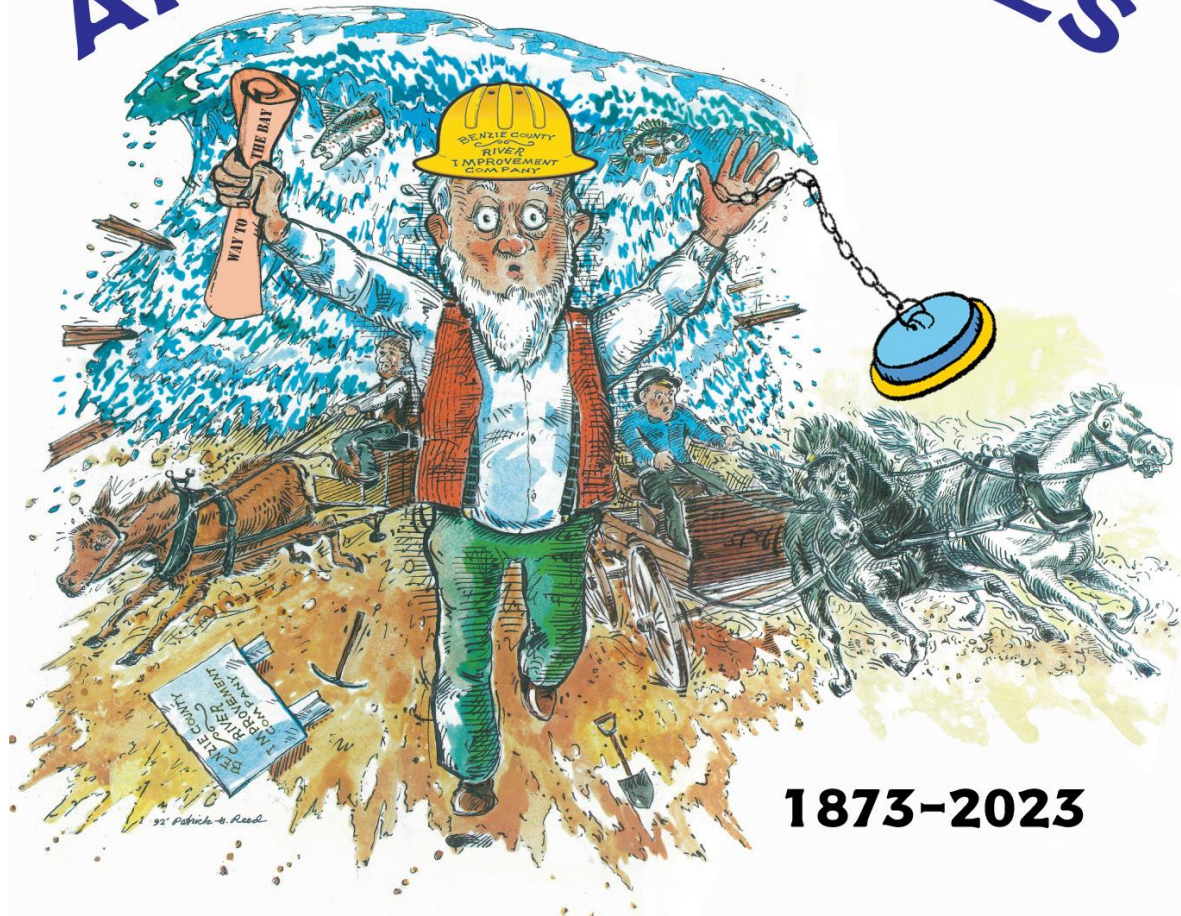


“SESQUI-CENTENNIAL”

THE LOWERING OF CRYSTAL LAKE
BENZIE COUNTY RIVER IMPROVEMENT CO.

ARCHIBALD JONES



1873-2023

www.crystalana.com/sesqui.htm

“¿ A MAN. A PLAN. A CANAL. A BEACH. A PANORAMA ?”

– THE LOWERING OF CRYSTAL LAKE (BENZIE CO., MI) –



**DR. STACY LEROY DANIELS, PRESIDENT *pro tem*,
“BENZIE COUNTY RIVER IMPROVEMENT COMPANY”
BENZONIA ACADEMY LECTURE,
MILLS COMMUNITY HOUSE , THURSDAY, 13 July 2023, 7 P.M.**

“Crystal Lake will always be something special for me, because it symbolizes an emotion that goes beyond time and space.” ... “It (Michigan) is wood and water, golden sand and blue lakes, emptiness and memories and the sort of isolation which it is hard for a city man to come by, these days.” ... “This is good country to come from and it is even better to go back to. It is a land of memories and also a land of escape; a place where you can be utterly idle in more pleasant ways than any other place I know.”

– Bruce Catton, The Real Michigan, Holiday Magazine 22(2), 26-39 (Aug. 1957).

TERSE – VERSE

CANAL	∧	LOCALE
STICKS & STONES	&	ARCHIBALD JONES
WAVES GREAT	≈≈≈	FOR GOD'S SAKE
CRYSTAL LAKE	◁▷	DAM BREAK
LOWER LEVEL	W/	WHAT THE DEVIL
INUNDATE	∞	WATER-GATE
FUTURE CANAL	=	SUPERNATURAL
<u>A BREACH</u>	↔	<u>A BEACH</u>
TRAGEDY	-	COMEDY
1873	150	2023
-- SLD		06/28/23

Lakes: Matters of Perspective

- Lake levels have “ups and downs”.
- Levels of other parameters may change independently.
- Certain parameters can act as environmental “stressors”.



Search ID: jkn0361
*"This lake looked a whole lot bigger
on the map!"*

WHO IS THE "REAL" ARCHIBALD JONES ?



To my fellow Citizens, Visitors, and Friends (*), Greetings ! I invite you to participate in the 150th anniversary of an epochal event. A series of coordinated activities is planned for the summer of 2023 to commemorate the lowering of Crystal Lake in 1873 which continues to have positive effect upon the history and development of Benzie Co., MI.

The true story of Crystal Lake is indelibly inscribed in our collective memories to various degrees. It has been told fully in large books, and abstracted in short articles, in various forms: letters, essays, quotations, poems, songs, puzzles, artwork, maps, photographs, etc. Several vignettes have been excerpted from earlier sources; others are especially prepared for this Commemorative Booklet. Enjoy!

Sincerely, Dr. Stacy Leroy Daniels, “President, *pro tem*, Benzie Co. River Improvement Co. (1873). For more on “SESQUI” events & Commemorative Booklet, go to www.crystalana.com/sesqui.htm

(*) “Lakeie” + “Townie” + “Countie” + “Fudgie” = “Shedie” !

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PROLOGUE

The sun awaits its birth o'er quiet Lake
A glow behind the night, yet to dispense the dark.
The lightening hills, still ghostly, anticipate the dawn
But peace still reigns; no discontent lies within my heart.
And as I stroll along the rippled sands
Peace walks with me – I wait and sigh
For that beckoning voice beneath the ripple of the waves
To tell me, “Be ye still, for God is neigh”.
And so, yet lovely Lake, I pour out forth to you
This message from my soul. No longer ache
Forever after me as I depart this life.
Remember calm and stormy inspiration, Crystal Lake.

-- Stacy L. Daniels, *August 29, 1937 - ()*

DEDICATION

To: Archibald Jones: “the man who (allegedly) pulled the plug at Crystal Lake”, and to his family, and to his contemporaries, the pioneer settlers of Benzie Co., without whom there would be no story;

To: The Case’s: William L., Walter F., Alden B., Leonard L.; and to the Hubbell's and the Bailey's, and to the Rev. Dr. James Barr Walker, and others, for keeping the story “alive”;

To: Many Individuals: who provided “new” story facts and suggestions to the whole of the story;

To: The Citizens of Benzie County: who made suggestions and continue to support the story;

To: The Visitors to Crystal Lake: who appreciate the consequences of the story; and

To: My Family & Friends at Crystal Lake and beyond: who have tolerated the idiosyncrasies of a lakeside curmudgeon !

PROCLAMATION !

Whereas, Crystal Lake is a very large glacial impoundment lake located NW Lower Michigan;

Whereas, said Lake was subject to an anthropogenic event unique among all inland lakes;

Whereas, said event was due to an attempt to build a canal to nearby Lake Michigan;

Whereas, said event resulted in a breaching of its outlet dam;

Whereas, said breaching resulted in the discharge of a voluminous portion of lake waters;

Whereas, said discharge was the largest of its kind in U.S. history for 147 years;

Whereas, the level of the Lake was lowered by twelve feet;

Whereas, the receding waters left behind a significant new beach;

Whereas, some 2,000 Acres of lake surface were transformed into a 21-mile sandy beach;

Whereas, said event led to the founding of the Village of Beulah; the further development of Frankfort, Benzonia; and Benzie Co.; the coming of the railroad and carferries; installation of telegraph and telephone lines; development of lakeside resorts; and construction of cottages, connected by an infrastructure of perimeter roads and trails.

Therefore, now know ye that, we do by these presents proclaim 23 August 2023 be known as:

“SESQUI-CENTENNIAL – the Lowering of Crystal Lake (1873 – 2023)”

Village of Beulah; Village of Benzonia; Village of Elberta; City of Frankfort; County of Benzie; and Townships of Benzonia, Crystal Lake, and Lake; and The State of Michigan.

("8th Annual Cold Creek Bridge Walk - Celebrating 150 Years of the Lowering of Crystal Lake", Monday, 04 Sep 2023)

SYNOPSIS OF THE “PANORAMA” (1/2)

Why tell the story about a singular esoteric unquitous event: the “*Tragedy*” / “*Comedy*” of Crystal Lake? Consider two twin antonyms: “uBiquity” and “uNiquity”, pronounced phonetically as: *you-bik-kwah-tee* and *you-nee-kwah-tee*. A cloud of mosquitos (bugs) in the woods is *ubiquitous* (commonly everywhere at once); the one-of-a-kind that doesn’t seem to bite you at first is *uniquitous* (uncommonly rare)!

All northern Michigan lakes share commonalities: geological histories, physiological features, hydrological behaviors; climatic influences, visual beauties, and recreational pursuits. Our visions are of clear waters and bright sunshine glittering from gentle waves lapping against pristine beaches ringed by wooded hillsides, scented of pine, exuding a spirit of place. We escape the congestion and “hustle-bustle” pace of our cities by vacationing at our special lake to experience carefree living, roughing it, returning to the simple life, and communing with nature.

“The lake vacation bug bites all !”

SYNOPSIS OF THE “PANORAMA” (2/2)

Peculiar to Michigan were needs to improve navigation of shallow tributaries to Lake Michigan by creating “harbors of refuge” and “inland waterways” at Saugatuck, Holland, Grand Haven, Muskegon, White Lake, Pentwater, Ludington, Manistee, Portage, Frankfort, Charlevoix, and Petoskey.

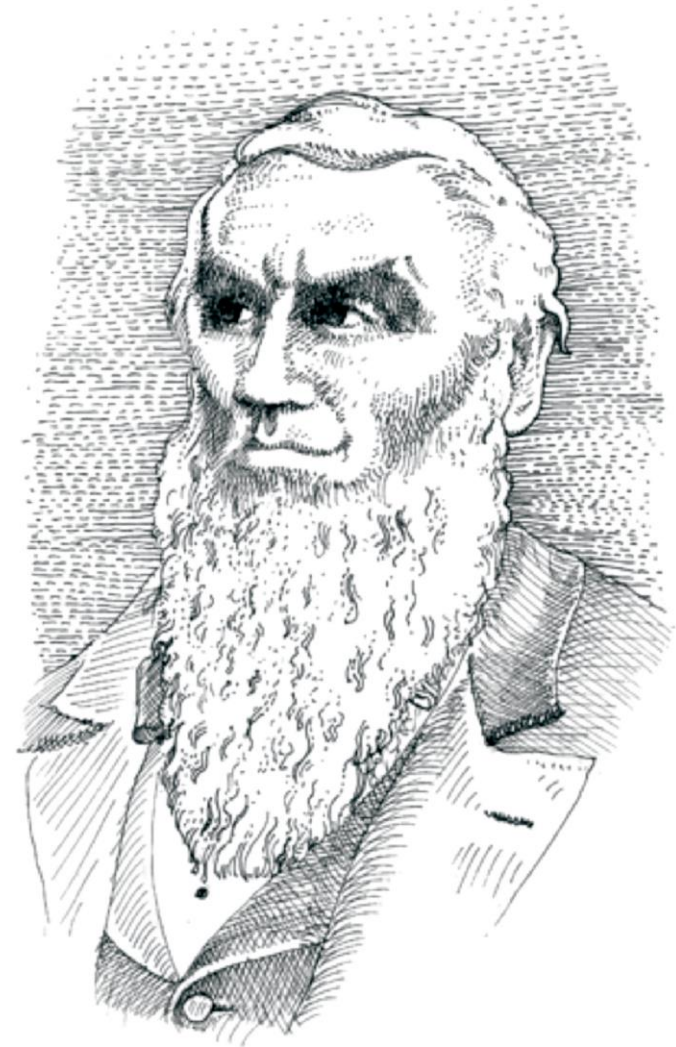
Crystal Lake was lowered during an attempt to build a canal to Lake Michigan. Whitecap waves washed away a temporary dam and its level fell by 17 ft as 56 Bgal of water rushed poured down its outlet. Some 2,000 A of lake became 21 mi of beach. This led to a new panorama: development of Beulah, Frankfort and Benzie Co., and telegraph and telephone, railroads and carferries, and resorts and cottages.

This uniquitous event in 1873 was the largest inundation from an inland lake due to an anthropogenic cause (a dam breaching) in U.S. history for 147 years until surpassed by a larger event in 2020! Archibald Jones, a “bootstrap engineer”, and his Benzie County River Improvement Co., increased the uniquity of Crystal Lake. It is a fascinating true story of a man, a plan, a canal, a beach, and a panorama !

