

# Affected Environment



## PHYSICAL SETTING AND DESCRIPTION

### LOCATION

The Keweenaw Peninsula is about 100 miles long and about 50 miles wide at its base, narrowing to less than 10 miles wide at its tip. It extends north and east into Lake Superior from the western part of Michigan's Upper Peninsula. The outer 45 miles of the Keweenaw Peninsula is now an island, created in the 1860s when a lake-level canal was dug at the extreme northern end of Portage Lake. Keweenaw National Historical Park is basically in the center of the Keweenaw Peninsula.

### ACCESS

Primary access to both park units is via U.S. Highway 41. The Quincy smelter is accessible from Michigan Route 26. The Houghton County airport is between the two units, just off U.S. 41.

### PHYSIOGRAPHY

The combination of geology and glacial forces have determined the area's topographic relief, which ranges from steep rocky ridges and dissected glacial deposits to gently sloping lake plains and nearly level outwash plains. The elevation of the Calumet unit is relatively even throughout and averages nearly 1,200 feet. The Quincy unit has an elevation range from slightly over 1,100 feet in the north to about 600 feet at Portage Lake.

The Keweenaw's most prominent geologic feature is the central highland that rises above Lake Superior on the upthrust side of the Keweenaw fault. Ranging from 4 to 12 miles in width and extending from the southwest to the northeast, this highland forms the Copper Range. The highland represents a well-exposed example of the 1.1 billion-year-old mid-continent rift system. The rift system does not begin or end on the peninsula. It continues, although not as well exposed, in its southwest direction to the Black River area near the Wisconsin border. From the tip of the Keweenaw, the rift turns northwest and

continues underneath Lake Superior where it is exposed again at Isle Royale. Copper was mined all through this area, which is referred to as the Lake Superior Copper District.

### THE KEWEENAW PENINSULA

The Keweenaw Peninsula offers many interesting attractions. Lake Superior is a dominant feature both for scenic vistas and climatic influence. The northern hardwood forest, which provides a spectrum of colors in the fall; Brockway Mountain, which provides a dramatic 360° viewpoint; and mine shafts and mining sites all have remarkable scenic and educational appeal for visitors to the peninsula.

In fact, many sites on the Keweenaw Peninsula attest to the profits and risks of copper mining, to the high failure rate of early entrepreneurs, and to the longevity of Keweenaw mining history. Evidence of work and life on the Keweenaw is vivid at mining locations and communities such as

- the Quincy Mining Company properties, including the Franklin and Pewabic mines, and the smelting works; the city of Hancock
- the C & H Mining Company industrial core, tracts of workers' housing, the adjacent Villages of Calumet and Laurium, the village of Copper City, and the Centennial Mine location
- the Cliff Mine site and other early sites in Keweenaw; the Champion Mine of the Copper Range Company and its company town, Painesdale; and the enclave of worker housing at Mason

Sites of mills and reclamation efforts along Torch Lake also reflect the growth and development of the mining industry on the Keweenaw.

## CULTURAL RESOURCES AND RELATED AREAS

### THE QUINCY UNIT

The Quincy unit of the park includes about 1,100 acres of land associated with the Quincy Mining Company, the longest producing mining operation in the Portage Lake district.

Established in 1846, four years after the opening up of the copper country by treaty to Euro-American settlement, the Quincy Mining Company began exploiting the extensive vein of amygdaloid copper, termed the Pewabic Lode, in the mid-1850s. Ranked first nationally in copper production for a period during the 1860s, the Quincy Mining Company earned the epithet "Old Reliable" for its long record of dividend payments to stockholders. Mining continued on the Quincy site for more than 100 years; the company's reclamation plant produced copper for yet another decade, until the late 1960s.

Remnants of the Quincy mining operation — the surface plant, smelter, administrative buildings, and worker housing — spread across a landscape that varies dramatically in topography, extending from the edge of Portage Lake up a steep, 500-foot rise to the peninsula's central ridge of copper-bearing rock. From the brow of Quincy Hill, above the city of Hancock, the site remains fairly flat as it sweeps to the northeast following the path of the Copper Range. Although the smelter is on the lakeshore, most of the buildings and structures related to the mine were built along the broad plateau beginning at the crest of Quincy Hill.

Following the course of the copper lode, the Old Calumet Road (now U.S. Highway 41) bisects the mine site. On the east side of this highway are the seven Quincy Mine shafts and surface works, including the Pewabic mines acquired in 1891. To the east of the mines are several discrete subdivisions of company housing, the earliest (Lower Pewabic) dating from 1899. On the west side of U.S. 41, facing the highway, are administrative and service buildings and managers' residences. Behind these to the west are a number of small neighborhoods of

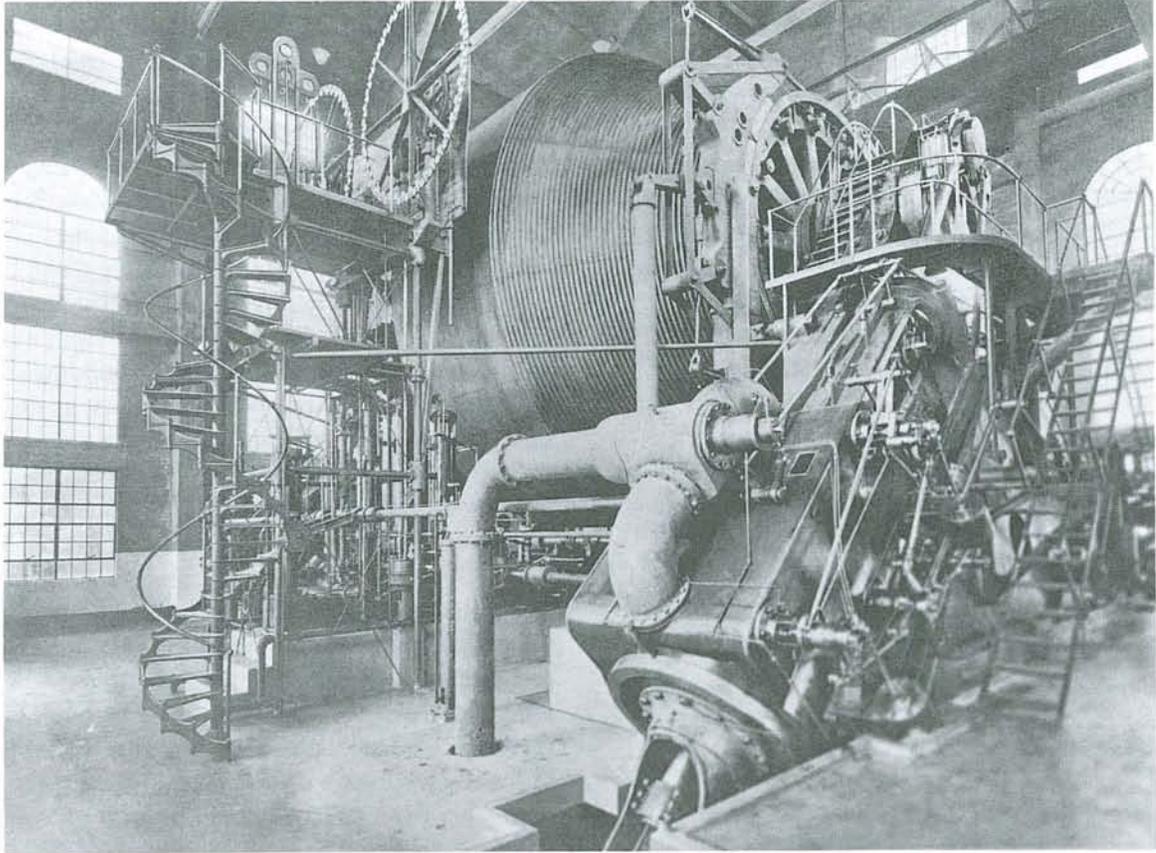
company housing, including some buildings from as early as the 1860s.

### Industrial Core Area

Except for the #2 shaft-rockhouse, which remains the most prominent structure on Quincy Hill, all of the shaft-rockhouses have been removed from the industrial grounds. The shaft openings, still evident, have been fenced off and covered with steel grating for safety. Some of the associated surface works have been torn down, but many significant and identifiable ruins stand. Smokestacks from the boiler houses punctuate the hillside, while abandoned railroad trestles and narrow gravel lanes are evidence of past patterns of work and community life. Apple trees, planted decades ago in this heavily industrial setting, still line the unimproved roads. The once open spaces between the structures, stripped of vegetation as a working landscape, are now filled by trees and shrubs.

Visible at a distance of several miles from its position at the crest of Quincy Hill, the shaft-rockhouse (or headframe) for Quincy's mine shaft #2 rises nearly 150 feet over a shaft that eventually reached more than 9,000 feet into the ground. This multilevel structure housed the system of cables, pulleys, and cars that transported ore, water, and laborers in and out of the mine; the initial crushing of the ore was also completed here. The current steel-framed structure, covered with corrugated sheet metal siding, was constructed in 1907 and remained in operation until 1931. Next to the shafthouse are two steel stanchions that supported the cables that ran between the shafthouse and the #2 hoist house; the hoist house was built in 1918 to house the Nordberg hoist, the largest steam-powered mine hoist ever manufactured.

The building that contained the hoist for the #2 shaft before its replacement by the Nordberg is north of the headframe. Constructed of coursed red sandstone in 1895, this structure, along with



*The world's largest steam hoist, Quincy Mining Company, 1919.  
Photo courtesy of Rextord, (now Nordberg Manufacturing), from the Michigan Technological  
University Archives and Copper Country Historical Collections.*



*Looking south from no. 6 shaft to no. 2 shaft, in the mid-1920s, Quincy Mining Company.  
Photo courtesy of Mr. John F. Chambell, from the Michigan Technological University Archives  
and Copper Country Historical Collections.*

the shafthouse and 1918 hoist house, have been the focus of preservation efforts by the Quincy Mine Hoist Association. The Nordberg hoisting engine has been restored to mint condition for public exhibition. The association resheathed the #2 shaft-rockhouse and maintains the 1895 hoist house as a display area for mining tools and mineral exhibits and as a staging area for tours. The supply house, easily accessible from U.S. 41, has been restored and now houses the association's visitor center and gift shop.

