Delta Council

Flood Control Committee

Update on the Yazoo Backwater Project

May 19, 2021

www.msleveeboard.com

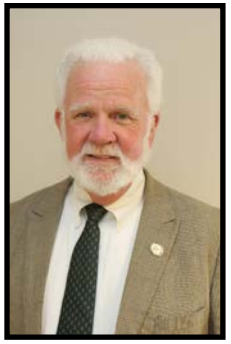
Mississippi LEVEE BOARD

The Mississippi Levee Board is responsible for:
<u>212</u> miles of Levees and
<u>350</u> miles of Interior Streams

KENNETH RODGERS
PRESIDENT
HUMPHREYS CO.
1993

NOTT WHEELER, JR.
VICE-PRESIDENT
BOLIVAR CO.
1994

ROY NICHOLS
ISSAQUENA CO.
1996



HANK BURDINE
WASHINGTON CO.
2010

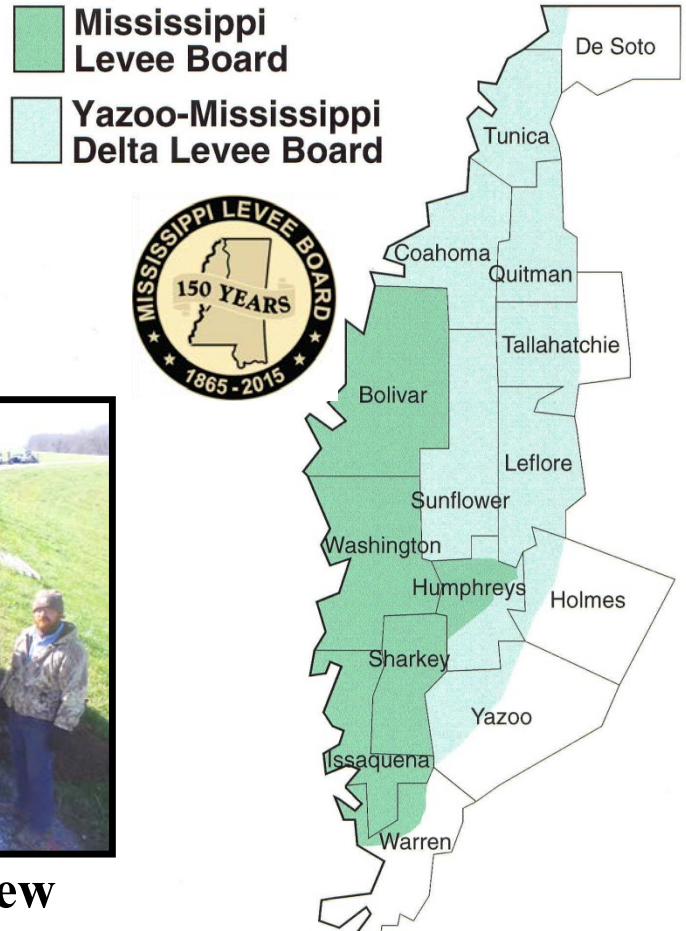
PAUL HOLLIS
SHARKEY CO.
2011

KATHERINE CRUMP
BOLIVAR CO.
2020

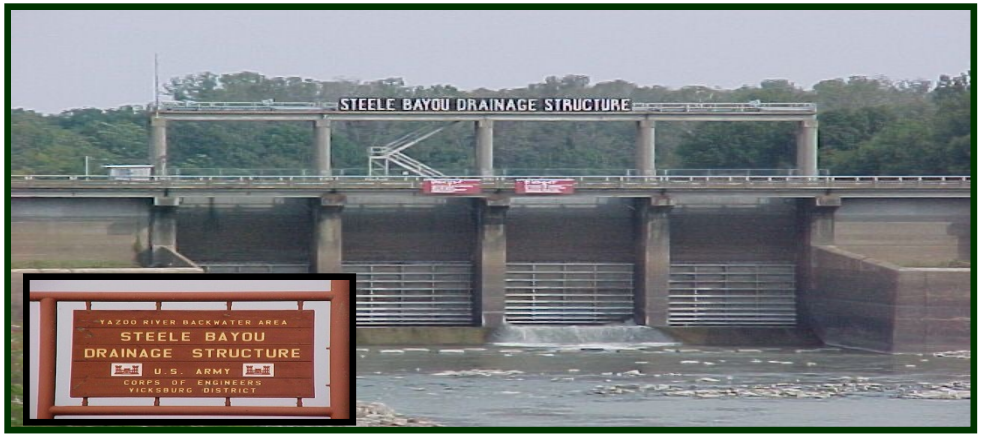
DAVID COCHRAN, JR.
WASHINGTON CO.
2020

Levee Board Staff

Levee Board Crew



The Yazoo Backwater Project



Balancing Economics …

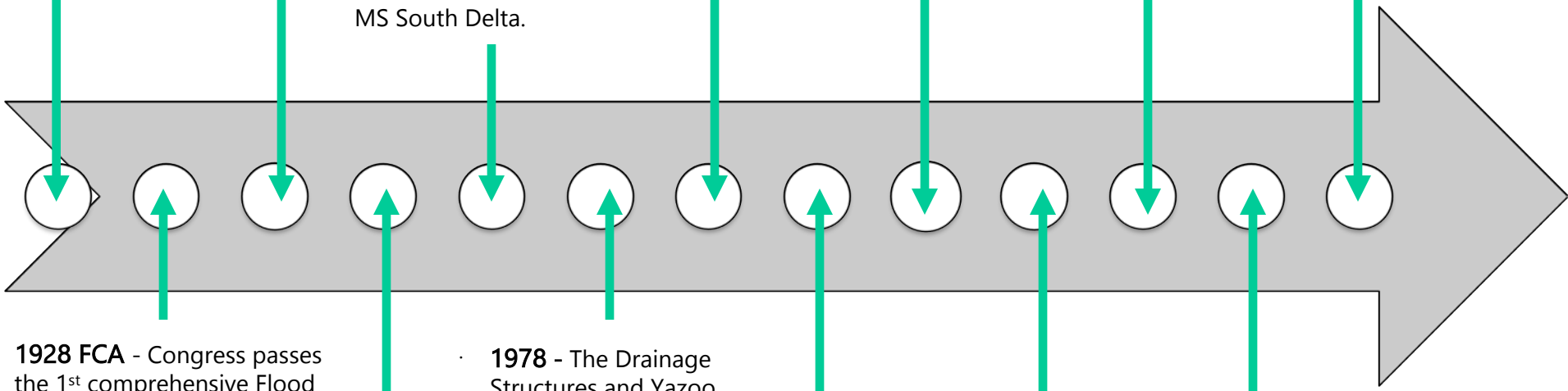
(Flood Control Benefits with a 14,000 cfs Pump)

…with the Environment!

(Environmental Benefits with Supplemental Low Flow Groundwater Wells and Reforestation)

A Balanced Project that is good for People, Trees, Wildlife & Fish!

History of the Yazoo Backwater Project



1927 MS River Flood - 16.6M acres flooded, 700,000 people displaced, 162,000 Homes flooded.

1928 FCA - Congress passes the 1st comprehensive Flood Control Project. The "MR&T Project" consists of Levees, Floodways & Cut-offs.