ARCHIBALD JONES

**ARCHIBALD JONES (14 Sep 1811-15 May 1890),
President of the Benzie Co. River Improvement Co.
responsible for the enterprise that resulted in the
lowering of Crystal Lake, August, 1873.**

**Read “THE SAGA OF ARCHCHILD JONES”
(HIS LIFE IN VERSE) (21 stanzas, 84 lines)**



THE ARCHIBALD JONES HOUSE & PARK PLACE HOTEL (CA 1885)



THE BENZIE CO. RIVER IMPROVEMENT CO. (BCRIC) LIVES ON – IN SPIRIT !

**IN
BUSINESS
Since 1873**

Benzie Co. River Improvement Co.

Organized 1873 under the

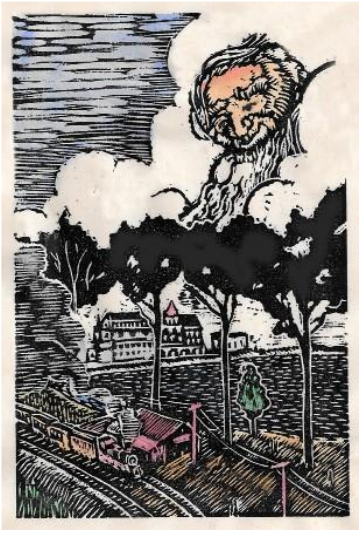
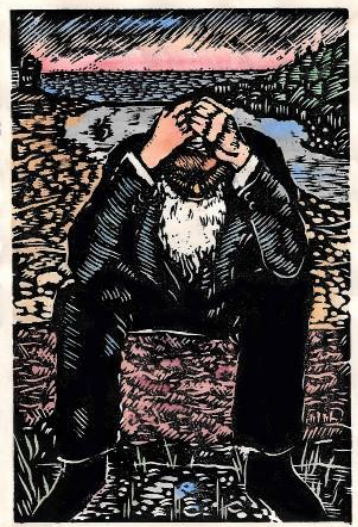
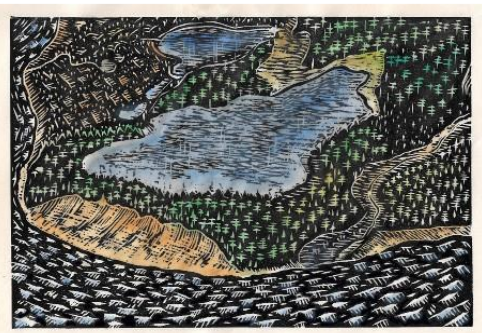


General Law of Michigan

" THE BOTTOM OF THE RIVER WAS TOO CLOSE TO THE TOP OF THE WATER ! "
" THE TOP OF CRYSTAL LAKE WAS TOO FAR ABOVE THE BEACH ! "
" I BULDDED BETTER THAN I KNEW ! " -- " A.J. "

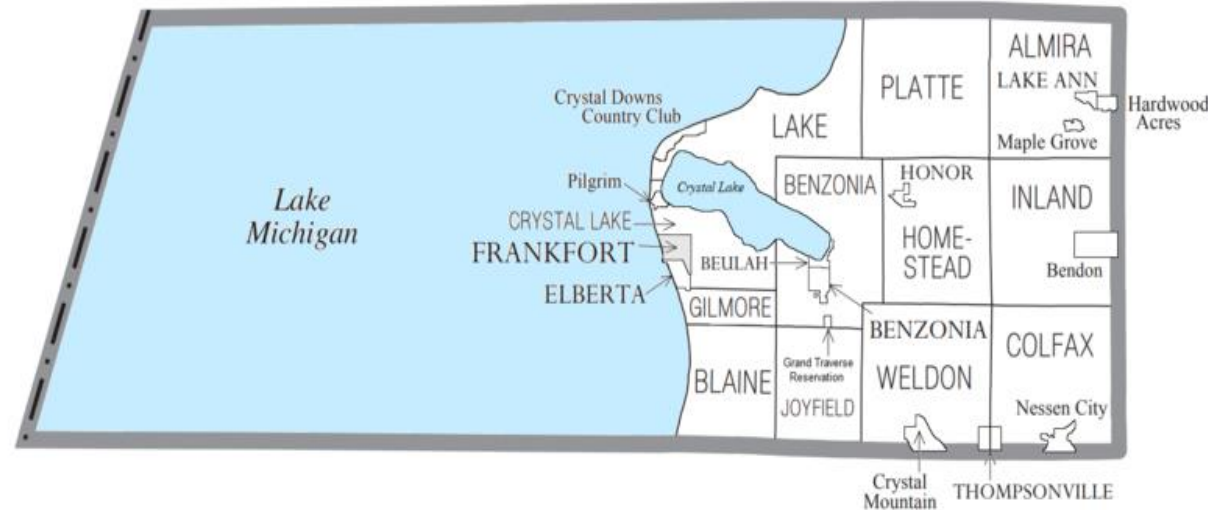


THE STORY IN PICTURES



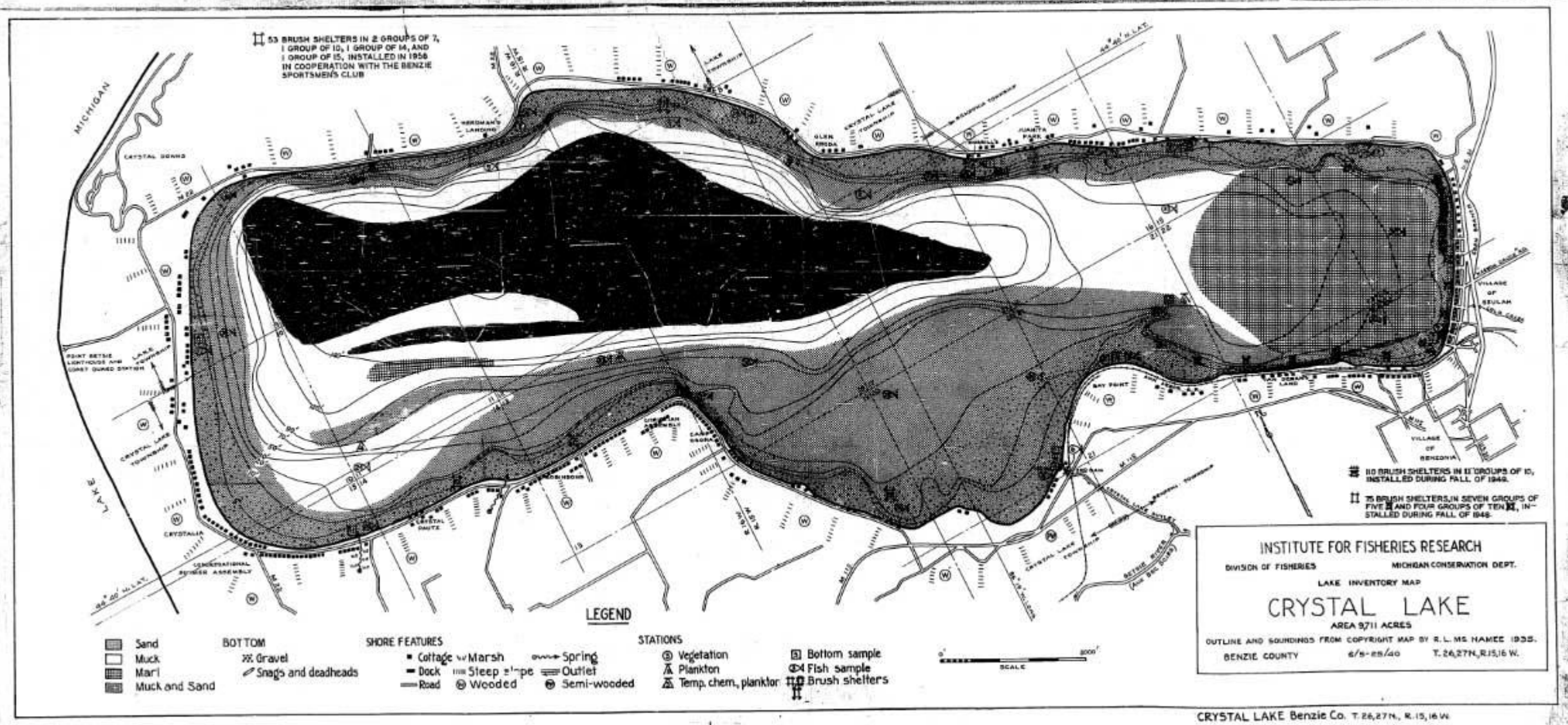
CRYSTAL LAKE: QUANTITIES & QUALITIES

1. Crystal Lake is about *"halfway"* between *"here"* and *"there"*: *"halfway"* between the Equator and the North Pole, and *"halfway"* between the NW corner of the UP of MI and the SE corner of the LP of MI !
2. Benzie Co. encompasses 860 sq mi = 320 sq mi (37%) "Land"+ 540 sq mi (63%) "Lake Michigan" !
3. Crystal Lake Watershed = 43.98 sq mi = 28.52 sq mi (65%) "Land"+15.46 sq mi (35%) "Crystal Lake" !
4. Crystal Lake ranks 3rd (depth); 4th (volume); and 9th (area) of 26,266 inland lakes (≥ 1.0 A) in MI !
5. Lowering Crystal Lake to the level of Lake Michigan in 1873 would have raised the latter ~ 0.3 in !
6. Crystal Lake contains 221,000,000,000 gallons = 678,000 Acre-ft = 0.201 cu mi) (at 600 ft elev.) !
7. All the "Water" in Crystal Lake would cover all the "Land" of Benzie Co. to a depth of 3'-8" !
8. A faucet flowing at 10 gallons per minute for 51 years would lower the top of Crystal Lake one inch !
9. The glacial moraines around Crystal Lake are about twice as high as the Lake is deep $\sim 2 \times 165$ ft !
10. Crystal Lake lost about 7% depth, 8% area, & 15% volume in exchange for a magnificent beach !



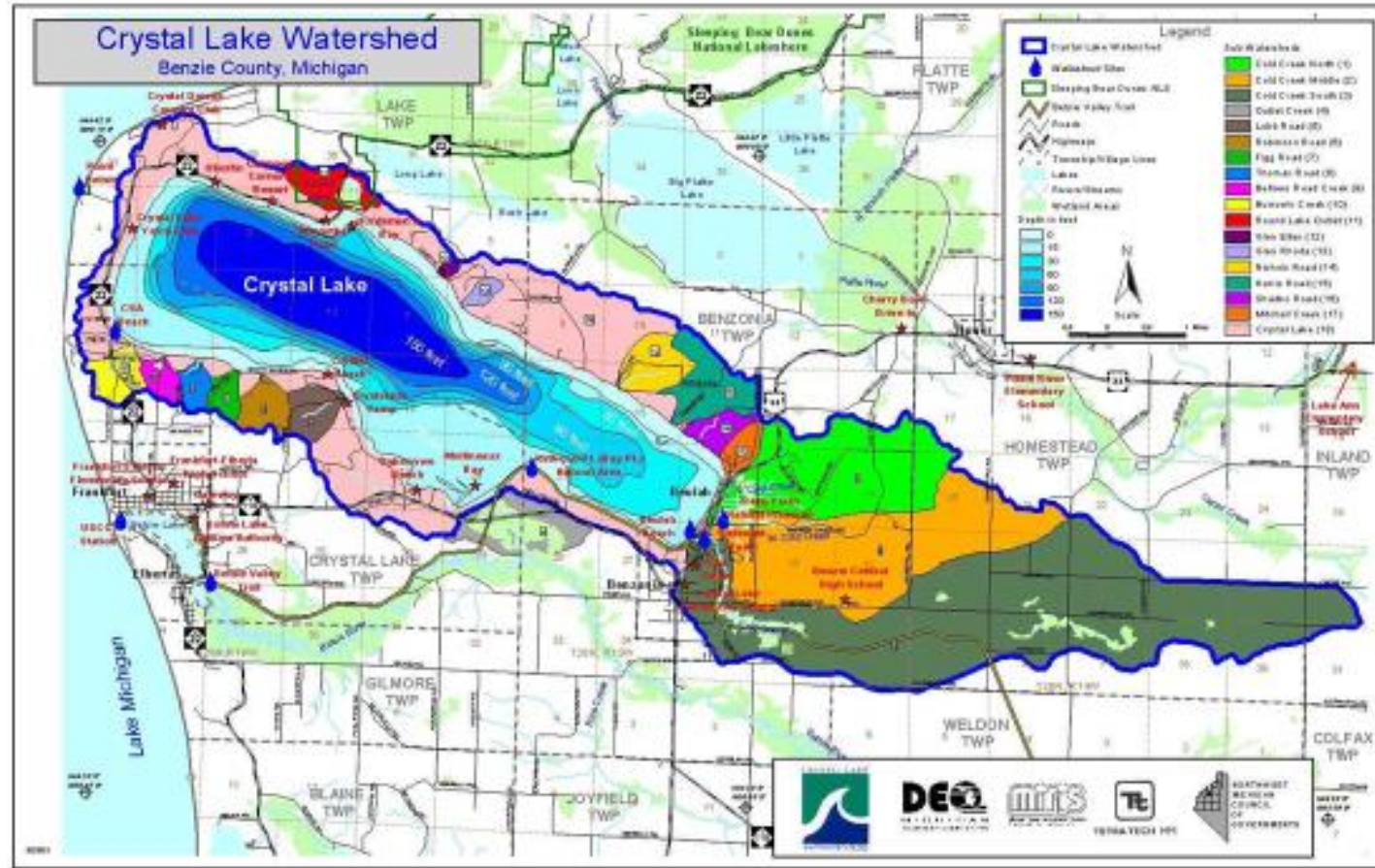
https://commons.wikimedia.org/wiki/File:Benzie_County,_MI_census_map.png

THERE BE MONSTERS ? !