Several other significant brick and sandstone buildings remain, though now deteriorated, in the industrial core area north of the shaft/hoist house complex, including the blacksmith shop, machine shop, and roundhouse. West of U.S. 41, near the shafthouse, is the 1917 bathhouse, a copper-corniced building of brick construction.

### **The Quincy Smelter**

To negotiate the dramatic change in grade between the mine site and smelter, the Quincy Company operated a tramway that hauled rock down to the stamp mill (no longer existent) below. Although it was removed, the tram has been partially replicated to bring visitors to the underground tours conducted by the Quincy Mine Hoist Association. The tramway travels halfway down the hill to an opening, called an adit, that tunnels horizontally into the underground workings of the mine. In addition to providing access to visitors, the adit also serves Michigan Technological University students and faculty who use the mine for training and research.

At the base of Quincy Hill, the smelter juts out from the shoreline of Portage Lake on a site that remains physically and visually distinct from its surroundings. Built in 1898, the Quincy Smelting Works is the only remaining smelter associated with Michigan copper mining; many mining historians believe it to be the smelting works that best reflects the technologies of the late 19th and early 20th centuries. In addition, it is the only known late 19th century smelting works in the world that still stands with machinery intact.

Key smelter structures that were in place in 1920 remain today, as well as many of its secondary buildings and site features. Of greatest significance are the cupola and reverberatory furnace buildings. The reverberatory building houses melting furnaces built in the 1940s. From the melting furnace, the copper went to the refining furnace and then to the casting plant. These facilities, including a 1920 Walker casting machine, are still at the site. Although equipment has been removed from many of the buildings, the heart of the smelting works survives, as do many objects of significant interpretive value, such as the 1919 Corliss-valved steam engine, the slag buggies, and the copper molds and ladles.

The remnants of elevated rails, rail cars, and slag piles and their relation to the industrial buildings continue to show the complex's coordinated inner workings. Adding to the site's feeling of integrity and association as a turn-of-the-century industrial landscape is the canal-side courtyard with piers from which copper ingots were once shipped to market. With the exception of the 1898 smelter office, which is in excellent condition and has its original interior including furnishings in place, the smelter structures are in fair to poor condition. Most of the buildings were constructed of local Jacobsville sandstone and are handsome, solid structures. However, severely deteriorating windows and roofs have permitted rain and snow to enter and undermine their structural soundness.

### **Management-Related Buildings**

Returning up Quincy Hill via U.S. 41 from the smelter, the company's primary administrative building and the houses of its captains and the mine agent front the highway. To accommodate its chief administrative officer at the mine, the Quincy Mining Company built an elaborate 2½-story Italianate structure in 1880. It remains in a well-preserved state, near several more modest mining officials' homes that are in relatively poor condition. At the southern end of "management row" is the 1897 General Office building constructed of local Jacobsville sandstone.

Colonial revival in form, the building features a hipped roof, gabled pavilion, and large, round-arched windows.

### **Worker Housing Areas**

Much of the extant housing built by the Quincy Mining Company, and the neighboring companies that it acquired, cannot be seen from the core industrial area. The company clustered the dwellings it built for its workers into small, distantly spaced enclaves. The names of these housing clusters — Limerick, Singing, Frenchtown, Hardscrabble, Pewabic, Franklin, and Backstreet — reflect both the character of the place and the ethnic nature of the communities. Single-room log miners' houses now covered with clapboard stand in Limerick. Examples of the slightly larger "telescope houses" on mine-rock foundations are also present. In Lower Pewabic a few rows of houses that were constructed in 1917 stand virtually unchanged. Near the cooling ponds and the 1918 hoist house, a saltbox-style house remains in stable condition. The identical houses that stood next to and across the street from this house are gone. On the west side of U.S. 41, many early company houses are abandoned, subject to vandalism, and at risk of collapse due to structural failure.

Because the Quincy site has been subject to little development since the mines closed, the integrity of the site, and probably its archeological value, is high. Apart from several new houses on the west side of U.S. 41, there are few intrusions or nonconforming structures; modifications to houses have been minimal, although many houses have been lost. The upgrading of the old Calumet Road to a two-lane highway has somewhat altered the historic character of the site; proposed future development along the corridor may further diminish its historic integrity.

### **THE CALUMET UNIT**

Although the urbanized area of Calumet appears as one continuous settlement, it is in fact a highly complex cultural landscape, reflecting a varied and rich historical development. During the local mining industry's period of peak activity, circa 1910, Calumet served as a regional hub, growing to about 6 square miles in land area to support a population of more than 30,000 township residents. Today about 7,000 people live in the Calumet area. Components of the settlement include tracts appropriated for industrial use by the C & H Mining Company and other mining concerns, areas of company-built housing, and two incorporated villages that are primarily residential and commercial in character.

Stretching through the center of the settlement, parallel to U.S. 41, are the buildings and structures that represent the C & H Mining Company's corporate and industrial core. Neighborhoods of worker housing adjoin the industrial core on the east and west. Converging with clusters of mining company housing northwest of the industrial core lies the Village of Calumet (called Red Jacket until 1929), a plat of about 90 acres laid out in a pattern of perpendicular streets and rectangular blocks in 1868. About 1 mile southeast of the Village of Calumet, what is now the Village of Laurium was mapped out along the eastern perimeter of the C & H housing districts beginning in 1878. Like Calumet, Laurium was also platted as a speculative real estate venture on a grid pattern. Incorporated as a village in 1889, Laurium grew to about 300 acres by 1900.

The C & H Mining Company was not the only mining enterprise that contributed to the building up of Calumet. Several other companies opened mines and constructed housing and community buildings on land adjoining the C & H Company holdings in the late 1900s. To also mine the Calumet conglomerate lode, the Tamarack and Osceola Companies located on land north and west of the C & H industrial core. The Centennial Mining Company subdivided an area on hills north of Calumet Village for private

housing, and officials of the Laurium Mining Company platted the Village of Laurium.

Within the greater Calumet settlement area, the NPS Calumet unit comprises about 750 acres in the community's north-central section. Encompassing land in Calumet Township and the Village of Calumet, the unit's boundaries include the C & H corporate and industrial core, the entire Village of Calumet, and areas of mining company housing that have retained a high degree of historic and architectural integrity. Included within the unit's boundaries are four discrete groups of buildings and structures that historically and spatially comprise distinct physical environments.

#### **CALUMET AND HECLA (C & H) MINING COMPANY**

##### **Corporate and Industrial Core Area**

Some 400 copper mining companies operated in the Keweenaw copper district between 1872 and 1920. Of these, the C & H Mining Company had the greatest production, technological development, and influence on Michigan copper mining and on nationwide copper mining from 1867–82.

Occupying about 400 acres, this area contains some 40 buildings and structures that were historically associated with the C & H Mining Company, including industrial facilities, buildings associated with the management of the company, and buildings put up by the company, or with company support, for community use. Two outstanding buildings of architectural design in superb condition are the C & H office and the C & H library. The properties associated with the C & H Company in the industrial core represent important aspects of the Michigan copper mining industry. In particular, they reflect themes associated with the growth and development of one of the nation's leaders in late 19th and early 20th century copper production — corporate paternalism, mining technology, and immigrant labor, among others.

Oriented along the copper lode, the industrial area extends from Calumet Lake on the north to the Osceola #13 shaft complex on the south. More than 100 miles of tunnels (drifts) were excavated from this lode. The primary concentration of buildings occurs near Red Jacket Road between the limits of Calumet Village and U.S. 41. Churches, warehouses, a library, a boiler house, and two schools reflect the wide range of historic resources in the corporate and industrial zone.

Since the close of the mining company's operation in 1968, the large tract of company-owned land originally incorporating the mine site has been divided up and sold, primarily to private interests. A number of buildings in the industrial core have been adapted to new uses, and some buildings are vacant. Also included are parcels of unoccupied land that once were taken up by company structures, buildings, and railroad tracks. Except for Agassiz Park, now owned by the Village of Calumet, former C & H-owned land is in the political jurisdiction of Calumet Township.

**Industrial Buildings and Structures.** The Calumet conglomerate lode occurs in a narrow belt about 2.5 miles long, trending from the northeast to southwest. When mining first opened the lode in the mid-1860s, the Calumet Mining Company located north of what is now Red Jacket Road, while the Hecla Mining Company worked the portion of the deposit directly south. Both companies were underwritten by the same group of Boston-based investors; in 1871 they were consolidated as the Calumet and Hecla Mining Company (C & H).

Eventually, C & H mined the copper-bearing lodes from 16 shafts that extended in a line paralleling Mine Street — from the vicinity of what is now Pine Street on the north to Osceola Road on the south. Reflecting the company's early history, the shafts sunk on the northern section of the site retained the Calumet designation while those south of Red Jacket Road were identified as the Hecla and the South Hecla group. These designations also reflected

the company's practice of developing and managing its operation as three functional units.

Today four of the shaft headframes built by the C & H remain in the industrial core area — Osceola #13, Centennial #3, Centennial #6, and the Kingston headframe. The Osceola #13 shaft complex is at the southern limit of the industrial

district and within park boundaries. That shaft, originally part of the Osceola Mining Company, was reopened by C & H in the 1950s and closed in 1968. The shafthouse complex is fairly modern, with most machinery and buildings dating from the 1960s. Notably, the mine's hoisting equipment is still intact.



*Calumet and Helca, gear house and electric shop.  
Photos by Joseph Mihal, circa 1995, and used by permission.*

The C & H Company removed all other shaft and rockhouses after the closing of the mine. The industrial structures that remain are concentrated along a corridor that corresponds to the linear orientation of the mine shafts. Surviving on the site are buildings and structures associated with the actual mechanics of the extraction process and a number of shops that housed the mine's maintenance and manufacturing functions. Also remaining are several dryhouses, essentially change houses for those working underground. A roundhouse, trestle, and gang shack are related to the company-operated railroad. Another group of structures functioned as warehouses, and several

small buildings near the mine shafts served administrative purposes.

