

= Dowse Sod House =

The William R. Dowse House , more commonly known as the Dowse Sod House , is a sod house in Custer County in the central portion of the state of Nebraska , in the Great Plains region of the United States . It was built in 1900 and occupied until 1959 . After a long period of neglect , it was restored beginning in about 1981 , and opened as a museum in 1982 .

The house is listed in the National Register of Historic Places , as " an excellent example of the sod house phenomenon " , and as one of the few surviving sod houses in Nebraska .

= = Sod houses on the Great Plains = =

The Homestead Act of 1862 was a major factor in opening the Great Plains to white settlement . Under the provisions of the Act , settlers could obtain title to a quarter @-@ section ( 160 acres , or 65 ha ) of land for a nominal fee , provided that they built a house , made certain improvements , farmed the land , and occupied the site for at least five years .

Settlers in the regions east of the Missouri River had found ample trees with which to build log houses . The eastern quarter of Nebraska was also well supplied with timber . However , as settlers moved further west , they encountered the treelessness that had led Major Stephen H. Long , exploring the region in 1820 , to label it the " Great American Desert " . Especially before the arrival of the railroad , the cost of importing building materials was prohibitive ; and many homesteaders had spent all that they had on farming equipment , and could barely afford the filing fees for their land claims .

There is no consensus among scholars regarding the origin of sod construction on the Plains . Some maintain that the inspiration came from the earth lodges of the local native peoples , including the Omahas and the Pawnees . However , these earth lodges were circular in cross @-@ section , and built upon heavy timber frameworks . It has also been suggested that the idea of building with sod came from European immigrants , either Russian @-@ Germans , who are known to have built rammed earth dwellings in the Plains , or immigrants from the British Isles , particularly from Ireland , where turf houses were built with stone foundations and frames to support the turf . None of these closely resembled the unframed sod @-@ block houses built in the Midwestern United States ; but they might have engendered the idea of building with earth .

A simple sod house could be built in about a week , and for a cost of less than five dollars . Cost was not the only advantage . The thick walls provided insulation against summer heat and winter cold ; the latter was particularly important in light of the dearth of firewood on the plains , which forced the early settlers to burn corncobs , twisted grass , or dried buffalo dung . The walls also withstood prairie winds better than framed walls ; even sod houses struck by tornadoes generally survived with no worse damage than the loss of the roof , leaving the walls standing . Sod houses also provided a safe refuge against prairie fires , especially when surrounded by a plowed and back @-@ burned firebreak .

The sod house was not without its disadvantages , however . Initially , at least , most had dirt floors , which had to be sprinkled with water to abate dust . To protect against invasion by rodents , insects , and snakes , the interior walls were often shaved smooth and plastered with lime , or with a mixture of local clay and sand or ashes ; the lower portions of the exterior walls could also be reinforced , with planks or concrete if they were available , or with a second layer of sod to thicken them . Leaky roofs were also a problem ; to protect the inhabitants and the interior furnishings from falling water , dirt , and vermin , it was common to make a ceiling of a white muslin sheet tacked to the walls . Since windows were one of the most expensive elements of a sod house , pioneers on a budget were often forced to make do with windows that were small and few in number ; a light muslin ceiling and plastered walls helped to illuminate the house by reflecting daylight through the interior .

Sod houses continued to be occupied and built even after wood for construction became available . A number of contemporary photographs show occupied sod houses adjacent to frame barns and outbuildings . The Dowse house was built in 1900 , although the Burlington and Missouri River Railroad had reached the nearby town of Comstock in 1899 , and a lumber company was available

there . During the Great Depression of the 1930s , several Custer County farmers who had lost their homes relocated to vacant land and built sod houses there . As late as 1940 , a sod house was built near Dunning , Nebraska .

The sod houses of Custer County are particularly well documented , owing to the efforts of Solomon Butcher . An itinerant photographer , Butcher conceived the idea of creating a photographic history of pioneer life in Nebraska . Between 1886 and 1912 , he produced nearly 3 @, @ 500 glass plate negatives ; over 1 @, @ 800 of these were taken in Custer County , and over 1 @, @ 500 show sod houses . Butcher 's photographs are now owned by the Nebraska State Historical Society .

= = = Sod construction = = =

In constructing a sod house , a site had to be chosen that was close to good sources of sod . All prairie grasses were not alike for purposes of construction sod ; the best were those with a strong and dense root network to hold the blocks together . Preferred species included buffalo grass ( *Bouteloua dactyloides* ) , slough grass ( *Spartina pectinata* ) , and big bluestem ( *Andropogon gerardi* ) .

