

Glen Lake Sanatorium
County Road 4 at County Road 67
Minnetonka and Eden Prairie
Hennepin County
Minnesota

HABS No. MN-133

HABS
MINN
27-MINKA,
1-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Denver, Colorado 80225-0287

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GLEN LAKE SANATORIUM

HABS No. MN-133

Location: County Road 4 at County Road 67 in the cities of Minnetonka and Eden Prairie. Hennepin County, Minnesota.

USGS: Hopkins Quadrangle
UTM Coordinates: Zone 15, 463010 Easting, 4971060 Northing
463200 Easting, 4971400 Northing
463520 Easting, 4971400 Northing
463600 Easting, 4970650 Northing
463400 Easting, 4970820 Northing

Present Owner: Hennepin County

Present Occupant: Vacant

Present Use: None

Statement of Significance: Glen Lake Sanatorium was an early tuberculosis treatment facility in Hennepin County, Minnesota. It is situated in what originally was a rural area, in accordance with the accepted siting for such facilities. Development of the site began in 1913, and the first patient was admitted in early 1916. The complex represented a break from the design of previous tuberculosis sanatoria in the use of large hospital-type buildings rather than smaller cottage-type buildings.

Project Statement: This recording project was undertaken as a mitigation measure prior to the demolition of the campus structures. Funding was provided by Hennepin County.

The field work, measured drawings, historical reports, and photographs were prepared under the direction of Robert Mack of Macdonald and Mack Architects, Ltd., under contract with Hennepin County. Historical research and narratives were prepared by Deanne Ziebell and Charlene Roise of Hess, Roise and Company under subcontract to MacDonald and Mack Architects. Architectural descriptions were prepared by David Heide. Jerome Mathiason undertook the photography, also under a subcontract.

PART I. HISTORICAL DATA

Date of Construction: 1913 (East Cottage) to 1931 (Northeast Wing)

Architect: Sund and Dunham

Historical Narrative:

The first tuberculosis "sanatoria" were located in Europe, where infirmaries were established as early as 1791 to care for victims of the mysterious disease. At that time, many believed that certain ethnic groups were predisposed to the disease, and that the best treatment consisted of rest in a healthful climate. When Robert Koch discovered the tubercle bacillus in Germany in 1882, and demonstrated that the disease was contagious, physicians began to realize the value of isolation in preventing the spread of "the white plague." In 1885, Edward Livingston Trudeau opened the first modern sanatorium in the United States at Saranac Lake, New York, and sparked a nationwide "Sanatorium Movement."¹

Tuberculosis, also known in the nineteenth century as consumption, catarrh, and phthisis pneumonia, became a concern of the Minnesota State Board of Health as early as 1872. During that year, the board sent a questionnaire to physicians as part of its investigation of the climate's effect on diseases of the lungs and air passages.² It was only after Koch's discovery in Germany that treatment became a priority. The board began to consider building a state sanatorium in 1898. The first tuberculosis commission was appointed in 1901; after visiting "nearly every sanatorium from Canada to North Carolina and from Maine to California," they recommended construction of a facility in Cass County, on Leech Lake near Walker.³ The State Legislature authorized building a state sanatorium on this site in 1903, and four years later, the Minnesota State Sanatorium (Ah-gwah-ching) opened. Private groups

¹Information on the early history of tuberculosis from Donald C. Balfour, "The Medical Contribution of Glen Lake Sanatorium in the Fight Against Tuberculosis," included in Report of Glen Lake Sanatorium 1938 (Oak Terrace MN: Glen Lake Sanatorium, 1938), 143; and Philip D. Jordan, The People's Health: A History of Public Health in Minnesota to 1948 (St. Paul: Minnesota Historical Society, 1953), 267-68. For biographical history on Trudeau, see Rene and Jean Dubos, The White Plague: Tuberculosis, Man, and Society (New Brunswick, NJ: Rutgers University Press, 1987), 177-81; and Trudeau's An Autobiography (Philadelphia: Lea & Febiger, 1916).

²Jordan, 266; and Hennepin County Sanatorium Commission, Glen Lake Sanatorium, Oak Terrace, Minnesota (Minneapolis, 1961), 3.