Throughout the mine site as a whole, the industrial buildings are vernacular, designed by C & H engineers or by Consulting Engineer Erasmus Leavitt. Representing the second generation of mine structures on the site, most buildings were constructed between 1880 and 1910. Virtually all are of masonry construction — coursed, gray mine rubble (basalt); red sandstone rubble, squared and coursed; or brick. Roofs are generally of slate or sheet metal and double-sloped. Construction details that add to

the buildings' distinctiveness include contrasting stone quoins and segmentally arched lintels framing door and window openings.

**Calumet Mine Site.** North of Red Jacket Road, the Calumet mine site retains a number of significant industrial buildings, including the Superior steam boiler house with a 150-foot brick smokestack. Drills used underground were manufactured and sharpened in the drill shop (ca. 1885). Adjacent to this building is a dryhouse that serviced Calumet shafts #2, #3, and #4. Here also is the largest building within the mine complex, the #2 warehouse, which measures 80 by 440 feet. Standing nearby are the former pumphouse and an electrical power substation. A number of new buildings have been constructed on the Calumet site, including the Calumet Township offices, a telephone company building, and several Butler-type storage buildings.

**Hecla and South Hecla Mine Buildings.**

Although some buildings on the Hecla side have been removed, many significant structures remain in fair condition, including an important grouping of shop structures. Machinery used in the mines was machined and fitted in the machine shop, originally constructed in 1882. North of the machine shop is the blacksmith shop. The brick building now occupied by the mining museum, Coppertown USA, served as the facility where wood patterns for machine parts were made. The patterns were used to set castings for parts made in the foundry. South of the blacksmith shop is a building that was used to store the wooden patterns.

Another of the mine's large warehouses is within the Hecla complex, fronting on Red Jacket Road. Known as the Hecla warehouse #2, this brick structure stood adjacent to the railroad tracks that linked the Calumet and Hecla sites. Immediately to the south is a smaller structure that was used as a warehouse, although originally constructed as a hoist house. South of the warehouse is a close grouping of three small rubble structures — a railroad gang shack, an oil storage building, and a mine captain's office.

Completing the complex of buildings on the Hecla property are a small man-car house, a community bathhouse, a fire station, a roundhouse in which the turntable has been preserved, and a paint shop. A substantial brick building fronting on Calumet Avenue, the bathhouse, was constructed by the C & H Company in 1913 for employees and their families; it had shower facilities in the basement and a swimming pool on the main floor. The fire station, paint shop, and 1888 roundhouse have lost their original form and appearance through alteration for contemporary use. Although the railroad tracks have been removed throughout the location, in places routes remain visible.

The portion of the Hecla mine area directly south of the Sixth Street Extension road has also been significantly altered by the recent construction of a group of commercial buildings. This development impacts the industrial landscape by introducing a contrast of building form, material, size, and color and by the addition of large commercial signs. The foundations of the Frontenac engine house and carpentry shop were among the many archeological remains destroyed by the new construction. South of the development site, the former South Hecla Mine, now occupied by trees, brush, and wetlands, has only one significant structure, the sandstone Hancock and Pewabic boiler house.

**Corporate and Community Buildings.** Two architecturally outstanding buildings dominate the primary entrance to the mine: the C & H general office building and public library are opposite each other on Red Jacket Road. Designed by the Boston architectural firm of Shaw and Hunnewell in the 1890s, both structures are built of multicolored stone laid by Italian stonemasons. The general office building, somewhat altered but well maintained, now houses a medical clinic and the park headquarters. The library, constructed for use by company employees and residents of the Calumet school district, was lavishly furnished and stocked with thousands of books selected by librarians, with management approval. Little altered and very well maintained, the building now serves as offices for Champion

International, the firm that now owns and manages former C & H real estate holdings.

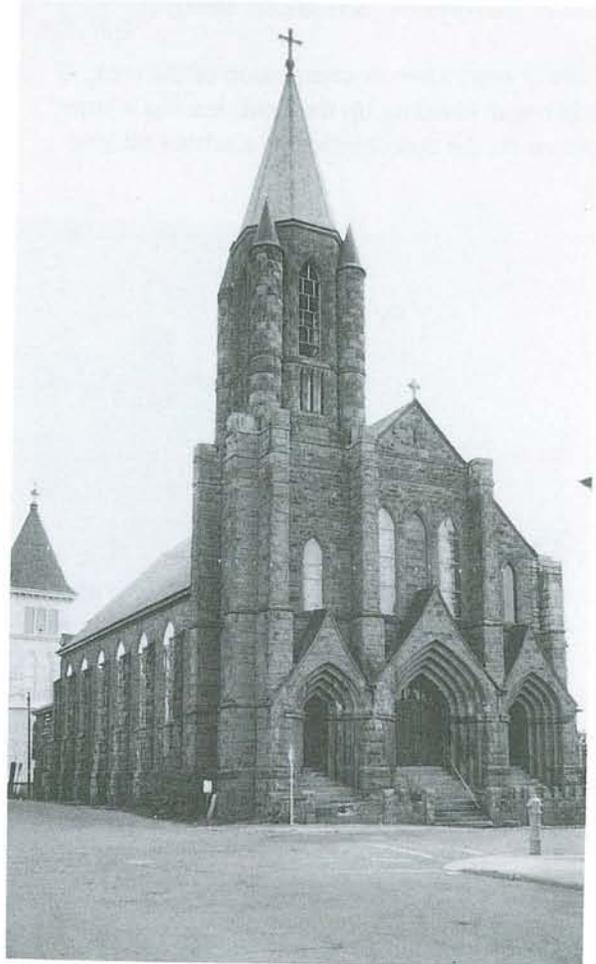
Two other buildings adjacent to the company's general office building also have strong historical associations with the company's management. The Miscowaubic Club, an athletic and social club operated by the C & H Company, continues now as a private membership club. The house the company built in 1895 for its long-time president Alexander Agassiz, for his twice-yearly inspection of the mines, now serves as a social service agency.

The C & H Mining Company figured significantly in the provision of public education to the Calumet community, assuming a controlling role in the fiscal operation and educational program of the school district. Prominently sited north of the cluster of corporate buildings are two large school buildings that now face each other across an expanse of lawn. The 1905 high school and the 1929 middle school building were built by the company and leased back to the school district for a modest fee. They still serve their original purposes. A new elementary facility was designed to complement the historic integrity of the two original school buildings. Efforts have been made to use materials and design elements that are compatible with the existing buildings.

One of the most distinctive group of buildings within the western limits of the core industrial area is a tight cluster of four church buildings situated where Red Jacket Road terminates at Fifth Street. Episcopal, Presbyterian, Swedish Lutheran, and French Roman Catholic congregations constructed buildings on the site, called Temple Square, between 1893 and 1900. Dominating the group at the entrance to Calumet Village on Fifth Street is St. Anne's Church, a Gothic Revival design in red sandstone.

Set on a rise that further elevates the buildings' spires, the churches mediate between the company's industrial zone and the private domain of Calumet Village. Two themes are visibly portrayed by the church cluster — the involvement of C & H in the cultural and

religious spheres of their workers' lives and the diverse ethnic heritage of the community. All four churches were built on mining company land, with construction subsidies provided by C & H. Currently, only the Episcopal and the Community (Presbyterian) churches continue their original function.



*St. Anne's Catholic Church, Calumet, now housing Keweenaw Heritage Center, circa, 1995.*

*Photo by Joseph Mihal and used by permission.*

**Agassiz Park.** Another property historically associated with C & H is Agassiz Park, a large, triangular piece of land that lies between the industrial district on the east and Calumet Village on the west. First used as a commons area by residents to pasture animals, over the years the company sponsored a series of improvements that converted the land to recreational use. In the early 1920s, under the direction of Massachusetts-based landscape architect Warren H. Manning, C & H developed

AFFECTED ENVIRONMENT

the area as a community park in memory of company founder and president Alexander Agassiz. Manning's designs for the area featured a series of radiating linear paths that converged at a large statue of Agassiz situated near an entrance to the mine site. Moved from its original place in the park, the bronze statue now resides next to the former C & H library building.

Twenty years after its completion of the park, C & H began dividing up the land, leasing a large section for the construction of a school athletic

field. Later, lots were sold for commercial use. In the 1970s, the Calumet Housing Authority put up a group of multiunit buildings in the southeast corner of the property. Land remaining from the original park, sold to the Village of Calumet in 1990, is now maintained as a public recreation area. Today, only portions of the tree-lined paths survive to represent Warren Manning's landscape designs, but efforts are underway to restore some of the park's original design elements.



*Calumet and Hecla Worker Housing, Calumet, circa 1994.*

*Photo courtesy of Michigan Technological University Archives and Copper Country Historical Collections, Calumet and Hecla Photograph Collection.*

### **Worker Housing Districts**

To stabilize and control the efficiency of its workforce, C & H provided housing for its employees and their families, totaling as many as 1,000 dwellings in the Calumet area. The primary concentration of worker housing, built up around once-functioning mine shafts, stretches along the eastern boundary of the industrial core. Smaller housing enclaves are concentrated around the north, south, and west edges of Calumet Village. At least 200 dwellings, including a number of those originally built by the Osceola Mining Company (later consolidated by C & H) are within the park boundaries. Although the mine shafts that gave rise to the dwellings are long absent, these former locations are still distinguished by their traditional names — Albion, Blue Jacket, Newtown, and Raymbaultown, among others.

Street geometry within the worker housing areas, although laid out in a planned fashion, does not follow the right-angled grid plan found in Calumet Village. For the most part, streets are straight, but blocks are generally long. Lots are narrow; and houses, set very near to each other and the street, have small front and side yards. Streets are now paved, but they remain uncurbed. Lots still bear the consecutive numbering of the C & H inventory. In winter, some houses still retain “snow walks,” the arrangement of planks on wood supports that connect house entries to the street.