At the house site , the grass was removed . Often , the soil was excavated one to two feet ( 30 to 60 cm ) below ground level ; this reduced the height of the walls , and thus the amount of sod that had to be cut . The ground that would form the house floor was moistened and then tamped with a fencepost to flatten and harden it . Footings were rarely laid , due to the cost or unavailability of material .

Before the sod blocks were cut , the grass was mown short or burned off . At times , the surface was scored with a cutter or disc ; the blocks could then be removed with a spade . This approach , however , tended to produce rough and non @-@ uniform blocks , which complicated the task of laying them in even courses . Blocks could also be cut with a plow . An ordinary plow could be used , given considerable skill and care on the part of the operator ; however , the mouldboard tended to turn over and break up the blocks ; even if intact blocks were produced , they were generally not of uniform thickness . In the late 19th century , a modified plow designed specifically for sod cutting was invented : this " grasshopper plow " replaced the mouldboard with a set of adjustable rods , which allowed the operator to cut a uniform strip of sod three to six inches ( 7 @. @ 6 to 15 @. @ 2 cm ) deep and 12 to 18 inches ( 30 to 46 cm ) wide . This strip could then be cut into blocks . The dimensions of these depended , among other things , on the strength of the builder ? the blocks were dense , and had to be sized so that the builders could lift them . Typical blocks cut with a grasshopper plow might measure four inches ( 10 cm ) deep by 12 inches ( 30 cm ) wide by 24 to 36 inches ( 60 to 90 cm ) long .

In building the walls , the sod blocks were laid one course at a time ; each course was completed before the next was begun . Walls were generally two or three wythes thick ; the vertical joints were staggered to avoid creating a direct path through the wall for wind and vermin . To bind the wythes and increase the stability of the wall , every second , third , or fourth course was laid crosswise .

Early sod houses were roofed with sod . The weight of the roof helped to keep it from blowing away in strong winds , and the insulating power of such a roof helped to moderate temperatures within the house . However , the sod roof 's weight also posed the risk of collapse if there was insufficient wood support for it , and sod roofs tended to drip water , mud , and insects . In later sod houses , for which the material was more readily available , roofs were shingled or covered with tarpaper , boards , or metal .

= = History = =

The first homestead established in Custer County was that of Lewis R. and Sarah M. Dowse , who in August 1873 occupied a site on the Middle Loup River . Lewis Dowse was born in 1845 in Sherborn , Massachusetts . After service in the Civil War , he moved to Iowa in 1868 . In the following year , he married Sarah Wagner , who was born in 1854 in Auglaize County , Ohio . In 1871 , their oldest child , William R. Dowse , was born . The family moved to Nebraska in 1873 ,

accompanied by Sarah Dowse 's parents ; the latter remained in Loup City while their daughter and son @-@ in @-@ law established their homestead , then moved to Custer County in 1874 . The Dowses initially occupied a dugout on their claim ; in 1874 , they built a slab house , using material brought from Loup City . There , they raised nine children , including an adopted daughter .

### = = = Building the house = = =

In October 1900 , William Dowse married 18 @-@ year @-@ old Florence Murphy , daughter of John and Leah Thrist Murphy . At the beginning of that year , he was living in a dugout just south of his parent 's farm ; by April 1900 , a sod house was under construction , to be occupied by the couple . John Murphy was an experienced builder of sod houses , and the William Dowse house was built with his aid and that of neighbors and friends .

The new house was located northwest of the homestead of the senior Dowses . William Dowse did not homestead the site . The property was originally acquired in 1884 by Kate Prescott , under the provisions of the Timber Culture Act of 1873 ; it is not known whether Prescott had built a dwelling on the parcel .

The blocks for the house were cut from bluestem sod , probably obtained from a site very close to the house . The grass was mown to a height of 1 / 4 inch ( 6 mm ) ; the blocks were then cut with a grasshopper plow , to dimensions of about 24 inches ( 60 cm ) long by 16 inches ( 40 cm ) wide by 3 ? 4 inches ( 8 ? 10 cm ) thick . Blocks were laid with the grass side down , in a one @-@ course common bond ; the walls were battered , measuring 27 inches ( 69 cm ) thick at ground level and 20 inches ( 51 cm ) thick at the top .

The plan of the house was L @-@ shaped , with stems projecting to the east and to the south . It occupied a rectangle measuring 29 feet by 31 feet 3 inches ( 8 @-@ 8 m by 9 @-@ 5 m ) ; each stem of the L was approximately 20 feet ( 6 m ) wide . The single @-@ story house was topped with a steeply @-@ pitched wood @-@ shingled hip roof .

