Lake Conroe, Texas

Lake Conroe Association

Meeting with TCEQ

April 8, 2025

Agenda

1. Introductions
2. Issue: water permit violation Lake Conroe diversions
3. Two lakes - brief history, background, and status
4. Discussion
5. Request for TCEQ intervention

A challenge for this overview presentation:

Overwhelming amount of data and history

but it all leads to the same conclusion.

2. The issue:

Non beneficial use diversion and waste of water from Lake Conroe

Permit authorization

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AMENDMENT TO A
CERTIFICATE OF ADJUDICATION

CERTIFICATE NO. 10-4963A			TYPE § 11.122
Owners:	San Jacinto River Authority	Addresses:	P.O. Box 329 Conroe, Texas 77305
	City of Houston		P.O. Box 1562 Houston, Texas 77007
Filed:	April 29, 2010	Granted:	JUL 20 2010
Purpose:	Industrial, Agricultural, Municipal, Mining	Counties:	Harris, Montgomery
Watercourse:	West Fork San Jacinto, tributary of San Jacinto River	Watershed:	San Jacinto River Basin

WHEREAS, Certificate of Adjudication No. 10-4963 (Certificate) authorizes the San Jacinto River Authority and the City of Houston (Owners) to maintain an existing dam and reservoir (Lake Conroe) on the West Fork San Jacinto River, San Jacinto River Basin and to impound therein not to exceed 430,260 acre-feet of water for recreational purposes in Montgomery County; and

WHEREAS, Owners are also authorized to divert or release and use not to exceed 100,000 acre-feet of water per year from the perimeter of Lake Conroe at a maximum diversion rate of 700 cfs (315,000 gpm) as follows: 66,000 acre-feet for municipal purposes, 28,500 acre-feet for industrial purposes, and 5,500 acre-feet for mining purposes; and

WHEREAS, Owners are also authorized to use the bed and banks of the West Fork San Jacinto River to convey all or any part of the 100,000 acre-feet of water downstream to Lake Houston in Harris County; and

WHEREAS, the priority dates for this right are January 12, 1959 for the impoundment of 380,430 acre-feet of water and the diversion and use of the 100,000 acre-feet of water, and June 28, 1965 for the impoundment of an additional 49,830 acre-feet of water, and

WHEREAS, the Certificate contains Special Conditions; and

WHEREAS, Owners seek an amendment to Certificate of Adjudication No. 10-4963 to add multi-use (municipal, industrial, mining, and agricultural) to the 100,000 acre-feet of water currently authorized for diversion; and

WHEREAS, the Texas Commission on Environmental Quality (Commission) finds that jurisdiction over the application is established; and

WHEREAS, no requests for a contested case hearing were received for this application; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Certificate of Adjudication No. 10-4963, designated Certificate of Adjudication No. 10-4963A, is issued to the San Jacinto River Authority and the City of Houston, subject to the following terms and conditions:

1. USE

   A. In lieu of the previous authorization to divert or release and use not to exceed 100,000 acre-feet of water per year for municipal purposes (66,000 acre-feet), industrial purposes (28,500 acre-feet), and mining purposes (5,500 acre-feet), Owners are now authorized to divert or release and use not to exceed 100,000 acre-feet of water per year for municipal, industrial, mining, and agricultural purposes.

   B. Any water diverted or released for agricultural purposes pursuant to Use paragraph 1.A. shall be utilized within the Owners' service areas in the San Jacinto River Basin.

   C. Owners are also authorized to use the impounded water for recreation purposes.

2. CONSERVATION

   Owners shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall include a requirement that in every wholesale water contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water be required to implement water conservation measures.

This amendment is issued subject to all terms, conditions and provisions contained in Certificate No. 10-4963 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the San Jacinto River Basin.

State law: Texas Water Code

- Specifies the purposes for which state water may be appropriated (TWC Sec. 11.023)
- Stipulates that water is held in trust for the public and may be appropriated only as expressly authorized (TWC 11.0235)
- States the preferential uses of state water. (TWC Sec. 11.024)
- Prohibits the willful taking, diversion or appropriation of state water (TWC 11.081)
- Prohibits uses of water except in the amount beneficially used, as specified in the appropriation (TWC 11.025)
- Provides for forfeiture of appropriation for willful abandonment (TWC 11.030)
- Requires records of amounts beneficially used, which must be provided to the ED in response to a complaint (TWC 11.031)

The violation

Houston Annual Water Use Report for 2024

(provided by TCEQ on March 20, 2025, in response to PIA request)

Report Year	Assigned Basin	WR Type	WR Number	Owner	WUR Form Use	Received Date	Div Jan Amt	Div Feb Amt	Div Mar Amt	Div Apr Amt	Div May Amt	Div Jun Amt	Div Jul Amt	Div Aug Amt	Div Sep Amt	Div Oct Amt	Div Nov Amt	Div Dec Amt	Div Total Amt
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	AGRICULTURE	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	INDUSTRIAL	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MINING	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MUNICIPAL/DOMESTIC	02/28/2025	0	0	0	0	818.	6791.	0	0	0	0	0	0	7609.
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	OTHER	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0

The violation

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2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	AGRICULTURE	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	INDUSTRIAL	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MINING	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MUNICIPAL/DOMESTIC	02/28/2025	0	0	0	0	818.	6791.	0	0	0	0	0	0	7609.
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	OTHER	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Houston

Municipal/Domestic Use

818 acre-ft
(266,546,118 gallons)

6,791 acre-ft
(2,212,854,141 gallons)

7,609 acre-ft
(2,479,400,259 gallons)

The violation

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2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	INDUSTRIAL	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MINING	02/28/2025	0	0	0	0	0	0	0	0	0	0	0	0	0
2024	SAN JACINTO	ADJ	4963	CITY OF HOUSTON	MUNICIPAL/DOMESTIC	02/28/2025	0	0	0	0	818.	6791.	0	0	0	0	0	0	7609.
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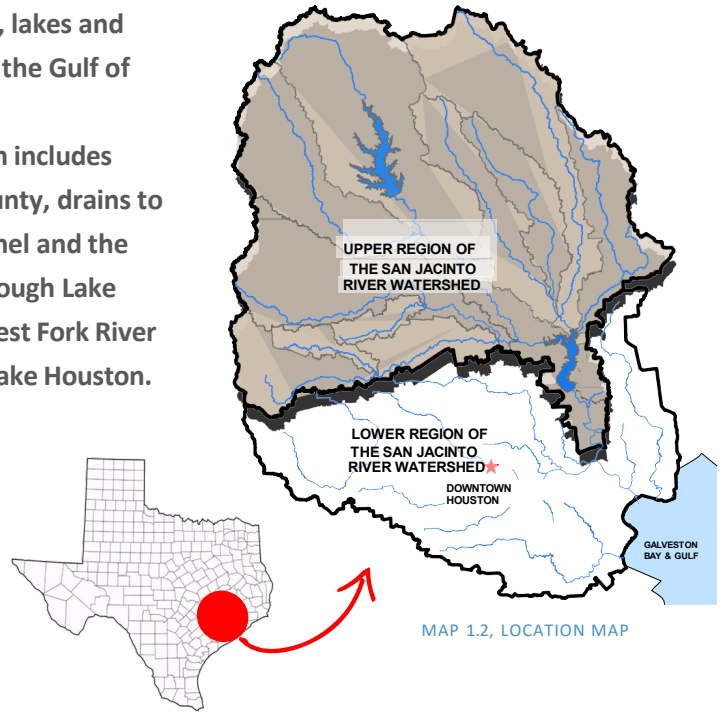
Fact: *all of this water was wasted and not beneficially used*

3. Two very different lakes - brief history of lowering programs, impacts, and status

OVERVIEW
SAN JACINTO WATERSHED

San Jacinto Watershed, Lake Conroe, and Lake Houston Facts

The San Jacinto River watershed encompasses more than 4,500 square miles of rivers, streams, lakes and reservoirs that drain to the Gulf of America.
The lower region, which includes Houston and Harris County, drains to the Houston Ship Channel and the upper region drains through Lake Conroe and into the West Fork River and East Fork River to Lake Houston.



MAP 1.2, LOCATION MAP

THE UPPER SAN JACINTO RIVER WATERSHED HAS A DRAINAGE AREA OF 2,880 SQ. MI. AND IS DRAINED BY THE EAST AND WEST FORKS

THERE ARE 11 MAJOR WATERSHEDS INCLUDING THE WEST FORK SAN JACINTO RIVER, EAST FORK SAN JACINTO RIVER, LAKE CREEK, SPRING CREEK, CYPRESS CREEK, AND SEVERAL MAJOR TRIBUTARIES.