CRYSTAL LAKE & SUBWATERSHEDS

Crystal Lake Watershed



Crystal Lake (Outlet) Watershed HUC 04060104-0305-01-xx, xx = #1 - #17, less #4 (Outlet)

86°20'W

86°15'W

86°10'W

86°5'W

LEAND 25.2 MI

86°W

85°55'W

85°50'W

CRYSTAL LAKE WATERSHED AND BATHYMETRY OF CRYSTAL LAKE

BENZIE COUNTY, MICHIGAN

WITH
HISTORIC CANALS & MODERN FEATURES OF INTEREST

Produced by Dr. Stacy Leroy Daniels,
"President pro tem, Benzie County River Improvement Company, Ext. 1878".
Map Compiled by Trevor Hobbs & Greg Anderson



© 2023



44°45'N

44°45'N

44°40'N

44°40'N

44°35'N

44°35'N

Lake Michigan

CRYSTAL LAKE

CANAL ROUTES

- SOUTH (ATTEMPTED)
- SOUTH (DREDGED)
- NORTH (PROPOSED)
- WEST (CONSIDERED)

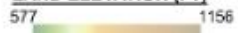
CRYSTAL LAKE LEVELS

- High 1873 (612 FT)
- Low 1904 (595 FT)
- Now 2015 (600 FT)

CRYSTAL LAKE DEPTH (FT)



LAND ELEVATION (FT)



OTHER FEATURES

- CITY
- TOWNSHIP
- VILLAGE
- SBDNL
- PLSS



86°20'W

86°15'W

MANISTEE 24.5 MI

86°10'W

MANISTEE 24.2 MI

86°5'W

86°W

CADILLAC 36.6 MI

85°55'W

85°50'W

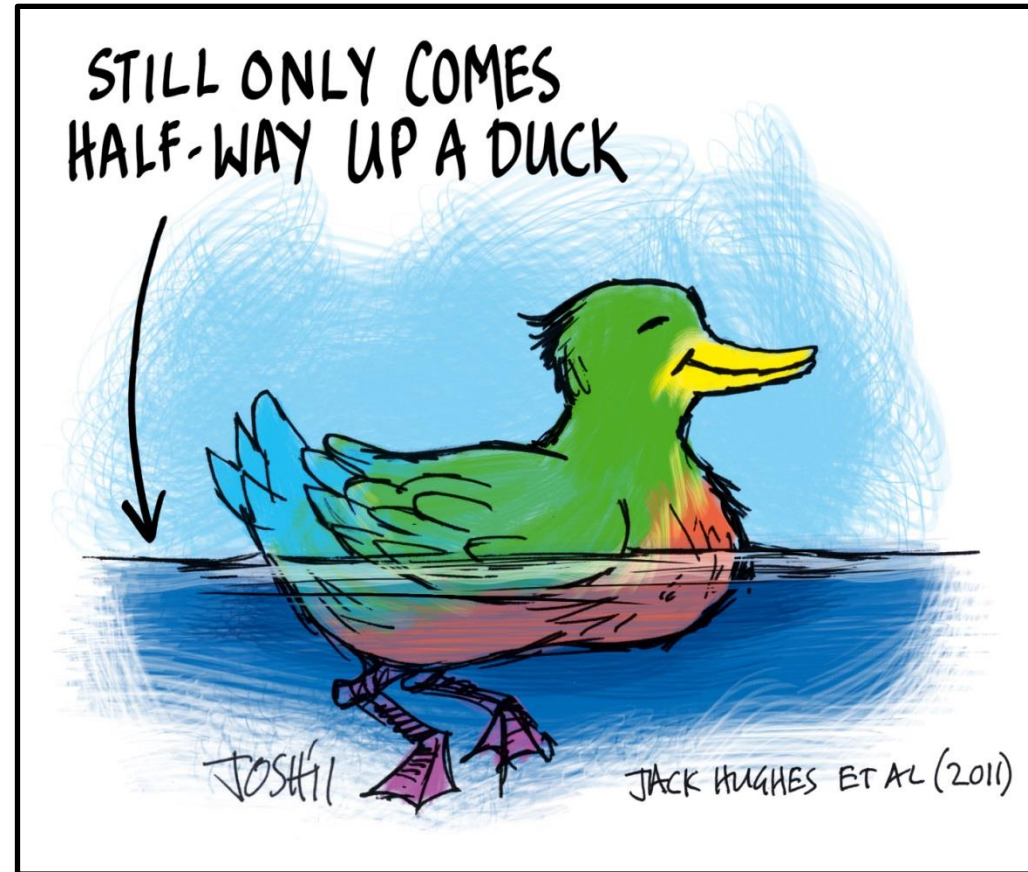
TRAVERSE CITY 25.5 MI

SILENTLY PRAISE THOSE WHO PULL THE PLUG, SENDING YOU CIRCLING THE DRAIN, FOR SOMETIMES THE ONLY WAY OUT IS THROUGH.



**A duckling, circling a nameless drain, seeking a means to escape.
curt-masbruch.pixels.com.(With permission)**

THE LEVEL OF CRYSTAL LAKE



Elevation: 600 +/- 0.25 ft (IGLD1985)
(Summer: 01 May - Oct 31; Winter: 01 Nov - 30 Apr 30)

CREATURE COMFORTS AT CRYSTAL LAKE

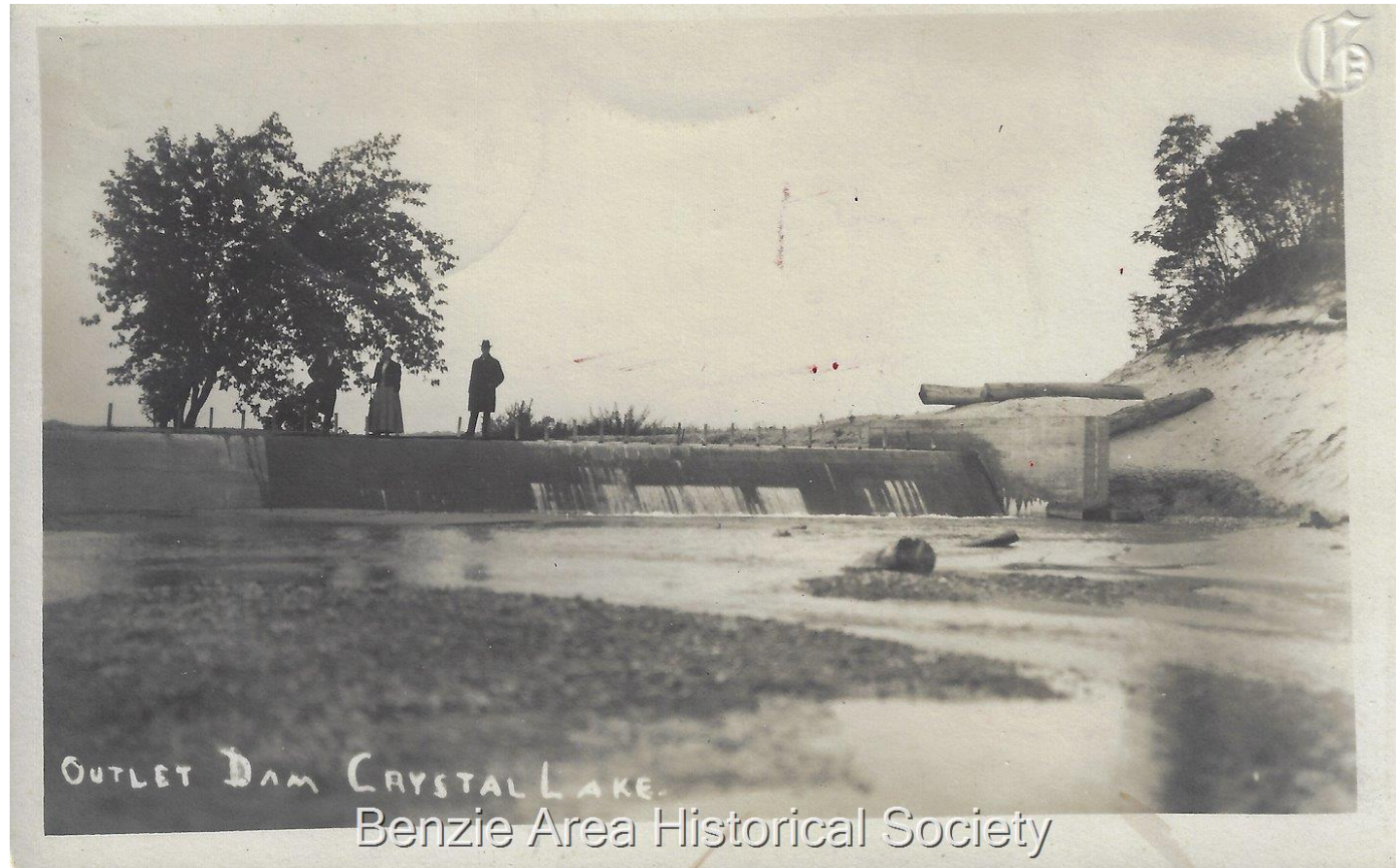


“Winnie”, the author’s dog, fishing for minnows in Crystal Lake.

BCRIC TEAM IN ACTION



THE CRYSTAL LAKE OUTLET: WHERE IT ALL BEGAN



Crystal Lake Outlet Dam (ca. 1912-1913), “The Comedy”, p166.

HISTORICAL MARKER (CRYSTAL LAKE OUTLET)



ARCHIBALD JONES

14 SEPT 1811 - 15 MAY 1890

Archibald Jones (Jr.) was born in Petersburg, NY, into a family of Welsh seafarers and farmers. He worked on the Erie Canal as a young man becoming a "bootstrap engineer". Archibald, his wife Sophia, and eight children migrated to the Midwest during the 1840-1860's as he became engaged in farming, carriage-building, fruit growing, and lumbering. In 1872, he chanced to meet Rev. James Barr Walker, a founder of the Benzonia Colony, who convinced him to move north to Crystal Lake where he founded the Benzie Co. River Improvement Co. His plan for a slack-water canal was ill-fated when the level of Crystal Lake was accidentally lowered in 1873; and his attempt to navigate Betsie River with a paddleboat failed in 1874. He moved to Marengo, IL, in 1877 operating a livery, and on to Emporia, KS, in 1885, engaging in cattle raising and another livery. When asked why his paddleboat failed to perform, Archibald replied, "Well, the real reason was because the bottom of the river was too close to the top of the water". He might have concluded, "The top of Crystal Lake was too far above the beach!"

THIS MONUMENT ERECTED BY THE PEOPLE OF BENZIE COUNTY,
STANDS AT THE ORIGINAL SITE OF THE EVENT.



In 1873, Archibald Jones, Jr., founded the Benzie County River Improvement Company to purchase land and improve water-lots on Crystal Lake; construct slack-water canals between Crystal Lake and Lake Michigan; remove obstructions to navigation; and build a paddleboat to transport passengers and freight. On the morning of 23 August 1873, a storm arose and whitecap waves breached a temporary dam at the Outlet. As a torrent of water was released, the Lake lost a quarter of its area, and its level dropped twenty feet. A 21-mile beach was created making possible the Village of Beulah, the railroad, telegraph and telephone, perimeter roads, lakeside resorts and cottages. This epochal event insured the future of Crystal Lake and Benzie Co. as a prime vacation destination. The lowering of Crystal Lake is both "Tragedy" and "Comedy" - a serious action with a happy ending! This monument to Archibald Jones, "the man who (allegedly) pulled the plug at Crystal Lake": "He Buildded Better Than He Knew", stands near the beginning of the Outlet Canal at the original level of Crystal Lake. Dedicated to the citizens, littorians, and visitors to Crystal Lake, 2014.

THIS MONUMENT ERECTED BY THE PEOPLE OF BENZIE COUNTY,
STANDS AT THE ORIGINAL SITE OF THE EVENT.

ARCHIBALD & SOPHIA JONES MAPLEWOOD CEMETERY, EMPORIA, KS



ARCHIBALD
HUSBAND OF S. JONES
BORN SEP. 14 1811 DIED MAY 15, 1890

“He builded better than he knew.”

SOPHIA
WIFE OF A. JONES
BORN JAN 23, 1817 DIED AUG 10, 1887

WHAT MIGHT HAVE BEEN ? THE CRYSTAL LAKE CANAL !



TO PULL THE PLUG? TO PUT IT BACK?



Dr. Stacy Leroy Daniels (as Archibald Jones) pulling the “Plug” at Crystal Lake.

I've Had It Up to Here !