³For full description, and justification of the commission's choice (which also reveals the extent of what they knew about treatment for tuberculosis at the time) see J. Arthur Myers, Invited and Conquered: Historical Sketch of Tuberculosis in Minnesota (Minneapolis: Webb Publishing Company, 1949), 398-99.

in Hennepin County also contributed to the anti-tuberculosis effort, and within a few years, Pokegama and Thomas Hospital (among others) were functioning private sanatoria.⁴

Despite these advances, it was feared that Ah-gwah-ching would not be large enough, and public health officials advocated a statewide system of county facilities to halt the disease.⁵ The legislature authorized counties to establish sanatoria in 1909, and appropriated \$500,000 to help fund construction in 1913. Fourteen county institutions eventually opened, becoming the main centers for treatment and control of tuberculosis in the state.⁶

Glen Lake 1913-1941

Hennepin County wasted no time after funding was approved, appointing three men to a County Sanatorium Commission in 1913. After considering a location near the University Hospital on River Road, the commissioners purchased land in the village of Oak Terrace, near Lake Minnetonka and the County Farm for Boys. The area was hilly and tree-covered, a landscape favored for tuberculosis treatment.⁷ That same year, construction began on the first four buildings of the facility: East Cottage, the Heating Plant, the Laundry Building, and the Administration Building. On 4 January 1916, East Cottage welcomed its first patient. The next year, West Cottage opened, doubling Glen Lake's capacity to 100 beds. Even before West Cottage was finished, however, the commission realized that large-scale expansion was necessary if the facility was to serve the needs of the community. With the number of people on the waiting list equal to the number of patients in the cottages, commissioners began to plan for an eventual 300-bed expansion. They consulted with sanatorium administrators in Chicago and Milwaukee, and even with Saranac Lake, who all advised against continuing with a cottage-type facility because of the difficulties the separate buildings presented in treating non-ambulant patients. The commissioners decided to expand Glen Lake with hospital-type facilities, housing a large number of patients in buildings with several floors. This marked a break with traditional sanatorium facilities, which had all been constructed similar to Trudeau's Saranac Lake cottages.

⁴Jordan, 280; and Hennepin County Sanatorium Commission, 3. Pokegama, in Pine City, opened in 1905; Thomas Hospital was located adjacent to Fairview Hospital in Minneapolis and opened in 1907. Others are mentioned in Myers, 410.

⁵For a more complete discussion of the difficulties faced by H.M. Bracken, the executive secretary of the Minnesota Board of Health, see Jordan, 269-77.

⁶Jordan, 280-81. One state, one city and two private sanatoriums were also functioning by 1918, according to Myers. "Since that date," he wrote in 1949, "no new institution has been constructed (except by the Veterans' Administration)." (Myers, 415.)

⁷See Myers, 398-99. For a description of area as a "Little Switzerland," see "Sanatorium for Child Patients Formally Opens," Minneapolis Sunday Tribune, 14 May 1922, 8; and Feike Feikema, Boy Almighty (St. Paul: Itasca Press, 1945), 321-22.

By the time the commissioners were ready to begin construction, World War I was underway, and federal or state assistance with funding was difficult to obtain. After numerous delays, a 100-bed Infirmary Building opened in 1921. By this point, Glen Lake had reached its originally planned maximum capacity of 200.⁸

In 1922, a Children's Sanatorium for 60 children was built northwest of the other buildings. Also called a "preventorium," this \$160,000 building was a gift from the Citizens' Aid Society. This foundation, set up by George H. Christian before his death in 1918, gave the building in memory of Lenora Hall Christian, Christian's wife. She became involved in the planning for a children's sanatorium after a son died of tuberculosis. The Christian family had a long history of philanthropy with the tuberculosis crusade. They funded many projects before extensive public treatment was available, including the salary of the first tuberculosis nurse in Minneapolis in 1903, a summer camp for children in 1906, and Thomas Hospital in 1908. The Children's Sanatorium reflected the treatment methods of the day with its large, open, south-facing porches. Here, children could bask in the sun and breathe the fresh (and often cold) air.⁹

Again, the commission realized that Glen Lake needed to be enlarged. "Long before the administration building was ready," Administrator Ernest S. Mariette wrote, "it became very evident that a much larger institution than was originally contemplated, would have to be provided if the Sanatorium was to meet the needs of the community." However, the legislature authorized Hennepin County to issue only \$1 million in bonds, instead of the requested \$1.5 million. The commissioners let contracts for only part of the planned projects, and asked the legislature for an additional \$750,000. That money was granted, but even with an extra \$100,000 from county tax coffers, plans for two doctors cottages and a proposed wing on the nurses' building had to be scratched.¹⁰

Despite these omissions, the 1924 expansion tripled the size of the facility, increasing the capacity to over 600 patients and making Glen Lake one of the largest tuberculosis sanatoria in the nation.¹¹ East and west wings were added to the 1921 Infirmary Building, which was converted into a new Administration