THIS AREA EXPERIENCES AN AVERAGE ANNUAL RAINFALL OF 49 INCHES

WITH AN ESTIMATED POPULATION OF 1.9M, THERE IS AN ANNUAL MEDIAN HOUSEHOLD INCOME OF 77400

UPPER SAN JACINTO RIVER WATERSHED FACTS

THERE ARE 2 WATER RESERVOIRS, LAKE HOUSTON AND LAKE CONROE, WHICH PROVIDE WATER TO THE REGION

LAKE CONROE

- Completed in 1973 for water supply
- Drainage Area is 445 square miles
- Lake surface is 32 square miles
- Water supply capacity is 134 billion gallons – local use via SJRA WPP inlet
- Water diversions to Lake Houston are made through 5 dam gates via WFSJR

LAKE HOUSTON

- Completed in 1953 for water supply
- Drainage Area is 2,828 square miles
- Lake surface is 19 square miles
- Water supply capacity is 44 billion gallons.
- Water delivered via CoH NEWPP and SJRA LHPS
- All water not used is released above or below full pool via a spillway (uncontrolled) and / or 2 controllable dam gates

Lake Conroe and Lake Houston are man-made lakes, located in the upper region of the San Jacinto River Watershed. Both lakes are water supply reservoirs, meaning that normal pool water levels are maintained at a consistent elevation as much as possible to ensure a constant supply of water in times of drought.

Lake Conroe was built in 1973 and is located about 43 miles northwest of downtown Houston. The lake and dam are maintained by the San Jacinto River Authority. The lake has a normal pool elevation of 201 feet above mean sea level. Excess water is released from Lake Conroe through five gates on the dam and discharged into the West Fork San Jacinto River. The City of Houston is allocated two-thirds of the water rights in the lake. The SJRA is allocated the other 1/3.

of downtown Houston. The lake is owned by the City of Houston and maintained by the Coastal Water Authority. The lake has a normal pool elevation of 42 feet above mean sea level. Excess water spills over an uncontrolled 3,000-foot-long spillway at the dam and travels down the San Jacinto River to Galveston Bay. The dam also has 2 gates which are occasionally used to make releases.
The City of Houston is allocated all the water rights in the lake. The lake is a primary source of water for the City of Houston.

Key points are both lakes have the same purpose - water supply, and the differences in drainage area (6.4X), and "recharge" time to recover from lowering.

Source – Regional Watershed Master Drainage Study –
No improvements of the two lakes, outfall structures, or operations were evaluated as part of that study.

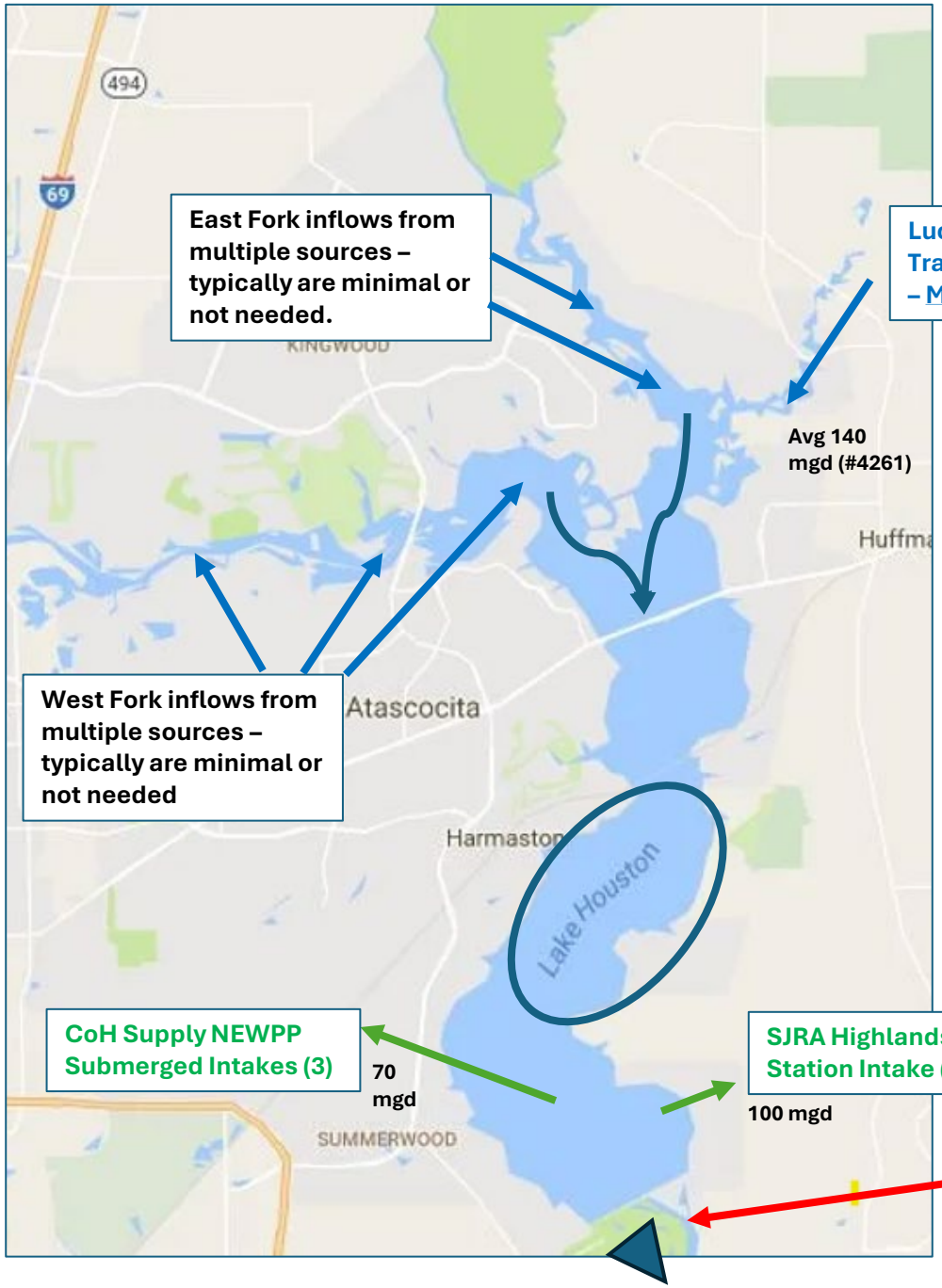
Is Houston using Lake Conroe water for a beneficial purpose?

Lake Houston daily normal inflows and typical volumes used as permitted.

Lake Conroe water supply diverted to Lake Houston was intended as a supplemental supply and built pre-Luce Bayou.

City of Houston has only called upon Lake Conroe once in 50 years for water supply due the 2011 drought.

All other inflows to Lake Houston are uncontrolled and usually account for 65-95% of the storm inflows depending on watershed rainfall.