The C & H Company constructed worker houses from standardized plans. One of the more recurrent types, dating from as early as the 1870s, is a side-gabled double house. Most prevalent is a 2½-story, single-family dwelling with the gable oriented to the street. All dwellings rest on foundations of waste rock (termed “poor” rock); a few still retain their original narrow clapboard siding. In addition to houses, the company also built barns and fences to encourage miners’ families to plant gardens and keep livestock. Although the fencing has disappeared, some original outbuildings still exist.

Contrasting with the miner’s dwellings are a group of homes that C & H constructed for its managers along Calumet Avenue near the company’s headquarters. Built around 1900, these large, opulent houses shaded by mature maples are set on more spacious lots. Here, too, the company used standardized designs; examples of several different types are apparent.

Because houses were often put up in groups to meet the periodic nature of labor demand, some sections of streets display a unified identity based on the repetition of identical house forms. In other areas, houses are diverse in design, probably due to the C & H practice of allowing employees to put up their own houses on company-leased land. Since the sale of C & H residential properties to private individuals beginning in the 1930s, houses and landscape elements have been adapted for use by successive occupants. Re-siding, the addition of enclosed porches, new windows, and street-front garages account for many of the changes made to the properties. Alterations are particularly apparent in the case of double-houses now under dual ownership, where each property owner has modified the structure in different ways.

The National Park Service, state historic preservation office, Western Upper Peninsula Planning and Development Office, and outside specialists drafted an affordable housing planning document or concept paper. This draft document was prepared in response to concerns about the Housing and Urban Development housing rehabilitations on workers’ housing. Once this working document is finalized, it will be an important guide for responding to issues related to worker housing rehabilitation.

### **Calumet Village Civic and Commercial Area**

Extending along both Fifth and Sixth Streets between Scott and Pine, the Calumet Village civic and commercial district encompasses portions of some 15 blocks containing more than 100 buildings that share similar characteristics of type, form, materials, and historical development. Platted in 1868 and incorporated in

1875, the Village of Calumet (named Red Jacket until 1929) grew up on the northwest edge of the Calumet and Hecla Mine. The Calumet downtown district represents the geographic center of commerce and culture within this industrial community, which flourished between the 1870s and 1910s. Surviving buildings represent the district at its peak period of development, when it served as a regional hub.

The corporate policies of the C & H Mining Company, established by its long-time President Alexander Agassiz, had a direct and major effect on the character of building development within Red Jacket Village. Agassiz's early determination to prohibit stores, saloons, and any other commercial activity on company-owned land channeled all early business development to property privately held in Red Jacket. The village subsequently became the social and commercial area for the entire Calumet mining district.

The commercial buildings of Calumet Village — stores, saloons, banks, and general business blocks — play a central role in defining the community's collective image. Their number, size, and dense concentration gives these buildings prominence in shaping the overall physical character of the village. Rectangular in plan and ranging from one to four stories, many buildings in the district abut each other to form a continuous wall along the street. The buildings present facades of wood, local red sandstone, and brick embellished with stock elements, sometimes in lavish combination — terra cotta trim, metal cornices, turrets, bays, and cast iron columns. Several episodes of construction are represented: small, false-front frame structures built before 1890 and the more substantial stone and brick business blocks that are evidence of a second period of intense commercial building activity between 1895 and 1910.



*Corner of 5th Street and Pine, Red Jacket Village (now Calumet Village), circa 1915.  
Photos courtesy of the Michigan Technological University Archives and Copper Country Historical Collections,  
Roy Drier Collection.*

Because the village's commercial structures were constructed during a relatively short boom period, they reflect a narrow range of styles. Although the facades of the early frame structures have very simple architectural treatment, the larger masonry buildings are more ornate and varied in terms of materials and design features. Several architect-designed buildings display Renaissance elements; a number of others can best be categorized as local adaptations of the Richardsonian Romanesque style. The most distinctive of these are constructed of local Portage Entry sandstone. Notable examples include the former Vertin's Department Store (late 1880s, expanded 1899); the former Peter Ruppe and Son Store (also expanded in 1899); and the Kinsman Building and the 1898 Ryan Block, each featuring commercial space on the first floor with flats above.

Civic buildings within the Calumet downtown district are grouped together on Sixth Street near Elm, including the 1898 Red Jacket Fire Station and the Red Jacket Village Hall and Opera House (now the Calumet Town Hall and Theatre). The addition of a 1,200-seat opera house and new village offices to the existing 1885 town hall building affirmed the village's wealth and confidence at the turn of the century. Next to the theatre is a small lot that was historically maintained by the village as a green space; the original 1868 village plat reserved no land for public parks. Both the village hall and the theatre continue their original use; the fire station is now a museum.

Although alterations to the storefronts of most buildings have changed their original appearance, and fire and demolition have left gaps in the urban fabric, taken as a whole the district has retained sufficient integrity to convey its identity as the settlement's civic and commercial center. The structures that have been lost to fire or demolition are not numerous enough to lose the general effect of the streetscape; the essential scale and massing of buildings making up the streetscape remains.

### **Calumet Village Residential Area**

The Calumet Village residential district contains approximately 160 dwellings within an area of about 15 blocks. Generally, the area of residential development extends from Spruce Street on the north to Scott on the south. The eastern boundary runs through the alley between Sixth and Seventh; on the west the boundary ends at the village limits on Ninth Street.

Built primarily between 1880 and 1910, houses in the area range from small, 1½-story, end-gabled dwellings to large and elaborate interpretations of Queen Anne and Classical Revival styles, concentrated primarily along Eighth Street. Although most homes are single-family dwellings, double houses and a row house unit are also represented; virtually all of the houses are of wood frame construction.

In response to the locally harsh climatic conditions, most houses have been altered through re-siding, new roofing, and the addition of porches and garages. A public school and four churches, including the twin-spired Romanesque St. Paul's, are interspersed among the district's dwellings. Although there are a number of instances where infill housing has replaced original dwellings lost to fire or demolition, overall the area has retained integrity sufficient to convey its historic and architectural significance.

Despite the village's small area, there is some variety in streetscape character. Commonly, houses are set quite close to the street and to each other. Many have little, if any, front yard space. Where there is available yard space, trees are planted in the narrow public right-of-way between the sidewalk and the street. On larger lots, hedges are frequently used to create private space, buffering houses from the street and adjoining properties. Notably, along sections of Eighth Street houses are sited back from the street. Some homes here occupy several lots, which allows for larger yards; mature trees planted in the parkway arch over the street. Here and nearby on Pine Street, low sandstone walls enclose a number of properties.

The Calumet Residential District reflects aspects of the social organization of the Calumet industrial community. In contrast to tracts of worker dwellings on company-held land, village housing was privately built, mostly by those associated with the area's primary center of commerce on adjacent blocks to the east along Fifth and Sixth Streets. The churches and school building survive to represent the community's cultural life and diverse ethnic heritage.

## RELATED AREAS

### Torch Lake

Torch Lake was the site of both the C & H and Quincy stamping operations. Along the shores of Torch Lake are several prominent reminders of Keweenaw milling and reclamation efforts. The Houghton County Historical Museum is housed in a C & H mill office building. Tall stamp mill ruins near Tamarack City also evoke this critical step in the mining process. A dredge used in reclamation efforts is also visible from the roadside along Torch Lake, as is a group of workers' houses associated with the Quincy Company's stamp mill at Mason.

### Cliff Mine Site

The Cliff and Minesota Mine sites were the first to demonstrate convincingly the potential profits to be made from Keweenaw copper in the district's early, speculative years. Both relied on the working of fissure deposits (masses of pure native copper), and both had already been mined by Native Americans. The richest Keweenaw copper deposits in the long run were the amygdaloid and conglomerate lodes (see appendix A), but the first Keweenaw copper boom was based on the fissure deposits. By 1849 the Cliff Mine operation paid the first dividends that came to investors in Keweenaw copper mining ventures. The Cliff Mine, in the 1850s, was the largest in the district; by 1870, its production had fallen dramatically and it was closed.

### Painesdale National Historic District

Painesdale National Historic District encompasses a planned company town that retains significant integrity of worker and management housing and industrial buildings. The town was named after William A. Paine of Boston, founder of the Paine, Webber and Company brokerage firm; the firm was a majority stockholder in the Champion Copper Mine around which Painesdale was constructed. Champion's parent company, the Copper Range Company, developed the southern half of the district's largest mines including the Atlantic, Baltic, Isle Royale, and Champion. After Calumet and Hecla Consolidated Copper Company, the Copper Range Company was the largest consolidated mining company in the district in the 20th century. The Champion Mine was an important producer between 1899 and 1916.

Today, Painesdale is distinctive for its mountainous waste rock piles, rows of stock-designed workers' housing, New England colonial-style management housing, masonry industrial buildings, and steel frame shafthouse. The shafthouse was the first steel frame shafthouse in the district and is now in the hands of a nonprofit group that is seeking to stabilize the structure. Workers' houses, primarily saltbox-style duplexes and front-gable single-family and duplex houses, stand in rows following the hilly terrain.

## NATURAL RESOURCES

### CLIMATE

The Keweenaw Peninsula has a continental temperate climate with warm summers and cold winters. Temperatures are moderated by the proximity of the Great Lakes. The mean daily temperatures are 18°F for January, 40°F for April, 64°F for July, and 48°F for October.

The average annual precipitation is about 40 inches. Much of that comes from the high average annual snowfall, which exceeds 200 inches; snow cover lasts about 150 days. This is largely the result of moisture-laden weather systems coming off Lake Superior.

### GEOLOGY

The bedrock geology of both park units consists of the Portage Lake lava series, Nonesuch shale, Copper Harbor conglomerate, and Freda sandstone. The Portage Lake lava series consists of basalt and andesite lava flows interbedded with conglomerates. Copper filled the cavities and pore spaces in the series, forming the largest deposit of copper in the world. The Keweenaw fault separates the Portage Lake lava series from the relatively flat Jacobsville sandstone that lies east of both units.

