In the winter of 1816, soon after the first settlers arrived in Sheffield, religious meetings commenced at the home of Captain Jabez Burrell. They consisted of reading a sermon, singing, and a prayer. As there was no minister in the settlement, Mr. Hanchett of Ridgeville, who worked for Captain Burrell, usually offered the prayer. The first sermons were preached the next year by Alvan Hyde, son of the Reverend Dr. Hyde of Berkshire County, Massachusetts. He was commissioned by the Berkshire Missionary Association to preach in the new settlements of the Western Reserve, including Sheffield.

In the fall of 1817 the citizens of Sheffield constructed a log building at the crest of the hill overlooking French Creek valley to serve as both a church and schoolhouse. On May 1, 1818, the Reverend William Williams, a missionary from the Connecticut Missionary Society, assisted by Alvan Hyde, formed a Congregational Church for the community. The thirteen charter members included: Nathan Stevens and wife, Mary Burrell [wife of Captain Jabez Burrell] and her daughters Julia & Sarah, Martha Smith [widow of Capt. Joshua Smith] and her son Douglas, Henry Root, Preston Pool, William Day, William Smith, Samuel B. Fitch, and Daniel Perry.
In 1852 the congregation built an elegant Greek Revival-style Congregational Church on East River Road on the site of the original 1818 log church. The church featured a graceful bell tower capped by a sharp spire directed toward the heavens. A long row of horse barns was also constructed behind the church for the use of the parishioners. On May 1, 1898 the Sheffield Congregational Church celebrated its 80th Anniversary. Pastors who ministered to Sheffield’s spiritual life were honored: the Reverends White, Walker, Gough, Right, Shaffer, Delong, Baldwin, Barnard, Deidrich, Kelsey, and Hadley. Professor G. Frederick Wright of Oberlin College, husband of Hulda Maria Day who was the granddaughter of John Day, delivered the celebration address.

Thereafter, with the death of community elders and emigration of many of their children to western states, the membership of the Congregation Church at Sheffield Center dwindled to six families. The congregation could not afford a pastor and for two years Edward Burrell, grandson of Jabez, read a printed sermon to keep up the service.

In 1903 the Sheffield Congregational Church held its final service, a funeral for Edna Crehore, age 18. The congregation was merged into Lorain Congregational Church and the Sunday school moved to Vincent Congregational Church west of the Black River. When Sheffield celebrated its 100th Anniversary in 1915, festivities were held at the old church, which had been restored for the occasion. The celebration started with a launch ride up the Black River to the Hyer Farm, then a jitney bus ride from the top of hill to French Creek Hollow for a program, followed by dancing in the grove [later to become James Day Park]. Later, Orville Root, grandson of Henry Root, called to order a general assembly held at the old Congregational Church where letters were read from past residents. The reunion concluded with a picnic on the lawn of the Harry Burrell home that was attended by more than 300 residents, former residents, and county friends.

With no further services, the dilapidated old church was torn down in the 1930s, but some pieces of the foundation can still be seen in the French Creek Reservation of the Lorain County Metro Parks, across East River Road from the Burrell Homestead.