1941 FCA - Arkansas abandons the Eudora Floodway & MS realizes this will flood the MS South Delta. Congress authorizes the YBW Project – Drainage Structures, Backwater Levees & Pumps.

1960's - The Corps starts constructing the Drainage Structures & Backwater Levees.

1973 Backwater Flood - 630,000 acres flooded in the MS South Delta.

1978 - The Drainage Structures and Yazoo Backwater Levees are completed.

1986 - The Corps starts building the YBW Pump Project - 17,500 cfs Pump turned on at 80'.
However the 1986 WRDA places cost-sharing on YBW Project. Project stops.

1996 - 1996 WRDA removes the cost-sharing on YBW Project.

2007 - Corps releases the 2007 YBW Project – 14,000 cfs Pump turned on at 87'.

2008 - EPA vetoes the Yazoo Backwater Pumps located in Issaquena Co., MS.

2019 Backwater Flood - 548,000 acres, 686 homes and 3 Highways flooded; 2 people died, wildlife, trees & the environment decimated. Corps & EPA work together to develop a new YBW Project with Pumps in Warren Co., MS.

2020 - Corps completes the NEPA environmental documentation.

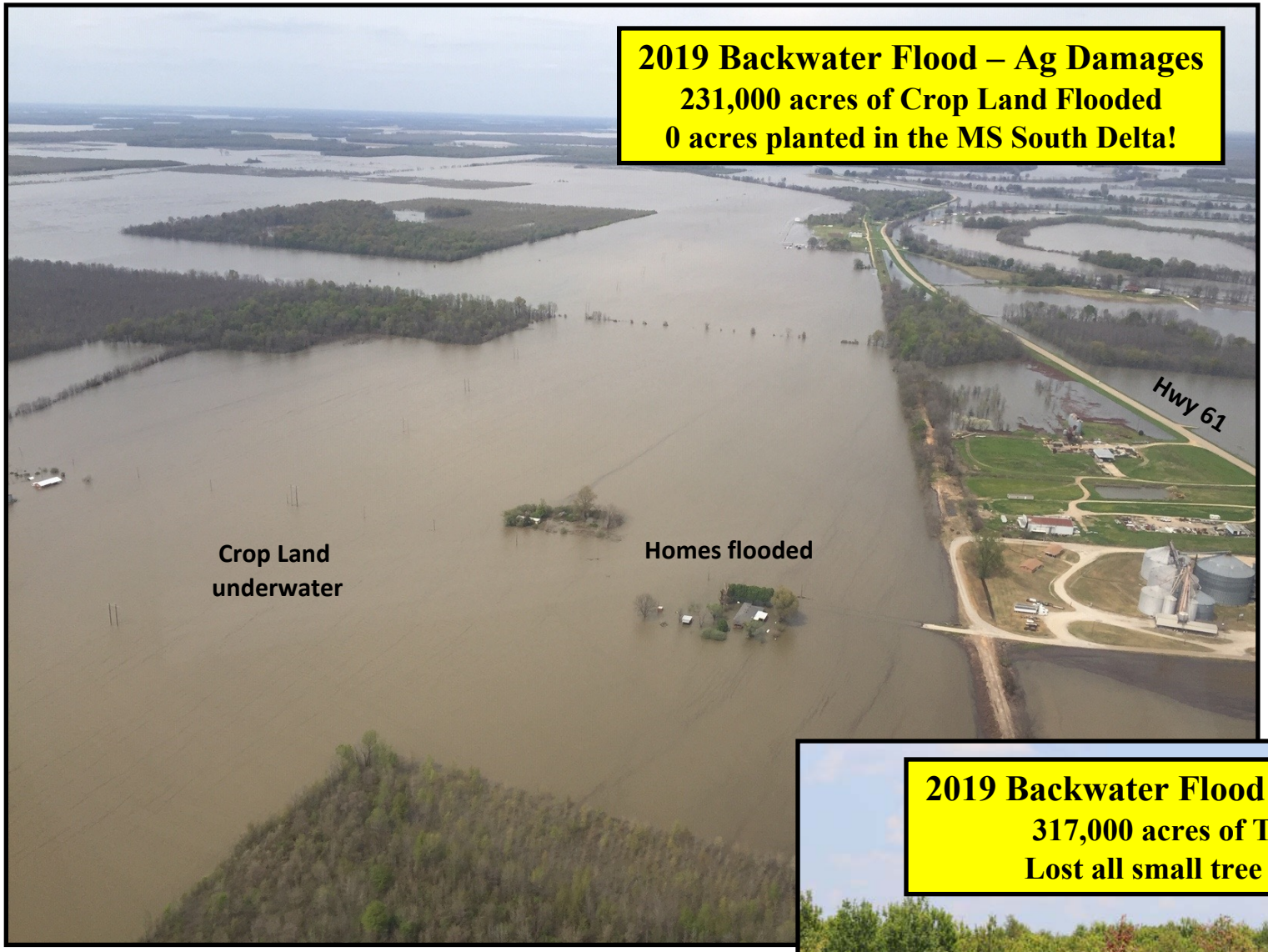
2021 – Record of Decision (ROD) is signed January 15, 2021.

HISTORICAL BACKWATER EVENTS

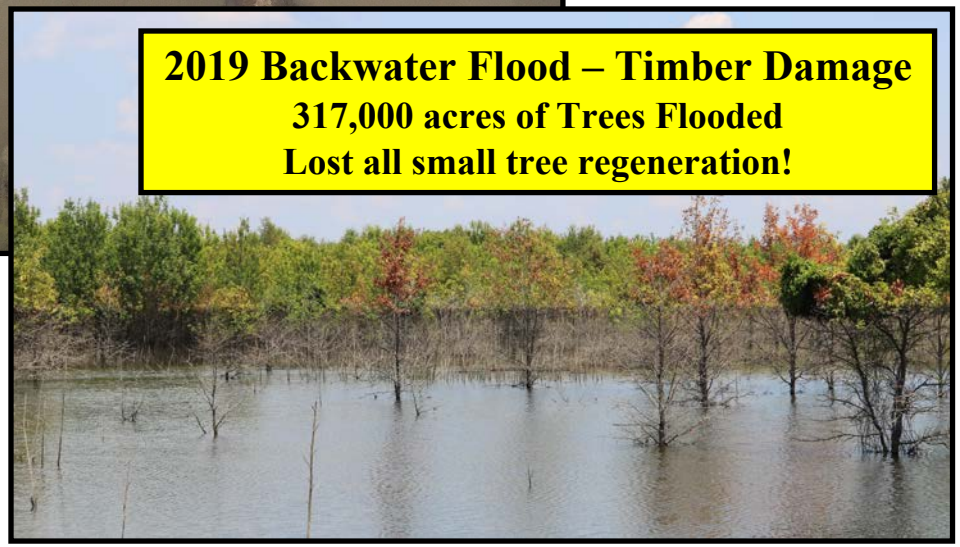
Since 1978

	1973 (May 15)	**101.5’**	**>630,000 acres**
1.	**2019 (May 23)**	**98.2**	**548,000 acres**
2.	**2020 (April 23)**	**96.9’**	**500,000 acres**
3.	1979 (May 4)	96.5’	
4.	1983 (June 7)	95.8’	
5.	**2018 (Mar 25)**	**95.2’**	**444,000 acres**
6.	**2009 (June 4)**	**93.7’**	**394,000 acres**
7.	1997 (April 8)	93.3’	
8.	1991 (May 6)	92.5’	
9.	**2008 (May 7)**	**92.2’**	**344,000 acres**
10.	**2016 (Mar 21)**	**92.0’**	**337,000 acres**
11.	1984 (May 29)	92.0’	
12.	**2021 (April 15)**	**91.8’**	**331,000 acres**