### SOILS/VEGETATION

Soils identified by the Soil Conservation Service (SCS 1991) in the Calumet unit include nearly level and gently sloping Udipsamments and Udorthents complex. Urban land is loamy to sandy soil, moderately to somewhat excessively well drained. In Calumet most of the land surface is covered by streets, parking areas, driveways, buildings, and other structures. The remaining land is used primarily for grass lawns, landscaped yards of exotic and native vegetation, recreational facilities, and abandoned lots.

Soils identified by the Soil Conservation Service in the Quincy unit include the same as those identified in the Calumet unit. In addition, the Quincy unit contains some soil types of 1%–8% slopes of Arcadian-Michigamme-rock outcrop; 0%–8% slopes of Trimountain-Net complex; 15%–70% slopes of Keweenaw-Kalkaska-Waiska complex; and dissected and waste materials from past copper mining.

Arcadian-Michigamme-rock outcrop occurs as areas of shallow, well-drained Arcadian soil, a moderately deep, moderately well-drained Michigamme soil, and intermingled areas of rock outcrop. The Trimountain-Net complex consists of deep soils that are well drained on low knolls and ridges as well as soils on small flats with stones and small boulders on the surface. Primary vegetation for these soil types is woodland. The Keweenaw-Kalkaska-Waiska complex consists of steep to very steep soils on dissected uplands, and erosion is severe. Northern hardwoods are dominant on these lands.

Mine dumps consisting of piles of poor rock (rock hauled to the surface but not milled) occur in both units. Some of this rock is used as road fill or rip-rap or is crushed for use as road gravel.

The Canadian coniferous forest dominates the general area and is characterized by balsam fir, white spruce, and paper birch. However, past mining activity stripped the area of lumber-bearing trees and much other vegetation. Since the end of most copper mining in the late 1960s, natural revegetation of grasses, shrubs, and young trees has been successful.

### WETLANDS/FLOODPLAINS

No major streams or rivers traverse the park units, but the Quincy unit is adjacent to Portage Lake on the south. Neither the Calumet or Quincy units are within identified 100-year or 500-year floodplains.

Wetlands are common throughout the Keweenaw Peninsula, and several wetlands are identified in both park units. All identified wetlands are of the palustrine type (open water or saturated surface wetlands dominated by trees, shrubs, or emergent vegetation).

## WILDLIFE

Wildlife species specifically inhabiting the boundaries of the park units have not been identified. However, wildlife species that have been identified in Houghton County and are likely to inhabit or use habitat in the park include white-tailed deer, black bear, coyote, tree squirrels, snowshoe hare, common raven, hawks, owls, and various songbirds.

## THREATENED AND ENDANGERED SPECIES

There are no species of plants or animals in the park that are federally listed or proposed for listing as endangered or threatened. Also no critical habitat is known to occur in the park.

No state-listed species are known to occur in the Calumet unit of the park. However, three state-listed species are known to occur within the Quincy unit. The Rayless mountain ragwort (*Senecio indecorous*) is listed by the state as threatened. Both the Douglas hawthorn (*Crataegus douglasi*) and the Marsh willow-herb (*Epilobium palustre*) are listed as state species of special concern.

## AIR QUALITY

The park is in a region that meets all national ambient air quality standards for sulfur dioxide, ozone, particulate matter, nitrogen dioxide, carbon monoxide, and lead. Isle Royale, the closest national park system site, is a class I area. A class I area has special protection under the provisions of the Clean Air Act. All national parks in existence as of August 7, 1977, and more than 6,000 acres in size are class I areas.

There are few major point sources of air pollution within 100 miles of the park. The closest for nitrogen dioxide, sulfur dioxide, and volatile organic compounds is the Champion International pulp and paper factory in Ontonagon, Michigan.

## HAZARDOUS SUBSTANCES

All properties proposed for NPS ownership and/or operation are on the Keweenaw Peninsula, the site of more than 100 years of commercial copper mining and milling. Milling consisted of extracting elements of copper ore from mined rock by stamping the rock into small pieces and separating the ore from the rock through gravimetric sorting. The leftover crushed rock particles, called stamp sands, were discarded with the mill-processing water by pumping the mixture into Torch Lake. The milling process was not completely efficient, and copper (along with other heavy metals) was lost in the discarded stamp sands.

In later years technological advances allowed copper to be recovered from the previously deposited stamp sands. Dredges collected the sands; and an ammonia leaching process was used to recover copper and other metals. After reprocessing, the chemically treated stamp sands were returned to the lake. From the 1860s to 1968 more than 200 million tons of stamp sands were dumped into Torch Lake.

By September 1992, the U.S. Environmental Protection Agency had analyzed large sections of the peninsula to assess the nature and extent of contamination. In the course of its study, the agency found widespread contamination, designated a large portion of the area as the Torch Lake site, and listed it on the National

Priorities List (NPL).<sup>2,3,4</sup> The Torch Lake site is divided into three operable units, and certain properties that are within the boundaries of Keweenaw National Historical Park are within operable units of the site.<sup>5</sup>

Possible contaminants of concern are those typically associated with copper mining activities and include copper, arsenic, chromium, lead, and zinc, plus the chemicals used in flotation reprocessing (pyridine, oil, coal-tar creosotes, wood creosotes, pine oil, and xanthates). Asbestos, metals, and PCBs associated with reprocessing debris may also be present. Possible release mechanisms for these contaminants include dust emissions, runoff, and erosion from stamp sands and infiltration from soil through sediments. The potential contaminant transport

pathways to receptors involve air, groundwater, surface water, and sediments.

Asbestos also was commonly used in insulating pipes and other materials associated with steam equipment. Drawings of mine sites identify underground steam pipes in utility trenches. Any hazardous materials assessment would need to include testing for asbestos.

The Natural Resources Conservation Service, the state, and the U.S. Environmental Protection Agency are involved in planning for and carrying out remedial actions to clean up pollution problems resulting from past industrial activities. Much of this effort on land is focused on stabilizing stamp sands to prevent dust emissions. As part of this effort, the Torch Lake Area Public Action Council, which represents stakeholder groups affected by this issue, is charged with continuing these remedial actions and returning beneficial uses to affected areas.

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2. The National Priorities List (NPL) is a ranked listing (with about 1,300 facilities) of those sites in the nation that pose the greatest risk to human health and the environment.

3. The Torch Lake NPL site is also on the Act 307 Michigan Sites of Environmental Contamination Priority List, the state of Michigan analog to the National Priorities List.

4. NPL listing imposes a host of stringent procedural and substantive technical requirements for remediation and significant U.S. Environmental Protection Agency and state control over the cleanup process. The remediation of an NPL site is consequently very costly and time and resource intensive, with the Environmental Protection Agency estimating the average remediation cost of an NPL site at \$30 million. Acquisition of properties in the Torch Lake site would be the first time the National Park Service has acquired lands listed on the National Priorities List.

5. At this time, the National Park Service lacks many of the EPA documents produced related to the Torch Lake NPL site. Such documents are collectively known as the "administrative record." The overlap between the properties of potential interest for NPS ownership and/or operation and the Torch Lake NPL site appears to be significant. See, *Record of Decision, ROD Summary, Torch Lake Site, Operable Units I and III*, Houghton County, Michigan (U.S. Environmental Protection Agency, Region V) September 1992 [hereinafter ROD] at page 6. ("The Quincy Mining Company Historic District and the Calumet Historic District, which were proposed as a National Historical Park in September 1987, are located within the Site."). See also ROD at pages 9, 13, 14, 16, 17, 22, and 23. In addition, an underground storage tank within the Calumet Historic District was listed on the state of Michigan's priority list of contaminated sites.

## REGIONAL VISITOR USE AND FACILITIES

### CURRENT VISITOR USE AND INTERPRETATION

Keweenaw Peninsula visitors participate in various recreational and educational activities. Federal, state, local, and private entities maintain many natural and cultural resources on the peninsula for public use. Forests and parklands offer camping, hunting, fishing, boating/canoeing, hiking, snowmobiling, cross-country skiing, snowshoeing, scenic driving, water sports, and other recreational opportunities. Harbors and lighthouses depict shipping on the Great Lakes, and museums depict daily life of past eras, the geology and minerals of the area, and other facets of a rich cultural heritage. Underground copper mines, company towns, mine shafthouses, festivals, historic districts, and area residents who continue old world traditions add a distinctive flavor to visitor experiences. Visitors find chapters of the story of copper conveyed at several sites, some of them within the boundaries of Keweenaw National Historical Park.

Data collected in 1989 indicates that most visitors to the Keweenaw Peninsula are Michigan residents. Because of the long harsh winters, most visitors come in the summer; however, winter activities are growing in popularity, and many visitor service providers have expanded and will continue to expand the tourist season with year-round activities, including lighted cross-country ski trails, hundreds of miles of snowmobile trails, and ski touring. The National Park Service plans to have all major NPS facilities open all year.

Because it was only recently established (October 1992), the park's formally recorded visitor use is minimal. Most visitor experiences within the park are informal — seeing the landscape, streetscapes, and historic structures and meeting local business owners and residents. The main park attractions are walking tours of Calumet's historic business district, the Coppertown Museum, the Calumet Theatre, the Calumet Firehall, a tour of the Quincy mine

hoist, and an associated underground mine tour. The Calumet walking tour brings visitors into close contact with many of the historic buildings and landscapes associated with the copper mining era. Although these buildings are privately owned, some, such as business, churches, local government offices, and cultural attractions, are open to the public.

The Quincy unit's hoist and mine tours are operated by the Quincy Mine Hoist Association. These tours provide visitors with a glimpse of what mining life was like in the 19th and early 20th centuries.

At the Quincy unit visitors can hear the story of Quincy Mining Company, visit a gift shop and historical displays, and take a guided tour of the shafthouse, underground mine, and world's largest steam hoist to gain insight into the first American mineral boom. A cog-rail tramway, connecting the hoist and the mine entrance, opened in 1997.