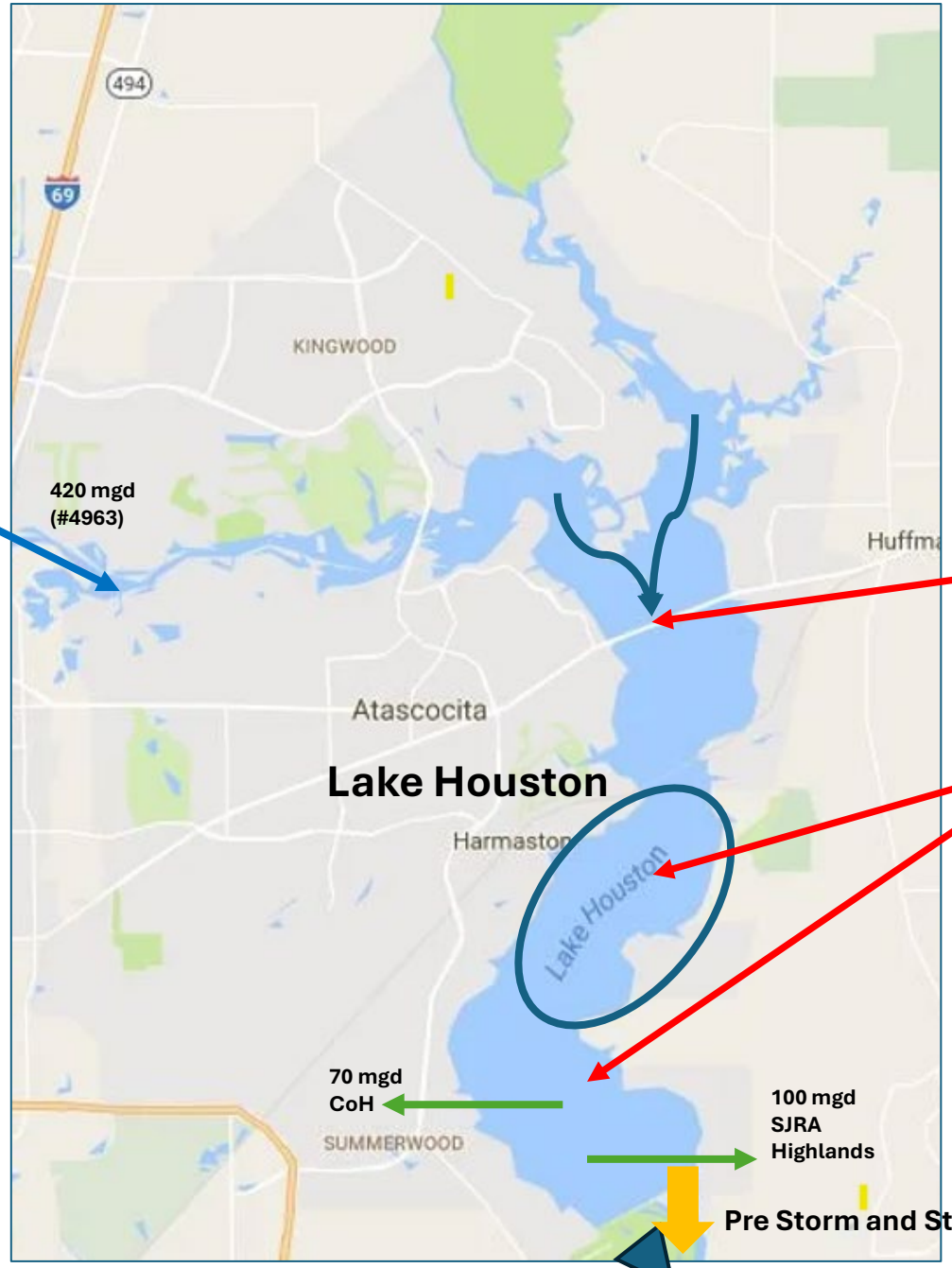
City of Houston Diversion call on Lake Conroe water permit showing TCEQ permitted rates.

Permitted CoH Call for diversion from Lake Conroe 700 cfs for *beneficial* use - max permitted diversion rate = 420mgd

Lake Conroe – Water Use Permit

The San Jacinto River Authority and City of Houston are joint permittees under Certificate 10-4963 for impounding up to 430,260 acre-feet of state waters, and annual use of up to 100,000 acre-ft for municipal, industrial, and mining purposes, with a maximum diversion rate of 700 cfs, and use of all impounded water for recreational purposes.

Flood risk reduction is not an authorized use per the TCEQ permit.



TCEQ Permit #4963 does not allow for a CoH rain event-based call for LC water diversions

No means **to segregate or divert the specific Lake Conroe volumes from other incoming volumes which are often 2X to 12X times greater.**

Lake Conroe max permitted diversion rate of 420 mgd *significantly exceeds (by 2.5X)* CoH and SJRA daily needed beneficial use volumes.

All excess water exits and is wasted **via Lake Houston Spillway / Dam to Gulf.**

Pre Storm and Storm Release Mode 950-5400 mgd unused

How and why did the Lake Conroe lowering start?

Hurricane Harvey – August 2017

Context and Dates of the four different Lake Conroe Lowering Programs / Protocols

- **SLLP Phase I-** Fall 2018 – 2019 - a temporary program authorized by the TCEQ while dredging was underway on the West Fork. Dredging was completed in Sept. 2019. Lake level lowering was "promised" as temporary so there was very little concern or criticism of the program.
- **SLLP Phase II** – Feb 2020 -City of Houston (CoH) requested to the SJRA Board an extension of the SLLP - same criteria as Phase I lowering – up to 1 foot and Fall - up to 2 feet). No TCEQ authorization was requested or given. This phase w*as supposed to end by EoY 2022. Significant protests ensued.*
- **Compromise SLLP** - In late 2021 due to LCA complaints before the TCEQ and LCA lawsuits the CoH and SJRA sought a compromise to allow additional needed time (2-3 years) as the Lake Houston Spillway project was significantly delayed. There were n*o calls for lowering for flood mitigation for two years.*
- **Active Storm Management** - In late 2023 CoH and SJRA proposed a 2024 program named Active Storm Management (ASM) – criteria was intended to be the same as 2023 Compromise SLLP but now based upon approvals / studies. LCA agreed that *if ASM was technically based and did not result in either waste or violations of water permit they would support.*

Does arbitrary lowering or prerelease of Lake Conroe reduce downstream flooding at Lake Houston?

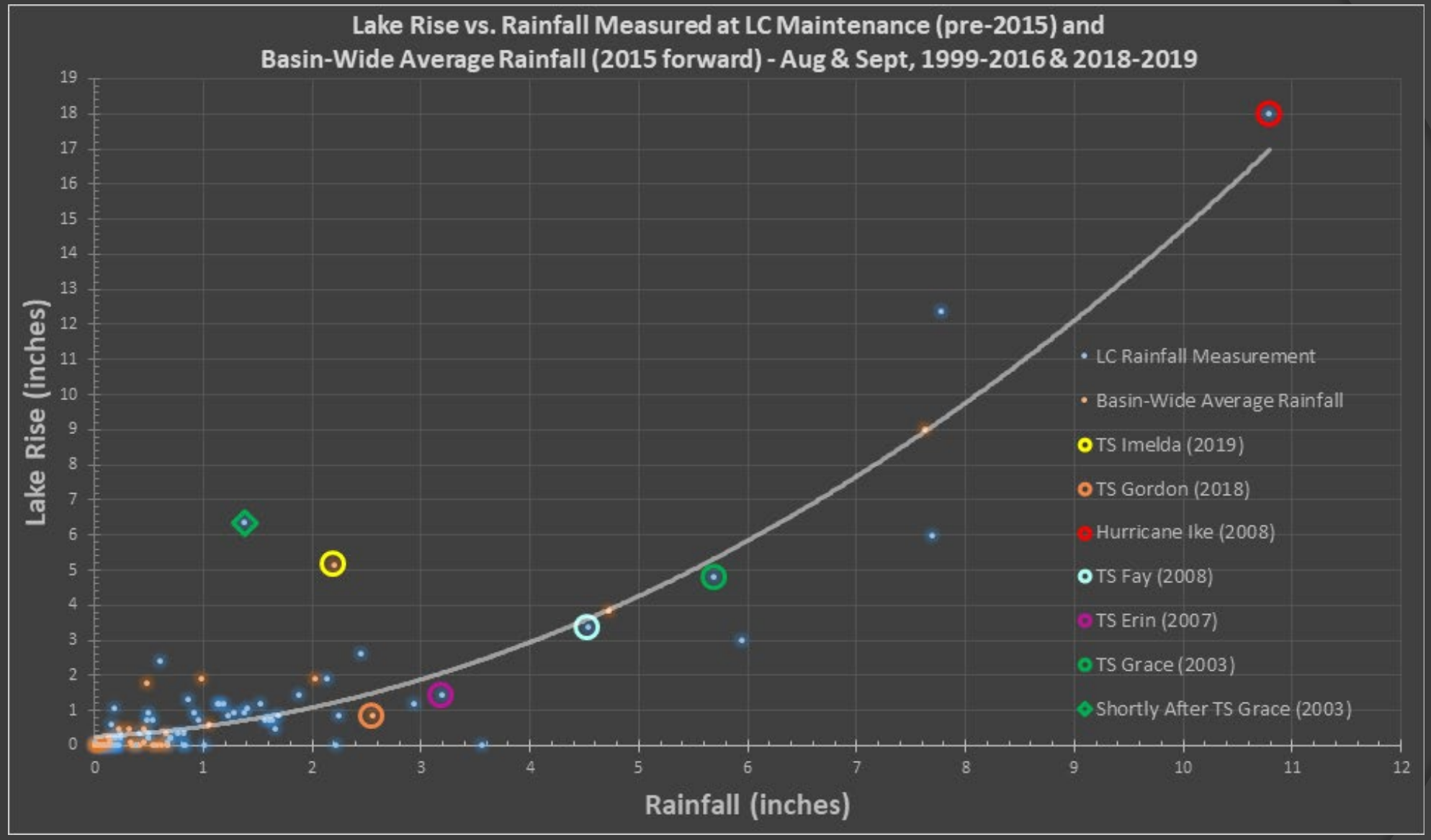
Does arbitrary lowering or prerelease of Lake Conroe reduce downstream flooding at Lake Houston?