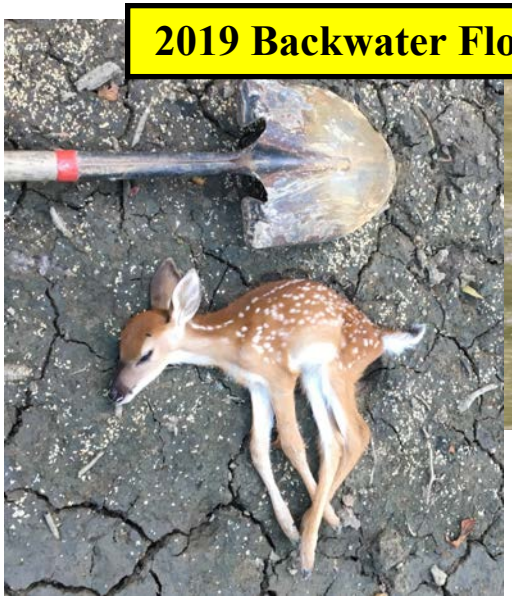
2019 Backwater Flood - 686 Homes Flooded

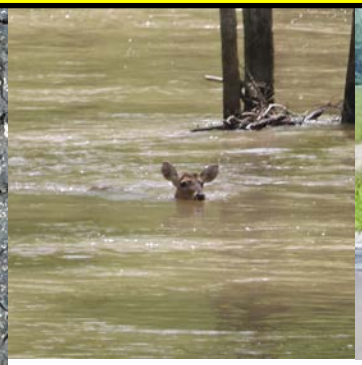


South of Valley Park, MS
Backwater at 97.2' on March 29, 2019



2019 Backwater Flood - The MS South Delta has lost an entire generation of Wildlife





Tara Wildlife Executive Director Gilbert Rose - "*60% to 80% of the deer Tara Wildlife had before the 2019 Backwater Flood have not returned to the area. The deer that are there are noticeably smaller, skinnier and their antler development is way behind schedule. We estimate it will take 5 years to rebuild the deer herd.*" Tara canceled their 2019-20 deer season.

Raccoons ate all the Turkey Eggs, Alligator Eggs & Turtles Eggs.

2019 Backwater Flood
2 people died

2 PEOPLE TRAGICALLY DROWN IN THE BACKWATER JUNE 13, 2019

Deer Creek Pilot

Guiding the South Delta for 142 years

Volume 143 Number 24 | Rolling Fork, MS | June 20, 2019 | $1.00

Floodwaters prove deadly to local couple

HOLLY BLUFF— Many in the South Delta are mourning the loss of a young mother this week after she and her boyfriend were found in floodwaters about a half-mile from this small Yazoo County community last Saturday afternoon, while another Issaquena County woman is thankful her encounter with floodwaters had a much less tragic ending.

LaTamela Taylor

LaTamela Taylor, 29, and her boyfriend, 34-year-old Dorren Wilson of Vicksburg, left her brother's house in Vicksburg for Rolling Fork last Thursday night about 11:30 p.m. in her 2008 Mazda, according to Sharkey County Sheriff Lindsey Adams.

By Friday morning, Taylor was reported missing, and by early Saturday morning, her friends and family had taken to Facebook pleading for help in finding the missing couple. The news they would get would be devastating.

According to Yazoo County Coroner Ricky Shivers, an area farmer discovered two bodies floating in floodwaters along Satartia Road around 5 p.m. Saturday. "He saw skid marks and looked over and saw the bodies," Shivers said.

Dorren Wilson

"I heard it on the radio and responded since it was so close," Holly Bluff Volunteer Fire Chief Glen Reams said. "I was the first one on the scene...I just knew it was them."

Reams said he helped recover the bodies, and Adams positively identified the young woman who was employed as a dispatcher with his department.

A Yazoo County dive team recovered the car in what Adams said was much more than 10 feet of water. The driver's side window was down, according to Shivers, who said there was really no way to know whether the couple tried to escape the sinking car.

Shivers also confirmed Monday that security cameras on a nearby farm shop captured video of Taylor's car at 2:32 a.m. Friday. The video shows the car travelling at a high rate of speed before spinning and sliding backwards into the floodwater. Shivers said the camera couldn't make out what happened after the car sank.

"I just believe they made a wrong turn and got disoriented," Adams said.

At almost the same time and a county away, Mayersville resident Angela Stubbs found herself in floodwaters just off Highway 1 in Issaquena County.

According to that sheriff department's dispatcher Brenda Peterson, Stubbs said she encountered deer on the road around 3 a.m. Friday morning. She swerved to miss the animals and ran off the road and in to standing water.

The only occupant in her 2015 Chevy Impala, Stubbs was able to free herself and get to safety before calling 911.

Shivers, who said Taylor was 13-weeks pregnant when she died, had not received reports from autopsies performed at the state medical examiner's office as of Monday afternoon.

A graduate of South Delta High School, Taylor lived in Rolling Fork with her young son.

Aerial drone images of Holly Bluff Road at the Big Sunflower bridge from May 30 shows just a small part of the more than 500,000 acres still inundated with floodwaters mid-June. With less than predicted rainfall and an equalization of the water on both sides of the Steele Bayou Draining Structure, the U.S. Army Corps of Engineers announced Wednesday morning that the structure's gates would be opened sometime during the day.

—Image courtesy of David Battaly, MEMA

On June 13, 2019 LaTamela Taylor (13 weeks pregnant) and Darron Wilson drowned when their car slipped off in the Backwater near Holly Bluff, MS.

Their car was found 10' underwater.

These 2 people died because of the EPA decision to veto the Pumps in 2008.

ENVIRONMENTAL JUSTICE

Yazoo Backwater Area – MS South Delta - Issaquena & Sharkey County, MS

- 71% of the population is minority.
- 30% of the population lives below the poverty line.
- Flooding has caused undue hardships and economic losses to these residents.
- The Corps has concluded that the Proposed Plan will benefit low-income and minority populations in the Study Area.
- The vast majority of homes in these communities would be protected from flooding.
- Highways and roads throughout these communities will be protected from flooding.
- These communities would benefit from reduced damage to agriculture crops.
- Improvements in resources for subsistence fishing & hunting for these residents.
- The "no action" alternative would continue temporary displacement of these communities because minority and low-income residents would remain vulnerable to flooding.

If the Yazoo Backwater Pumps are built – they will help the minority and impoverished communities!

2019 Backwater Flood

1. 548,000 total acres flooded.
2. 231,000 acres of Crop Land flooded.
3. 686 Homes flooded.
4. 3 Highways were flooded.
5. 2 people drown.
6. Decimated the Wildlife, Environment & Trees.
7. Flood mostly impacted the minority and impoverished community.