Visitors who walk or drive through the Calumet community find the heritage of a remarkable ethnic conglomerate reflected in the neighborhoods, surnames, foods, and traditions of the current residents. Brochures describing walking tours of commercial and residential areas are available at several locations.

The first scheduled interpretive programs were conducted by a seasonal ranger in summer 1995. Nearly 1,000 people attended NPS programs at several sites within and near the park. Limited funding threatens the continuation of seasonal programs. Permanent staff present programs at various locations, including onboard *Isle Royale's Ranger III* on its regular cruises on the Portage Lake when staff is available and there is a need for such programs.

The NPS administrative headquarters is in the historic C & H headquarters building, and NPS information and orientation is available at several cooperating sites (see below).

## **COOPERATING SITES**

The Keweenaw Peninsula and the associated themes of copper mining and life on the peninsula reach from Ontonagon to Copper Harbor to Baraga. A number of governmentally and privately operated attractions throughout the peninsula help tell the stories of the Keweenaw. These sites vary significantly in size and type of resources represented. Keweenaw National Historical Park is a new contributor to Keweenaw Peninsula visitor experiences. The park has an opportunity to augment existing visitor facilities and services and help visitors understand a broader story of Keweenaw's copper mining heritage.

Toward the goal of expanding the visitors' understanding of Keweenaw's story, several of these sites have agreed to become partners with the park through the park's cooperating sites program. The cooperating sites enhance visitor appreciation of the copper story, inform visitors about Keweenaw National Historical Park, and encourage visitor participation in the area's cultural, natural, and recreational opportunities. See appendix C for a list and description of these sites. Other historic attractions of note may be added at a later date as roles and responsibilities for cooperating sites are developed further.

A brochure describing these sites is available throughout the Keweenaw Peninsula. Signs have been erected at the sites to identify their cooperative role with the National Park Service and their association with the story of copper.

## **VISITOR USE STATISTICS AND ANALYSIS**

Because it is a new park, visitor statistics are not available to assess the quality of experiences and the length of visitor stays. Procedures for counting visitors have not yet been developed for the park. Park boundaries are not widely known or well delineated for the public. Visitor access to the Quincy mine hoist and mine tour, however, is controlled and enables the association to count visitors. Access to the rest of the

park is free and open. Many areas, especially the Calumet unit, will always be open because there are no fixed entrance/access points that could be easily monitored for counting visitors.

Another unusual occurrence for a unit of the national park system is that the entire Village of Calumet is in the park's boundaries. Residents and people who come to Calumet to work could not be counted as visitors. Discerning the difference between visitors and residents in a cost-effective way would be virtually impossible. Also, it will be common for many people to visit both units of the park on the same day, and double counting will be a problem when determining visitor use of the park.

## **FUTURE VISITOR USE OF THE PARK**

Examining the visitation recorded at a number of attractions on the Keweenaw Peninsula can provide some insight into what level of use might be expected at Keweenaw National Historical Park (see table 2). Based on the visitation at some of these attractions, the potential number of visitors to the park is expected to be substantial. For example, in 1994 the Quincy Mine Hoist Association recorded about 37,000 visitors touring the shaft-rockhouse and steam hoist. Included in this figure were 14,000 visitors who were also able to tour the mine. The figure of 37,000 visitors can be taken as a minimum number of visitors to the park because the Quincy Mine Hoist is the major attraction of the Quincy unit of the park.

McLain State Park and Fort Wilkins State Park recorded more than 190,000 and 170,000 visitors, respectively, in 1996. Fort Wilkins State Park is at the extreme northeastern end of the Keweenaw Peninsula (35 miles from Calumet and 40 miles from Hancock), and McLain State Park is only about 10 miles west and northwest, respectively, from the Calumet and Quincy units. Most of the Fort Wilkins visitors will take U.S. 41 right through and past the Quincy and Calumet units of the park, respectively. With this volume of recreationists passing so close to the park units, it is reasonable to expect that a

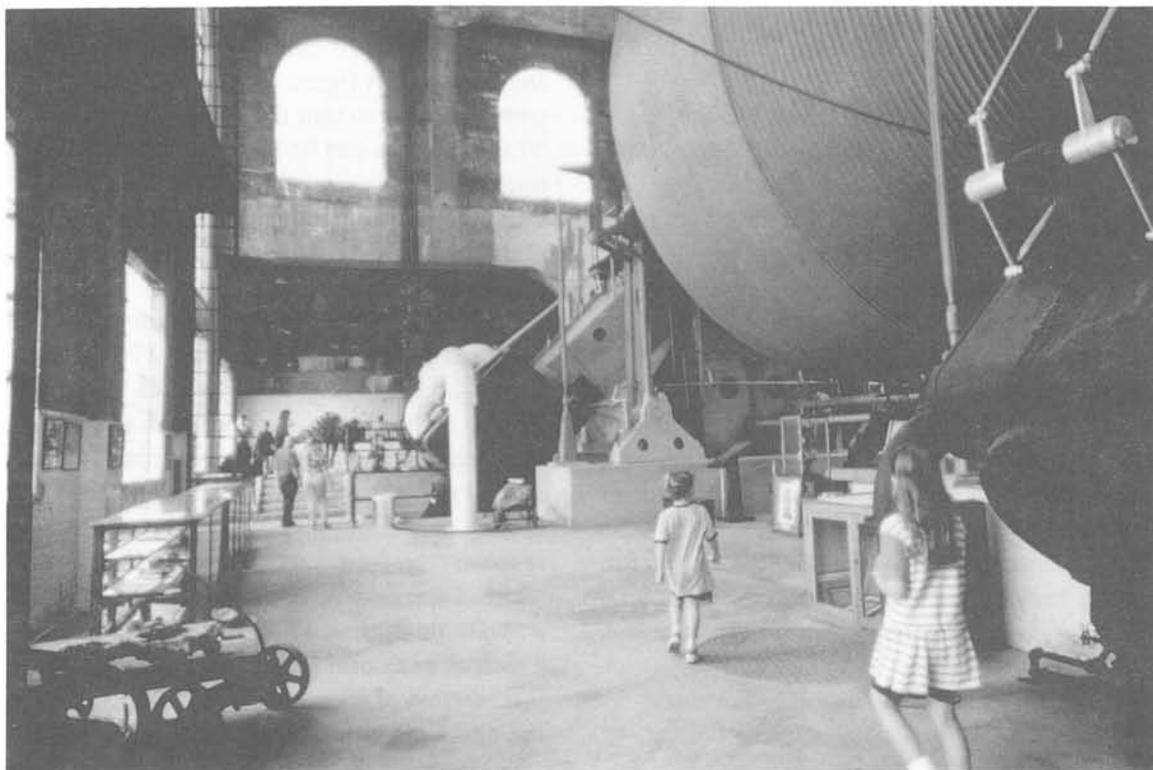
## AFFECTED ENVIRONMENT

large number of people will take the time to visit the park. In addition, with both units being so close to McLain State Park and its large tourist population, it is expected that many of these state park visitors would make a side trip to Calumet or Quincy to take advantage of the visitor attractions, restaurants, and shopping opportunities. A reasonable conclusion is that about 37,000 to 190,000 or more visitors might visit Keweenaw National Historical Park annually in the next few years. In the future, visitation might reach even higher levels.

There are a number of other attractions within the park's boundaries — Coppertown USA (a mining museum), Calumet Theatre, and the Italian Hall site are only a few of the historically important attractions. The Seaman Mineralogical Museum may open a branch museum in the park's Calumet unit (and possibly a training facility with a geology walking tour in the Quincy unit). This museum has an extensive and impressive collection of mineral specimens (more than 60,000) that can be displayed for visitors. If the new branch museum is developed, it would attract substantial visitor numbers.

Although Keweenaw National Historical Park will probably be a day use park for most visitors, it will be another important recreational resource of the Keweenaw Peninsula. The number and variety of attractions and recreational resources found on the Keweenaw Peninsula all contribute to make the peninsula itself the destination for many thousands of visitors every year.

Most visitors will visit the park during June, July, and August. The peak use period will probably extend from late spring through early fall. The severe weather and high snowfall are expected to constrain visitation during the area's relatively long winter season. Many historic attractions on the peninsula are closed or operate under curtailed hours during the winter off-season. A growing number of visitors are still attracted to the seasons of fall colors, white snow, and spring's greening. Hunting, cross-country skiing, snowmobiling, and other fall and winter activities are contributing to off-season tourism on the peninsula. It can be expected that the park will receive some level of visitation throughout the year, and that winter visitation will mirror the peninsula's popularity as a winter recreational use area.



*Inside 1917 Quincy hoist house, circa 1993.  
From Keweenaw National Historical Park collection.*

TABLE 5: VISITATION AT SELECTED ATTRACTIONS  
ON THE KEWEENAW PENINSULA

Visitor Attraction	1994 Visitation	1995 Visitation	1996 Visitation
Baraga State Park	46,703	53,019	46,689
Coppertown Museum	4,984	5,000 <sup>a</sup>	4,000 <sup>a</sup>
Fort Wilkins State Park	162,364	188,862	171,217 <sup>b</sup>
Hanka Homestead <sup>c</sup>	3,000 <sup>a</sup>	3,000 <sup>a</sup>	3,000 <sup>a</sup>
Houghton County Historical Museum	4,000 <sup>a</sup>	na	na
Isle Royale National Park	24,843	23,470	23,580
Keweenaw County Historical Museum	12,102	6,284 <sup>c</sup>	7,376 <sup>c</sup>
McLain State Park	160,319	192,000	190,700
Old Victoria	3,800 <sup>a</sup>	4,100 <sup>a</sup>	5,100 <sup>a</sup>
Porcupine Mountains State Park	412,071	443,000 <sup>d</sup>	368,000 <sup>d</sup>
Quincy Mine Hoist and Underground Mine	37,000	na	na
Seaman Mineral Museum	7,000 <sup>a</sup>	10,000 <sup>a</sup>	10,000 <sup>a</sup>
Twin Lakes State Park	32,473	45,960	52,433

SOURCES: The various visitor attractions provided data, respectively.

na = not available

a Estimated visitation.

b Park experienced a cold and rainy July.

c Counts registered visitors; not all visitors sign the register.

d Fiscal years, October to September.