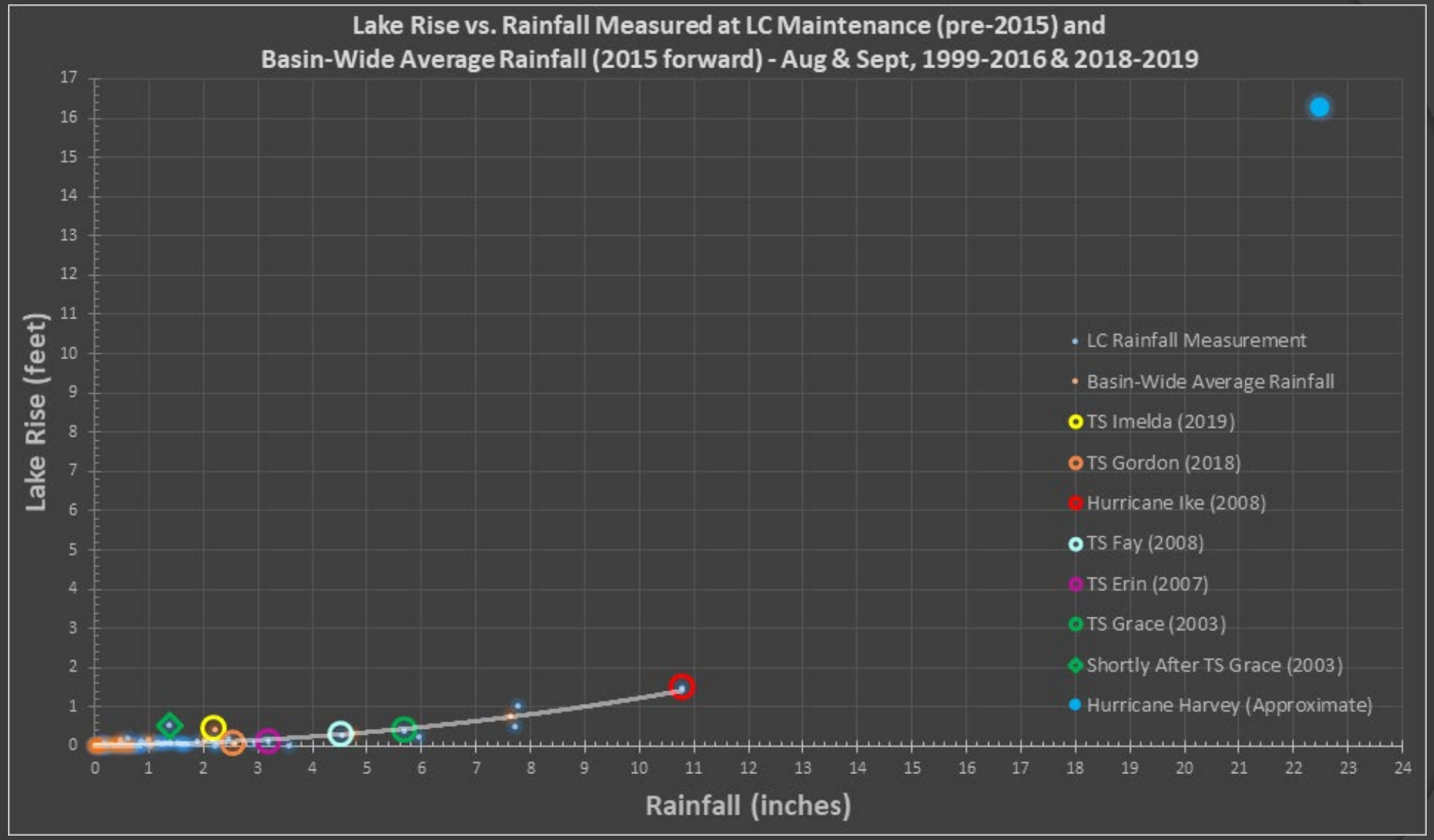
The short answer is no! The evidence is:
45 plus years of normal operations where the lake has retained significant runoff reducing downstream flooding without lowering.

Lowering for 99.9% of the major rain events is non effective.

Lowering for the .1% (1994 Flood and Hurricane Harvey) rain events would not have made material reductions in downstream flooding unless Lake Conroe was emptied before hand!

All existing technical studies indicate that lowering is non effective to materially reduce the downstream flood height or areal footprint.


