The Eagle Lake and Crooked Lake Texas Associations Joint Meeting To Discuss Legal Lake Levels

October 3, 2019 | KVCC Dale B. Lake Auditorium

Eagle and Crooked Lake Texas Associations Joint Meeting – October 3, 2019

- Welcome
- Introductions
- ***Purpose:*** The purpose of this joint meeting is to present information that outlines the long-term, permanent solution for our flooding situation in Texas Township so that residents feel confident when signing a Legal Lake Level (LLL petition).

We need a long-term (permanent) solution so flooding doesn't happen again

Tonight's Agenda

- Quick Review of the flooding crisis
- The dilemma in getting to the permanent solution
- Newest projections for the drawdown rates
- ELTA and CLTA President Reports
- The proposed solution
  - What's the design
  - What's the cost
  - Who pays
- The process for setting a Legal Lake Level (LLL)
- The overall timeline
- What does the LLL petition look like
- What about the augmentation wells
- Conclusion - Questions and Answers and Petition Signing

Quick Review of Flooding Crisis

- What happened
  - A Slow Motion Disaster that started in Oct of 2017
  - Lake levels rose to historic proportions … because of no outlet
- Where we are today
  - Short-term pumping solution is operating – obstacles overcome
  - The SAD cost – in addition to out-of-pocket costs
- Who's Affected
  - 800-1200 Texas Township residents impacted
  - Eagle Lake, Crooked Lake, Pine Island Lake, Vineyards, & others

Residential property values have plummeted during this crisis – we must act

The Dilemma in Getting to a Permanent Solution

- The dilemma in a nutshell
  - A permanent solution requires a drainage system
  - The Drain Office is responsible to design/build drains
  - The mechanism that triggers the Drain Office is a LLL
  - Lake residents must petition County Commissioners to set a LLL
  - County Commissioners then authorize the Drain Office to act
  - But … residents need petition specifics before signing
    - What's the solution ??
    - What's the cost … and Who pays ??
    - What about the augmentation wells ??

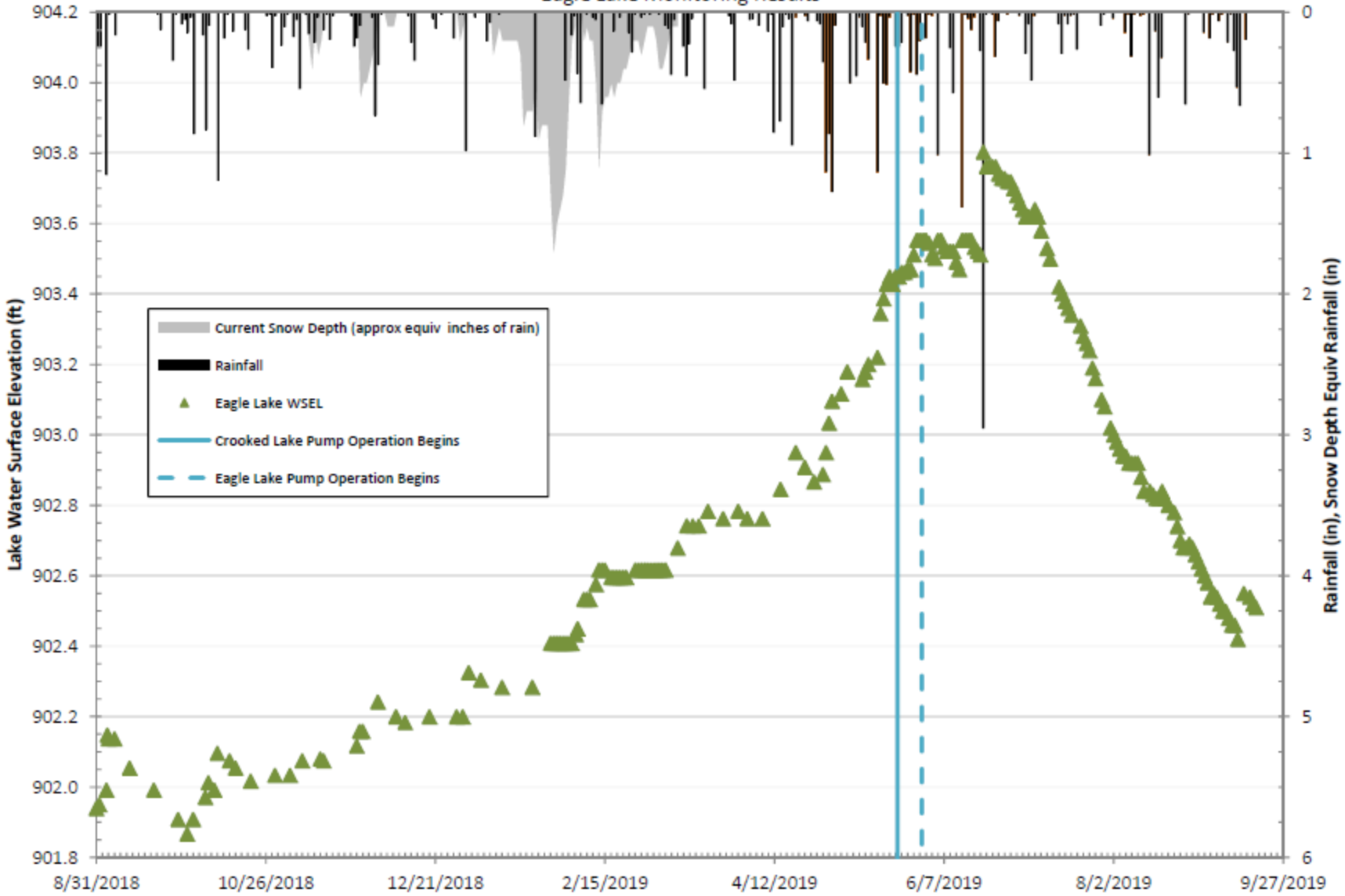
The TT Flooding Task Force LLL Subcommittee was created to find answers to these questions so that a permanent flooding solution is achieved