## MAJOR RECREATIONAL RESOURCES OF THE KEWEENAW PENINSULA

Listed below is a selection of recreational resources found on the peninsula. Areas with an asterisk (\*) are cooperating sites.

### National and State Recreation Areas.

Following is a list of national and state recreation areas.

*Isle Royale National Park, Keweenaw County* — The park, an island in Lake Superior with headquarters in Houghton, is accessible only by boat or seaplane. This national park offers boating, camping, and hiking in a wilderness environment.

*Ottawa National Forest, Houghton and Ontonagon Counties* — Camping is offered at the Sparrow Rapids, Lower Dam, Courtney Lake, Tanlund Lake, Bond Falls, Robbins Pond, Paulding Pond, and Deadmans Lake Campgrounds.

*\*Fort Wilkins State Park, Keweenaw County* — This state park provides living history interpretation, boat tours, 165 campsites, picnic areas, hiking, fishing, and cross-country skiing. A lighthouse, boat launch, store, and bookstore are also onsite.

*\*McLain State Park, Houghton County* — A picnic area, 90 campsites, a trail for hiking and cross-country skiing, a bathhouse and shelter, beaches, swimming, fishing, all-

season rental houses, and interpretation are available.

**\*Porcupine Mountains Wilderness State Park, Ontonagon County** — Recreation facilities include two developed and four rustic campgrounds with 210 campsites; a visitor center, 90 miles of hiking trail with backpacking, two interpretive trails, 16 rental cabins (three open year-round) accessible only by foot, a winter sports facility with alpine and Nordic skiing, seven picnic areas, one boat ramp, 93 waterfalls, the Summit Peak and Lake of the Clouds scenic overlooks, and hunting and fishing.

**Twin Lakes State Park, Houghton County** — This park offers 62 campsites, a picnic area, a boat ramp, a beach house, a nature trail, a state forest snowmobile trail, swimming, fishing, and cross-country skiing.

**Baraga State Park, Baraga County** — This park provides camping, hiking, and access to Keweenaw Bay.

**State-Operated Harbors.** The following is a list of state harbors:

***Keweenaw County***

- Copper Harbor – Offers day use accommodations, gas, water, electrical hookups, restrooms, showers, launch ramp, pumpout, and radio communications.
- Lac La Belle – Offers day use accommodations, gas, and launch ramp.
- Eagle Harbor – Offers day use accommodations, gas, water, electrical hookups, restrooms, showers, pumpout, and launch ramp.

***Houghton County***

- Houghton/Hancock – Offers day use accommodations, gas and diesel fuel, water, electrical hookups, restrooms, showers, pumpout, launch ramp, a courtesy car, and radio communications.

- Houghton – Offers only day use facilities.
- Grand Traverse Bay – Offers day use accommodations, launch ramp, and other limited facilities.
- Portage River – Offers river access.

***Ontonagon County***

- Ontonagon – Offers day use accommodations, gas, telephone, water, electrical hookups, restrooms, showers, haul-out facility, pumpout, launch ramp, and radio communications.

**Other Local Government Recreational Facilities.** Following is a list of other local government recreational facilities:

- Calumet Agassiz Park – Offers grills, picnic tables, and a basketball court.
- Calumet Waterworks Park – Offers a pavilion, volleyball court, and a ramp to the beach for the handicapped.
- Hancock Park – Offers camping, a beach, and boat launch.
- Houghton Park – Offers camping, a beach, and a large outdoor play area.
- Lake Linden Park – Offers camping and a boat launch.
- Laurium Bicentennial Park – Offers hookups for recreation vehicles and a tennis court.
- Swedetown Recreation Area – Offers the only lighted cross-country ski trail in the area; also has a chalet, ponds, fishing, and a handicap-accessible pier.

In addition, there are numerous county-maintained roadside parks along Lake Superior. Groomed cross-country ski areas are in Swedetown, Hancock (Maasto Hito), Michigan Technological University, Chassell, and Copper Harbor.

The National Park Service is working with the Keweenaw Tourism Council, local governments, and paddlers, to develop the Keweenaw Water Trail for use by canoes and sea kayaks. These organizations are also working toward the long-term goal of having the Keweenaw Water Trail circle the peninsula from Portage Lake around Keweenaw Point and back.

## REGIONAL LAND USE

### OWNERSHIP PATTERNS

Much of the Keweenaw Peninsula is in large tracts of forested land that are owned by a few companies who are mainly concerned with forest products. Two companies control lands and buildings that are important to the park; these two are the corporate vestiges of the Calumet and Hecla Consolidated Mining Company and Quincy Mining Company.

The populations of Houghton and Hancock have remained relatively steady, largely due to the growth of Michigan Technological University, Suomi College, a number of state services, and Portage Health Systems. In the last 30 years most new primary home construction has occurred in the Houghton/Hancock area. Houghton has twice been ranked as one of the top 100 small towns in America. The creation of the park appears to have at least indirectly sparked a modest amount of new retail and service development in the Calumet area.

The Keweenaw Peninsula has seen a significant increase in second home sales. The most expensive homes are being built along the shores of Portage Lake, Lake Superior, and several inland lakes. The Keweenaw was recently described as one of the top five second-home locations in middle America. In the last decade or so waterfront prices have gone from \$20 to \$50 a frontage foot to as much as \$400 a frontage foot. In addition to second homes, there are many small cottages called "camps" scattered throughout the peninsula that are used seasonally for recreation.

Within the Calumet unit of the park, new commercial development has recently occurred just south of the historic business district of the Village of Calumet. Further development is likely in this area because the owner of the new business also owns many undeveloped lots nearby. Currently, Calumet Township is the only governmental unit that has implemented historic preservation ordinances within the area under its

jurisdiction that is within the boundaries of the park. Other governmental units, including Calumet Village, have similar actions currently under consideration. In addition, however, none of the governmental jurisdictions have adopted effective land use controls. Consequently, it is possible that new businesses will be visually incompatible with the historic landscape. Some property owners are pressing forward with alterations to their property to avoid future land use regulations.

In and near the Quincy unit, a new hospital is being constructed and roads are being improved to serve this hospital. A road to access the hospital would cut through the land on which the historic bathhouse is located. The road may compromise this important feature and conflict with the park's mission to preserve historic resources. To avoid and/or mitigate any adverse impacts on the historical significance of this area, the park staff is working with the local authorities during the development of these facilities to seek ways to preserve the important historical values of the site.

Houghton County does not have countywide zoning or comprehensive land use planning. Within the park boundaries, the Village of Calumet and Calumet Township have adopted zoning ordinances and developed a comprehensive land use plan. Osceola, Quincy, and Franklin Townships have not adopted zoning or land use plans but have taken preliminary steps to get started on the process. To date, the Village of Laurium, near the Calumet unit of the park, has not adopted zoning or land use planning.

### LOCAL HISTORIC DISTRICT ORDINANCES

Under Michigan's Local Historic Districts Act, local government units can adopt local ordinances that allow for the creation of a commission composed of local residents who can designate structures and districts of historic

significance, regulate work done on designated buildings, and identify and carry out overall goals and objectives for preservation in the community.

This process has already begun. The need for a historic district ordinance was officially recognized by the Calumet community and government units in 1993, when a historic district study committee was formed to begin developing a local preservation program. After community volunteers began work on a local survey, a required first step in the ordinance development process, the committee enlisted the assistance of the Western Upper Peninsula Planning and Development Regional Commission to secure the data needed to compile historic district study committee reports for potential historic districts within Calumet Village, Laurium Village, and Calumet Township.

The survey received major funding from the state historic preservation office, the three local government units, Coppertown USA Mining Museum, and the National Park Service. An emphasis of the survey was to provide basic tools — maps, property photographs and information cards, and a computerized database — that will enable local governments and the National Park Service to better manage the community's historic resources.

Local representatives of the park's Quincy unit have also expressed an interest in exploring options for establishing preservation ordinances to protect properties in and around that park unit.

#### **FUTURE POTENTIAL LAND USES**

All copper mining on the Keweenaw Peninsula has now ceased. White Pine Mine ended standard operations in September 1995; the company plans to gear up for a several-year-long solution mining program, but that will employ only a fraction of the previous workforce. A project to open a copper mine near Gratiot Lake has been fully permitted. Those operations were suspended once it became likely that White Pine and its smelter were going to close. The company

developing the Gratiot Lake Mine is currently investigating other arrangements for smelting and has not abandoned its project. Scientists from the People's Republic of China have made reconnaissance visits to the Upper Peninsula to examine the potential for renewed copper and iron mining (based on the direct maritime shipping access from the peninsula through the Great Lakes and St. Lawrence Seaway system).

Increased economic development in the Houghton, Hancock, and Calumet areas is resulting in the steady elimination of the "poor rock" or waste rock piles associated with the active mining period. This metamorphic rock is very useful for a number of road and building construction applications.

#### **POTENTIAL FOR COORDINATED PLANNING OF RESOURCE AND/OR VISITOR USE MANAGEMENT WITH ADJACENT LAND MANAGEMENT AGENCIES**

Three units of Michigan's state park system are cooperating sites of the park. They share a number of natural and cultural resources with the stories of the park. There has already been modest collaboration in natural and cultural resource management and visitor services with these parks, and there is great potential to do more. These parks, along with several local parks, provide primitive and modern camping, walking trails, and interpretive activities. Thus there is no need for the National Park Service to develop camping facilities of its own.