Lake Rise vs. Rainfall Measured at LC Maintenance (pre-2015) and
Basin-Wide Average Rainfall (2015 forward) - Aug & Sept, 1999-2016 & 2018-2019
Lake Rise (inches)
Rainfall (inches)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
LC Rainfall Measurement
Basin-Wide Average Rainfall
TS Imelda (2019)
TS Gordon (2018)
Hurricane Ike (2008)
TS Fay (2008)
TS Erin (2007)
TS Grace (2003)
Shortly After TS Grace (2003)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Lake Rise (feet)
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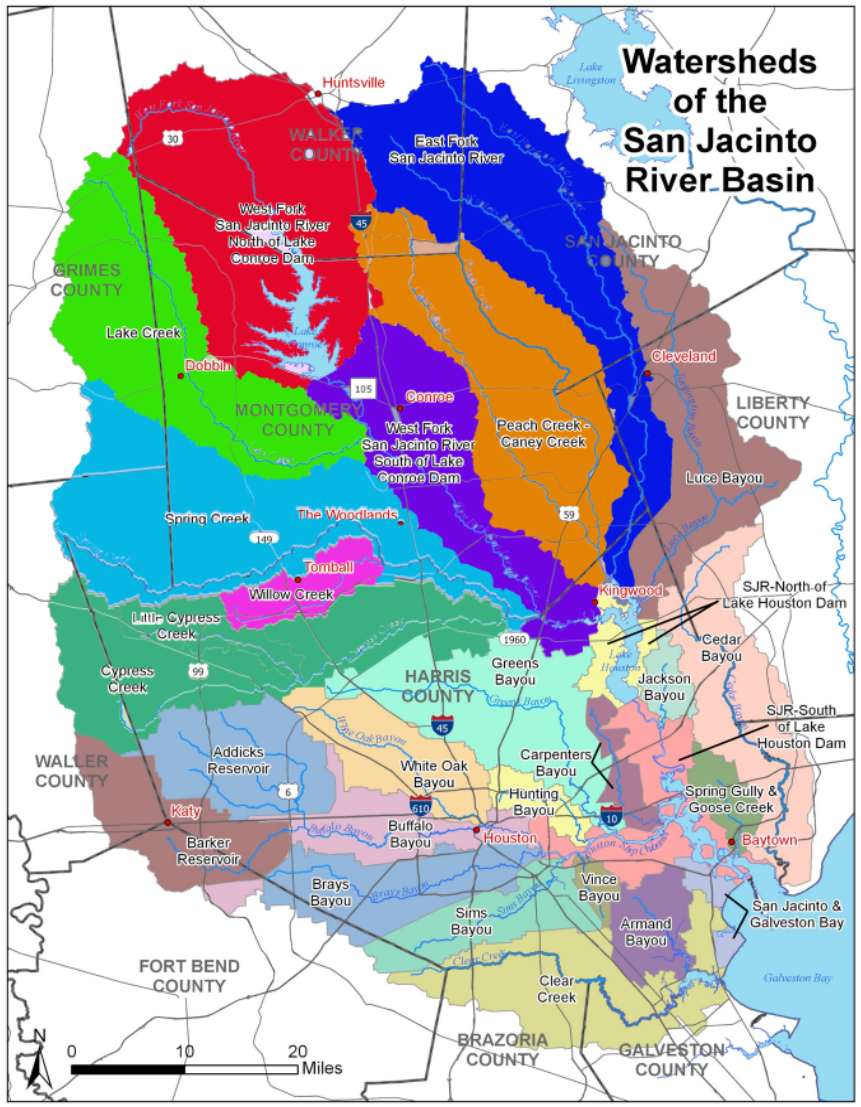
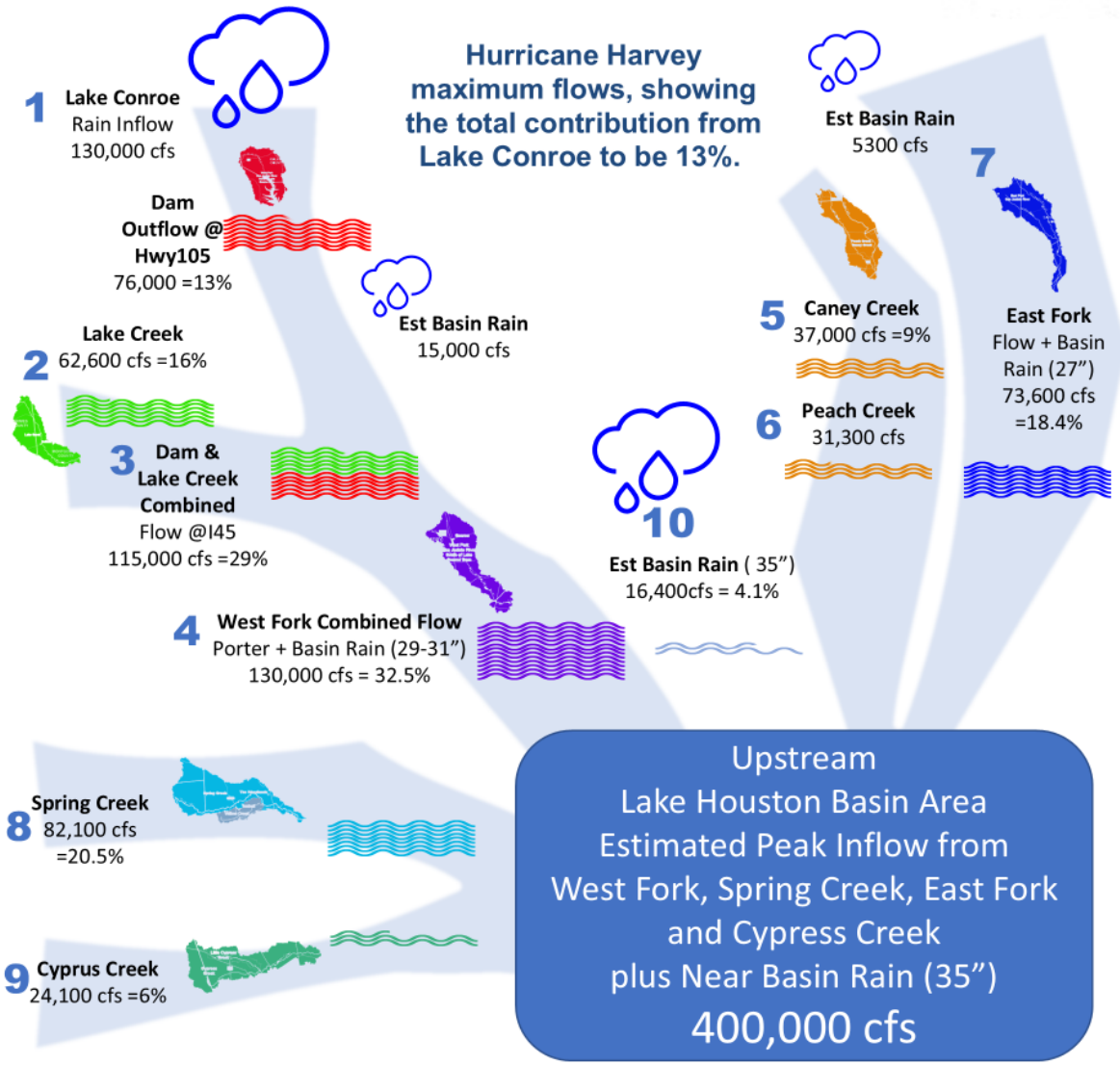
LC Rainfall Measurement
Basin-Wide Average Rainfall
TS Imelda (2019)
TS Gordon (2018)
Hurricane Ike (2008)
TS Fay (2008)
TS Erin (2007)
TS Grace (2003)
Shortly After TS Grace (2003)
Hurricane Harvey (Approximate)

Hurricane Harvey Inflow Sources and Contributions to Flooding at Lake Houston





Six highly qualified Entities or Individuals concluded lake level lowering or prerelease at Lake Conroe was not effective for “100 year” or greater storms and / or it was likely to make “downstream flooding worse”.

LCA Lake Conroe Association

SAN JACINTO REGIONAL WATERSHED MASTER DRAINAGE PLAN

Dec 2020 RWMD Study

FREESE AND NICHOLS

Apr 2018 – 2 studies for SJRA

SAN JACINTO RIVER AUTHORITY SJRA www.SJRA.net

Sept 2019 SJRA Dockline
Contradicted in Nov 2019 PR?

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Apr 2017 TCEQ letter to SJRA

BLEYL ENGINEERING
PLANNING • DESIGN • MANAGEMENT

February 2020

Conclusion:

While there is a positive impact to the water surface elevations of West fork from US-59 to Lake Houston, it Is our professional opinion that these reductions, under the given storm characteristics, are still generally **not enough to be considered wholesale improvements to the flood hazards along the West Fork**.

Note that this study extended all the way down to the Lake Houston area, and concluded a **2-3 inch difference in flood height elevation (which is equal to 1%) as compared to an **average flood height of 15-20 feet** and that the SLLP therefore has no material impact.*

March 2024 - Bob Rehac – *“Upstream Watersheds’ Relative Contributions to Lake Houston Area Flooding”*

“2-million-acre feet would drain into Lake Houston due to a 100-year storm.”

“That volume would fill all of Lake Conroe 4.75 times.”

Footnote – Mar 2020 Letter from Governor Abbot’s office –”It is our understanding that the plan set forth by SJRA and City of Houston to temporarily lower Lake Conroe is not a long-term solution , but a temporary measure.”

What impact has lake lowering had on Lake Conroe?

Consequences of Lake Conroe Flood Mitigation Lowering - 2019-2021 and 2024

- "Seasonal" program releases in 2019 and 2020 caused the lake to be below normal pool, often 1-1.5 feet below normal, **for 600 days**.
- During 2019-2021 there was no rainfall event that could have not been handled at normal pool. Lowering created no needed rain event capacity.
- **40 billion gallons** were diverted for flood mitigation and wasted up to 2022.
- The SJRA and CoH claimed water from flood mitigation releases "had no value" due to "no billed customer" but it was officially classified as "municipal use" which should have a customers.
- Arbitrary dates caused 6" to be diverted in late May 2020 without any storm threat – lake lost another 3" in evaporation in June.
- Arbitrary releases in April 2021 diversion of 1' - **7 billion gallons** to maintain target.
- **June 2024 ASM release of 2.2 billion gallons due to a ½" rain event was unnecessary and significantly wasteful.**

City of Houston Historical Lowering Diversions from 2018 -2020 equal 37.8 Bgal (116,000 af)

	Lake Houston Inflows				Lake Houston Dam Discharge[4]	
Period[1]	Inflow from Non-Lake Conroe Tributaries (acre-feet)[2]	Lake Conroe Discharge Below Full Pool (acre-feet)[3]	Inflow Total (acre-feet)	Ratio of Water from Lake Conroe Compared to Other Tributaries	Lake Houston Discharge Below Full Pool (acre-feet)	Lake Houston Discharge Total (acre-feet)
2018 Fall	70,099	18,746	88,845	0.27	60,296	132,629
2019 Spring	284,737	53,246	337,984	0.19	85,353	624,581
2019 Fall	367,621	18,958	386,579	0.05	181,474	782,144
2020 Spring	113,779	25,053	138,832	0.22	180,549	220,686
Total	836,236	116,004	952,240	0.14	507,672	1,760,041

What progress has been made on projects to control flooding?

