

WELLS CREEK WATERSHED  
Prehistory - (Dobbs, pg 28)

Geologic Formations -

This area of southeastern Minnesota is essentially a plateau of Paleozoic sedimentary rocks. The earlier layers are sandstone, (Cambrian and early Ordovician) overlaid with limestone and dolomite (Ordovician and Devonian). Upon this plateau, the area was dissected by tributaries to the Mississippi River during the early Pleistocene. (3 million years B.P.). The crest of the hill tops are all approximately the same elevation and record an erosion surface of Tertiary age.

During the Wisconsin glaciation, the Mississippi (River Warren?) was a major course for glacial meltwaters. The retreat of the Des Moines lobe, which reached its maximum extent 14,000 years B.P., caused the most dramatic and rapid evolution of the Mississippi River. The main outwash course of the retreating ice is marked by a large terrace at an elevation of 800 feet near the confluence of the Cannon and Mississippi Rivers.

The 800 foot terrace marks a regional drainage divide between the Mississippi and Hudson Bay drainage areas. It was between this low divide and the retreating ice front that Glacial Lake Agassiz was formed. During this drainage phase, the Mississippi River underwent a series of downcutting stages, each recorded as a terrace lying above the present river level. The two prominent terraces in the Pool 4 area occur at elevations of 800 and 740 feet (pg 28-29)

"The Pleistocene dissection of the Tertiary erosion surface and the nature of the Paleozoic sedimentary rocks found within the area, resulted in the characteristic topography that typifies the region. Limestone and dolomite units are relatively resistant to erosion and usually form steep cliffs adjacent to tributary stream valleys, while the shale and some of the sandstone units are more easily eroded, forming more gentle slopes. The resultant topography is composed of steep-sided hills with rounded or rolling crests. Local relief is commonly 200-400 feet." (Dobbs, pg 28)

"In considering Pool 4, it is essential to remember that until quite recently (ca. 2,500 years ago), the entire Pool above the Chippewa Delta was covered by Lake Pepin. Testimony to the Lake's ubiquitous presence is provided by the deep blue-green lake clay deposits that are 3 meters or less under almost all of the more recent alluvial materials." (pg 81)

## Native Populations -

12,000 BP - Human Immigration into Upper Midwest

Early history poorly known, thought that populations of this area interacted most closely with areas to the east and south.

Late-glacial and early post-glacial (Paleo-Indian) thought to be present in the Pool 4 region, but no actual evidence has been found.

Earliest spear points in Pool 4 region are associated with the Plano complex - 9,000 - 10,000 years ago.

The Archaic Stage (9,000 - 2,500 years ago) is well documented in other areas of the Midwest, almost completely unknown in the Pool 4 area. This was a time of re-adaptation to the post-glacial environment.

The Woodland Stage (2,500 - 900 years ago) includes the development of ceramic vessels, earthen burial mounds and other earthworks and has several substages. There are more than 24 documented Woodland sites in and around Pool 4, but none have been excavated. Some of the earthen mounds in the area may be from this time, but only a few have been professionally examined and those contained artifacts from the more recent Mississippian or Oneota cultures.

The Mississippian (1050 - 1300 AD or 950 - 700 years ago) tradition (Silvernale Phase) expanded into the Upper Mississippi Valley. More than 80% of the known sites around Pool 4 are associated with these cultures. All the large village and mound groups are found on the extensive glacial outwash terraces adjacent to the pool.

This episode lasted about 200 years (pg 15) and encompassed rapid change in the Native American culture. These changes included the adoption of intensive horticulture (maize), bow and arrow technology, ceramics, food preparation and storage advances.

These advances lead to the transformation of the Late Woodland traditions to semi-sedentary villages of greatly increased population densities. Also developed during this time was a pattern of long-distance trading with other Middle Mississippian groups to the south and to the west in the eastern Dakota's. The ethnic identity is unknown, although suggested to be ancestors of the Ioway and Oto.

The center of the Mississippian culture was in southwestern Illinois at the site of Cahokia. The two other predominant sites are Mill Creek in northwestern Iowa and the Red Wing Locality of southeastern Minnesota. The Red Wing Locality is at the confluence of the Cannon and Trimbelle Rivers with the Mississippi and encompasses 58 square miles. It contains more than 2,000 mounds and earthworks, eight major village sites, and dozens of smaller sites. This locality is the northernmost center of Mississippian interaction. "We hypothesize that the Red Wing Locality functioned as the northern 'gateway' to the eastern margin of the plains, the

wild rice beds of northern Minnesota, and the extensive native copper deposits of the western Lake Superior region." (Dobbs pg 18)

Emerging at about the same time as the Mississippian, (1200 A.D., 800 years ago) the Oneota culture is found along the margins of western woodlands and eastern plains. It is thought to have persisted until the time of European contact in the mid-17th century, but there are no known Oneota sites around Pool 4 that post-date 1300 A.D. Both the Oneota and Silvernale have evidence that riverine resources, particularly fish, were a significant part of their diet.

After roughly A.D. 1300, the intense occupation of Lake Pepin region appears to decline and little evidence of major human use until the Santee Dakota moved into the area in the seventeenth century. It is indicated that the Dakota lived particularly around the head of Lake Pepin from the early 1600's until their displacement in the early 1860's.

NOTE - It is thought that some of the areas with high potential for archeological finds have been covered with dredge spoil - in particular Diamond Island is suspected to be one of the locations where 18th or 19th century Dakota villages were located. The island is covered with at least 10 feet of dredge spoil.

Potential of different landforms for archeological finds. (pg 33-38)

**Deltas** - The prominent deltas within Lake Pepin are those of the Mississippi, Rush and Isabella Rivers and Wells Creek, while numerous small deltas have formed at the mouth of smaller creeks and coulees. The small deltas at the mouth of perennial and intermittent tributaries have relatively steep slopes. During large storms coarse sand, gravel and rock fragments are transported to the lake. Although these deltas are small, they are relatively permanent features and have changed little in morphology over the last 100 years.

These deltas abound with natural resources. They have diverse plant and animal communities and are protected from the severe winters by the steep sides of the valley. They may have been preferred occupation sites in winter, as well as hunting and foraging areas.

**Terraces** - The two terrace levels are ideal locations for habitation sites. They provide access to the uplands as well as the river and provide an excellent view for defense as well as level building sites. Several large settlements are known, but recent intensive agriculture has undoubtedly disturbed some of these sites.

**Uplands** - The crests of hills are known to be the location of earthworks in the Red Wing area. They may also have been the site

of ceremonial summer camps. There is potential for finding cultural materials in these sites.

**Streams and slopes** - Steep slopes separating the stream valley from the uplands would not generally be considered areas of high potential for archeological finds, but in Pool 4 there are several exceptions. Quarrying sites occur in the limestone, small caves and rock shelters are present and petroglyph sites have been found.

(Detail of site #21GD150 - located on Long Point and thought to be an historical outlet of Wells Creek - 1988 survey found several ceramic sherds, flake (Dobbs))

1983 Project Reconnaissance Survey:1983 by Jan E. Streiff has several sites listing artifacts in the Wells Creek Delta and also several mound groups in close proximity to Wells Creek. (pgs 60-68).

European Influences -