The interior was divided by wood partition walls into three rooms . A small bedroom occupied the northwest corner , at the angle of the L. The eastward projection contained a large kitchen and hall ; the southward projection , a somewhat smaller parlor and dining room . A steep stairway led up to an unfinished attic . The floors were packed dirt ; the ceiling was muslin tacked beneath boards . The interior of the sod walls was plastered with a mixture of clay , straw , and hog hair .

Two east @-@ facing doors led into the house . One , at the end of the eastern projection of the L , led into the kitchen @-@ hall . A second , on the east side of the southern projection , led from the space enclosed by the arms of the L into the parlor @-@ dining room . Two windows faced northward : one from the kitchen @-@ hall , one from the bedroom . Two more faced southward : one from the kitchen @-@ hall and one from the parlor @-@ dining room . A single window faced eastward from the kitchen @-@ hall . Windows were flush with the exterior walls of the house . The window wells were beveled , widening toward the interior of the house ; this admitted more light to the house . The configuration of the west wall is not known , since the wall was removed in 1924 .

### = = = Living in the house = = =

William and Florence Dowse raised five sons , born between 1905 and 1919 : Harold , William Jr . , Philip , Curtis , and Kermit . After occupying a crib in his parents ' bedroom , each son moved up to the attic room , where they slept on straw ticks .

As the family expanded , the house was enlarged and improved . In 1915 , the muslin ceiling was replaced with plaster . Two years later , wood tongue @-@ and @-@ groove flooring was installed . In 1924 , two additions were made . The space between the two arms of the L was framed in and covered with a shed roof ; the resulting southeast corner room was left unfinished and used as a laundry room . The west sod wall of the house was removed completely , and a second shed @-@ roofed addition constructed to extend the house to the west . Both additions were clad in wooden shingles . William Dowse , Jr. and his wife Inez occupied the western addition .

At some point , the house was wired for electricity . Plumbing was never installed .

The last major alteration to the house took place in 1935 , when it was realized that the projection of the eaves was not sufficient to protect the house 's walls from erosion . At that time , concrete was applied to the lower portion of the exterior sod walls : boards were placed against the wall and concrete poured into the space between board and wall , then allowed to dry before the boards were raised and the process repeated .

The durability of the house was tested in the early 1940s , when a tornado struck the farmstead . All of the farm 's outbuildings were destroyed ; but the house escaped undamaged , apart from a sawhorse blown through one of the windows .

William Dowse lived in the house until his death in 1951 . Florence Dowse remained for another two years before moving to Comstock ; she died in 1969 . The final occupants of the house were the family of William Dowse , Jr . , who remained there until 1959 , the year before his death .

= = = Restoring the house = = =

After the departure of the last occupants , the house stood neglected for over two decades . Fire damaged the roof and shingles were blown off , allowing leakage ; all of the windows and doors were broken or destroyed . With nothing to bar their entrance , cattle passed through the house , leaving a foot ( 30 cm ) of manure on the floors .

In about 1981 , descendants of William and Florence Dowse decided to restore the house . The project was spearheaded by two of the Dowse sons , Philip and Curtis , and supported by the Comstock Community Club . In the course of several years , over \$ 6 @, @ 000 was raised for the project . A fence was built to exclude cattle from the house . The roof was repaired and reshingled . The exterior walls were reinforced and repaired with new sod blocks , cut with a horse @-@ drawn plow about 600 feet ( 200 m ) from the house ; additional concrete coating was applied in places . The porch walls were re @-@ shingled , and doors and windows were replaced . Inside the house , the manure covering the floors was removed , and the wood flooring repaired ; the plaster on the walls was patched or replaced , up to 20 layers of old wallpaper was removed , and new wallpaper applied in places . Pioneer @-@ era interior furnishings such as a cast @-@ iron stove were installed . In May 1982 , the house was opened as a museum .

In 1986 , the house was listed in the National Register of Historic Places , under the name " William R. Dowse House " . In the form nominating it for the register , it was described as " an excellent example of the sod house phenomenon " , and as one of the few surviving sod houses in the state . For their efforts in restoring the house and opening it to the public , Philip and Curtis Dowse received the Nebraska State Historical Society 's Nebraska Preservation Award in 1990 . In the 21st century , the Dowse Sod House is promoted as a tourist destination by the village of Comstock and by the Nebraska Division of Travel and Tourism .