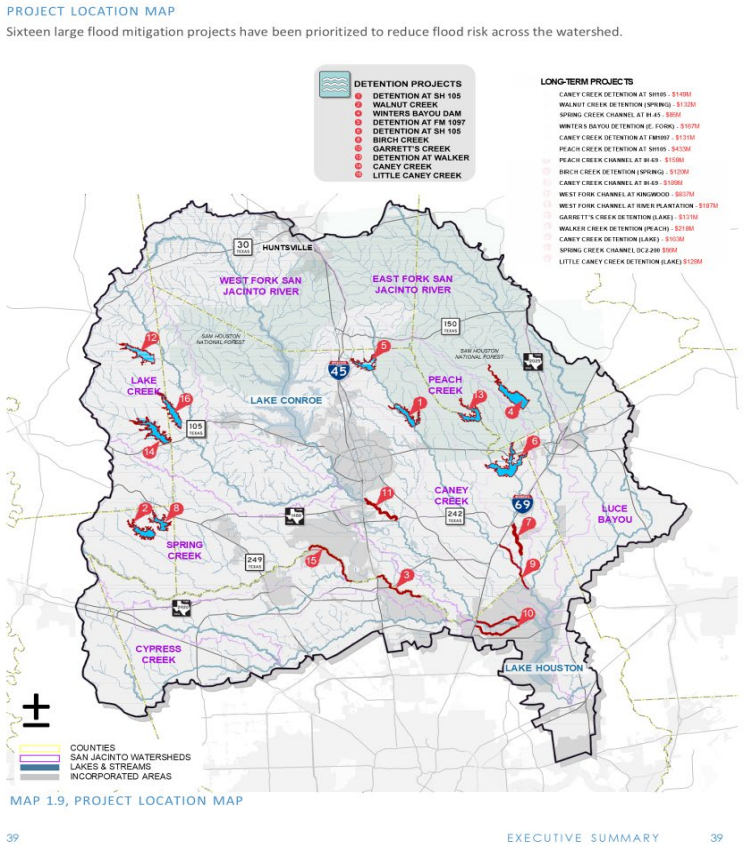
2020 Regional Master Drainage Plan Study

PROJECT SCORING AND RANKING

The Master Drainage Plan recommended that 16 projects could be implemented to reduce vulnerability to flood hazards on the main channels and improve watershed resilience.

Ranking	Project	Score	Cost ($M) *
1	Caney - Detention at SH 105	3.00	179.0 - 208.0
2	Spring - Walnut Creek Detention	2.60	97.2 - 132.1
3	Spring - I-45 Channelization	2.60	81.2 - 231.0
4	Peach - I-69 Channelization	2.55	161 - 311
5	East Fork - Winter's Bayou Detention	2.40	134.0 - 166.6
6	Caney - Detention at FM 1097	2.25	105.0 - 131.0
7	Spring - Birch Creek Detention	2.10	81.6 - 121.6
8	Caney - US 69 Channelization	2.05	194.0 - 209
9	West Fork - Kingwood Benching	2.05	818.0 - 848.0
10	Peach - SH 105 Detention	1.75	356.0 - 433.0
11	West Fork - River Plantation Channel	1.75	148.0 - 593
12	Lake - Garret's Creek Detention	1.55	107.0 - 131.0
13	Peach - Walker Creek Detention	1.30	201.0 - 218.0
14	Lake - Caney Creek Detention	1.25	98.0 - 163.0
15	Spring - DC2-200 Channelization	1.05	53.6 - 203
16	Lake - Little Caney Creek Detention	0.95	98.0 - 128.0