Isle Royale National Park shares the same geology and a similar human use and occupancy story with the Keweenaw Peninsula. The remote location of Isle Royale, accessible only by water or air, and its predominant management for natural and wilderness values, seems to attract very different visitors than those who remain on the mainland. The numbers of visitors who actually reach Isle Royale is also quite small. Thus it seems likely that while there will always be mutual support and assistance between these

AFFECTED ENVIRONMENT

two national park system units, they will generally serve very different groups of visitors.

The Michigan Department of Transportation is completing the purchase of about 20 acres of property adjacent to the existing Al and Ellie Isola turn-out/overlook. The objective of this purchase is to protect this acreage from incompatible development. The state may consider constructing a small visitor information facility, including public restrooms, at this location in the future. Keweenaw National Historical Park would need to be involved in planning for this

type of facility to ensure that park resources are protected because this property is adjacent to the park boundary. Such a facility might also be considered as a partnership endeavor with the state. Additional planning would be needed before this concept could be developed.

Representatives from the National Park Service, U.S. Forest Service, the Michigan Department of Natural Resources, local governments, and the private sector are collaborating to coordinate the use of public lands and publicly accessible private lands throughout the Upper Peninsula.

## THE SOCIOECONOMIC ENVIRONMENT

### COUNTY AND REGIONAL CHARACTERISTICS – OVERVIEW

Much of the consumptive use of the peninsula's natural resources has been replaced by nonconsumptive uses as the economy has evolved. Considerably fewer people are now supported by the local economy by providing the resource base for a growing tourism industry (see services in table 6). Many parks, including Isle Royale National Park and other attractions, provide a focus for summer activities. Heavy winter snowfall, averaging more than 200 inches, and hilly topography provide the basis for winter sports — cross country-skiing and snowmobiling. Roads and thoroughfares are well maintained, and snow removal is excellent. The forests, lakes, and extensive Lake Superior shoreline are fostering a growing, less consumptive, and hopefully more sustainable tourism industry.

### POPULATION

In 1994 the state of Michigan ranked 8th in the country in population (see table 7). Houghton County is one of 83 counties in Michigan. In 1994 Houghton County ranked 44th in population in the state. Keweenaw County was the least populated county in the state, and Ontonagon ranked 78th. Between 1980 and 1994 Houghton, Keweenaw, and Ontonagon Counties have declined in population, about -4.0%, -5.0%, and -12.0%, respectively, while the state as a whole has increased +2.6% in population.

It is interesting to note that the seasonal number of visitors to the Keweenaw Peninsula, as evidenced by the annual visitation to Fort Wilkins and McLain State Parks (tables 5 and 7), is several times the combined population of all three counties.

### ECONOMY

In 1994 the national average per capita income was \$21,696. Michigan ranked 19th in the country, with a state average per capita income of \$22,192, which was 102.3% of the national average (see table 8). Houghton, Keweenaw, and Ontonagon Counties all had average per capita personal incomes well below the average for the state with 68.8%, 72.0%, and 74.8% of the state average respectively.

By far, the major individual employer in the region is Michigan Technological University (see table 9). Nearly 1,200 employees provide services to a student body of about 6,000 undergraduates and 600 graduate students. The next two largest employers combined provide only about half as many jobs.

The numbers of full and part-time jobs in the county economies are displayed in table 10. Compare these figures to the 1994 total of 5,019,749 jobs in the entire state and the relative size of the county economies become apparent.

Table 11 displays labor force projections for the three counties in the early 1990s. Unemployment was relatively high in all three counties at that time.

TABLE 6: KEWEENAW PENINSULA, TOP THREE INDUSTRIES IN 1994 IN TERMS OF EARNINGS

Primary Economic Sectors in Terms of Earnings in 1994				
State/County	Industry and Percent of Total Earnings	Industry and Percent of Total Earnings	Industry and Percent of Total Earnings	Total Earnings (Thousands of \$)
Michigan	Durable goods manufacturing (26.5%)	Services (23.2%)	State and local government (11.6%)	\$153,395,620
Houghton	State and local government (38.7%)	Services (21.4%)	Retail trade (11.8%)	\$324,378
Keweenaw	Services (25.4%)	Federal civilian government (22.5%)	Durable goods manufacturing (16.5%)	\$9,470
Ontonagon	Mining *	State and local government (14.4%)	Nondurable goods manufacturing (14.4%)	\$102,429

SOURCE: Regional Economic Information System, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, May 1996.

\* Not shown to avoid disclosure of confidential information.

TABLE 7: STATE AND LOCAL COUNTY POPULATIONS FOR SELECTED YEARS

State/County	Year	Population*					
		1980	1990	1991	1992	1993	1994
Michigan		9,255,600	9,311,100	9,370,200	9,423,200	9,460,200	9,469,500
Houghton		37,900	35,500	35,800	36,100	36,100	36,400
Keweenaw		2,000	1,700	1,700	1,800	1,800	1,900
Ontonagon		9,900	8,900	8,900	8,800	8,700	8,700

SOURCE: Regional Economic Information System, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, May 1996.

\* Census Bureau midyear population estimates. Estimates for 1990-94 reflect state and county population estimates available as of October 1995.

**TABLE 8: STATE AND LOCAL COUNTY PER CAPITA PERSONAL INCOMES FOR SELECTED YEARS**

State/ County	Year	Per Capita Personal Income					
		1980	1990	1991	1992	1993	1994
Michigan		\$10,154	\$18,237	\$18,703	\$19,739	\$20,601	\$22,192
Houghton County		\$6,863	\$12,634	\$13,400	\$13,615	\$14,517	\$15,264
Keweenaw County		\$6,715	\$14,586	\$15,364	\$15,305	\$15,052	\$15,985
Ontonagon County		\$7,511	\$13,758	\$14,460	\$14,951	\$15,604	\$16,591

SOURCE: Regional Economic Information System, Bureau of Economic Analysis, Economics and Statistics Administration, U.S. Department of Commerce, May 1996.

**TABLE 9: SELECTED MAJOR EMPLOYERS IN HOUGHTON AND KEWEENAW COUNTIES, JUNE 28, 1993**

Employer	Number of Employees
Michigan Technological University	1,191
Copper Country Mental Health	322
Portage Health Systems (formerly Portage View Hospital)	321
Houghton County Medical Care	238
D & N Bank	198
Keweenaw Memorial Medical Center (formerly Calumet Public Hospital)	189
Suomi College	178
Mead Corporation	170
Calumet-Laurium-Keweenaw Public Schools	170
Upper Peninsula Power Company	163
Houghton/Portage Township Schools	159
K-Mart	154
Hancock Public Schools	133
Western Upper Peninsula District Health Department	121
Herman Gundlach	103

SOURCE: Keweenaw Peninsula Chamber of Commerce.

TABLE 10: FULL AND PART-TIME EMPLOYEES BY MAJOR INDUSTRY FOR 1994 (NUMBER OF JOBS)

Industry	Houghton County	Keweenaw County	Ontonagon County
Farming	198	0	143
Agricultural Services, Forestry, Fishing, and Other <sup>a</sup>	(D) <sup>b</sup>	(D) <sup>b</sup>	76
Mining	(D) <sup>b</sup>	(L) <sup>c</sup>	(D) <sup>b</sup>
Construction	880	(L) <sup>c</sup>	162
Manufacturing	935	88	620
Transportation and Public Utilities	440	(D) <sup>b</sup>	132
Wholesale Trade	289	(L) <sup>c</sup>	83
Retail Trade	3,437	147	743
Finance, Insurance, and Real Estate	755	(L) <sup>c</sup>	139
Services	4,181	179	(D) <sup>c</sup>
Federal Government, Civilian	151	73	79
Military	131	(L) <sup>c</sup>	22
State and Local Government	4,295	99	643
Total	15,790	619	4,490

SOURCE: Regional Economic Information System, Bureau of Economic Analysis, Economics and Statistics Administration, U. S. Department of Commerce, May 1996.

a "Other" consists of the number of jobs held by U.S. residents employed by international organizations and foreign embassies and consulates in the United States.

b (D) Not shown to avoid disclosure of confidential information.

c (L) Fewer than 10 jobs. Estimates are included in totals.

TABLE 11: LABOR FORCE PROJECTIONS

County	Item	Fiscal Year 1991 7/91-6/92	Fiscal Year 1992 7/92-6/93	Fiscal Year 1993 7/93-6/94
Houghton	Labor Force	15,675	15,775	15,900
	Employment	14,175	14,250	14,400
	Unemployment	1,500	1,550	1,550
	Unemployment Rate	9.5%	9.7%	9.4%
Keweenaw	Labor Force	700	700	700
	Employment	575	575	600
	Unemployment	100	100	100
	Unemployment Rate	15.7%	16.0%	15.6%
Ontonagon	Labor Force	3,700	3,750	3,800
	Employment	3,325	3,300	3,350
	Unemployment	375	450	450
	Unemployment Rate	10.0%	11.8%	11.7%

SOURCE: *Annual Planning Information Report 1993*, Western Upper Peninsula Service Delivery Area.

## TRANSPORTATION/ACCESS

The Keweenaw Peninsula is accessible from the major population centers of the Midwest (table 12). Although the Keweenaw Peninsula is connected by a network of national, state, and local highways to the rest of the country, it still remains somewhat isolated by its geography and climate, especially during the winter season.

Primary access to the Keweenaw Peninsula is via U.S. 2 from the east, U.S. 41 and 141 and U.S. 45 from the south, and U.S. 2 from the west. Michigan Route 26 and U.S. 41 traverse the length of the peninsula. Vehicle access from lower Michigan is via Interstate 75 and the Mackinac Bridge. The Keweenaw is accessible to Canadian travelers via Sault Ste. Marie and via Duluth, Minnesota/Superior, Wisconsin. Access by air is available at the Houghton County Airport, which is midway between the two park units

TABLE 12: MILEAGE FROM KEWEENAW PENINSULA TO MAJOR URBAN AREAS

Urban Area	Mileage
Duluth, MN	210
Minneapolis, MN	340
Green Bay, WI	215
Milwaukee, WI	340
Chicago, IL	425
Detroit, MI	570

SOURCE: The Keweenaw Tourism Council