⁸Information on early construction from "Sanatorium for Child Patients Formally Opens," 8; "192-acre Glen Lake Sanatorium Just Cottage & Tent 34 Years Ago," Minneapolis Star, 3 March 1950, 28; Hennepin County Sanatorium Commission, 3; Ernest S. Mariette, "Glen Lake Sanatorium--Its Growth and Development," Minnesota Medicine 9 (March 1926), 117; and Mariette, "Glen Lake Sanatorium (Hennepin County)," included in the Minnesota Advisory Commission's Report of the Advisory Commission of the Minnesota Sanatorium for Consumptives (N.p., 1924?), 100-108.

⁹"Sanatorium for Child Patients Formally Opens," 8.

¹⁰Mariette, "Glen Lake Sanatorium (Hennepin County)," 104-105. An overall plan included in this report shows the sites where future buildings were to be placed. It is evident that with Glen Lake's construction history, plans had to be elastic in case funding was withdrawn.

¹¹Hennepin County Tuberculosis Association, Twenty-Five Years of Fighting Tuberculosis in Minneapolis and Hennepin County, 1903-1928 (Minneapolis: Hennepin County Tuberculosis Association, 1928), 48.

Building. A dining hall and an auditorium were housed in a building that connected the old Administration Building (now the Service Building) to the new Administration Building. Living quarters (with nearby garages) were constructed for the nurses, doctors, staff, and the superintendent. Other additions to the grounds, including a power plant, a sewage disposal plant, an ice-making plant, and a 750-foot well, were constructed in order to care for all of the new patients.¹²

All of these buildings were designed by the Minneapolis architecture firm of Sund and Dunham. Engelbret H. Sund was born in Norway in 1880, and formed a partnership with Arthur Barrett Dunham sometime after the latter graduated from the University of Illinois in 1911. The firm specialized in designing hospital facilities and institutions. They were responsible for at least ten of Minnesota's fourteen county sanatoria, of which Glen Lake was the largest and most innovative. The Hennepin County Sanatorium Commission commented in a 1940-41 report that: "E.H. Sund . . . was not afraid to abandon the ideas of the cottage sanatorium which was the common vogue at that time and to embark on a new field of hospital construction for a sanatorium, thus setting the example which has been followed with slight modification of details by many other communities."

Since the Sund and Dunham office was located in the same Minneapolis building as the engineering firm of Rose and Harris, the two partnerships often worked together, as they did on Glen Lake's Power Plant. The grounds were designed by Morell and Nichols, who were known as the landscape architects in the Twin Cities in the 1920s, and were highly respected. Their plans included vegetable and flower gardens near the Superintendent's Cottage, play meadows for the children, and a landscaped mall leading to the main buildings.¹³

During the 1920s, important developments were also occurring inside Glen Lake's walls. The X-ray department was organized in 1921, greatly improving diagnostic procedures. This made possible the first chest surgery, a pneumothorax. This operation, by artificially introducing air into the pleural cavity, collapses the diseased lung and thus stimulates the formation of scar tissue. The tuberculosis lesions were thought to heal much more readily with this procedure. The Occupational Therapy, Outpatient, Dental, and Laboratory departments were all organized during this period as well.

By 1927, demand for beds was so great that the administration was forced to increase room occupancies and use porch areas for beds as Glen Lake strained to accommodate more than 700 patients. That same year, Glen Lake became the first tuberculosis sanatorium in the world to be approved by the American College of Surgeons. This distinction confirmed what had already been recognized by many: that Glen Lake was a superior medical facility, served by some of the most well-respected doctors and staff in the state.

¹²Glen Lake Sanatorium, Report of Glen Lake Sanatorium 1940-41 (Oak Terrace MN: Glen Lake Sanatorium, 1941), 127.

¹³Information on Sund and Dunham from Rolf Anderson, "Minnesota State Hospital for Mental Diseases, Moose Lake, Carlton County, Minnesota," National Register Nomination, March 1992, Section 8, page 11; and Glen Lake Sanatorium, Report 1940-41, 7.

The last major construction project at Glen Lake began in 1931, when Sund and Dunham designed a wing for the main building's northeast corner. Known as the Vocational Building, and later as the Education Wing, the new structure added labs and operating rooms, as well as more space for the vocational and occupational therapy programs. It was dedicated to Henry Hall Christian, a son of George and Lenora Christian.