Newest projections for the drawdown rates from Prein & Newhof

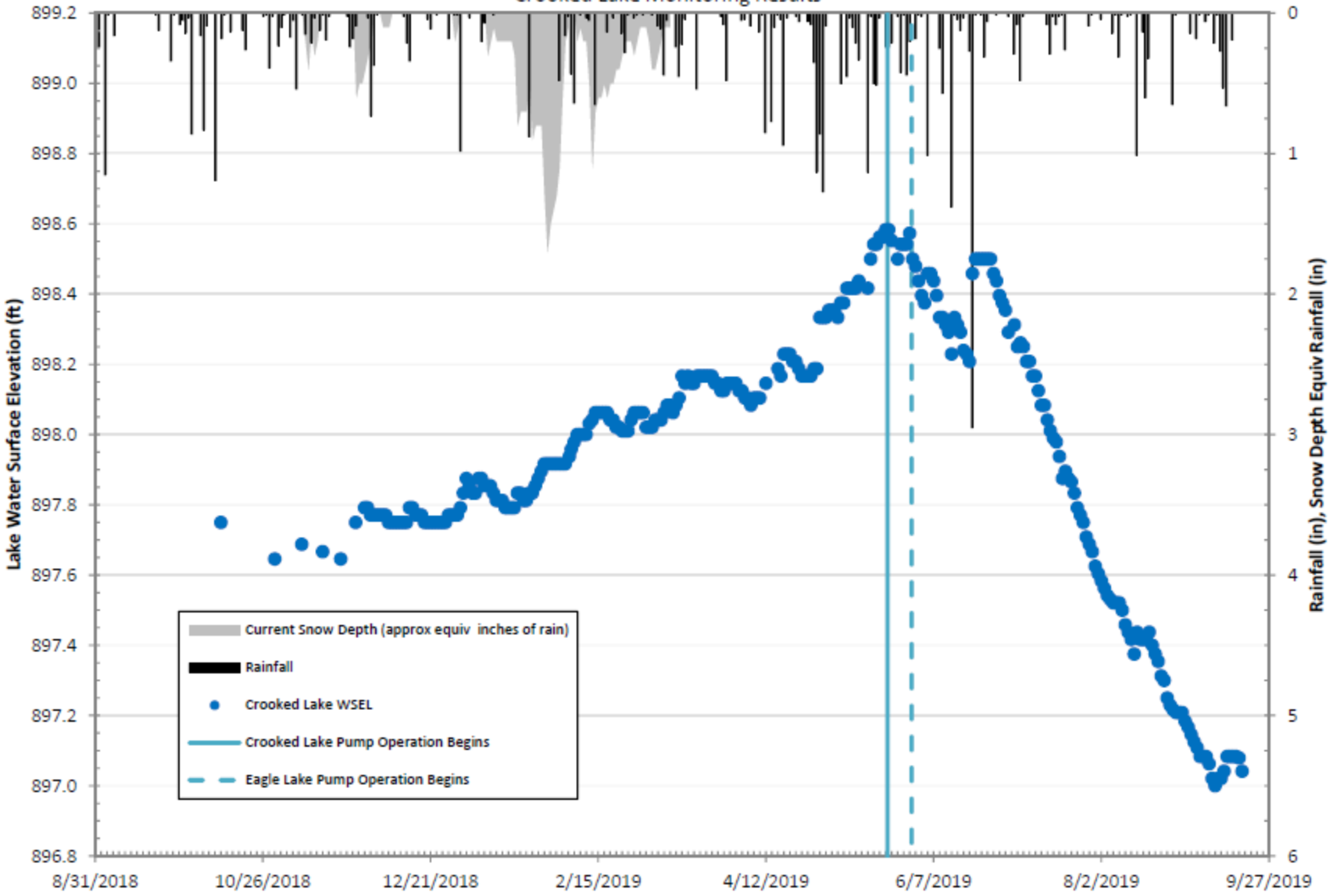
- Past projections on the drawdown rates for Eagle and Crooked Lake have changed
- Unfortunately, recent pumping restrictions from the Michigan EGLE have required adjustments to our charts for the drawdown rates
- Let's take a look

