

## THE “TRAGEDY” BEGINS; THE “COMEDY” AWAITS.

Dr. Stacy Leroy Daniels, “President *pro tem*, Benzie Co. River Improvement Co.” (\*)

*“The world turns softly, not to spill its lakes and rivers. The water is held in its arms and the sky is held in the water. What is water, that pours silver, and can hold the sky?” – Hilda Conkling, Poems by a Little Girl, 1920.*

*“The top of Crystal Lake was too far above the beach!” – “A.J.” (Archibald Jones, Jr.)*

Prelude: In former times, there is a large inland lake in northwest Lower Michigan surrounded by high hills falling sharply toward the water’s edge largely devoid of beach. Its crystalline clear waters, deep and cold, reflect shades of green and blue. Tall pines and scattered maple and beech forest its slopes. Its surroundings are devoid of human habitation except for a few scattered cabins and small farms. Late summer haze fills the air. Plants are in full flower, their leaves not yet turning many-hued. All is serene, perhaps a bit pensive, with fall approaching. On the southeastern shore of the lake, a small creek runs downstream to the big inland sea. This outlet sometimes overflows with spring freshets and winter runoff, but now is a time when its lazy flow has subsided to a mere meandering trickle.

But behold! Near the scene is a bustle of activity. Brawny men with axes and shovels engage in slashing brush and downing trees to clear a new pathway along the creek. With horse-drawn scrapers, some are dredging deeply into the virgin soil to construct some sort of ditch. Others are building a makeshift low-crested dam of logs and rocks to hold back the lake waters, pent up for millennia, from entering the channel. But to what purpose – a canal, to divert water and permit passage, but for whom and for what?

After the day’s activities have concluded, the teams of horses are led away to be fed. Most of the weary men trudge homeward to their suppers. They seem intent to return on the morrow to finish their endeavors. Two men remain behind to watch over the surroundings. Nothing extraordinary is expected. The watchmen build a small fire for camaraderie as the nights are beginning to cool with impending fall. The wind is calm, and the lake is peaceful, except for a few gentle waves lapping its shoreline. The fire is the only sign of civilization within sight. It is the forest primeval. The men commune with Nature. The stillness is broken only by a few bird cries and an occasional fish splashing in the shallows. As the shadows darken, the men settle in their bedrolls comforted by the wind rustling in the towering pines.

But Nature is fickle and prone to be ever-changing. The wind stirs the branches in the overhanging trees. It begins to pick up as the night progresses. Clouds form and scud invisibly across the dark sky of a new moon. The lapping waves increase and wash more strongly against the meager beach. By the early morning hours the wind is blowing strongly across the long reach from the northwest directly at the shore before the dam. The waves become whitecaps with foam billowing at their crests. Their force is felt as they begin to crash upon the narrow shore. They advance onward toward the little dam.

Relentlessly the waves climb the beach and reach the bulwarks of the dam. They begin to beat at the logs of the retaining wall and its supports. Small rivulets wash grains of the sandy soil from between the cracks causing small leaks to appear. Around the ends of the structure other rivulets are washing away clods of the adjoining earth. Now these small rivulets become steady streams, each eroding away the foundation of the dam and carrying the suspended soil downstream in an increasing flow.

A watchman arises to conduct an inspection. He becomes alarmed at developments. He awakens his fellow and together they strive to add logs to strengthen the dam. They shovel more soil to stem the flow. Their struggles are of little avail. The onslaught of the crashing whitecaps become too much for

the meager temporary dam to resist. First a log at one end gives way and then another. The waters engulf the structure and surge over the top. The flow becomes more than the structure can restrain and it collapses entirely and washes downstream. The waters of the lake, freed from their confinement, seize the opportunity to rush downstream in a rapturous torrent toward the inland sea!

