasi-public land uses include churches, golf courses, and similar facilities that are owned by private enterprise, but are open to the public. These uses generate increased traffic on a seasonal, occasional, or intermittent basis, by providing facilities and services which meet the needs of local residents and contribute to the quality of life of communities and neighborhoods. The presence of quasi-public facilities such as golf courses can also affect property values.

TABLE 5-1 CITY OF NEGAUNEE & MARQUETTE COUNTY LAND USE PATTERNS				
	City of Negaunee		Marquette County	
	Acres	%	Acres	%
Urban and Built Up	1,172	12.5	37,473	3.1
Residential	563	6.0	14,076	1.2
Commercial	114	1.2	3,063	0.3
Industrial	15	0.2	850	0.1
Transportation, etc.	150	1.6	4,031	0.3
Open pit mining	44	0.5	13,068	1.1
Underground mining	180	1.9	936	0.1
Open land, other	106	1.1	1,448	0.1
Agriculture	68	0.7	17,603	1.5
Nonforested	1,489	15.9	29,016	2.4
Forested	5,238	55.8	988,050	82.6
Northern hardwood	3,706	39.5	468,151	39.1
Central hardwood	0	0.0	7	0.0
Aspen, white birch, assoc. spp.	745	7.9	176,813	14.8
Lowland hardwoods	148	1.6	32,961	2.8
Pine	277	2.9	147,775	12.4
Other upland conifers	57	0.6	19,981	1.7
Lowland conifers	305	3.2	142,349	11.9
Christmas tree plantation	0	0.0	15	0.0
Water	582	6.2	29,663	2.5
Wetlands	753	8.0	87,323	7.3
Barren	92	1.0	7,627	0.6
Total	9,394	100.0	1,196,754	100.0

Source: Michigan Resource Information System.

Churches are located throughout the City, as well as in the City of Ishpeming and surrounding townships. Negaunee residents may attend churches outside the City, while churches in the City draw from the surrounding communities. In addition to serving as places of worship, churches often serve as community gathering places, for social events and local meetings. The closure or consolidation of churches, as is currently being done within the Catholic Diocese of Marquette, can affect traffic patterns and the availability of gathering places; it can also have a less tangible effect on the character and cohesiveness of a community.

5.5 Land Ownership

As discussed earlier, land ownership in the City of Negaunee is a significant issue. Currently about 75 percent of the City's land area is controlled by mining companies, either through outright ownership or through controlling mineral rights. The City leases land from these mining

companies for a variety of uses, primarily recreation areas, but such leases are subject to a year's notice should the lands be required for mining. A significant portion of the mining company-owned lands are "caving grounds," which are unsuitable for development.

The City of Negaunee lacks the ability to significantly expand residential or commercial development because of the physical limitations of the caving grounds and Teal Lake. As long as the mining companies are unwilling to sell any of their lands within the City, the ability to develop is also limited by the availability of land. Cleveland Cliffs Iron Company has begun the process of evaluating all their holdings in Marquette County, including lands in Negaunee, and some discussions with City officials have taken place regarding the City's long-term needs. The City has expressed an interest in acquiring additional property if it becomes available.

5.6 Contaminated Sites

The Michigan Department of Environmental Quality is required by state law to identify, evaluate, and rank all sites of environmental contamination in Michigan. For several years, the DEQ was required to submit an annual list of these "Act 307" sites to the Michigan Legislature. However, recent changes to Michigan's environmental laws have changed this requirement to every five years. The most recent list of contaminated sites was submitted in April, 1995, and no sites of environmental contamination were identified in the City of Negaunee, although three leaking underground storage tank (LUST) sites were identified.

From a land use standpoint, the presence of environmental contamination represents a constraint on future development, as well as a threat to human health and safety. In addition to affecting a specific site, some contaminants can enter groundwater and cause more widespread problems, such as water well contamination. It is desirable to identify and remediate contaminated sites in a timely manner, in order that potential hazards and land use constraints be removed.

In terms of future land use decisions, it is important that decisionmakers are aware of the potential for certain types of land use to cause environmental contamination. Most of the sites of environmental contamination identified in Marquette County are the result of past land use practices, and this illustrates that even when legal and accepted land uses are undertaken, the possibility of future impacts exists.