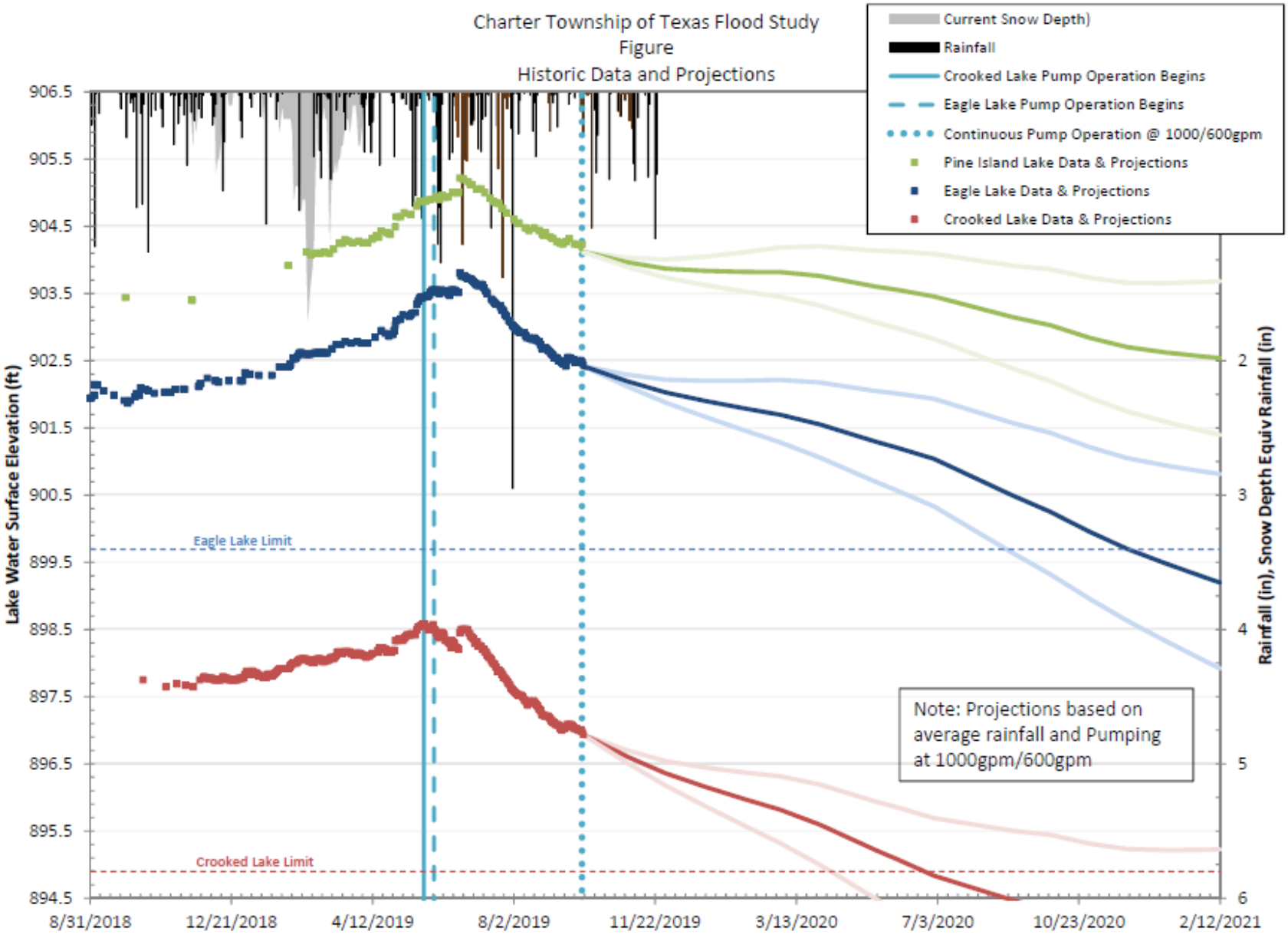
Before discussing the permanent long-term solution – a word about the current short term pumping situation