Pump Support – National Level

AMERICAN FARM BUREAU FEDERATION®

Wrote a letter of Support for the Pumps
June 5, 2019

The Nature Conservancy

Wrote a letter of Support for the Pumps
August 2, 2019

FARM BUREAU MISSISSIPPI®

Wrote a letter of Support for the Pumps
July 29, 2019

Pump Support – Mississippi Level

MS House of Representatives
Passes a Resolution of Support for the Pumps
January 29, 2020
VOTE 121-1

MS Senate
Passes a Resolution of Support for the Pumps
February 18, 2020
VOTE 51-0

MISSISSIPPI Wildlife FEDERATION

"We are fully supportive of the new Yazoo backwater pump project"- Ashlee Smith, CEO, Mississippi Wildlife Federation

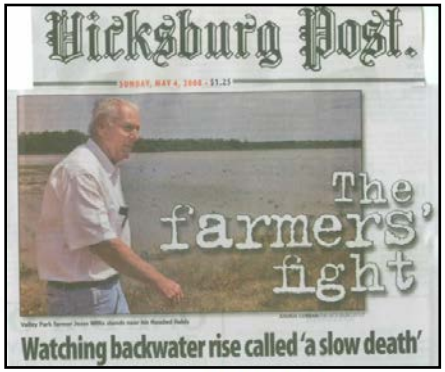
Published 14 mins ago on May 9, 2021
By **David Day**

MISSISSIPPI WILDLIFE, FISHERIES, & PARKS

MS Department of Wildlife, Fisheries & Parks
Passes a Resolution of Support for the Pumps
June 19, 2019

MISSISSIPPI FORESTRY COMMISSION · PROTECTION · MANAGEMENT · INFORMATION · MFC

MS Forestry Commission
Passes a Resolution of Support for the Pumps
March 10, 2020



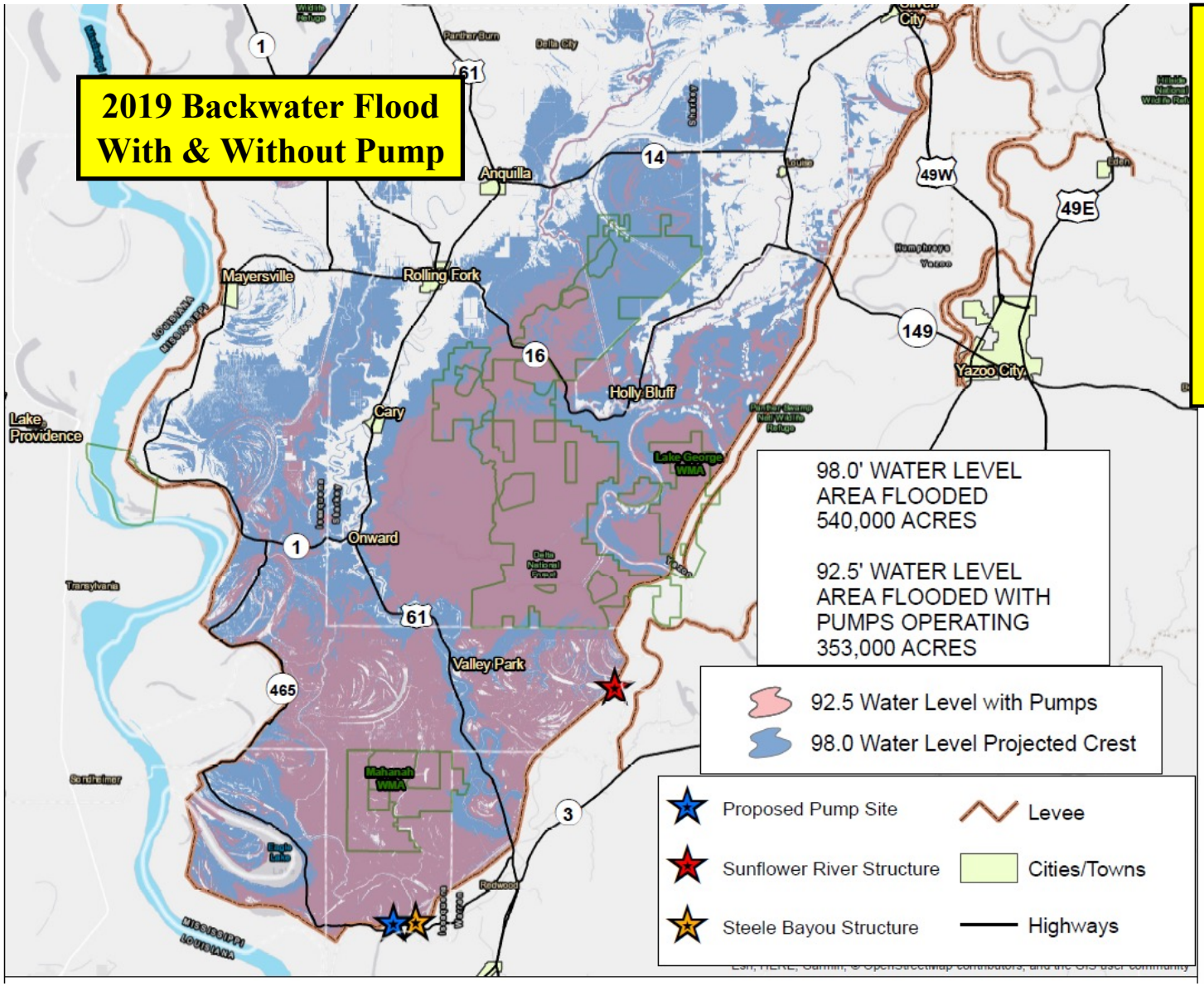
YAZOO BACKWATER PUMP PROJECT

March 9, 2021

2008-2020

	Observed Elevation	W/Project Elevation	Total Acres Flooded	Crop Land Flooded	Ag Damages Prevented by Pump	USDA Crop Insurance Payments	Total Crop Value (Not Produced)
Pump On	87.0		203,000	37,000			
May 2008	92.2	87.0	344,000	103,000	$61,372,000	$15,585,556	
June 2009	93.7	89.8	394,000	133,000	$62,431,000	$41,594,564	
June 2011	90.0	87.0	280,000	71,000	$33,041,000	$62,622,590	
May 2013	90.9	87.0	304,000	82,000	$42,081,000	$19,262,626	
April 2015	90.7	87.5	299,000	80,000	$35,293,000	$22,710,060	
January 2016	91.4	88.1	319,000	89,000	$21,581,000	$28,571,269	
May 2017	88.5	87.0	241,000	52,000	$14,156,000	$15,491,464	
March 2018	95.1	92.7	440,000	162,000	$25,565,000	$14,957,491	
May 2019	98.2	95.1	548,000	231,000	$57,268,000	$84,366,779	$177,653,222
April 2020	96.8	93.9	496,000	200,000	$53,240,000	$46,571,931	$146,838,548

BENEFITS - Total Ag Damages Prevented w/ Pumps in place 2008-20	**$406,028,000**	**$351,734,330**	**$324,491,770**
BENEFITS - USDA Crop Insurance Payments 2008-2020	**$351,734,330**		
BENEFITS - Total Crop Value (Not Produced) 2019-20	**$324,491,770**		
TOTAL BENEFITS - 2008-2020	**$1,082,254,100**		
TOTAL COSTS - YBW Project (Pumps, Well Fields & Mitigation)	**($400,000,000)**		
Total Benefit ($1.080M) minus Project Cost ($400M)	**$682,254,100**		