Leaking underground fuel storage tanks have become a concern throughout the country in recent years. Many fuel tanks which were in compliance with all installation guidelines at the time they were installed have deteriorated and allowed fuel to contaminate the surrounding soil. New guidelines for installing underground fuel tanks have been implemented, and efforts are underway to identify and clean up leaking tanks.

The two LUST sites in the City of Negaunee as of April, 1995, were the Grade A-1 Stop on U.S. 41/M-28, and the Holiday Station at the intersection of U.S. 41/M-28 and Croix Street.

5.7 Land Use Trends

Although the City of Negaunee has suffered a population decline over the past 50 years, the community has not seen widespread physical deterioration of existing housing, or pronounced decline of the business districts. The most significant trends have been the reduction of the developable area of the City due to caving and an increase in commercial development along U.S. 41/M-28 at the expense of the downtown business district.

Caving which has occurred throughout the history of Negaunee has necessitated actual relocation of buildings and sometimes entire neighborhoods. While the caving is no longer a common occurrence in residential neighborhoods, recreational areas and open space are still being affected. For example, Jackson Park in the late 1980s encompassed nearly 12 acres, but in the 1994 Recreation Plan is reported to be three acres in size due to caving and loss of usable land.

Businesses which have been established along the U.S. 41/M-28 corridor over the past 20 years have succeeded in drawing some commerce away from the downtown area. However, the downtown has not seen substantial decline, and still retains a diverse base of commercial establishments. Recent downtown improvements have made the downtown area a more attractive place to shop and do business.

The cities of Negaunee and Ishpeming have apparently not shared in the overall growth that has taken place in the urban corridor that stretches from southeast of Marquette to Ishpeming. The majority of the new residential development has taken place in the encompassing townships, including Negaunee, Marquette and Chocolay townships. Commercial development has also occurred at a rapid pace in Marquette Township, and to a somewhat lesser extent in Chocolay and Negaunee townships. However, Negaunee and Ishpeming cities are desirable locations for a number of reasons, and as a result the overall housing market has remained fairly strong. Some two-income families in the City have one wage-earner in the Negaunee-Ishpeming area and the other in Marquette, but choose to live in Negaunee. Others who work in Marquette choose to live in Negaunee so that they can enjoy the amenities the City provides, such as municipal water and sewer, while enjoying the lower housing prices compared to Marquette.

Two new subdivisions are currently being developed in the City, totaling about 60-65 single-family residential lots, which will be developed with housing ranging from affordable to upscale. The lack of new development in the past has been due to a lack of developable sites, rather than a lack of demand, and it is hoped that these two new subdivisions will be followed by other development. Both new developments are located on land purchased from mining interests, one along Teal Lake and the other near the former Maas Mine, at the intersection of Carr and Cherry streets.

5.8 Issues and Opportunities

The land ownership pattern in Negaunee severely constrains the City's ability to grow. The City is attempting to begin a dialog with CCI regarding the possibility of acquiring CCI-owned land

within the City, which may lead to future opportunities for growth. The opportunity may also exist for future land sales to developers, as in the case of the two newly-platted subdivisions, allowing for future growth.

Significant areas within the City have experienced caving as a result of past mining activities. In addition to being unsuitable for development, such areas can pose a safety hazard if access is not limited. Although caving is no longer common in residential areas, some recreational facilities are being adversely affected by caving.

Some sites in the City may be suitable for industrial development, since there are properties which have access to rail and other infrastructure.

The City of Negaunee contains a lower percentage of residential and commercial land use and a higher proportion of forested and open areas than any other city in Marquette County. This is primarily due to the ownership pattern within the City.

The purchase of large parcels of land around Teal Lake provides the opportunity for the cities of Negaunee and Ishpeming to offer their residents expanded recreational opportunities, and to protect the scenic north shore of the lake from development.

The expansion of the Superior Nordic Training and Recreation Complex, formerly known as Suicide Bowl, may result in development of a year-round, "destination" facility which will attract visitors from outside the area as well as provide opportunities for local residents. It may also trigger increased "spinoff" development in the area, such as new commercial development to serve the needs of visitors to the area.

Acquisition of the north shore of Teal Lake provides the opportunity to protect a unique area from inappropriate development, while providing for recreational opportunities and open space.