Charter Township of Texas Flood Study
Figure
Eagle Lake Monitoring Results



Charter Township of Texas Flood Study
Figure
Crooked Lake Monitoring Results




Charter Township of Texas Flood Study
Figure
Historic Data and Projections
Current Snow Depth)
Rainfall
Crooked Lake Pump Operation Begins
Eagle Lake Pump Operation Begins
Continuous Pump Operation @ 1000/600gpm
Pine Island Lake Data & Projections
Eagle Lake Data & Projections
Crooked Lake Data & Projections
Lake Water Surface Elevation (ft)
Rainfall (in), Snow Depth Equiv Rainfall (in)
906.5
905.5
904.5
903.5
902.5
901.5
900.5
899.5
898.5
897.5
896.5
895.5
894.5
2
3
4
5
6
Eagle Lake Limit
Crooked Lake Limit
Note: Projections based on average rainfall and Pumping at 1000gpm/600gpm
8/31/2018
12/21/2018
4/12/2019
8/2/2019
11/22/2019
3/13/2020
7/3/2020
10/23/2020
2/12/2021

Eagle Lake Texas Association (ELTA)

Comments from ELTA President, Amy Coon

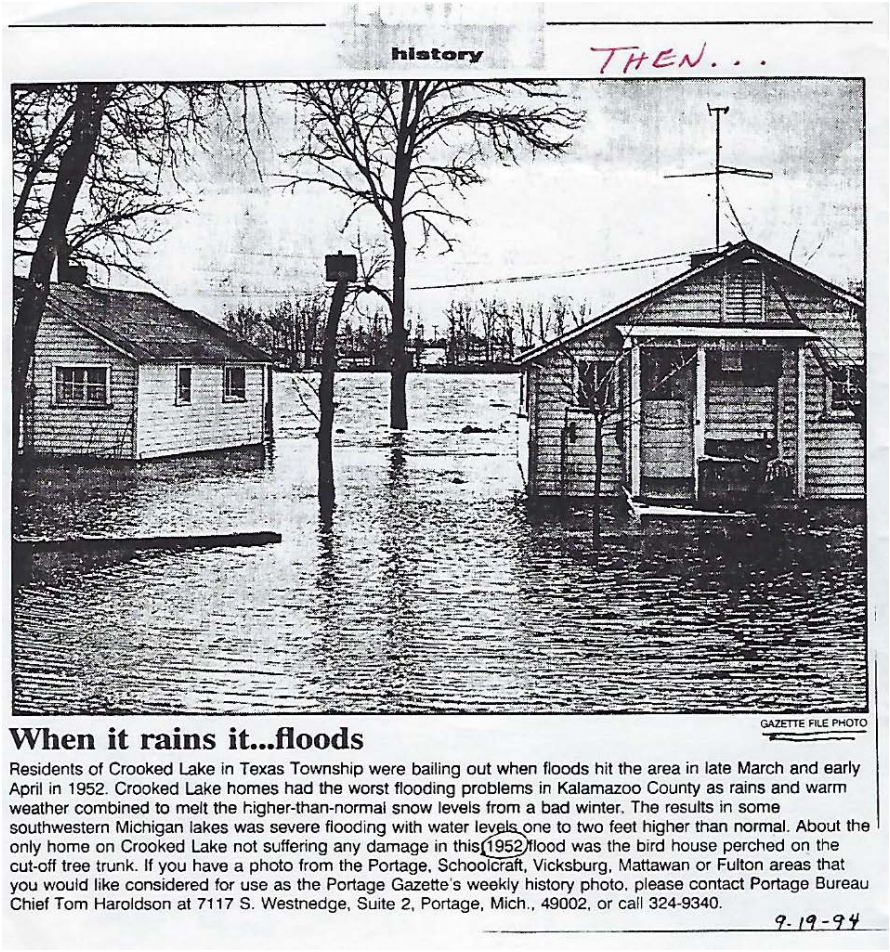
- Future Flooding - this cannot happen again!
- Protect property values
- Restore All Sports Lake status
- Collaborative Effort from all parties involved and no more EGLE(DEQ)

Graphic: https://www.ucsusa.org/global-warming/global-warming-impacts/floods

Crooked Lake Texas Association (CLTA)

Comments from CLTA President, Jim Roberts

- CLTA Board of Directors support the program you will be hearing about tonight. As you may recall from previous discussions, this type of flooding has occurred in the past.
  - 1952 was the last time this happened, 67 years ago
  - Took a reported 5 years to get to a normal level
  - Most of the homes at the time were cottages, not permanent residences
  - Township reports that there was talk at the time of a permanent fix, but water levels receded and support faded away
- We don't believe it's going to take 67 years for a flooding crisis to occur again.
- We need a long-term solution to eliminate future property loss, stress and the frustration that the short-term solution has presented
- **Please** sign the petition, and be part of the solution.



history

THEN...