MAJOR ROADS/HIGHWAYS FLOODED BY BACKWATER IN MAY 2019

Hwy 1 near Fitler
Hwy 465 near Fitler
Hwy 16 near Holly Bluff
Hwy 465 at Eagle Lake
Satartia Rd near Holly Bluff
Low-Water Bridge Road
Goose Lake Road
Spanish Fort Road
Blanton Road

WITHOUT A PUMP

Backwater at 98.2'
548,000 acres Flooded
231,000 acres Crop Land
3 Highways Flooded
686 Homes Flooded

WITH PUMP

Backwater at 95.2'
444,000 acres Flooded
164,000 acres Crop Land
0 Highways Flooded
0 Homes Flooded

Yazoo Backwater Pumps

Had the Pumps been in place the Backwater would have crested at **95.2'** instead of 98.2' (**3.0' lower crest**).
At 95.2' **444,000 total acres** would be flooded instead of 548,000 acres (**104,000 less acres flooded**).
At 95.2' there are **164,000 acres** of Crop Land flooded (**67,000 less acres of Crop Land flooded**).
At 95.2' **no** homes would have flooded and **no** highways would have overtopped.

Corps Modified Yazoo Backwater Project

As submitted to EPA on December 20, 2019

Modified YBW Project

Proposed Project will provide net gains in every environmental resource category (wetlands, terrestrial, aquatic & waterfowl)

ECO-SYSTEM RESTORATION IN FALL
New Well Fields along the levee to pump water into MS Delta Streams during the low-water season in the Fall to provide critical habitat for fisheries, aquatics, mussels, wildlife & the environment.

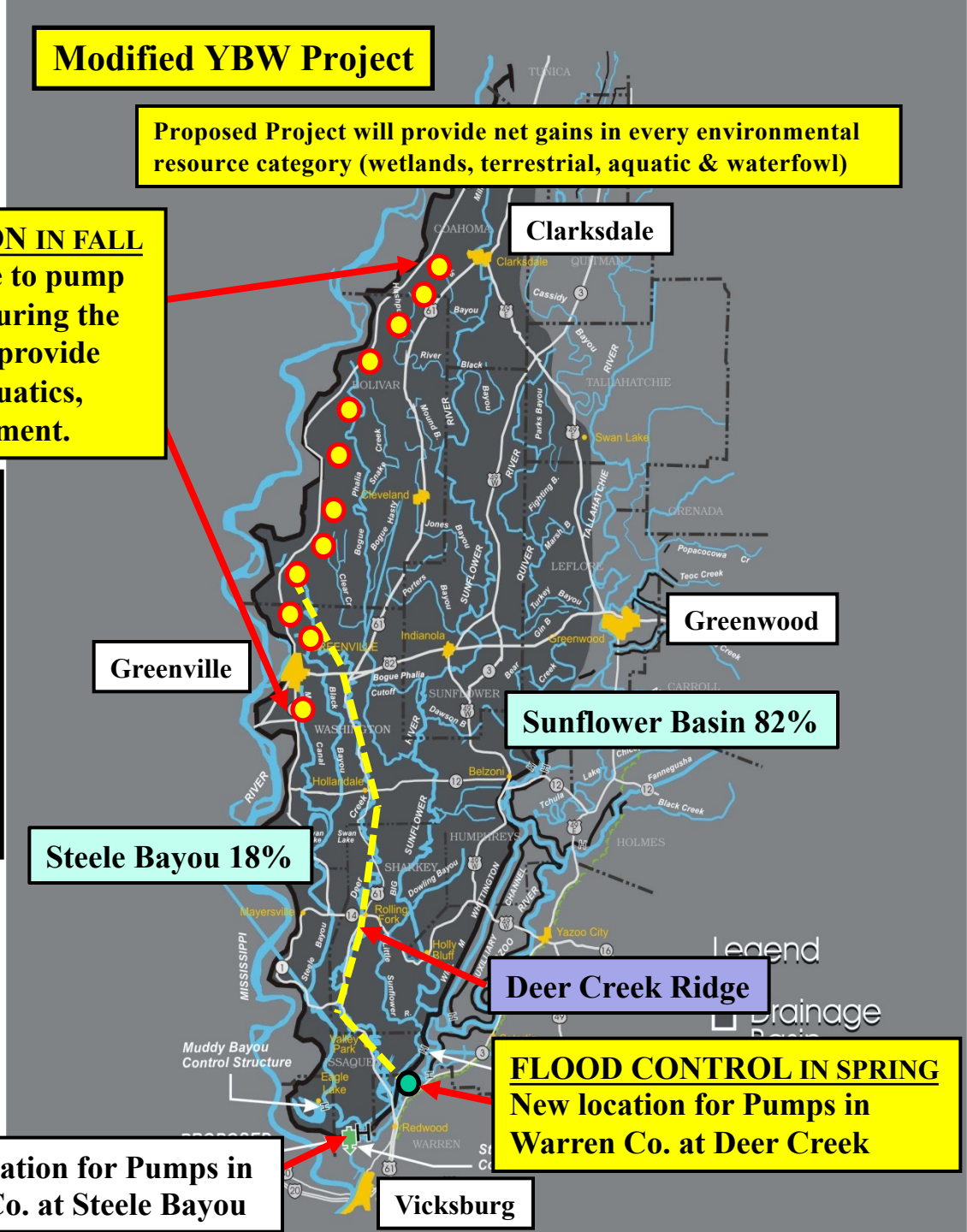
Corps meeting with EPA January 15, 2020

New Wetland data showing that 87% of the Wetlands in the YBW Area are sustained by Annual Precipitation – not sustained by backwater flooding