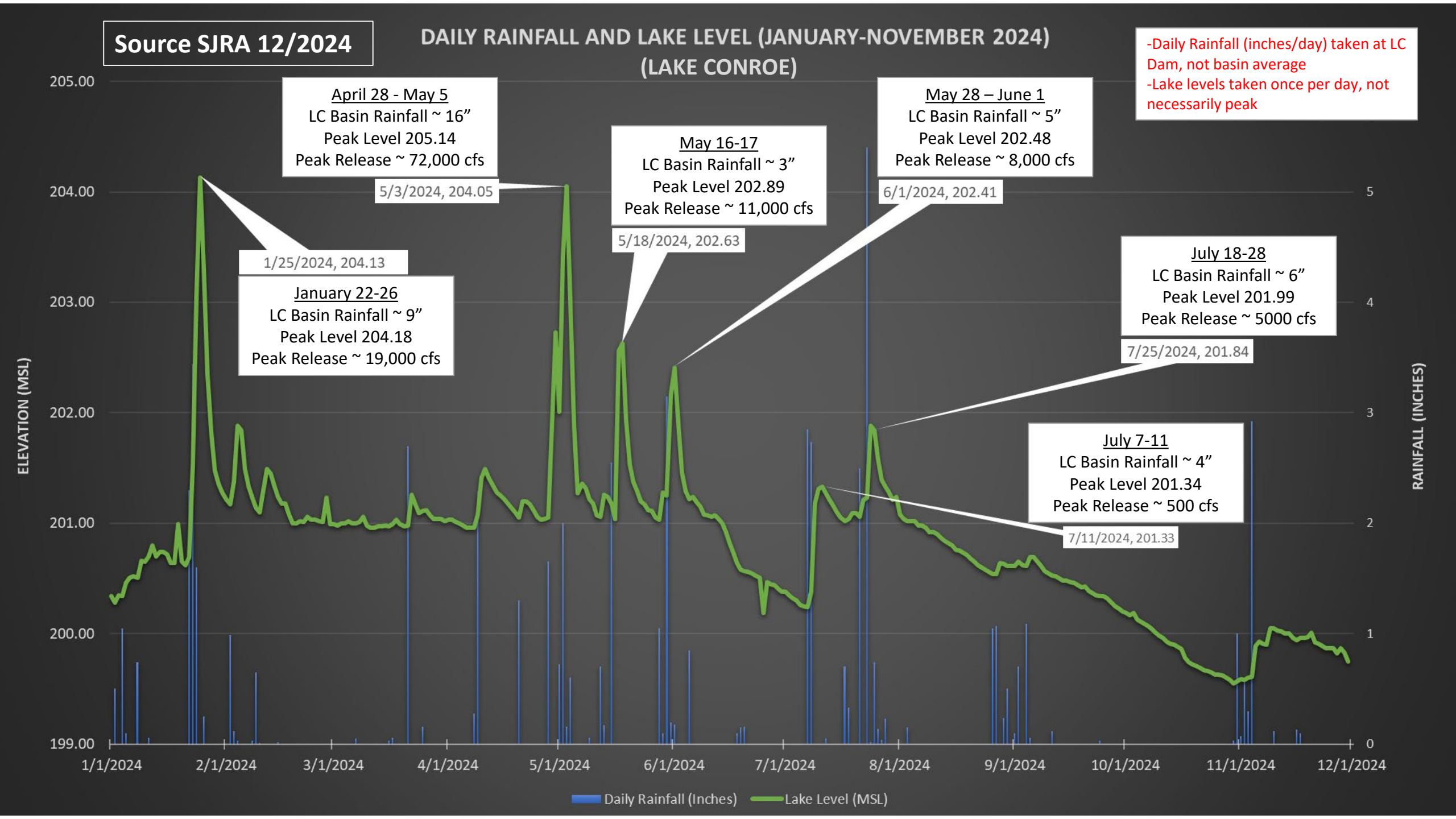
=$3.6B

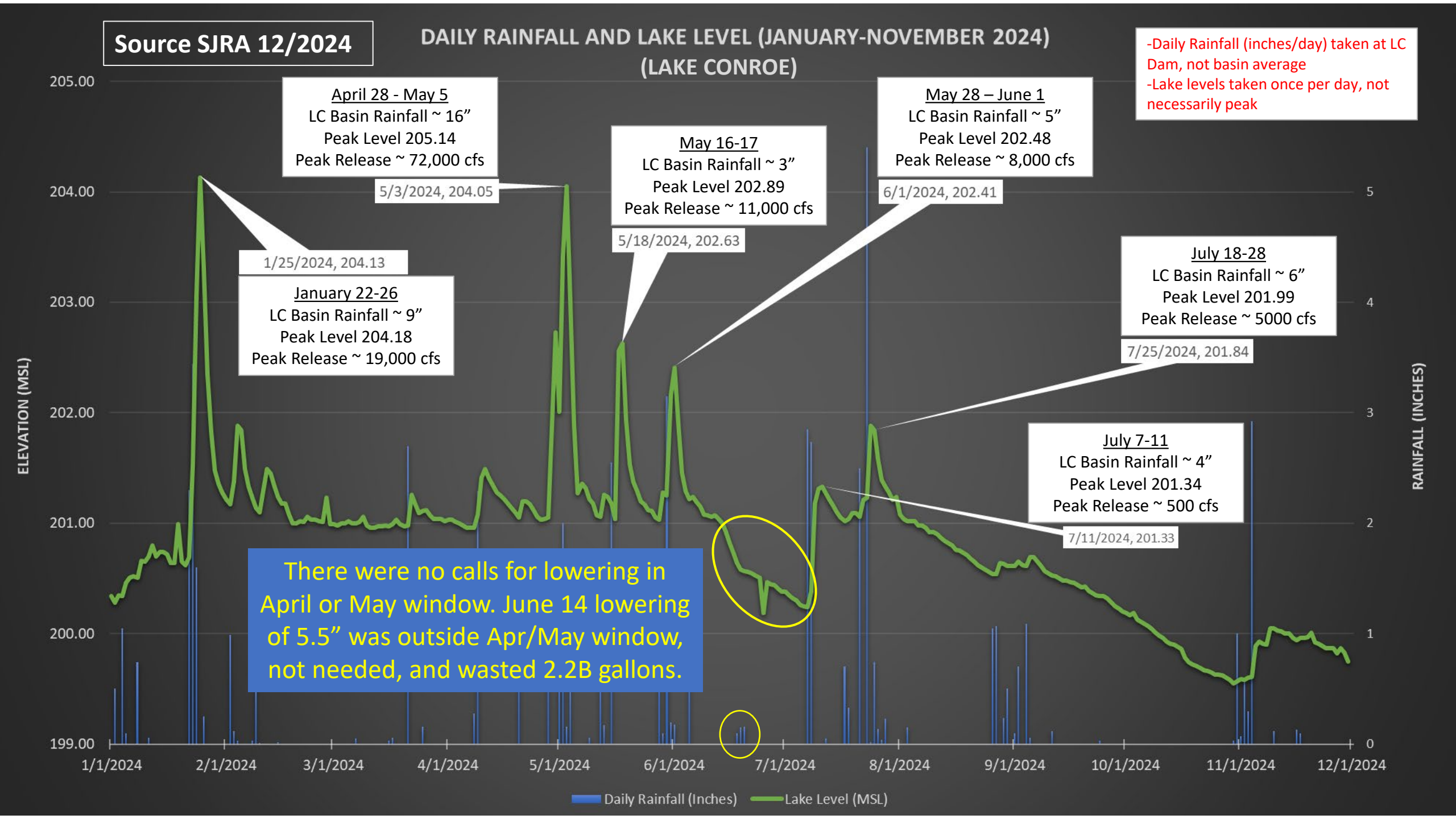


Lake Houston Dam Gates Expansion Project (was not in the ranking in the Regional Study)
Project entering Phase 2, which includes the project's final engineering design and construction. This design must then be approved and full funding obtained. Approximately **$155 million** has been secured, **significant additional funds are needed.**

Project completion is now estimated **to be 2029, not 2024.** There are reasonable doubts the Spillway project will be completed or completed on time. There are no other major flood mitigation projects underway – **will the "temporary" Lake Conroe lowering be perpetual?**

What happened in 2024 with ASM and why we are here.


Source SJRA 12/2024
DAILY RAINFALL AND LAKE LEVEL (JANUARY-NOVEMBER 2024)
(LAKE CONROE)
-Daily Rainfall (inches/day) taken at LC Dam, not basin average
-Lake levels taken once per day, not necessarily peak
April 28 - May 5
LC Basin Rainfall ~ 16”
Peak Level 205.14
Peak Release ~ 72,000 cfs
5/3/2024, 204.05
May 16-17
LC Basin Rainfall ~ 3”
Peak Level 202.89
Peak Release ~ 11,000 cfs
5/18/2024, 202.63
May 28 – June 1
LC Basin Rainfall ~ 5”
Peak Level 202.48
Peak Release ~ 8,000 cfs
6/1/2024, 202.41
1/25/2024, 204.13
January 22-26
LC Basin Rainfall ~ 9”
Peak Level 204.18
Peak Release ~ 19,000 cfs
July 18-28
LC Basin Rainfall ~ 6”
Peak Level 201.99
Peak Release ~ 5000 cfs
7/25/2024, 201.84
July 7-11
LC Basin Rainfall ~ 4”
Peak Level 201.34
Peak Release ~ 500 cfs
7/11/2024, 201.33
ELEVATION (MSL)
RAINFALL (INCHES)
205.00
204.00
203.00
202.00
201.00
200.00
199.00
5
4
3
2
1
0
1/1/2024
2/1/2024
3/1/2024
4/1/2024
5/1/2024
6/1/2024
7/1/2024
8/1/2024
9/1/2024
10/1/2024
11/1/2024
12/1/2024
Daily Rainfall (Inches)
Lake Level (MSL)


Source SJRA 12/2024
DAILY RAINFALL AND LAKE LEVEL (JANUARY-NOVEMBER 2024)
(LAKE CONROE)
-Daily Rainfall (inches/day) taken at LC Dam, not basin average
-Lake levels taken once per day, not necessarily peak
April 28 - May 5
LC Basin Rainfall ~ 16”
Peak Level 205.14
Peak Release ~ 72,000 cfs
5/3/2024, 204.05
May 16-17
LC Basin Rainfall ~ 3”
Peak Level 202.89
Peak Release ~ 11,000 cfs
5/18/2024, 202.63
May 28 – June 1
LC Basin Rainfall ~ 5”
Peak Level 202.48
Peak Release ~ 8,000 cfs
6/1/2024, 202.41
1/25/2024, 204.13
January 22-26
LC Basin Rainfall ~ 9”
Peak Level 204.18
Peak Release ~ 19,000 cfs
July 18-28
LC Basin Rainfall ~ 6”
Peak Level 201.99
Peak Release ~ 5000 cfs
7/25/2024, 201.84
July 7-11
LC Basin Rainfall ~ 4”
Peak Level 201.34
Peak Release ~ 500 cfs
7/11/2024, 201.33
There were no calls for lowering in April or May window. June 14 lowering of 5.5” was outside Apr/May window, not needed, and wasted 2.2B gallons.
ELEVATION (MSL)
RAINFALL (INCHES)
205.00
204.00
203.00
202.00
201.00
200.00
199.00
5
4
3
2
1
0
1/1/2024
2/1/2024
3/1/2024
4/1/2024
5/1/2024
6/1/2024
7/1/2024
8/1/2024
9/1/2024
10/1/2024
11/1/2024
12/1/2024
Daily Rainfall (Inches)
Lake Level (MSL)

CoH / SJRA Active Storm Management ASM June 2024 Lowering

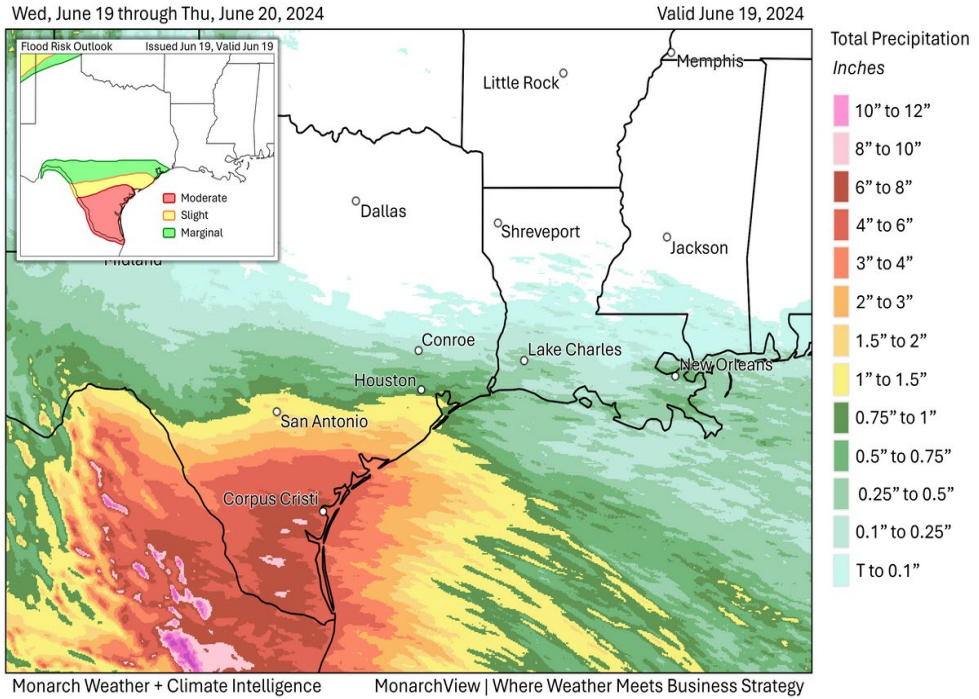
In mid-June of 2024, an over-prediction of rainfall led to a non-essential lowering of the Lake Conroe level resulting in over **2.2 billion gallons of water wasted.**

The SJRA and CoH faced conflicting rainfall forecasts, with some outlets predicting a low probability of 3-6” of rainfall and others less than 1-2”.