GAZETTE FILE PHOTO

When it rains it...floods

Residents of Crooked Lake in Texas Township were bailing out when floods hit the area in late March and early April in 1952. Crooked Lake homes had the worst flooding problems in Kalamazoo County as rains and warm weather combined to melt the higher-than-normal snow levels from a bad winter. The results in some southwestern Michigan lakes was severe flooding with water levels one to two feet higher than normal. About the only home on Crooked Lake not suffering any damage in this 1952 flood was the bird house perched on the cut-off tree trunk. If you have a photo from the Portage, Schoolcraft, Vicksburg, Mattawan or Fulton areas that you would like considered for use as the Portage Gazette's weekly history photo, please contact Portage Bureau Chief Tom Haroldson at 7117 S. Westnedge, Suite 2, Portage, Mich., 49002, or call 324-9340.

9-19-94

Continued Comments from CLTA President, Jim Roberts

Both associations along with the other permanent stakeholders will be working through the details in the weeks to come. We greatly appreciate all the efforts of the township that have made the short-term solution possible and effective. Effective for the most part! The short-term solution has had its challenges, but it is certainly not from lack of commitment at the township level.

One Final Note: The DEQ ordered the following directive on 9/26/19

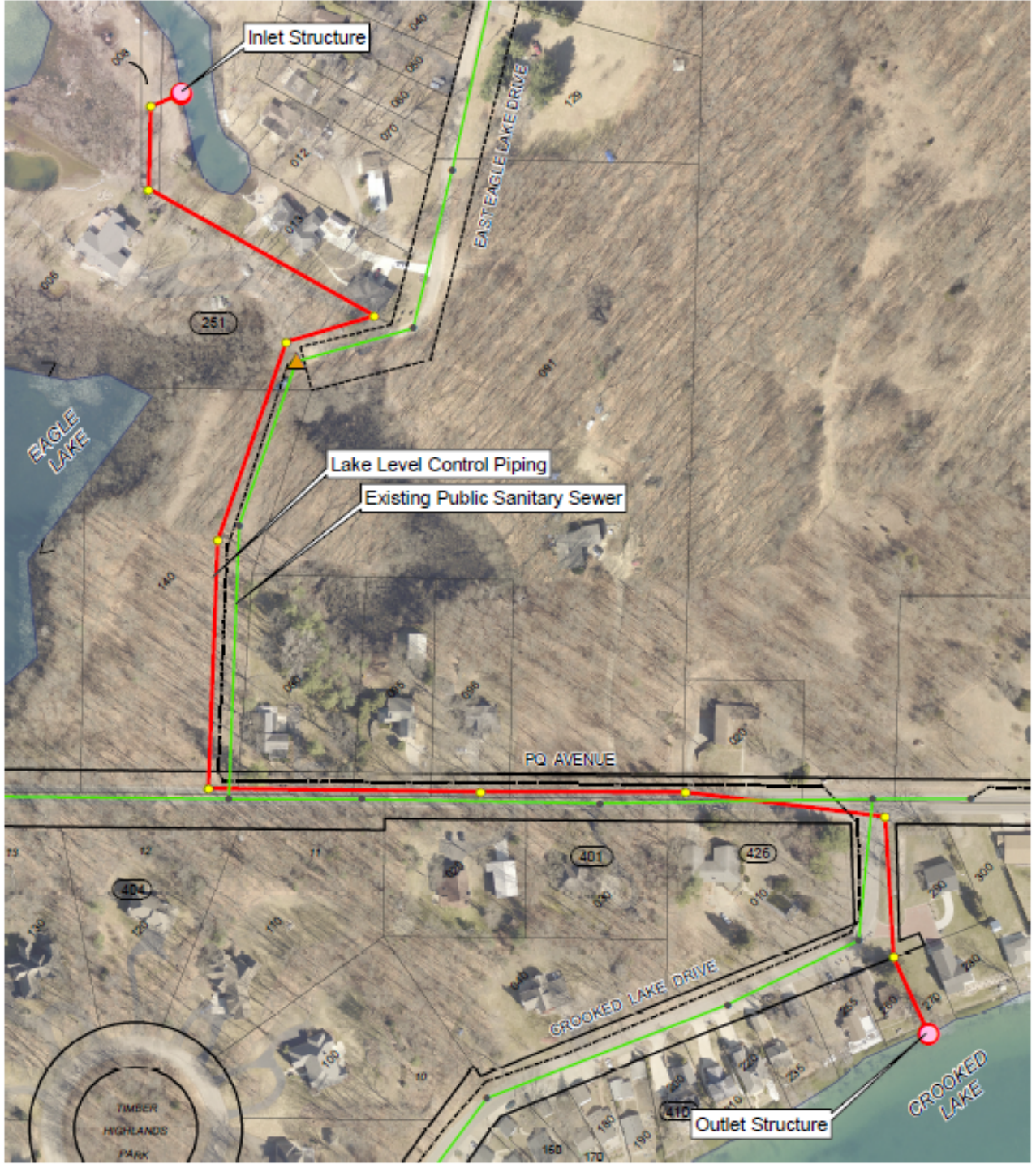
- 1000 gal/min down from 2000 gal/min (DEQ required due to said wetlands stress)
- Original recommendation from township engineers for pumping was 3000 gal/min
- No documentation provided by DEQ for their wetlands stress determination
- Have they given any consideration for the health impact of human stress? Residents have endured the stress & personal loss of this flooding crisis for a solid 18 months and continue to do so!
- If you're concerned or just plain upset by the DEQ's handling of the project, contact Aaron Keatley at the DEQ and voice your concerns – his contact information is in the back at the petition signing table