HIGH 612 FT

NOW 600 FT

LOW 595 FT



HIGH 612 FT

NOW 600 FT

LOW 595 FT

HIGH - NOW (Δ 12 FT) \sim 2.4 x NOW - LOW (Δ 5 FT)

ARCHIBALD JONES: IN LIGNUM VITAE



SPECIAL CREDITS

- **Vicki Carpenter (Crystal Lake Community Business Assoc.)**
- **Jane Purkis (Benzie Area Historical Society)**
- **Carrie Petiprin (BaySide Printing, Inc)**
- **Jessica Walitalo (FieldCrafts, Inc)**
- **Jim Stamm (ATI Consulting)**
- **Chris Howard (Cottage Pros, LLC)**

ACKNOWLEDGMENTS

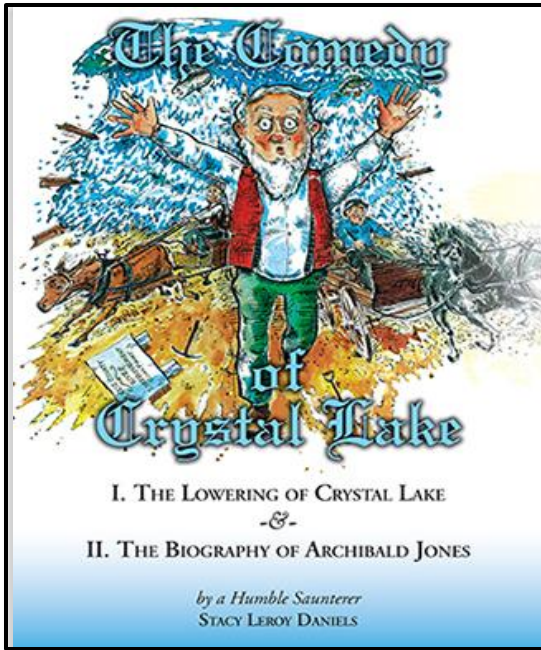
My travels through life are shared by my family, friends, and professional associates, who, intentionally and unintentionally, and perhaps wittingly and knowingly, helped to mold me into the inquisitive person who I became. They set examples of how best to live by sharing experiences, challenges, opportunities, accomplishments - most joyful, some sad. And in myriad, myriad ways, they inspired me to write about the unique environmental history of the Crystal Lake Watershed. I hereby humbly acknowledge them:

- My foremost thanks to: Oscar Lowell and Mary Jesta Daniels, my parents, God-rest, for my very being and nurturing, and for providing me with a living legacy at Crystal Lake;**
- Carol Yvonne Daniels, my dear wife, for her unending patience and understanding, as my quest led me in the pursuit of “Crystal Lake” *trivia*, sometimes “old” and other times “new”, in fact and fancy;**
- Julie, my precious daughter, Tom, my son-in-law, Tommy, Drew, and Brock Cavanaugh, my grandsons, for teaching me what Crystal Lake really means to our family and its future. (I trust someday there will be a “micro-hydro-bio-geo-physico-chemico-environmental engineer” to pass on all our cottage traditions.);**
- Winnie (Nov 1989 – Sep 2004), an awful good dog, always ready to go for a walk, or chase the fish;**
- Many individuals who opened “mental archives” to a wandering, wondering saunterer; and especially;**
- Archibald Jones, who, by causing The Plug to be pulled, transformed the environment of Crystal Lake.**

EPILOGUE

The sun has set, and o'er the quiet lake
His light still lingers, reluctant to depart.
The darkening hills draw close, and over all
Peace reigns, but discontent still fills my heart.
But as I stand alone upon the shore
Peace also comes to me - I seem to hear
A voice amongst the murmur of the waves
Saying. "Be still and know that God is near."
And so, O lovely lake, you gave to me
A message straight from God. And I still take
That message with me as I wander far.
And hope once more to see you, Crystal Lake.

-- Walter F. Case, 4 February 1895 – 06 March 1923



“THE COMEDY OF CRYSTAL LAKE” [Sequel to the classic “Tragedy” (1922)]

The story of Archibald Jones and the attempt to build a canal from Crystal Lake to Lake Michigan in 1873. The dramatic lowering of a very large inland lake and the creation of its sandy beach.

The epochal event that led to the development of
Crystal Lake and Benzie Co.
ISBN 978-0-692-21715-3 | Hardcover | 9” x 12”
496 Pages | 200 Illustrations

Flushed With Pride Press © 2015
3901 Orchard Dr. Midland, MI 48640
C989/750-2653, <http://CrystalLakeComedy.com>

(Proceeds from direct sales to local nonprofits)
BOOK \$ 32 ; WATERSHED MAP \$ 10
SESQUI SHIRTS \$ 10 ; SESQUI BOOKLETS \$ 5



“The Ballad of Archibald Jones” (Song & Lyrics by Doc Stewart)

“THE PANORAMA OF THE LOWERING OF CRYSTAL LAKE” (ca. 1889)



This iconic panoramic photograph typifies the period between the discovery of Crystal Lake by 1822 together with its survey by 1838, and connotes the opening of its pristine wilderness of surrounding moraines, still partially cloaked with forest, to the advances of civilization ! The newly exposed beach was entirely covered with twelve (net) to seventeen (low) feet of water before the level of Crystal Lake was lowered in 1873 in an attempt to build a canal to Lake Michigan “just over the hill” !

“Lakeie”+“Townie”+“Countie”+“Fudgie”=“Shedie”

- We may be permanent or summer residents somewhere within the Watershed**
- around the lakeshore (“Lakies”);**
 - in the neighboring villages (“Townies”);**
 - in the surrounding countryside (“Counties”); or**
 - we may be visitors from somewhere else (“Fudgies”).**

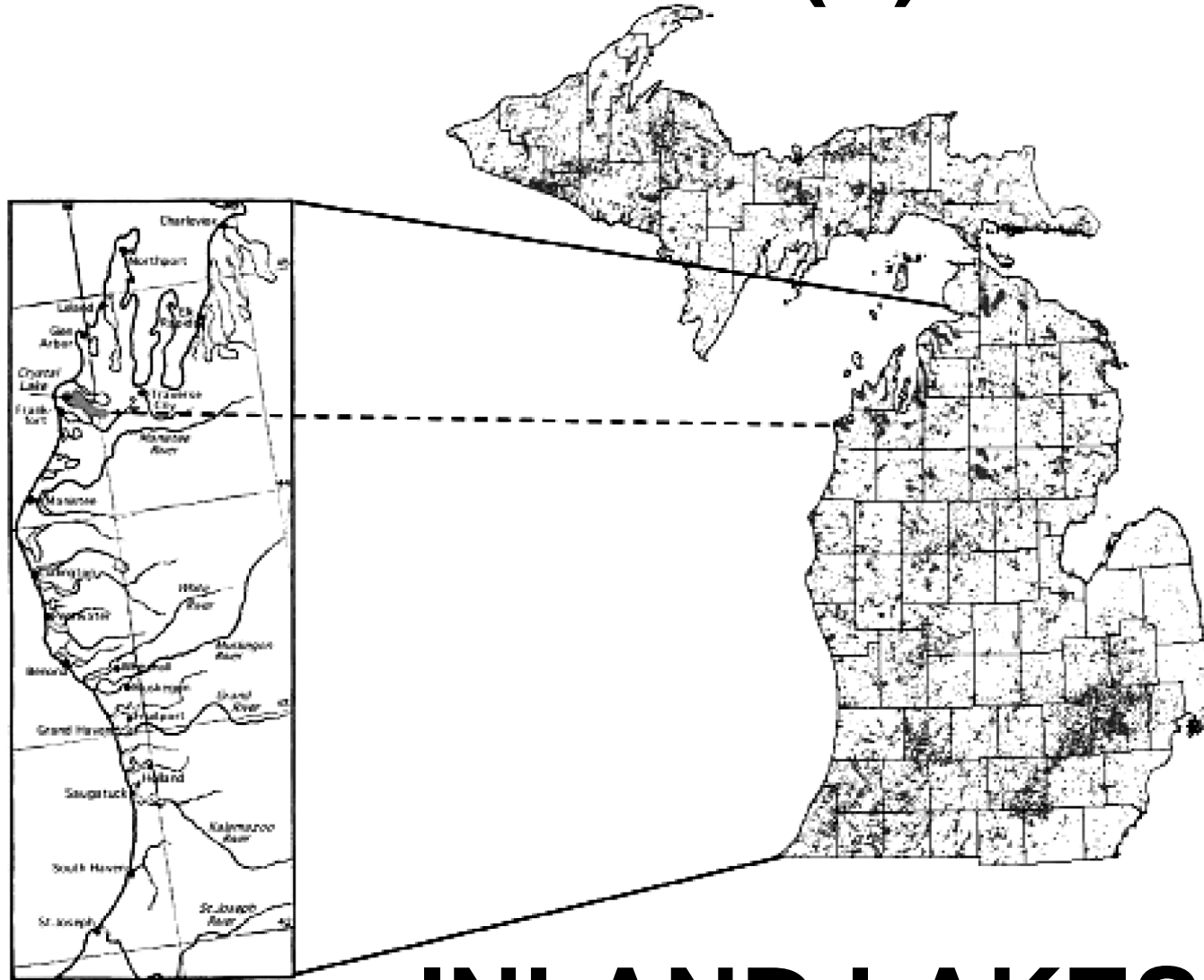
**Regardless of who we are, and where we’re from,
we all share a love for our Watershed,
and wish to preserve it for future generations !**

Within the Crystal Lake Watershed, we’re all “Shedies” :

(“Lakie” + “Townie” + “Countie” + “Fudgie” = “Shedie”).

Welcome to “SESQUI-CENTENNIAL – The Lowering of Crystal Lake (1873-2023)”

A BROOD OF LAKELETS (L)



INLAND LAKES OF MI (R)

**“¿ A MAN. A PLAN. A CANAL. A BEACH. A PANORAMA?”
[? AMARONAP A .HCAEB A .LANAC A .NALP A .NAM A ¿] (*)
– A SAUNTERER’S VIEW OF CRYSTAL LAKE
(BENZIE CO), MI (*) Not an exact palindrome!**



**DR. STACY LEROY DANIELS, PRESIDENT *pro tem*,
“BENZIE COUNTY RIVER IMPROVEMENT COMPANY”
BENZONIA ACADEMY LECTURE,
MILLS COMMUNITY HOUSE , 7 PM, 13 July 2023.**

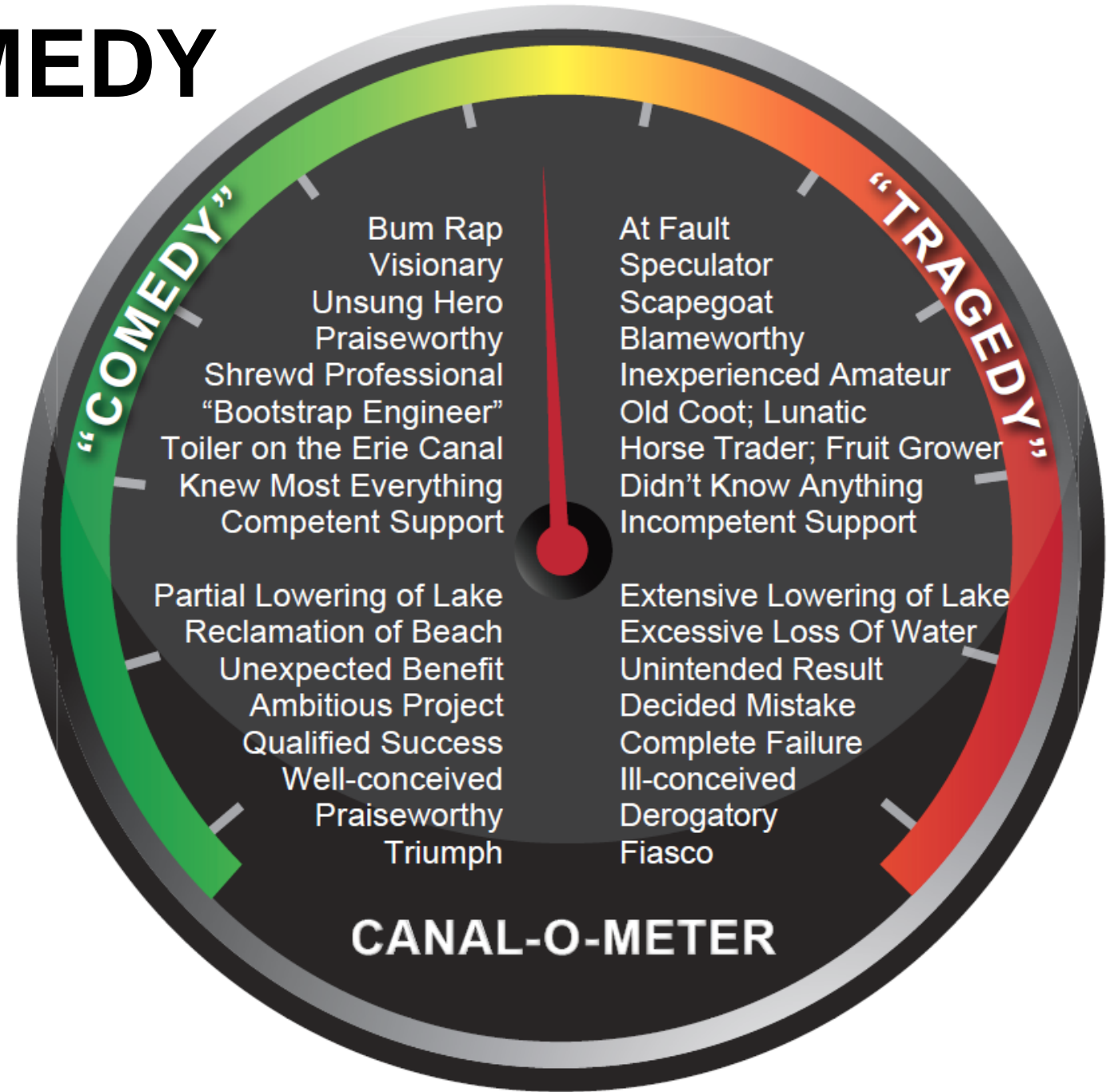
**"I hear lake water lapping with low sounds
by the shore; While I stand on the
roadway, or on the pavements gray, I hear
it in the deep heart's core." - W.B. Yeats,
The Lake Isle of Innisfree**



**"Life is a tragedy when seen in close-up,
but a comedy in long-shot."
- *Charlie Chaplin***

TRAGEDY VS. COMEDY

The lowering of Crystal Lake has experienced both in sequence!



Shares.

ie.co Benzonia River Improvement Co.

Organized 1873, under the

General Law of Michigan.



Capital Stock,
Twenty-Five Thousand Dollars

SEALRIES
Twenty-Five Dollars Each.