New 40 Year P.O.R. – 1978-2019

New LIDAR elevation data

Original location for Pumps in Issaquena Co. at Steele Bayou

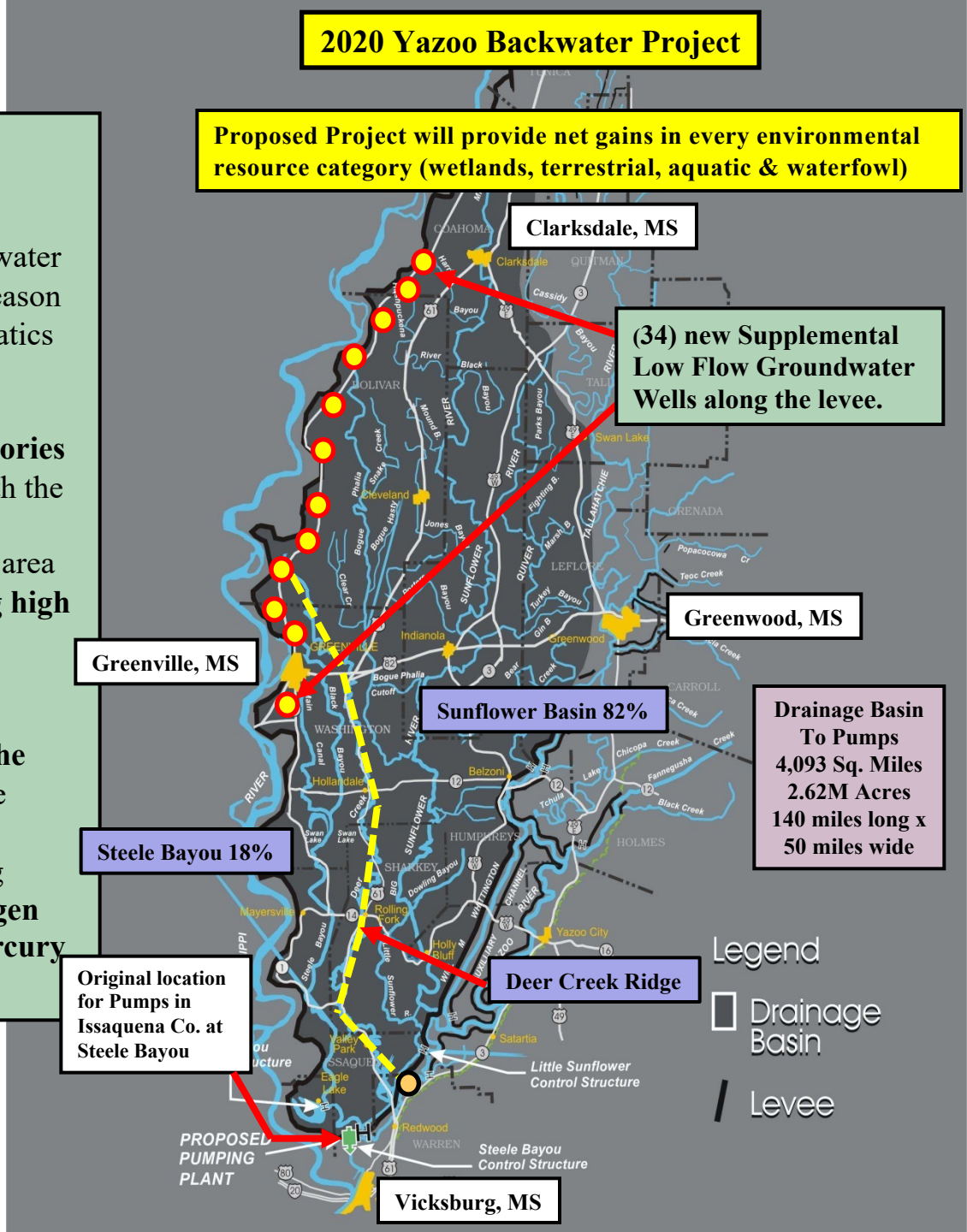


FLOOD CONTROL IN SPRING
New location for Pumps in Warren Co. at Deer Creek

2020 Yazoo Backwater Project
List of Accomplishments

ENVIRONMENTAL ENHANCEMENTS & IMPROVEMENTS

1. **Construct 34 new Supplemental Low Flow Groundwater Wells** along the levee to pump water into MS Delta Streams during the low-water season in the Fall to improve habitat for fisheries, aquatics & mussels. This will also help recharge the groundwater aquifer.
2. **Net gain in all environmental resource categories** (wetlands, terrestrial, aquatic & waterfowl) with the Proposed Plan.
3. **New data** shows that **87% of Wetlands** in the area are **sustained by rainfall** – therefore **pumping high water doesn't destroy Wetlands**.
4. **Pumps will use natural gas** instead of diesel, **reducing the carbon footprint**.
5. **Pumps will remove significant acres out of the flood providing habitat for wildlife** to survive during backwater floods.
6. **Pumps will reduce** flood duration, minimizing adverse impacts to fisheries of **Dissolved Oxygen (DO)** in standing warm water and **Methyl Mercury** levels that occur with standing water.



2020 Yazoo Backwater Project
List of Accomplishments

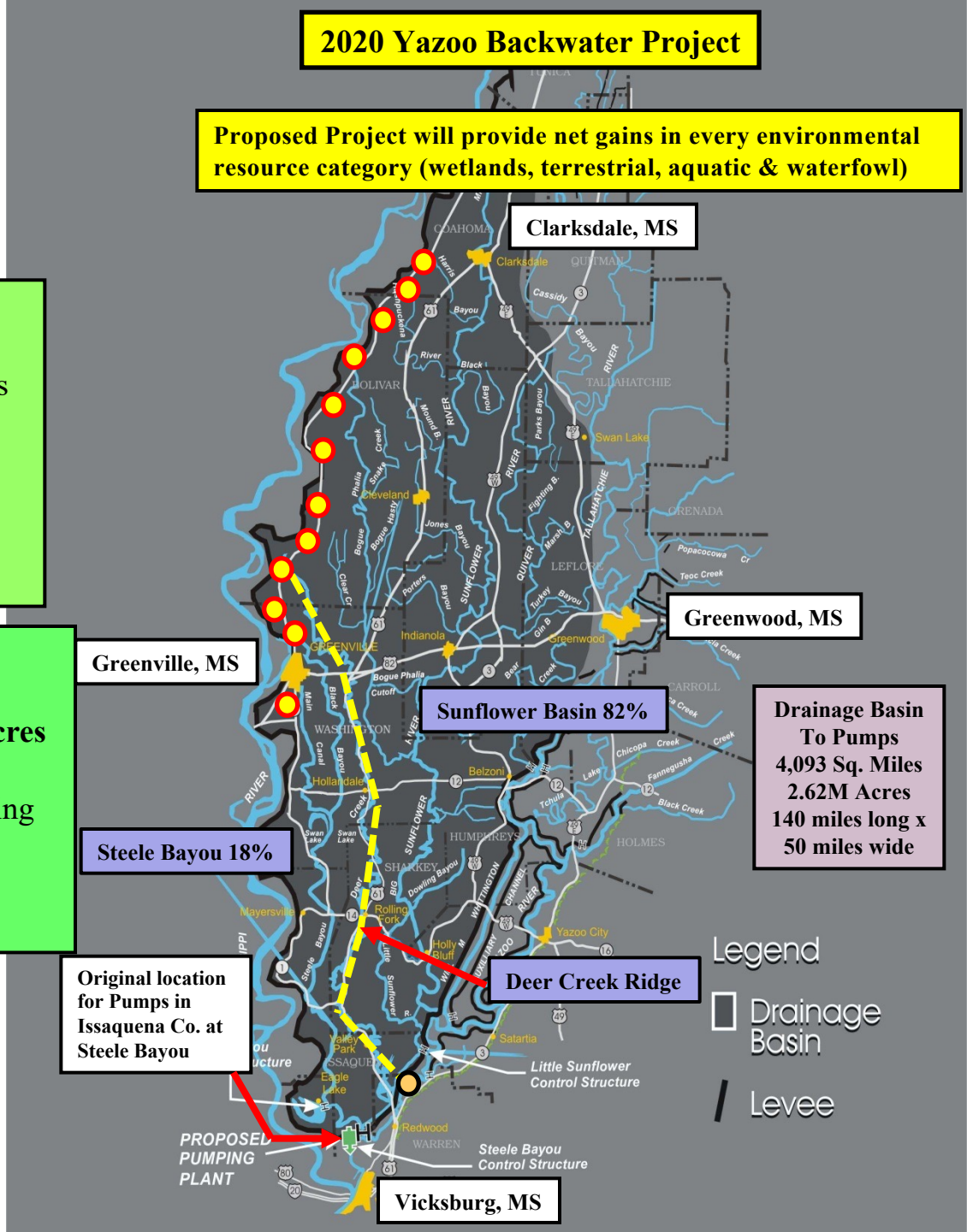
COMPENSATORY MITIGATION

1. **Acquire 2,405 acres** of existing low-lying ag land to reforest to offset any unavoidable losses due to the Pump.
2. **Incorporate a Monitoring and Adaptive Management Plan** to be able to make sure the project meets environmental, social, and economic goals.