Mainly because of education campaigns and the establishment of sanatoria, the patient census declined at Glen Lake after 1931 and never again reached 700. By 1934, public expense patients at other hospitals were moved to Glen Lake, and by 1941, three floors in the main building and one floor of the Children's Sanatorium were closed.¹⁴

Glen Lake 1942-1962

New medical treatments caused a steady decline in the number of patients and a reduction in the average length of stay after 1941. Glen Lake began the clinical use of streptomycin, the first effective drug against tuberculosis, in 1944. Streptomycin, along with the 1952 introduction of isoniazid (isonicotinic acid hydrazide), revolutionized care of tuberculosis around the world. A survey of the state's tuberculosis facilities in 1953 recommended that Glen Lake remain open, without needing to make significant improvements, noting that: "The physical facilities of [Glen Lake] are superior, and the sanatorium's excellent program of care and treatment has achieved international recognition." As a result of the declining tuberculosis admissions, however, East and West Cottages were closed for patient care in 1955.¹⁵

By the late 1950s, it was evident that the primary focus of Glen Lake would change, especially after utilization studies were commissioned in 1956 and 1959.¹⁶ The watershed year was 1959: the Children's Building and several floors in the main building were closed for patient care, and the County Sanatoria Law was amended, permitting Glen Lake to accept non-tuberculosis patients. Also that year, Administrator Russell H. Frost was forced to resign amid allegations of nepotism, waste and financial mismanagement. In 1961, the legislature authorized Hennepin County to lease Glen Lake to the state welfare department for \$1.00 a year. This effectively resulted in the formation of two separate institutions, Glen Lake State Sanatorium and Oak Terrace Nursing Home. These "new" institutions opened in 1962 after extensive remodeling of the main buildings.

¹⁴Glen Lake Sanatorium, Report 1940-41, 8.

¹⁵Minnesota, Tuberculosis Facilities Commission, Tuberculosis in Minnesota (St. Paul, 1953), 22.

¹⁶Hennepin County Sanatorium Commission, 6.

Glen Lake After 1962

Glen Lake functioned as a nursing home, caring for the elderly and the mentally ill until it closed in 1991. In the meantime, other organizations used parts of the facility. Tenants included the Cooperative School Rehabilitation Center for retarded adolescents, established in 1965 and in operation until 1978; Alanon, a program for the families of alcoholics; and Nexus, a rehabilitation program for released felons. The last tuberculosis patients were transferred to general hospitals in 1976, when Glen Lake ceased operating as a tuberculosis sanatorium. In June 1991, Oak Terrace Nursing Home closed when the state ended its lease arrangement.¹⁷

In effect, the sanatorium achieved its founders' goals. By isolating tuberculosis sufferers and improving treatment methods, the incidence of the disease declined to the point where the 600-bed facility was obsolete. The aging of Glen Lake mirrored a transformation in the patient population. When the facility opened, the typical patient was a young woman in her teens or early twenties; by 1959, the typical patient was a man in his sixties, on the fringe of society.¹⁸

Unlike many county sanatoria in Minnesota, Glen Lake remains intact and retains its historical integrity. However, despite efforts to find a feasible reuse, the facility is now vacant and slated for demolition.

¹⁷Agency outline for Glen Lake, in State Archives notebook, Minnesota Historical Society, St. Paul; and Rolf Anderson, "Glen Lake Sanatorium Slated for Demolition," Preservation Matters 9 (January 1993).

¹⁸"Glen Lake 'San' Observes Anniversary: Synonym of Rest, Recuperation 45 Years," Hennepin County Review, 4 May 1961, 3.

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings:

Morell and Nichols. General Plan of Arrangement of Grounds, Glen Lake Sanatorium, Oak Terrace, Minnesota. February 1925. In Glen Lake Subject Files, Box 2, State Archives, Minnesota Historical Society, St. Paul.

Sund and Dunham. Floor Plans for Glen Lake Buildings. In Glen Lake Subject Files, Box 2, State Archives, Minnesota Historical Society, St. Paul.

B. Early Views:

Many early photographs included in files for Glen Lake, State Archives, Minnesota Historical Society, St. Paul. (Boxes 115.H.11.10(F) and 109.H.16.3(B))

C. Bibliography:

1. Primary and unpublished sources:

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2. Secondary and published sources:

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D. Likely Sources Not Yet Investigated:

The minutes for the Hennepin County Sanatorium Commission have not been located at the Hennepin County Government Center, the Hennepin County Archives, nor at the Minnesota Historical Society. In addition, no secondary source has included them in a bibliography. They may have been destroyed. If discovered, they might shed additional light on Glen Lake's development.