This Certifies, That _____ is the
proprietor of _____ Shares of **TWENTY-FIVE DOLLARS** each,
in the Capital Stock of the **Benzonia River Improvement Company**.

_____, transferable only on the Books of the said Company, by
_____, Attorney on the surrender of this Certificate.

Benzonia, _____

S. P. Fograth Secretary.



A. Jones President.

STAMP.

THE NAMING OF CRYSTAL LAKE

*Giiwitaayaazha-mangi-zhaaboonde-
naazibiiyaamadinaa-waasaa-ishpadin-
anzigwagbiijimaagazehns-ziibiikaajige-ziikoobiiginan-
waashegaminaaboo-zaaga`igan”*

With many more morphemes as is sometime common to the language. It roughly translates as: ”He walks around-big-open from one end to the other-with hills coming down-waves frothing white ice freezes thick-(with) saw-bill ducks-(and) shining little fishes-to dig a canal-(and) drain the water out of-Crystal (clear)-Lake.”

THE AUX BEC SCIES

By most accounts, the word "Benzie" derives from the French, *La Rivere aux Bec Scies*, for the Betsie (var. Betsey, Betsy) River, meaning, river of the saw-bills (ducks). The Native American name, *ans-zig-o-ze-bee*, has the same meaning. *Mergus merganser* (L. *mergere* dive + *anser* goose), the common merganser found on lakes and rivers in Europe, northern Asia, and North America, is a large, handsome, fish-eating duck, whose bills have serrated edges (saw-bills) to help them grip and swallow prey. They nest in tree cavities, from which the young emerge shortly after hatching. Common mergansers have shaggy crests, large broods, raucous cries, oily inedible flesh, hunting restrictions, and can carry the vector for swimmers' itch. The male merganser has a dark green crest; the female has a reddish-brown crest.

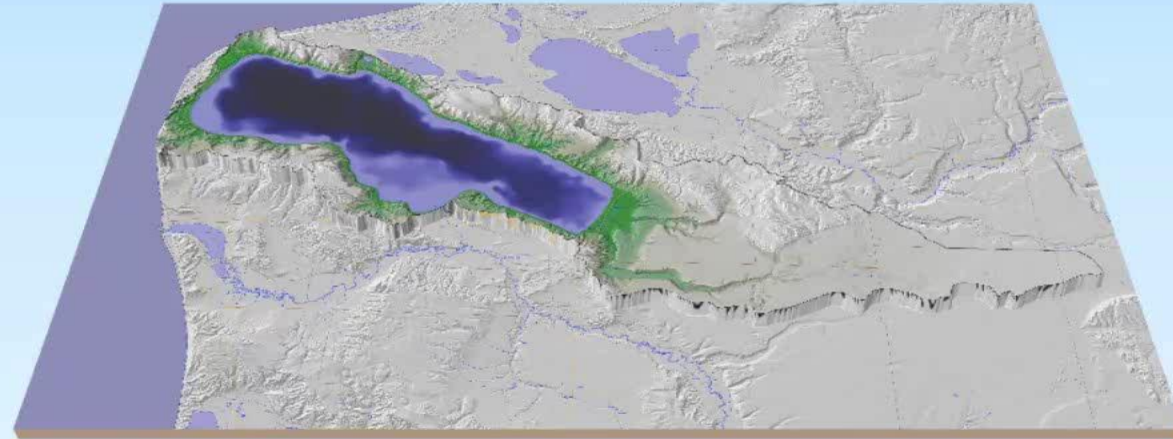


INUNDATIONS

The largest inundation from an inland lake in U.S. history due to a dam breaching occurred whilst building a canal from Crystal Lake to Lake Michigan (1873). It has been surpassed only by the Tittabawassee River inundation above Midland, MI (2020). The historical project map and a modern QL2 LiDAR dataset (MiSAIL) were combined to: (1) reconstruct the historical event; (2) assess current morphological features; and (3) develop dynamic 3-D models of the watershed.

“Inundations” are artificial, while “Floods” are natural !

CRYSTAL LAKE WATERSHED 3D



Edited by PowerDirector

WHICH CANAL IS WHICH ?

Three canal routes were considered, proposed, and/or attempted from Crystal Lake to Lake Michigan

- (1) **“SOUTH” Canal** (proposed, surveyed, and attempted in 1873 by the **BCRIC**) from the Outlet of Crystal Lake into the Betsey River, on to Betsey Lake. and into Lake Michigan at Frankfort;
- (2) **“NORTH” Canal** (proposed and surveyed in 1873, but never attempted by the **BCRIC**) from Platte Lake through Rush Lake, Long Lake, and Round Lake, and into Crystal Lake; and
- (3) **“WEST” Canal** (considered sometime prior to 1873, but independent of the **BCRIC**) to run directly from Crystal Lake across the isthmus of Point Betsey into Lake Michigan.

Instead of the level of the Lake being intentionally lowered by only five ft, it dropped precipitously by 17 ft over a three-week period as a torrent of 56,000,000,000 gal (Bgal) of water flushed downstream into the Betsie River almost washing the port city of Frankfort into Lake Michigan ! Crystal Lake dropped from its “HIGH” level (612 ft), to its “LOW” level (595 ft), eventually rebounding 5 ft to its present “NOW” level (600 ft).

If Crystal Lake had been lowered further to the level of Lake Michigan: 9,896 A -> 7,883 A (another ~ 2,000 A !

Excerpts from serial publications of the following Synopsis:

Daniels, Stacy Leroy, “Crystal Lake Watershed and Bathymetry of Crystal Lake, Benzie Country, Michigan with Historic Canals and Modern Features of Interest”, Map with text, ”A Map: A Plan; A Canal; A Beach – The Comedy of Crystal Lake”, Produced by Stacy Leroy Daniels, Benzie Co. River Improvement Co., Map compiled by Trevor Hobbs & Greg Anderson , © 2018. (& text et seq. 2023).

Where's a *ragin' canawl* when you need one?



The container ship Ever Given stuck in the Suez Canal, March 2021

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQldT-33UWHz2KiljKc_abtxX4dYelozZXuw&usqp=CAU ;

<http://www.eriecanalsong.com/sheetmusic/TheRagingCanal.pdf>

CRYSTAL LAKE OUTLET (IDEALIZED)



CRYSTAL LAKE OUTLET, watercolor, ca. 1950, John E. Easley

The Comedy of Crystal Lake

[Sequel to the classic "Tragedy" (1922)]

The story of Archibald Jones and the attempt to build a canal from Crystal Lake to Lake Michigan in 1873. The dramatic lowering of a very large inland lake and the creation of its sandy beach.

The epochal event that led to the development of Crystal Lake and Benzie Co.



"Crystalana"

A JOURNAL OF

Historical Reflections and Current Perspectives of Crystal Lake, Its Watershed, & Benzie County, MI.

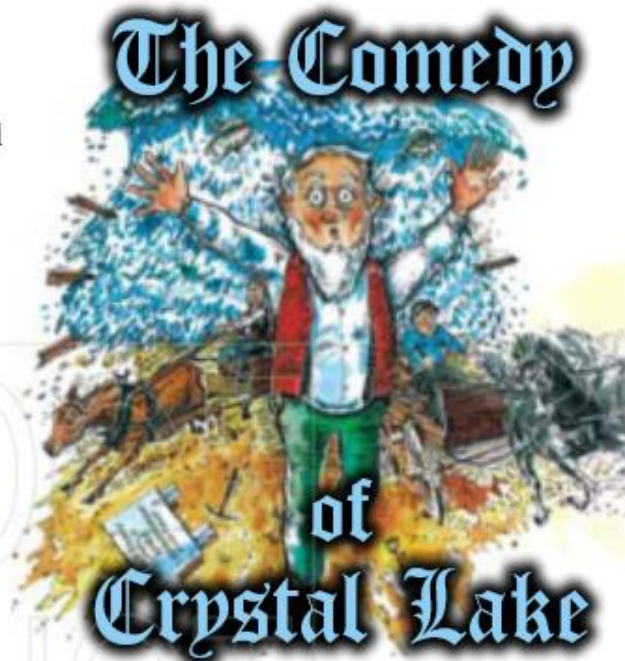
A new website compiled by Dr. Stacy Leroy Daniels, a humble saunterer and "President *pro tem*, Benzie Co. River Improvement Co., Est. 1873."

"Crystalana" www.crystalana.com is intended to supplement "The Comedy of Crystal Lake."

www.crystallakecomedy.com

Flushed With Pride Press

3901 Orchard Dr. | Midland, MI 48640



I. The Lowering of Crystal Lake

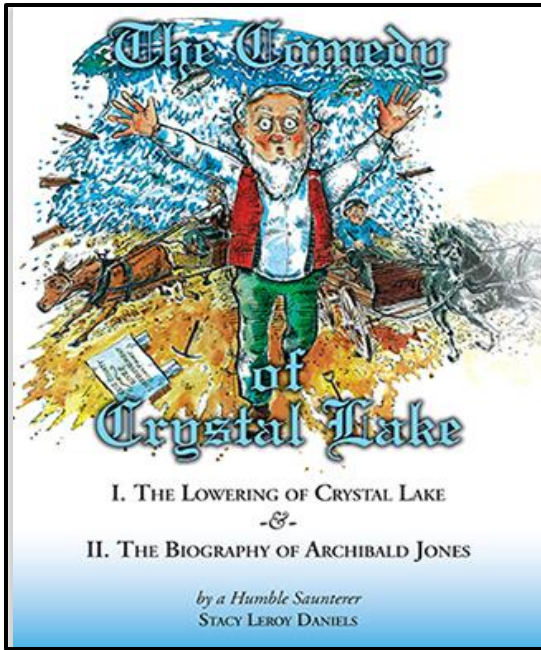
-&-

II. The Biography of Archibald Jones

by a Humble Saunterer

STACY LEROY DANIELS

**SESQUICENTENNIAL CELEBRATION OF THE LOWERING OF CRYSTAL LAKE,
THE "TRAGEDY" / "COMEDY"-(1873 - 2023)**



“THE COMEDY OF CRYSTAL LAKE” [Sequel to the classic “Tragedy” (1922)]

The story of Archibald Jones and the attempt to build a canal from Crystal Lake to Lake Michigan in 1873. The dramatic lowering of a very large inland lake and the creation of its sandy beach.

The epochal event that led to the development of
Crystal Lake and Benzie Co.

ISBN 978-0-692-21715-3 | Hardcover | 9” x 12”
496 Pages | 200 Illustrations

Flushed With Pride Press © 2015

3901 Orchard Dr. Midland, MI 48640

C989/750-2653, <http://CrystalLakeComedy.com>

(Proceeds from direct sales to local nonprofits)

BOOK \$32 ; WATERSHED MAP (12“x18”) \$10

Music by Doc Stewart



SAUNTERING (WALKING)

“I have met with but one or two persons in the course of my life who understood the art of Walking, that is, of taking walks, — who had a genius, so to speak, for sauntering: which word is beautifully derived “from idle people who roved about the country, in the Middle Ages, and asked charity, under pretense of going *à la Sainte Terre*,” to the Holy Land, ...

“So we saunter toward the Holy Land, till one day the sun shall shine more brightly than ever he has done, shall perchance shine into our minds and hearts, and light up our whole lives with a great awakening light, as warm and serene and golden as on a bank-side in autumn.”

-- Henry David Thoreau, *Walking*, *The Atlantic Monthly* . IX (LVI): 657–674. June 1862), [en.wikiquote.org/wiki/Walking_\(Thoreau\)](https://en.wikiquote.org/wiki/Walking_(Thoreau))

THE “LITERAL, LITTERING LITTORIAN”

Heaven save us from the “literal littering littorian” (**),

who,

having a concern or belief in a specific issue involving lakes - creates a character, assumes attributes, and plays a role, in spreading the word.

"A.J." lives on !

() Principally because he lives beside, and on a lake, and not a river, your humble scribe considers himself a "littorian".*

A “littorian”, someone who inhabits or frequents the edges of large freshwater lakes and rivers, is to be distinguished from a

"riparian", someone who is associated with the interface between land and a river or stream. The subtle difference lies in

consideration of being more “low-and-wet” than “high-and-dry”.

SERENDIPITOUS REDISCOVERIES

(*) Rediscovery of the original Survey Maps & Field Notes of Crystal Lake began a pursuit of Archibald Jones' biography and compilation of an Annotated Bibliography of the Environmental History of Crystal Lake.

“SESQUI-CENTENNIAL”

- Celebration of the 150th anniversary of an epochal event (23 Aug 1873).
- Crystal Lake was the largest “*Inundation*” (ne’ “*flood*”) from an inland lake watershed due to an *anthropogenic* cause (a dam breaching) in U.S. history - a record for 147 years, until Midland (Four Lakes) (19 May 2020).
- (Sesqui- (prefix “one-and-a-half”).
- Sesquipedalian (*ses·qui·pe·da·li·an*) a long (foot-and-a-half) polysyllabic word with a preponderance of pretentious morphemes.

KEEPING UP WITH A. (“ARCHIE”) JONES

- A. JONES
- ARCHIBALD, SR., JR., III., IV.
- BURTON RENSSELAER
- CASEY
- CHRISTOPHER, JR.
- DAVY
- INDIANA
- JOHN PAUL
- JUGHEAD
- TOM



“SESQUI-CENTENNIAL”

- **Sesquipedalian** (*ses·qui·pe·da·li·an*) a long (foot-and-a-half) polysyllabic word with a preponderance of pretentious morphemes.
- **(sesqui-, prefix: 1 + 1/2 of something, contraction of semis-que- "a half in addition," + ped- 'foot').**
- **Surface form sesqui- (“one and a half”) + plicate (“fold”); by analogy with duplicate.**
- **<https://en.wiktionary.org/wiki/sesquiplicate>**
- **150th anniversary of an epochal event (1873-2023)**
- **Crystal Lake was the largest “*Inundation*” ne’ “*flood*” from an inland lake watershed due to an *anthropogenic* cause (a dam breaching) in U.S. history (!!!) and held the record for 147 years. until**

THE PANORAMA OF CRYSTAL LAKE



This iconic panoramic photograph typifies the period between the discovery of Crystal Lake (1822) together with its survey (1838), and connotes the opening of its pristine wilderness of the surrounding moraines, still partially cloaked with forest, to the advances of civilization (1889) ! The newly exposed beach was covered with 17 ft high > low (12 ft high > now) of water before the lake level was lowered (1873) in an attempt to build a canal to Lake Michigan “just over the hill” !