NON-STRUCTURAL COMPONENT - REFORESTATION

Will offer a Reforestation Easement on 2,700 acres of ag land located below 87'.

1. Removes all developed land under 87' preventing future damages.
2. Provides additional reforestation above compensatory mitigation.

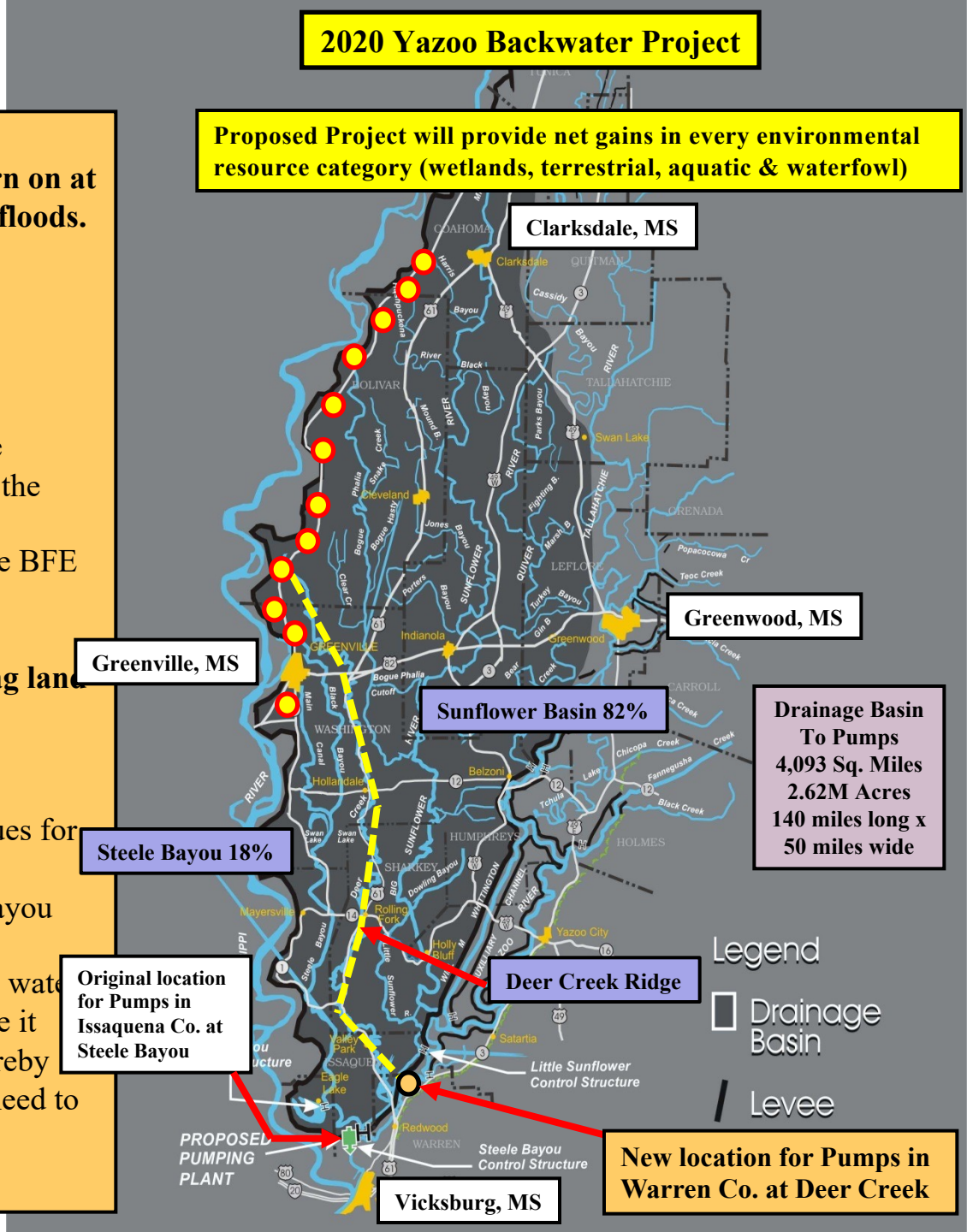


2020 Yazoo Backwater Project
List of Accomplishments

STRUCTURAL COMPONENT - PUMP

14,000 cfs Pumping Plant at Deer Creek will turn on at 87' to reduce height and duration of backwater floods.

1. **Lowers the 100-Year Flood to 95.2'**
   (matches the 2018 Backwater Flood).
2. Lowers the 200-Year Flood to 96.2'.
3. Lowers the 500-Year Flood to 97.5'.
   (lower than the 2019 Flood of 98.2').
4. The Base Flood Elevation (BFE), which is the 100-Year Flood, is **lowered 5.1'** from the current BFE of 100.3' to 95.2'.
5. This 5.1' reduction removes all homes out of the BFE and will significantly lower Flood Insurance Premiums.
6. This 5.1' reduction **removes 148,000 acres of ag land** out of the BFE.
7. At 95.2' **no homes will be flooded**.
8. At 95.2' there will be **no highways flooded**.
9. 95.2' will eliminate the access and flooding issues for the heavily populated Eagle Lake.
10. 95.2' will prevent overtopping of the Muddy Bayou Structure – protects Fish & Property.
11. New Pump location at **Deer Creek** will capture wate coming out of the larger Sunflower Basin before it inundates the smaller Steele Bayou Basin – thereby **slightly reducing flood levels**. Eliminates the need to construct a new Hwy 465 Bridge.