Citing expected rain of 3-6” **CoH took an early, aggressive approach to** lowering.

The Lake Conroe water level was lowered five days in advance of the “expected” heavy rainfall, which did not materialize. CoH / SJRA ignored LCA calls to stop.

Observed rainfall during that event totaled just under a half an inch, and thus the lake level remained well below normal pool due to 5.5” of lowering.



2024 Active Storm Management was random, poorly managed, and highly wasteful.
All studies conclude Lake Conroe prerelease lowering is ineffective.
SJRA does not support lowering and does not prerelease any of their water allocations.
However, SJRA allows the CoH to call for water solely to lower Lake Conroe (“it’s their water”) and therefore assists violation of the water use permit.

CoH 2024 ASM Diversions and Our concerns if ASM Continues

Lake Conroe Release Window	Lake Conroe Release Volume (BillionGal)	Lake Houston Release Volume (Gallons) during Same Time Period	Multiple (LH Released X Times LC Release)
May 11, 2024, 20:01:11 - May 12, 2024, 11:23:04	.27	3.8	14.1
June 14, 2024, 04:07:58 - June 19, 2024, 08:38:47	2.2	12.5	5.6
Totals	**2.5 Bgal**	**16.3 Bgal**	**6.6**

June 2024 lowering started well before forecast probability was reliable, went on far too long as the forecast became more certain and much less intense, and resulted in avoidable and significant (2.2Bgal) water releases.

Those releases could not have been diverted and physically used for any beneficial purpose as it was combined with other much larger volumes (12.5X) that went across the spillway.

In December 2024 meeting CoH representatives were adamant that they could "call for water year-round for any purpose and with no written protocol or agreement". No joint meetings held since December as CoH "has not been available".

Texas, Montgomery County, and Conroe need more water now – any appreciable waste should end.

4. Discussion

5. TCEQ intervention

TCEQ Intervention

- Does TCEQ need any additional information?
- Would a copy of this slide presentation or a follow-up letter be helpful?
- Based on today's discussion, is there a violation of the permit?
- Would a formal complaint help or hinder TCEQ's intervention?
- What will TCEQ do next?
- What is TCEQ's timing on its next step

(Supplemental/backup Slides)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 15, 2018

Mr. Jace A. Houston
General Manager
San Jacinto River Authority
P.O. Box 329
Conroe, Texas 77305

Ms. Carol Haddock
Director, Houston Public Works
City of Houston
611 Walker
Houston, Texas 77002

Dear Mr. Huston and Ms. Haddock:

As you are aware, there has been considerable attention given to reducing the risk of flooding along the San Jacinto River, particularly the West Fork of the San Jacinto River, in light of the extensive, catastrophic flooding that occurred as a result of Hurricane Harvey. The Texas Commission on Environmental Quality (TCEQ or Agency) has participated in community-related meetings and conducted flyovers and investigations of sand mining operations in response to concerns of unauthorized mining activities. Dredging portions of the San Jacinto River has also been discussed to address siltation in the river. The issue of lowering the levels of Lakes Conroe and Houston while the dredging takes place over the next one to three years has been identified by the San Jacinto River Authority (SJRA), City of Houston (COH), and the Texas Department of Emergency Management as being critical to the effort of mitigating flood risk. It is important to note that the Agency has received multiple inquiries from elected officials and concerned citizens alike with differing perspectives regarding the lowering of lake levels.

As TCEQ understands, SJRA, in coordination with the COH, have developed an emergency driven seasonal strategy for managing the water reservoirs during periods of heavy rainfall. TCEQ further understands that these measures would be utilized only on a temporary basis to mitigate flooding while dredging activities are completed. Those measures include releases under certain conditions from Lake Conroe or Lake Houston as determined to be necessary to mitigate impacts from future flood events. Additionally, according to SJRA, the lake lowering strategy would be reviewed and evaluated annually in February and must be agreed on by the SJRA Board and the COH to continue.

As we move into the 2018 Hurricane Season, in which we have already seen one named storm, the Agency recognizes the need to protect public health and safety by addressing and mitigating potential flooding. Accordingly, if flood mitigation releases made under these conditions result in an exceedance of the annual permitted amounts authorized for diversion or release by SJRA or the COH, the TCEQ Executive Director will exercise enforcement discretion with respect to such exceedance.

The TCEQ appreciates the challenges with mitigating flood risks during the time in which the San Jacinto River will be dredged while managing the region's water supply. If there are any questions, please contact me at (512)239-3900.

Sincerely,

Stephanie Bergeron Perdue
Interim Executive Director
Texas Commission on Environmental Quality

Enclosure: Texas Department of Public Safety June 12, 2018 letter

cc: The Honorable Sylvester Turner, Mayor of Houston
The Honorable Dave Martin, Councilman, City of Houston

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 24, 2017

Mr. Bret Raley
San Jacinto River Authority
Division Manager, Lake Conroe Division
P. O. Box 329
Conroe, Texas 77305

Re: **Pre-Release from Reservoirs**

Dear Mr. Raley:

During our telephone conversation on April 19, 2017, you requested our comments on pre-release from reservoirs before a predicted large rain event. Here are our comments.

We would not recommend pre-release based on weather forecasts. Meteorologists cannot precisely predict how much it is going to rain or exactly where it is going to rain. If pre-release from a reservoir was started based on a prediction of rain upstream of a dam and the rain actually fell downstream of the dam on top of the water that was released, the dam owner could be liable for causing any flooding and water supply would have been wasted.

The general rule in this country is that the operator of a dam may permit floodwaters to pass through the dam in an amount equal to the inflow, but will be liable if any excess amount is discharged. This is the reason the gate operation procedures as prepared by your engineer must be followed every time the gates are operated.

In the case of large rainfalls, it would be difficult to release enough water in advance of the storm, without causing flooding, to allow storage without release during the event.

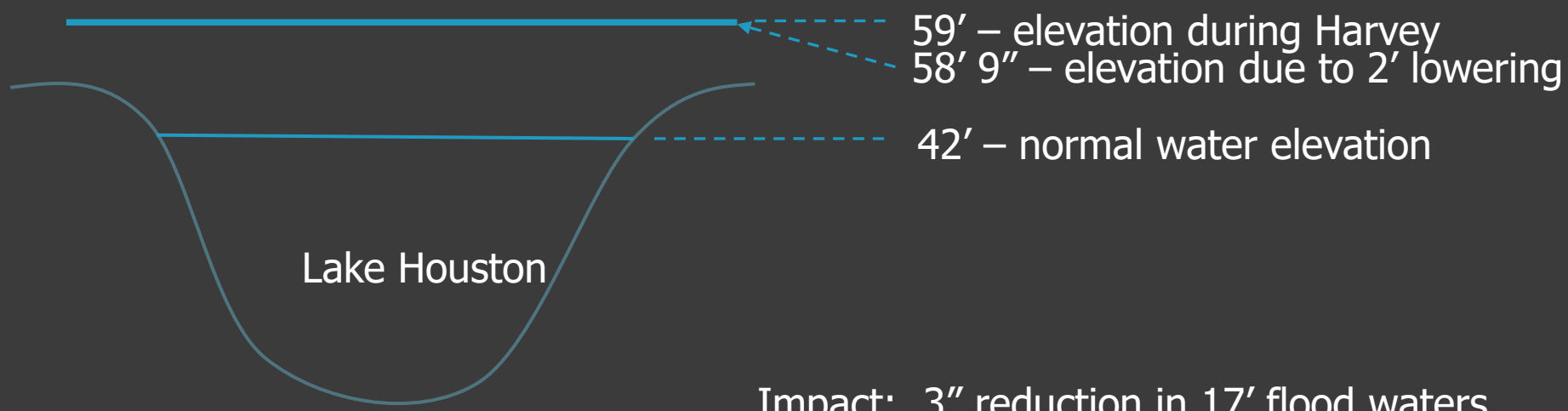
If you have questions, please feel free to call (512/239-5195).

Sincerely,

Warren D. Samuelson

Warren D. Samuelson, P. E.
Manager, Dam Safety Section
Critical Infrastructure Division, MC-177

Flood levels during Hurricane Harvey and impact of lowering Lake Conroe by 2 feet



Impact: 3” reduction in 17’ flood waters
(= 1.5% reduction)