"Michigan's Crystal Lake - located (in Benzie Co.) near the (Village of Beulah and the) (T)own of Frankfort and Sleeping Bear Dunes National Park (sic, Lakeshore) - as once the site of an (a seemingly) ill-fated event (**) that continues to be commemorated as a source of community tragedy turned comedy. Nearly 150 years ago, on August 23, 1873, a canal connecting Crystal Lake to Lake Michigan was commissioned (sic, proposed) to be dug out - a feat undertaken to allow boats to navigate between the two bodies, The water level of Crystal Lake was (38 feet) higher than that of Lake Michigan, and when a storm destroyed the dam and abruptly opened the canal, an estimated 76 (56) billion gallons of water poured out and lowered the water level of Crystal Lake by 20 (17 feet total, or 12 feet net, after rebound). Though the original plan was deemed a failure, the lowered water levels of Crystal Lake revealed sandy beaches that have been developed (a success!) into valuable real estate on the modern day coastline (sic, shoreline). Activities and events are planned this summer for the sesquicentennial celebration of the lake's lowering."

"Celebrating Crystal Lake's Lowering", Michigan News, NORTHERN, Michigan History 107), No. 4, Page 10 (Jul/Aug 2023).

See 1873-2023 – The Sesquicentennial Celebration of the Lowering of Crystal Lake, Benzie County, Michigan, COMMEMORATIVE BOOKLET / 24 pp. 2023, www.crystalana.com/sesqui.htm)

To : Too's ; To-Do'ers ; A-Do'ers ; & Me-Toot'ers

To “Wreck”- reate or Rē – Create our lakes: that is the question that we advocate :
To celebrate, educate, visitate, touristificate; not deprecate, nor contaminate !

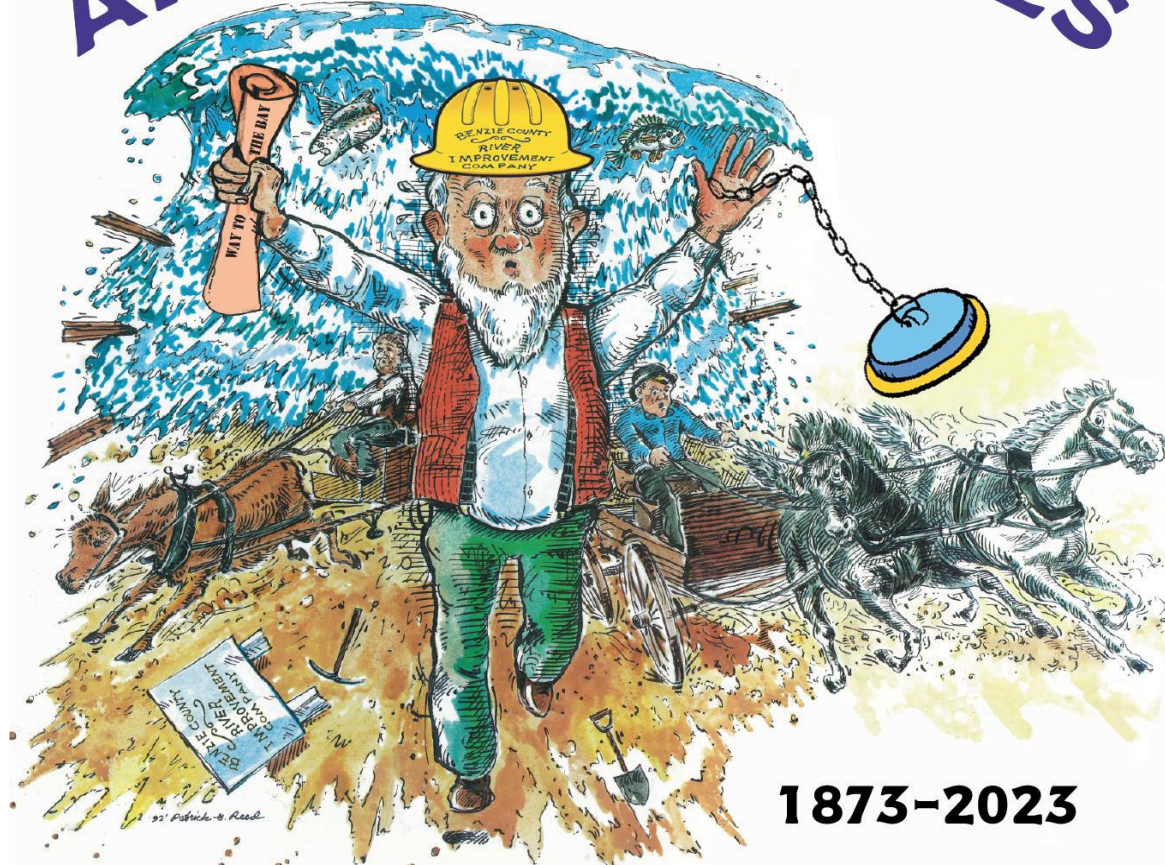
Too many Lakes , it seems , at times , are at too high or too low a level ; and contain too much or too little water; and are considered too wet or too dry ;
too cold or too hot ;
too windy or too calm ; with
too many boats; and too few fish ; with
too many aquatic invasive species ; and
too few desirable native species ; and not enough “Canawlers”, while
too many Beaches seem to be
too small; too rocky , too muddy , too weedy , too “buggy” , etc. ; with
too many irresponsible “Litterers” , and too few responsible “Littorians” ;
too many free-loaders and too few tax-payers; and
too many (or too few) visitors (two schools of thought); and to boot ,
too few lakes seem to be on ideally-habitable Goldilocks planets, i.e.
too good to be true ; with so few “To-Do'ers” , without so many “A-Do'ers” ;
too far away to tout , or to give two too(ts) about (!); and besides , - there are
too many marginally “Limnologically-Correct” “Me-Toot'ers” (!) ; and
too few “Just-Righter's” , amongst us , besides the two of us ; and I am not
too sure about You !!!



-- Stacy Leroy Daniels, WCC 08/30/2021

“SESQUI-CENTENNIAL”

ARCHIBALD JONES



1873-2023

I RAN FOR THE PLUG !!!

**THE LOWERING OF CRYSTAL LAKE
BENZIE COUNTY RIVER IMPROVEMENT CO.**

Prescient Words

“Do unto those downstream as you would have those upstream do unto you.”

-- Wendell Berry, *Watershed and Commonwealth: Citizenship Papers*, 2003.

“Mechanized man, having rebuilt the landscape, is now rebuilding the waters. The sober citizen ... freely submits his lakes to drainage, fillings, dredgings, pollutions, stabilizations, mosquito control, algae control, swimmer’s itch control, and the planting of any fish able to swim. So also with rivers.”

– Aldo Leopold, *Lakes in Relation to Terrestrial Life Patterns*, 1940.

“... (B)y throwing dams across the outlets, the outflow of the lakes may be controlled for a number of purposes, ... power, irrigation, logging operations, city water supply etc. ... which necessitates the building of a dam, thereby interfering with the natural level of the lake This may involve a raising or lowering of the level, ... (and) serious inconvenience and often damage to property along the shores.”

-- Irving Day Scott, *Inland Lakes of Michigan*, 1921.

“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.”

-- Charles Dickens, “A Tale of Two Cities”, Book the First, Chapter I., 1859.

“The beach was a desert of heaps of sea and stones tumbling wildly about, and the sea did what it liked, and what it liked was destruction. It thundered at the town, and thundered at the cliffs, and brought the coast down, madly.”

-- Charles Dickens , “A Tale of Two Cities”, Book the First, Chapter IV., 1859

“Mechanized man, having rebuilt the landscape, is now rebuilding the waters. The sober citizen who would never submit his watch or his motor to amateur tamperings freely submits his lakes to drainage, fillings, dredgings, pollutions, stabilizations, mosquito control, algae control, swimmer's itch control, and the planting of any fish able to swim. So also with rivers. We constrict them with levees and dams, and then flush them with dredgings, channelizations, and the floods and silt of bad farming.”

-- Aldo Leopold, *Lakes in Relation to Terrestrial Life Patterns*, 1940. [i]

“In rebuilding the waters of Crystal Lake, I builded better than I knew.” -- “A.J.” (*)
[(*) What Archibald Jones might have said as imagined by your humble saunterer.]

[i] Leopold, Aldo, *Lakes in Relation to Terrestrial Life Patterns*, pp 17-22 in Needham, James George, Sears, Paul Bigelow, Leopold, Aldo, et al., *A Symposium on Hydrobiology*, Univ. Wisconsin, Madison, 2-6 Sep 1940, 1941, 405pp.



"SESQUI-CENTENNIAL" - THE LOWERING OF CRYSTAL LAKE (1873 - 2023)

A MAN. A PLAN. A CANAL. A BEACH. A PANORAMA! - www.crystalana.com/sesqui.htm

Archibald Jones: *“Pulling the Plug”* at Crystal Lake, MI!

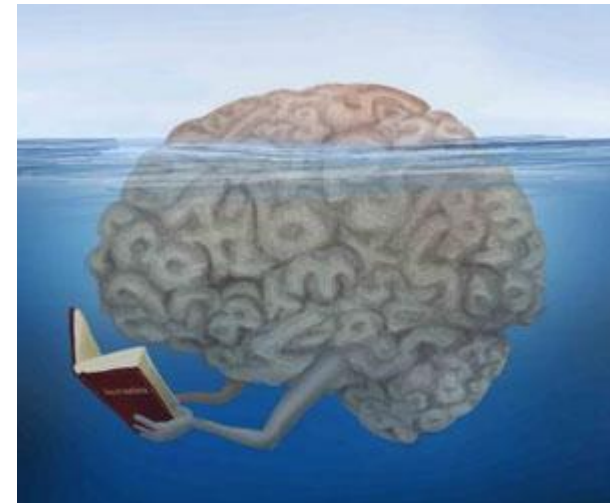


Biblical Level Control



Confucius Say:

**“Man who have water on brain,
have lake in mind, or mind in lake.”**



Level-Headed



**“Man who have head on straight,
tends to be level-headed.”**

**“Man who looses marbles,
no longer hard-headed.”**



www.clipartof.com · 1052945

- The level of the water is the surface of the lake
 - Relative to some benchmark (e.g. sea level, legal level)
 - Symptomatic of what's right, or wrong, with other “levels”:
 - More water = more, or less, of everything else.
 - More people = more activity = more environmental stress.
- “Today’s water in the lake, is tomorrow’s water over the dam.”**
-- Archibald Jones, Jr. (“A.J.”)

Where's a *ragin' canawl* when you need one?

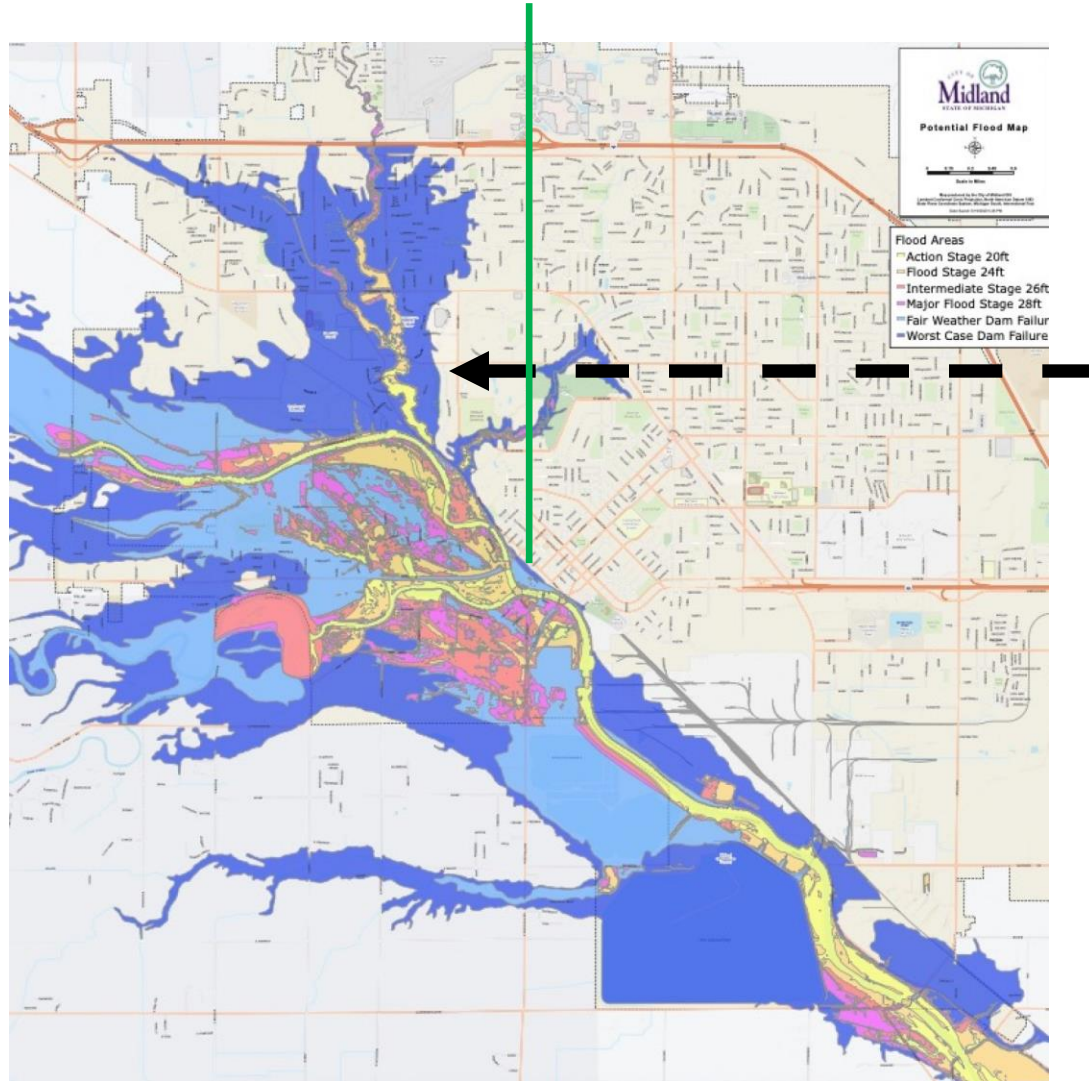


The container ship Ever Given stuck in the Suez Canal,, March 2021

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQldT-33UWHz2KiljKc_abtxX4dYelozZXuw&usqp=CAU ;

<http://www.eriecanalsong.com/sheetmusic/TheRagingCanal.pdf>

Caught between the “Horns of a Dilemma” !