What's the solution?

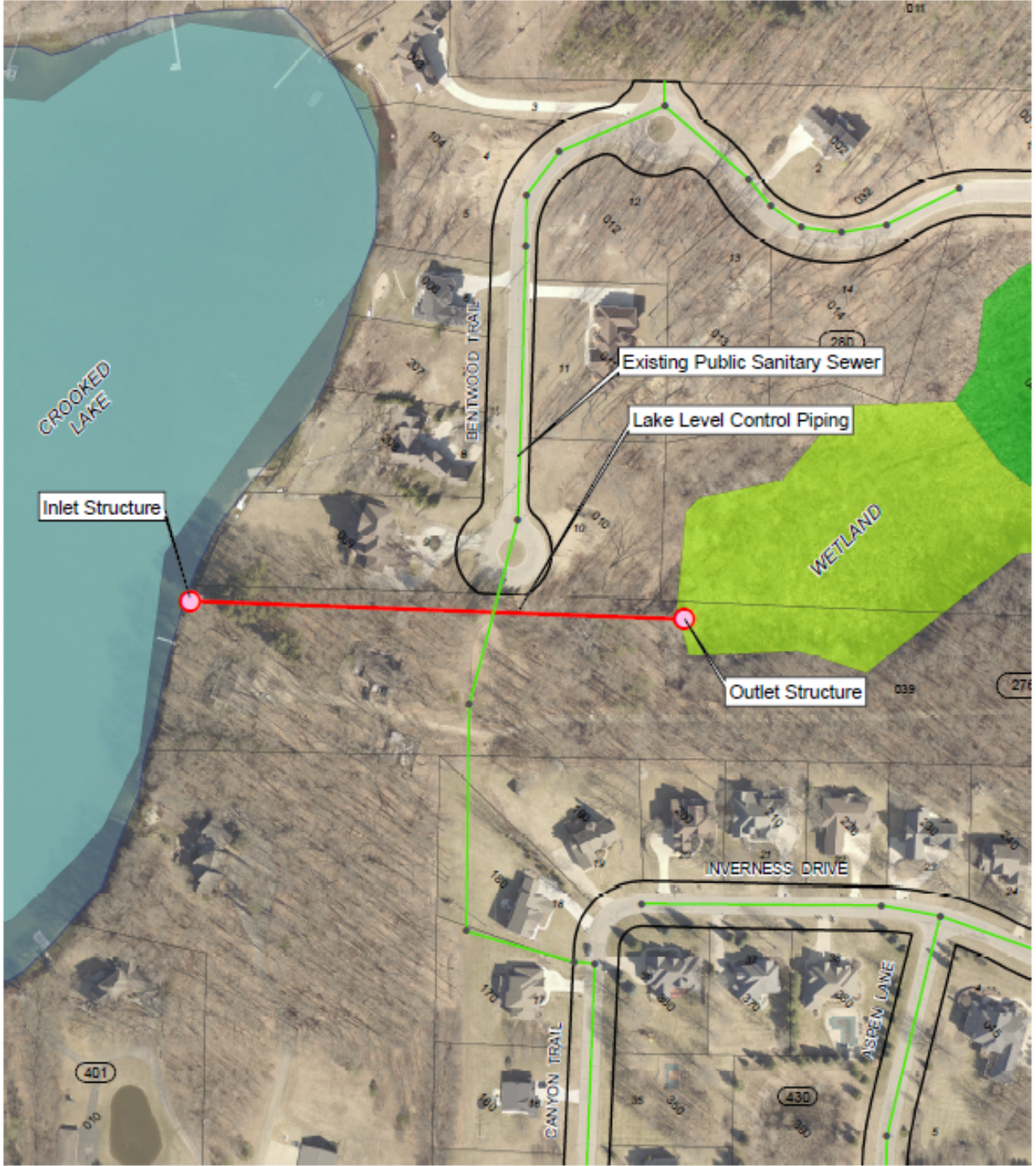
- The proposed solution
  - An underground gravity flow drain system
  - Using piping already purchased for the short term pumping
  - But with different route and different easements needed
  - Easements have been identified and are in process
  - Using horizontal wells to eliminate need for filters and screens to prevent spread of invasive plants