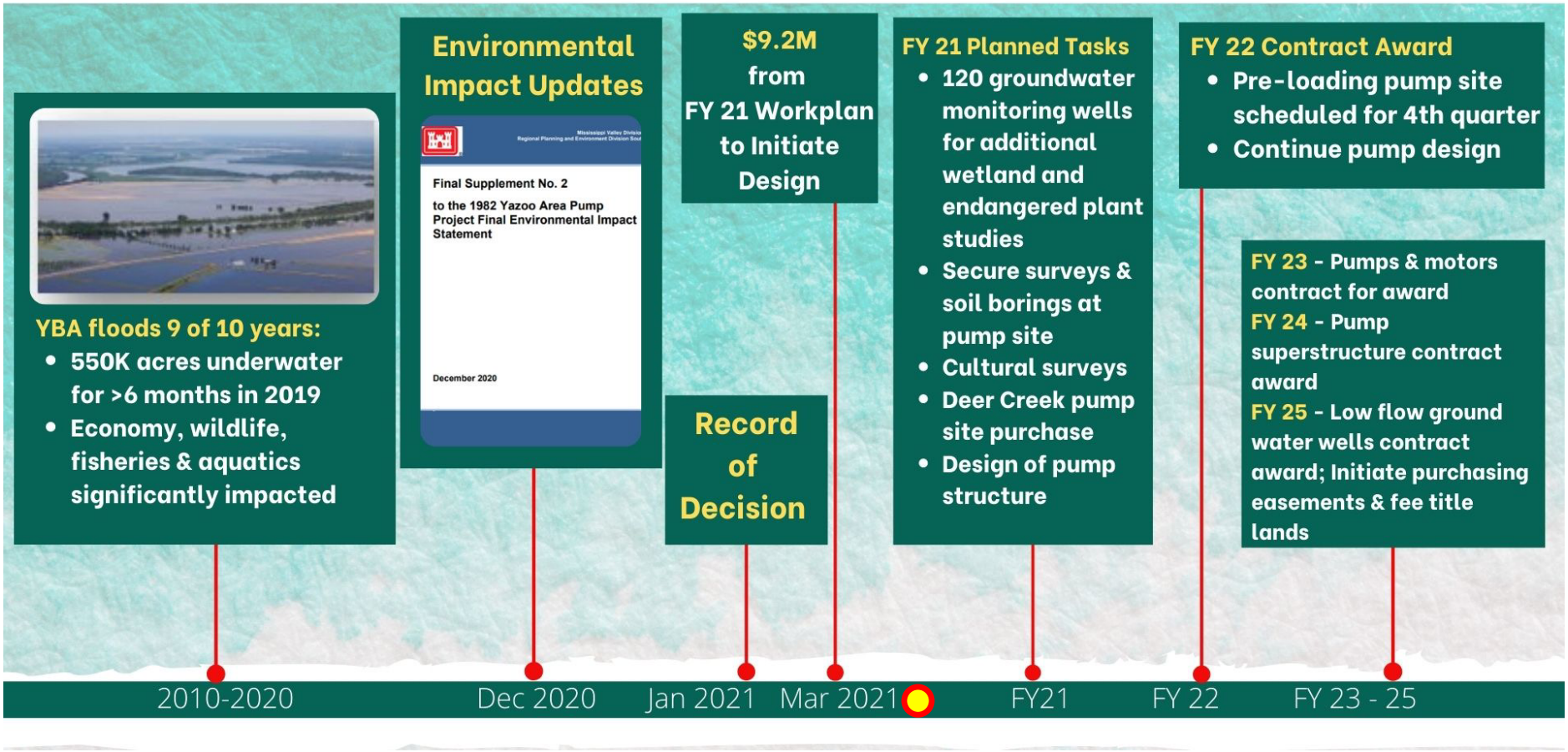


Supplement Environmental Impact Statement II
Yazoo Backwater Project
Summary Comparison of the 2007 vs. 2020 Yazoo Backwater Projects

	2007 Recommended Plan	2020 Recommended Plan	Improvement
New Features			
Stream enhancement	None	34 wells to add water in low flow periods	Enhances aquatic resources, fish, mussels
Adaptive Management plan	None	Monitoring provides information for changes if needed	Focused on further minimizing possible adverse environment impacts if necessary
New Information			
10 Additional years of flooding	Not available	Flooded 9 out of 10 years; catastrophic 2019 flood	New information on flood frequency, duration and damages, supporting need for Project
Mapping upgrades; higher resolution	30-meter LiDAR	10-meter LiDAR	Increased accuracy of land and wetland delineations
New wetland data	Broad assumptions overestimated potential wetland impacts	Accurate wetlands data shows wetlands sustained by rainfall not floods	More accurate assessment of impacts of project. Wetlands (sustained by rainfall and groundwater) see fewer adverse impacts from flood water removal
Wildlife damage from flooding	Assumed flooding benefit to habitat	Data shows flood damage to fish & wildlife habitat	Clarifies how fish and wildlife benefit from removing flood water & reducing flood duration
Design changes			
Pump Location	Steele Bayou	Deer Creek	Minimizes construction impacts. No new Hwy 465 Bridge needed. Slight Flood Reduction.
Pump fuel	Diesel	Natural gas	Minimizes emissions, carbon footprint
Low Flow management	Operation of the Steele Bayou water control structure to maintain water elevations between 70.0 and 73.0 feet, NGVD, during low water periods	Will maintain the current operation of the Steele Bayou water control structure by maintaining water levels between 68.5 and 70.0 feet, NGVD, during low flow periods	Provision of water during low flow periods is better met by 34 wells upstream than by retaining water downstream. Provides enhanced environmental benefit. Observations during recent Backwater Floods prove that stagnant pooled water creates low Dissolved Oxygen (DO) levels and also increases Methyl Mercury levels which kill fish.

YAZOO BACKWATER PROJECT - WHERE WE ARE TODAY

US Army Corps of Engineers
Vicksburg District



Work in 2021 (FY 2021)

On March 9, 2021 the Vicksburg District Corps officially received the $9.2M for the YBW Project.
The Vicksburg District has started the Pre-Construction Engineering & Design for the Yazoo Backwater Project.
They are collaborating directly with the USF&WS and the USFS on Pondberry and wetland monitoring & adaptive management.
They are also implementing work on cultural resources for the pump site and the well sites along with the Heritage Study that was agreed to in the Programmatic Agreement (PA) with the State Historical Preservation Officer (SHPO).
They will be looking to acquire the right-of-way needed for the Pump site later this year.
The Corps also has initiated discussions with MDEQ on acquiring a State Water Quality Certificate.

Yazoo Backwater Project Lawsuits

EARTHJUSTICE
BECAUSE THE EARTH NEEDS A GOOD LAWYER
SAN FRANCISCO, CA

American Rivers
RIVERS CONNECT US®
WASHINGTON, D.C.

Audubon
MANHATTAN, NY

SIERRA CLUB
FOUNDED 1892
OAKLAND, CA

healthy gulf
NEW ORLEANS, LA

Lawsuit #1 American Rivers vs. EPA

Announced on January 12, 2021 – Filed officially on March 1, 2021. American Rivers is suing the EPA because EPA is letting the Pumps move forward. They are upset with EPA Region 4 Administrator Mary Walker's November 30, 2020 letter to the Corps stating that ***"EPA has determined that the proposed project is not subject to EPA's 2008 Final Determination."*** They believe the new Project is still dead under the 2008 EPA Veto.

Lawsuit #2 American Rivers vs. Corps & USF&WS

Filed on April 14, 2021 – American Rivers is suing the Corps & USF&WS because they didn't go into formal consultation over the endangered Pondberry Plant.

It's hard to believe this – especially since the Pondberry has been decimated by continuous flooding over the past few years!

Pondberry doesn't survive when submerged under water for months at a time!

The Pondberry needs the Pumps to be able to survive!

Future Lawsuit # 3 American Rivers vs. MDEQ

As soon as MDEQ issues the Corps a State Water Quality Certificate - these same extremists will sue MDEQ issuing the Corps a Permit.

US Army Corps of Engineers®

MDEQ

The Mississippi Levee Board has hired a Washington DC Lawfirm and has intervened on behalf of the EPA in their lawsuit.

The Mississippi Levee Board will intervene on behalf of the Corps, USF&WS and MDEQ.

Please visit our web site for additional information.

www.msleveeboard.com

QUESTIONS???

#FORGOTTENBACKWATERFLOOD
#FINISHTHEPUMPS
www.finishthepumps.com

THE MS LEVEE BOARD:
PROUD TO SERVE THE DELTA