To “Evacuate” or
“Stay at Home” ?

Author’s Home
3901 Orchard Dr
632’ Elevation

Potential Flood Map,
City of Midland MI

Worst Case:
Dam Failure
(Inundation)



Archibald Jones at the Outlet (?)



The Johnstown (PA) Flood of 1889. The ruins of the South Fork Dam & Lake Conemaugh. <http://www.jaha.org/FloodMuseum/emptydam.jpg>



Tragedy vs. Comedy

“Tragedy”: an art drama in which the protagonist is overcome by a superior force or circumstance.

“Comedy”: a separate genre depicting laughable people in some kind of blunder that does not cause pain or disaster.



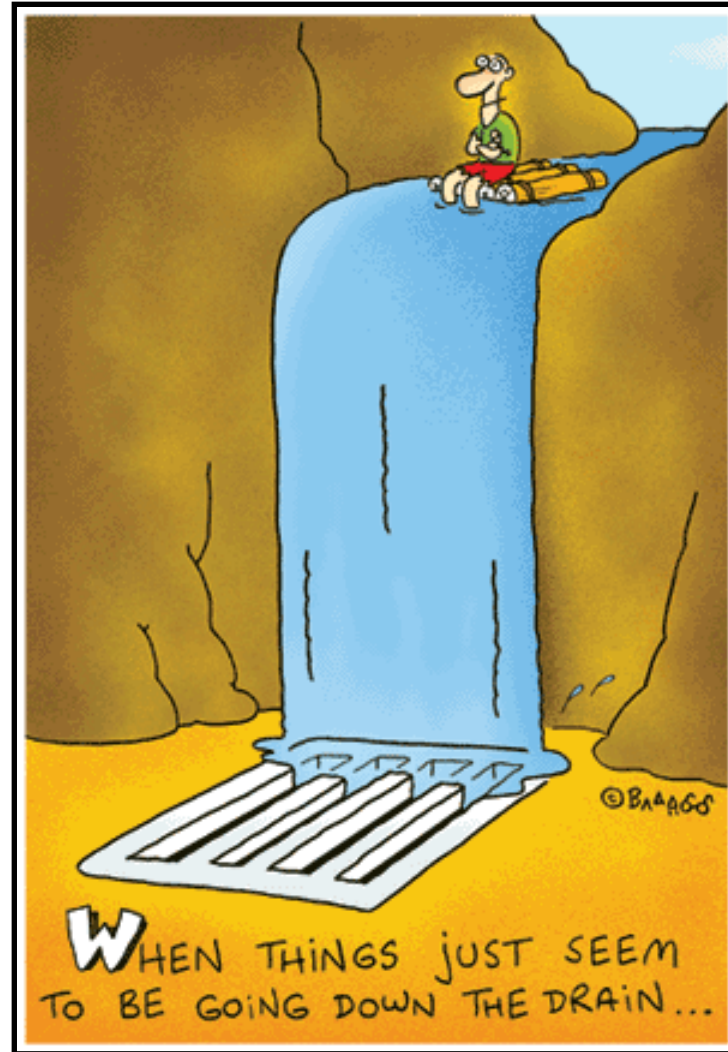
The lowering of Crystal Lake has elements of both.

The Crystal Bathtub



A large, shallow "bathtub" on a moraine overlooking Lake MI.
A home bathtub, by comparison, would contain ~ ¼ inch of water!!

Archie Poised at the Outlet !



Outlet During the “Tragedy” (?)



<http://chestofbooks.com/travel/canada/John-Stoddard-Lectures/images/Chicoutimi-Rapids.jpg>

**“¿ A MAN. A PLAN. A CANAL. A PANORAMA?
(AMARONAP A LANAC A NALP A NAM A) (*)
– A SAUNTERER’S VIEW OF CRYSTAL LAKE
(BENZIE CO), MI (*) Not an exact palindrome!**



**DR. STACY LEROY DANIELS, PRESIDENT *pro tem*,
“BENZIE COUNTY RIVER IMPROVEMENT COMPANY”
BENZONIA ACADEMY LECTURE,
MILLS COMMUNITY HOUSE , 7 PM, 13 July 2023.**

**“¿ A MAN. A PLAN. A CANAL. A BEACH. A PANORAMA?
[? AMARONAP A .HCAEB A .LANAC A .NALP A .NAM A ¿] (*)
– A SAUNTERER’S VIEW OF CRYSTAL LAKE (BENZIE CO), M
(*) Not an exact palindrome!**



**DR. STACY LEROY DANIELS, PRESIDENT *pro tem*,
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BENZONIA ACADEMY LECTURE,
MILLS COMMUNITY HOUSE , 7 PM, 13 July 2023.**

AMARONAP A HCAEB A LANAC A NALP A NAM A (*)

(*) Not Anishinaabe (Ojibwe)

(AMARONAP (Song by Benny Feenell))

[https://open.spotify.com/track/1ncWx6dgj65l2qG
W1k592o](https://open.spotify.com/track/1ncWx6dgj65l2qGW1k592o)

**“... Long thus, and various, ev’ry riv’let strays,
Till closing, now, their long meand’ring maze,
Where in a smiling vale the mountains end,
Form’d in a crystal lake the waters blend:
Fring’d was the border with a woodland shade,
In ev’ry leaf of various green array’d,
Each yellow-ting’d, each mingling tint between
The dark ash-verdure and the silv’ry green.
The trees, now bending forward, slowly shake
Their lofty honours o’er the crystal lake; ...”**

- - Luís Vaz de Camões, *Luciads*, Book IX, 1572

THE PLUG IS PULLED !!!



A Convertible & A Lake



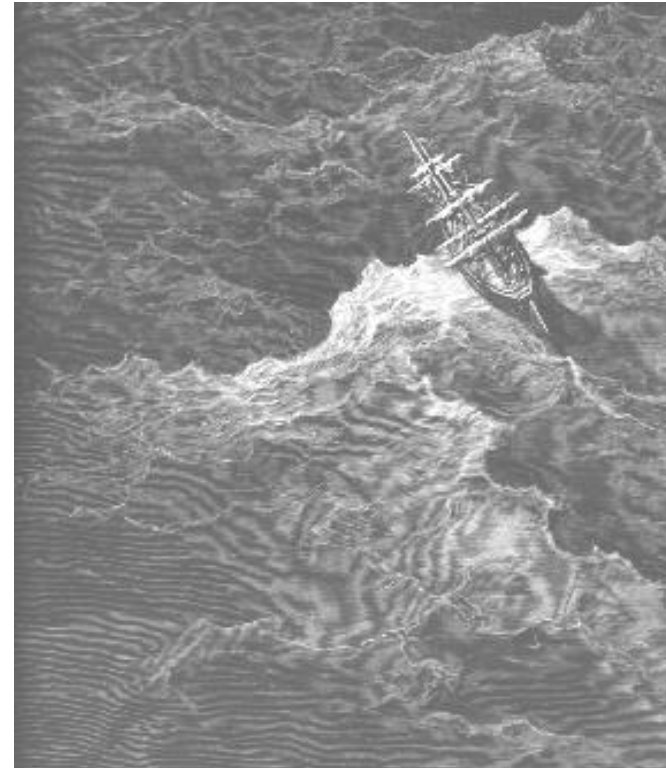
Incidents in Life and Labors

"The smallest bark on life's tumultuous ocean
Will leave a track behind for evermore;
The lightest waves of influence set in motion,
Extend and widen to the eternal shore:

We should be wary, then, who go before
A myriad yet to be; and we should take
Our bearing carefully, where breakers roar
And fearful tempests gather; one mistake

May wreck unnumbered barks
that follow in our wake."

-- Rev. Burton Rensselaer Jones, 1909.



Crystal Lake Outlet – Dry or Wet



THE FORGOTTEN FOUNDER OF BENZONIA

**“As pebble cast into a quiet lake
Sinks in its waters, but its impress lives,
And spreading on the surface, still expands,
Until it ripples to the farthest shore.
So human life, in the vast teeming sea
Of sentient being cast, creates an eddy
Which expands and rolls, through all the course of Time,
On to the precincts of Eternity!”**

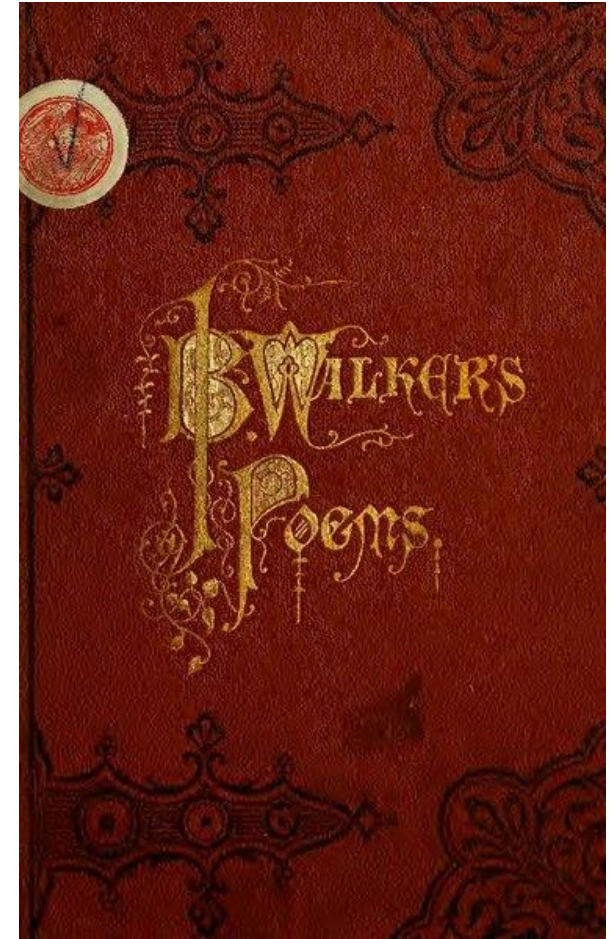
**– James Barr Walker, *Poetry of Reason and Conscience*,
Henry A. Sumner, Chicago, 1871, 214pp.**

Worth of the Soul. Canto Second. Page 49.

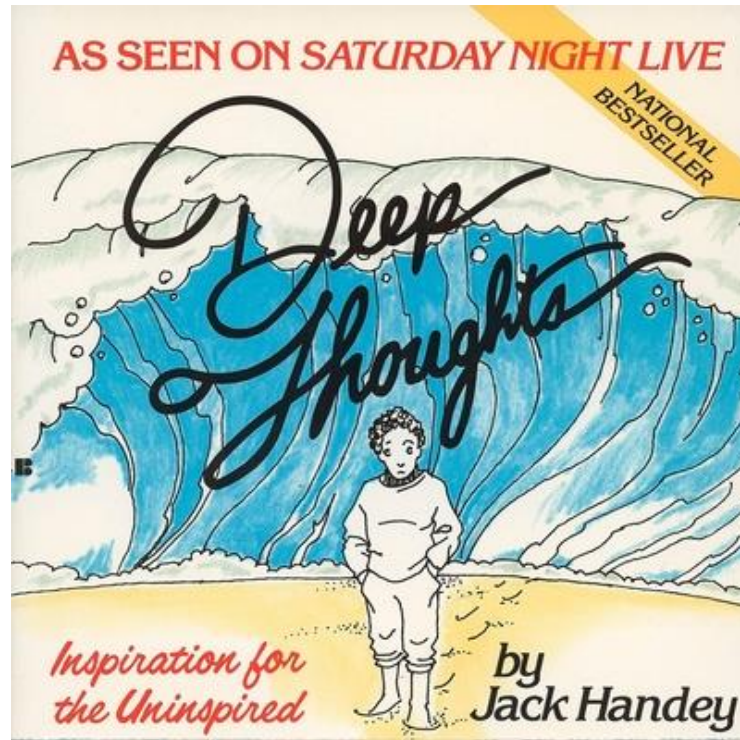
<https://archive.org/details/poetryofreasonco00walk/page/48/mode/2up>

(Aka the man who named “Benzonia” & “Crystal Lake”!)