The capricious whitecaps triumph! The blood is let! The *"Tragedy"* begins! The *"Comedy"* awaits ... Will the waters of the Lake ever be conserved in such a changing environment?

~~~~~  
Postlude: The participants in this tragicomedy did not realize the full significance nor its epochal nature, It had such a permanent bearing upon the subsequent development within the Crystal Lake Watershed of Benzie Co., MI, that it is now considered a major incident of the County's early history! In 1873, Archibald Jones formed the Benzie Co. River Improvement Co. to build a canal from Crystal Lake to Lake Michigan intending to lower its level to create "water-lots" and operate a paddle-boat to transport settlers and goods. His efforts were thwarted when whitecaps from a sudden storm breached a temporary dam at the Outlet before a permanent set of locks could be installed. The level of the Lake dropped precipitously by 17 ft as a torrent of water (56 Bgal in 3 weeks) flushed downriver almost washing the port city of Frankfort into Lake Michigan! The Lake lost 21.5 % of its original volume of 242 Bgal as some 2,000 A of surface became beach! Compared to other dam breachings this release was 15 X that of the Johnstown (PA) flood of 1889 (3.8 Bgal in 1 hr), "the worst inland flood in U.S. history"; and 62 % of the Tittabawassee River (Central MI) flood of 2020 (90 Bgal in 2 days), "a 500-year event"!

The canal was left "high-and-dry" - a sad beginning (the *"Tragedy"*); a wide sandy beach was exposed "low-and-wet" where none had existed - a happy ending (the *"Comedy"*). Archibald Jones? *"He builded better than he knew!"* This dual event led to development of a modern recreational community: founding of the Village of Beulah, coming of the railroad, installation of telegraph and telephone, lakeside resorts, and cottages, a network of perimeter roads and trails. The beach supports ~1,100+ cottages, numerous resorts, several church camps, a yacht club, and a State Boating Access Site. The former railroad bed is now a rail-trail to the City of Frankfort. The *"Crystal Lake Canal System"* remains an unfulfilled dream.

Remnants of the event are forever preserved in geographical features around the greater watershed. Some features, once being quite different in appearance before the viewscapes, were transformed by the epochal event, and have since become engrained within living memory. Others are still slowly evolving, but are virtually invisible except to the discerning eyes of geologists and limnologists. Even after a passage of 147 years, the *"Tragedy"* is still further transforming into the *"Comedy"* as the landscape continues to slowly evolve along its "new" shoreline, within the depths of the Lake, and in the surrounding wetlands. Previously submerged terraces have become sandy beach; peripheral marshes have become lakefront property. Lake sediments, dormant since the last glacial period, have been resuspended and redistributed; and underwater sandbars are still reforming. Nearby wetlands are slowly subsiding as organic peat oxidizes to carbon dioxide gas that disperses into the atmosphere.

Except for large-scale Great Lakes shipping, the era of canals about Michigan has passed. A few short inland waterways still connect neighboring water bodies for recreational purposes. Inland lake levels still rise and fall affecting water quality and quantity; animal and plant life; recreational uses; property values; and environmental conditions. We cannot "turn back the tide" of progress, but we must "mind" our lakes by managing their levels. Thus will Crystal Lake be conserved in its changing environment!

~~~~~  
(\* ) Excerpts revised from *"The Comedy of Crystal Lake"* (2015, 496pp) by Stacy Leroy Daniels, which is the sequel to the classic pamphlet, *"The Tragedy of Crystal Lake"* (1922, 17pp) by William L. Case.

## References

Daniels, Stacy Leroy, A Comparison of Flood inundations in Michigan: Perspectives of Historical and Current Hydrological Events Affecting Two Inland Lake Systems: Crystal Lake Watershed and Tittabawassee River Watershed, Conserving Lakes in a Changing Environment, Michigan Inland Lakes Convention, 17 Sep 2020.

Daniels, Stacy Leroy, Debacles, Catastrophes, Disasters, Cataclysms, and the Tragedy-Comedy of Crystal Lake: Consequences of Events Due to Natural Forces and Human Activities, Geological Sciences Section, Michigan Academy of Science, Arts, and Letters, Lawrence Technological University, 26 Sep 2020.