The permanent solution was designed/developed by Prein&Newhof engineering firm, with input from the County Drain Office

Eagle Lake to Crooked Lake Easement Route

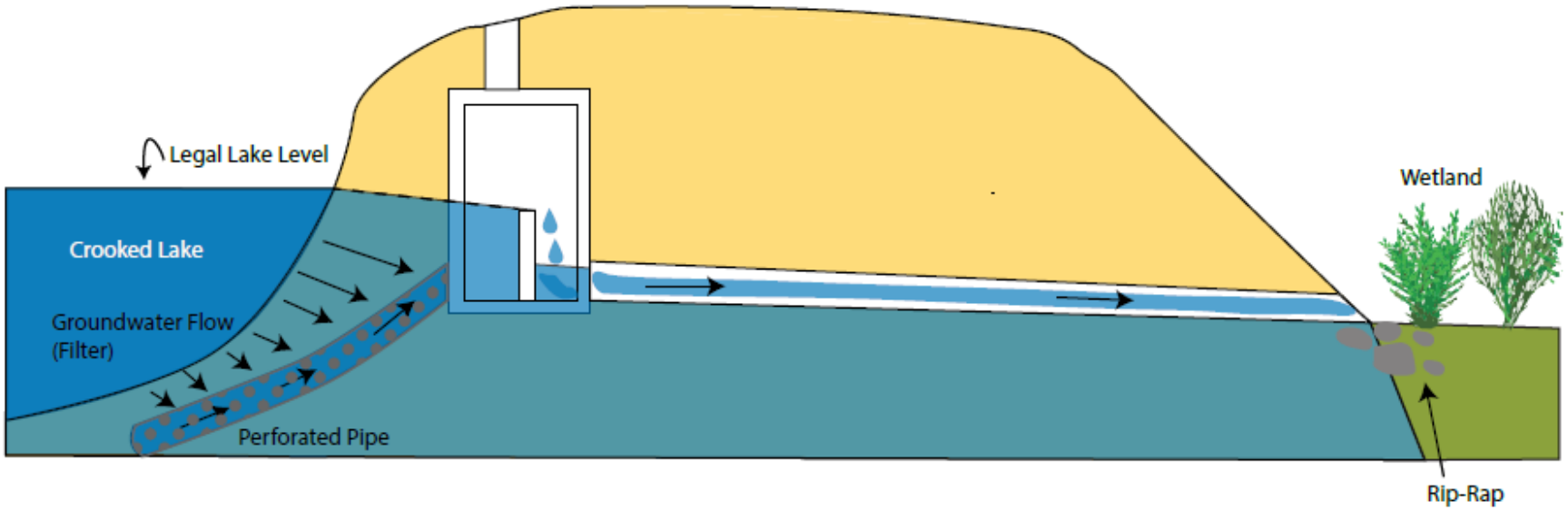


Crooked Lake Easement Route



What does a horizontal well look like?

Texas Township Flood Mitigation - Long-Term Conceptual Plan



What's the cost?

- The preliminary cost estimate is about $1.7M
  - Those costs provide for engineering designs, building structures, laying pipe, dewatering, tree removal, manholes, fill, road restoration, permitting, easements, admin/legal fees and contingencies
- Preliminary engineering design cost currently being incurred (estimated $30K) are being fronted by TT, and the monies will be credited back to TT's apportionment of the project

Interestingly, the long-term solution may be similar in cost to the short-term solution

Who pays?

- The envisioned SAD and how it works
  - TT pays 15%; the drain and road commission pay 10% each
  - Properties that benefit will be responsible for remaining 65%
  - Drain Office is responsible to determine SAD specifics
    - Likely made up of Tiers – with lake residents paying the most
    - Will use guidance from Prein&Newhof study and other TT records
    - The assessment will be based on “cost incurred and benefit derived”
  - SAD timeline would likely be spread over multiple years

Assessment adjustments are likely, according to TT tax assessor planning outlook

What's the overall timeline?

- The overall timeline (rough-order-magnitude)
  - Prepare Petitions and Begin Circulation Oct-2019
  - Petition Verification Dec-2019
  - Submittal to County Commission for Consideration January-February 2020
  - Lake Level Study Mar-2020
  - Township/County/Drain Office Review Apr-2020
  - Schedule Circuit Court Docket decision - Aug-2020
  - Appeals period End Sep-2020
  - Design Complete Dec-2020
  - MDEQ Permitting Mar-2021
  - Bidding Apr-2021
  - Begin Construction May-2021
  - Complete Construction Aug-2021

Note: Short term pumping to stop on the 30th September 2020 per the permit with short-term easements sunset on December 22, 2020
Possible MDEQ permit extension may be exercised

What's the LLL process?