**Daniels, Stacy Leroy, The Rev. James Barr Walker, Jr., The
Forgotten Founder of the Benzonia Colony, Benzonia
Academy Lecture Series, Benzie Area Historical Museum,
Benzonia, MI, 10 Jan 2019.**



DEEP THOUGHTS



<https://images.booksense.com/images/651/133/9780425133651.jpg>

Crystal Lake Outlet – Dry or Wet



“PULLING THE PLUG”)

The Daniels’ 54-yr old home in Midland was hit by lightning 9/15/21! A large pine tree was latter transformed into “chain-saw art” by Tom Gillman 6/17/23!

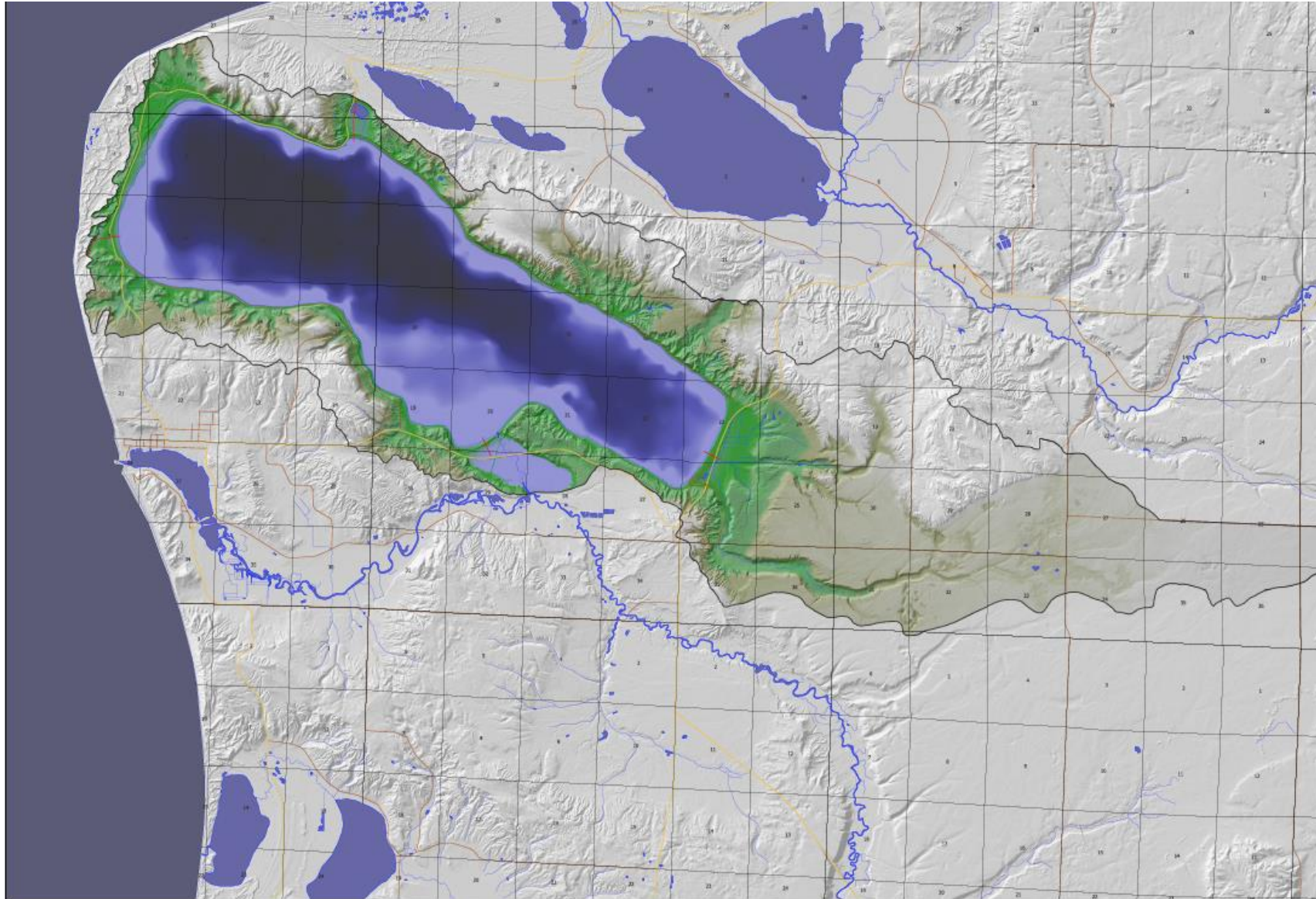


Canal Diggers (?)

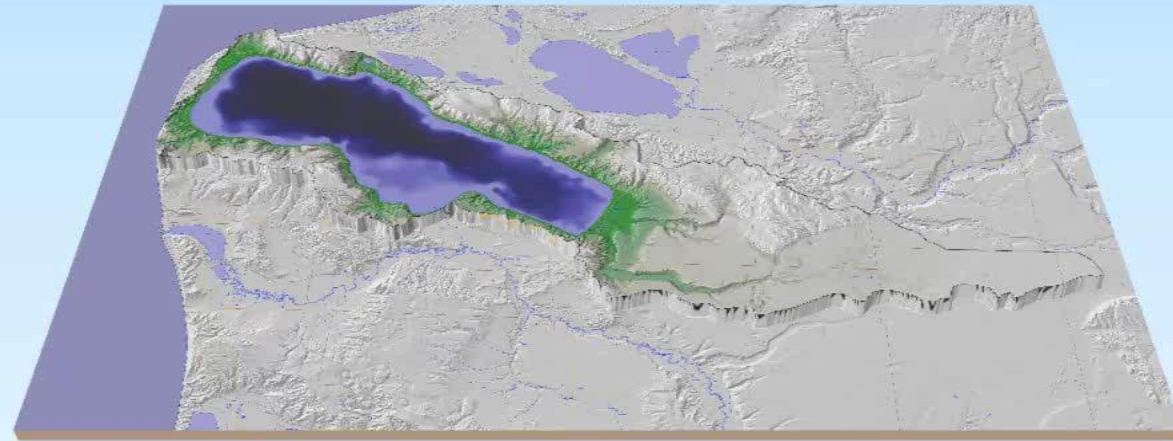


<http://www.kauricraft.co.nz/Images/gum%20diggers.jpg>

Topographic/Bathymetric Map

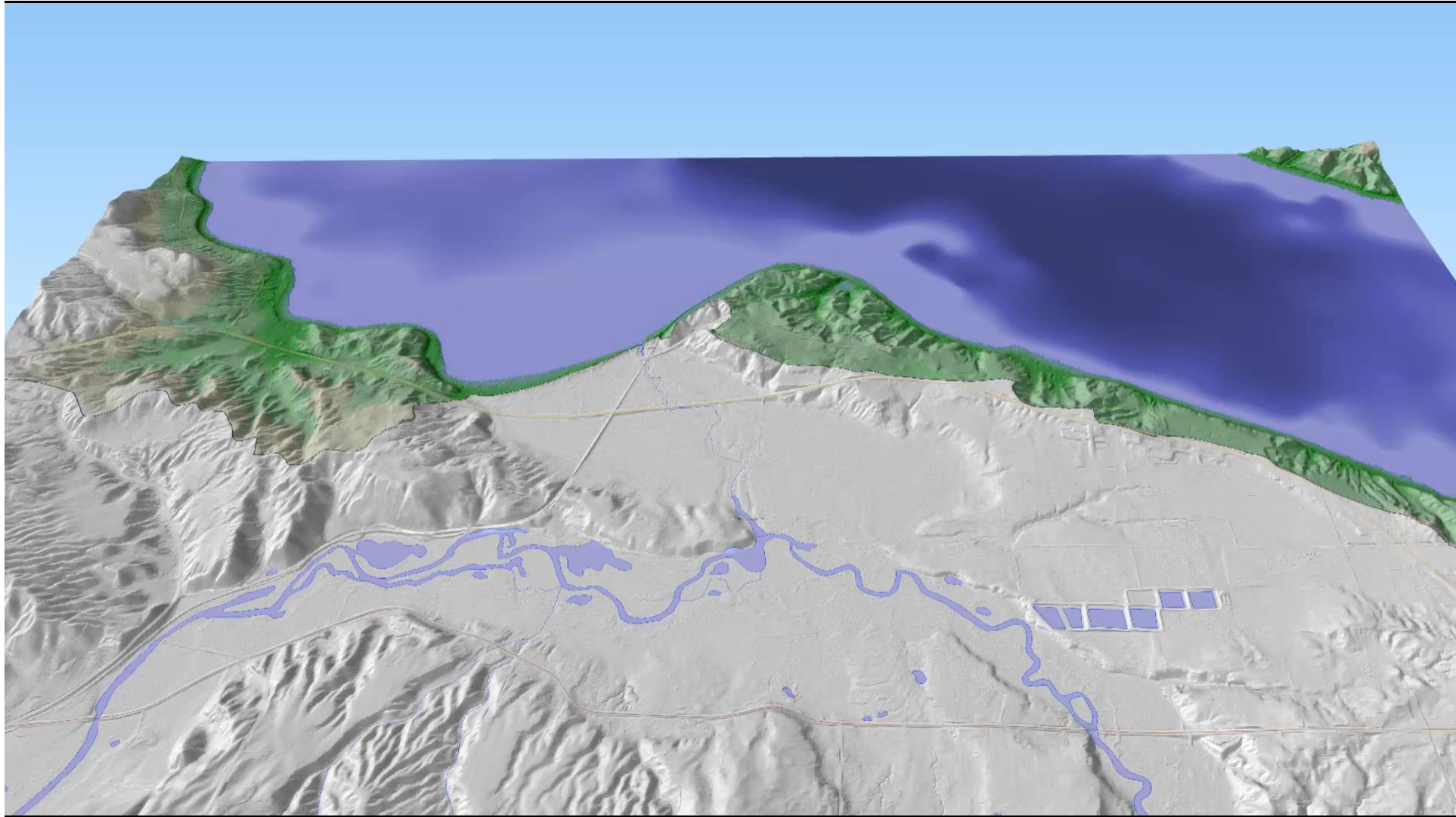


Crystal Lake Watershed 3D

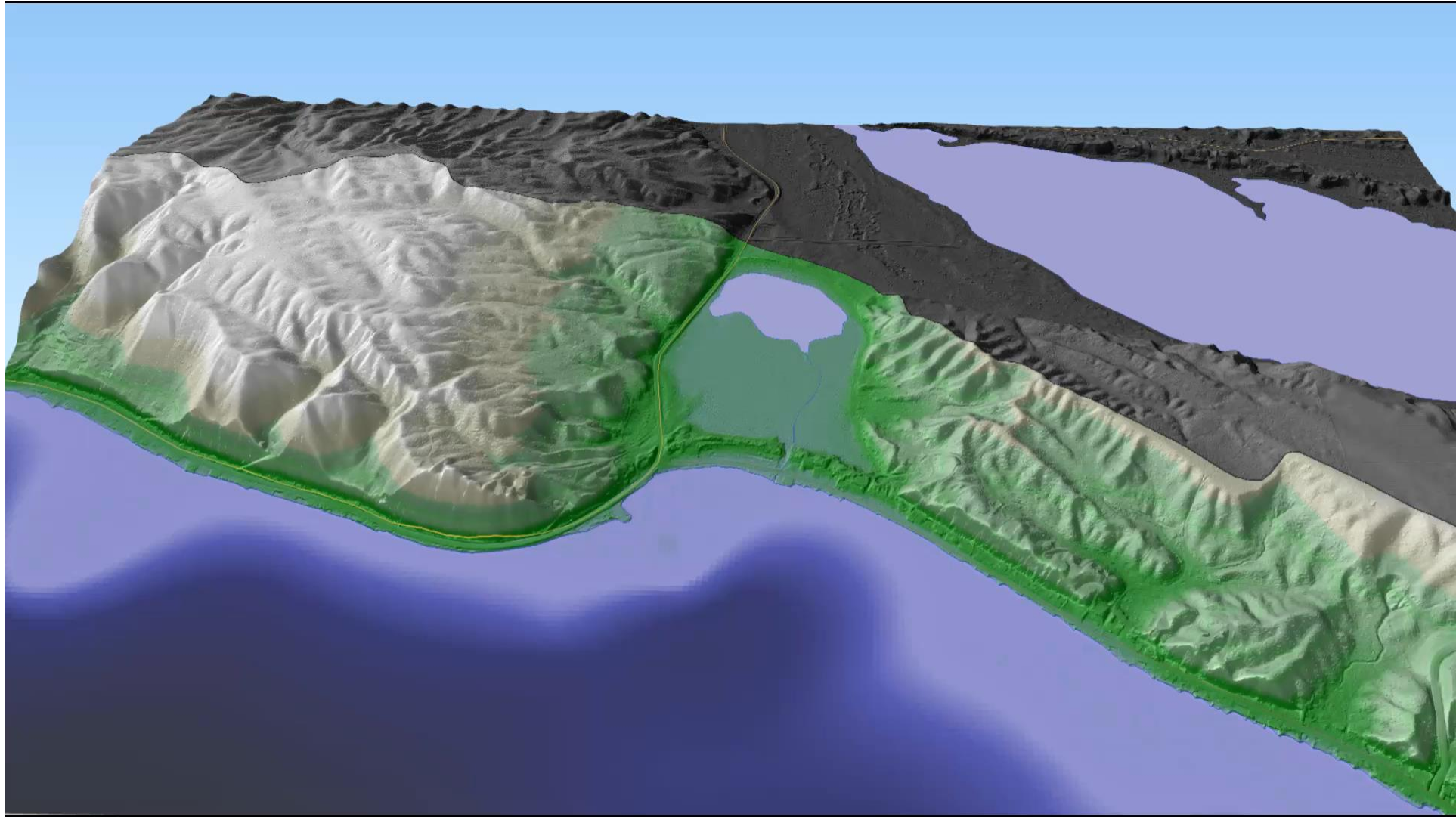


Edited by PowerDirector

“South” Canal (Outlet) 3D



“North” Canal (Round Lake) 3D



“West” Canal (CSA) 3D