- The overall process (rough-order-magnitude)
  - Residents sign LLL petitions
  - Petitions go to the County Commission
  - Preliminary study required to identify appropriate LLLs (Prein&Newhof)
  - Petition sent to court for action (scheduled hearing, notifications, etc)
  - Court renders decision on LLLs and SAD geography
  - Court sends decision to County Commission
  - County Commission empowers the Drain Office to maintain LLLs
  - Drain Office takes action to finalize engineering plans
  - Drain Office constructs the drainage system

The LLLs will be set by court using one SAD, one project, one court date, and one judge according to Drain Office

What do the (Two) LLL petitions look like – the Eagle Lake petition

EAGLE LAKE PETITION TO THE COUNTY BOARD OF COMMISSIONERS

KALAMAZOO COUNTY, MICHIGAN

The undersigned property owners of lands abutting Eagle Lake located in Texas Charter Township, Kalamazoo County, Michigan respectfully submit unto this Board this petition as follows:

The seasonable variations of inflow and precipitation, combined with a lack of suitable control over outflow, causes the water level of Eagle Lake to rise to a degree which is harmful to our interests.

The maintenance of a stable, normal, lake level is necessary on Eagle Lake to protect the public health, welfare, and safety; to preserve the natural resources of the State of Michigan; and to protect property values around Eagle Lake.

Therefore, we petition the Kalamazoo County Board of Commissioners to take the following action as provided by Part 307, Inland Lake Levels, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. MCL 324.30702(1).

To cause to be determined and established a Legal Lake Level for Eagle Lake, at an established lake level.

What do the (Two) LLL petitions look like – the Crooked Lake petition

Crooked LAKE PETITION TO THE COUNTY BOARD OF COMMISSIONERS

KALAMAZOO COUNTY, MICHIGAN

The undersigned property owners of lands abutting Eagle Lake located in Texas Charter Township, Kalamazoo County, Michigan respectfully submit unto this Board this petition as follows:

The seasonable variations of inflow and precipitation, combined with a lack of suitable control over outflow, causes the water level of Crooked Lake to rise to a degree which is harmful to our interests.

The maintenance of a stable, normal, lake level is necessary on Crooked Lake to protect the public health, welfare, and safety; to preserve the natural resources of the State of Michigan; and to protect property values around Crooked Lake.

Therefore, we petition the Kalamazoo County Board of Commissioners to take the following action as provided by Part 307, Inland Lake Levels, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. MCL 324.30702(1).

To cause to be determined and established a Legal Lake Level for Crooked Lake, at an established lake level.

Breaking it down

EAGLE LAKE PETITION TO THE COUNTY BOARD OF COMMISSIONERS

KALAMAZOO COUNTY, MICHIGAN

The undersigned property owners of lands abutting Eagle Lake located in Texas

Charter Township, Kalamazoo County,

Michigan respectfully submit unto this Board this petition as follows:

Breaking it down (continued)

The seasonable variations of inflow and precipitation, combined with a lack of suitable control over outflow, causes the water level of Eagle Lake to rise to a degree which is harmful to our interests.

The maintenance of a stable, normal, lake level is necessary on Eagle Lake to protect the public health, welfare, and safety; to preserve the natural resources of the State of Michigan; and to protect property values around Eagle Lake.

Breaking it down (continued)

Therefore, we petition the Kalamazoo County Board of Commissioners to take the following action as provided by Part 307, Inland Lake Levels, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. MCL 324.30702(1).

To cause to be determined and established a Legal Lake Level for Eagle Lake, at an established lake level.

The petitions are ready for signature in the back

What about the augmentation wells

- The Drain Office has no interest in controlling the operation of the augmentation wells
- Unfortunately, the Drain Office legal team will not allow the Drain office to sign a MOA to that effect at this time
- However, there is no evidence that the lake associations will lose management oversight of the augmentation wells

A permanent drain will restore property values for lake residents – there is no other solution

A word from the Deputy Drain Commissioner

- I am not interested in controlling the augmentation wells
  - The Drain Office would only control the infrastructure needed to maintain the legal level.
  - No new infrastructure could be installed unless a new petition process takes place.
  - Augmentation pumps would continue to be operated by the respective lake associations under the current guidelines.
  - A memorandum of agreement will be signed to ensure future Drain Commissioners abide by the agreement.

The letter of intent and MOA ensures control for managing the operation of the augmentation wells so that we can maintain lake levels as we have in the past

Conclusion Session

- For people who have additional questions – we will hold a Questions and Answers session
- For those who need to leave – our LLL Petition Signing Stations are located at the back – ready for your signature
- Our target goal is to obtain signatures by October 31 – there are various signing stations available
- For everyone - Thank you for coming