10-YEAR PROJECT PLAN
FY2020 – FY2029

WOODLANDS DIVISION

Spring 2019

10-Year Project Plan Key Elements

- Meet service level expectations
  - Water is provided to the MUDs in an efficient and reliable manner that is compliant with all state and federal regulations.
  - Wastewater is collected and transported from the MUDs to treatment facilities without environmental or residential concerns.

10-Year Project Plan Key Elements

- Manage aging infrastructure
  - Extend useful life
  - Reduce risk of system failure
  - Maintain progressive maintenance schedules
  - Utilize current technologies to improve efficiency

SJRA Woodlands Division Infrastructure

- 3 wastewater treatment plants
- 168 pumps
- 29 blowers
- 30 lift stations
- >70 miles of sewer mains
- >1,200 manholes

- 5 water plants
- 59 pumps
- 38 water wells
- 6 elevated storage tanks
- 8 ground storage tanks
- >126 miles of water mains

The Woodlands Joint Powers Agency
@WJPA_Water

Our Mission: to be your resource for water use, costs, quality and conservation in The Woodlands.

The Woodlands Joint Powers Agency @WJPA_Water · Apr 8

From the weekly WJPA email: Looks like (perhaps, hopefully) spring has arrived. Lots of recent rain, so no need to irrigate. Think about aerating and composting your lawn though. Now's the perfect time to do it. Mosquitoes are out. Dump standing water and put out mosquito dunks.

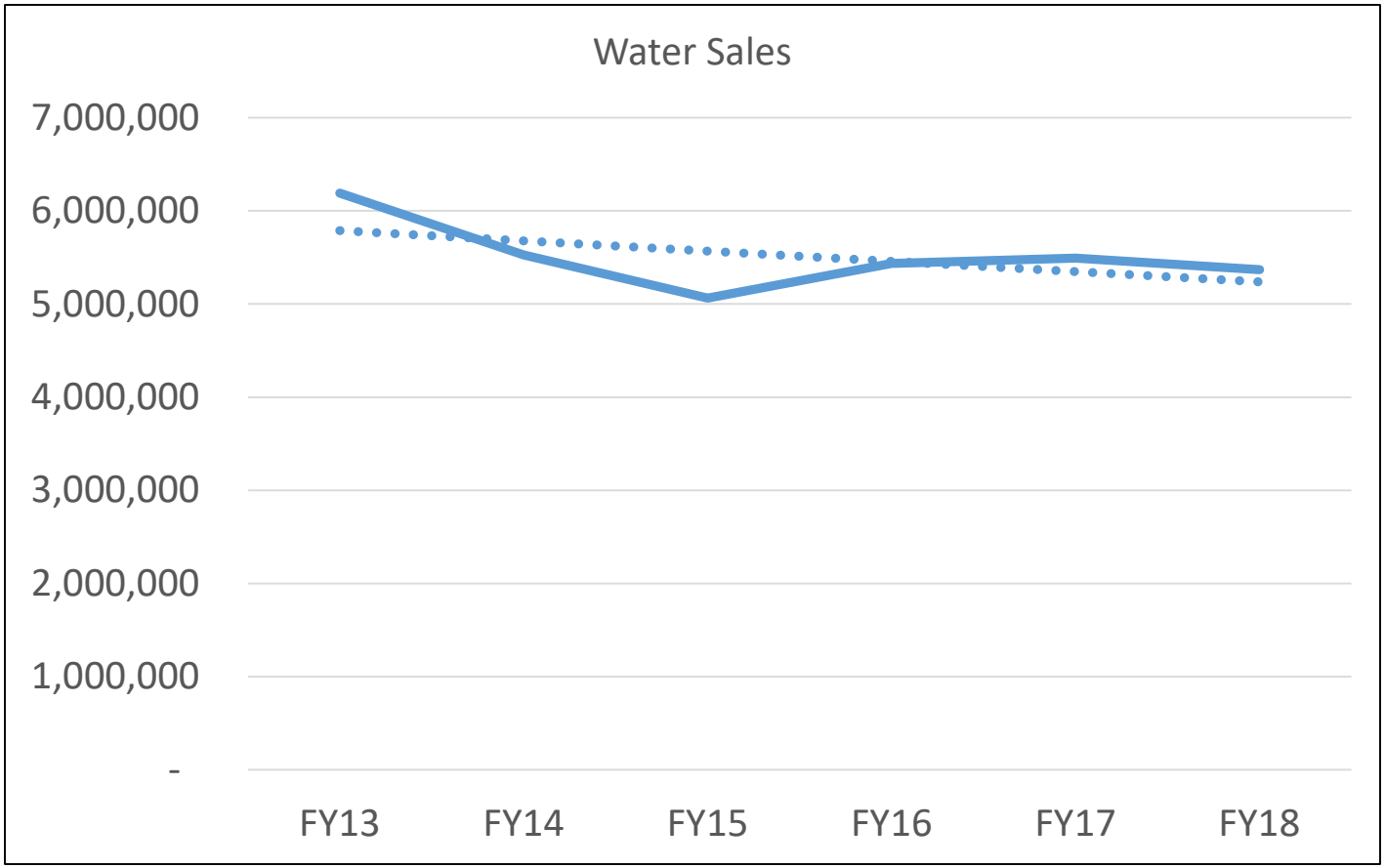
The Woodlands Joint Powers Agency
March 19 at 10:11 PM ·

From the WJPA email for the week of 3/18/19:

Bluebonnets are blooming, pecans are starting to bud, and all is right with the world. However, we've had enough of rain to last us a month of Sundays. Don't irrigate this week.

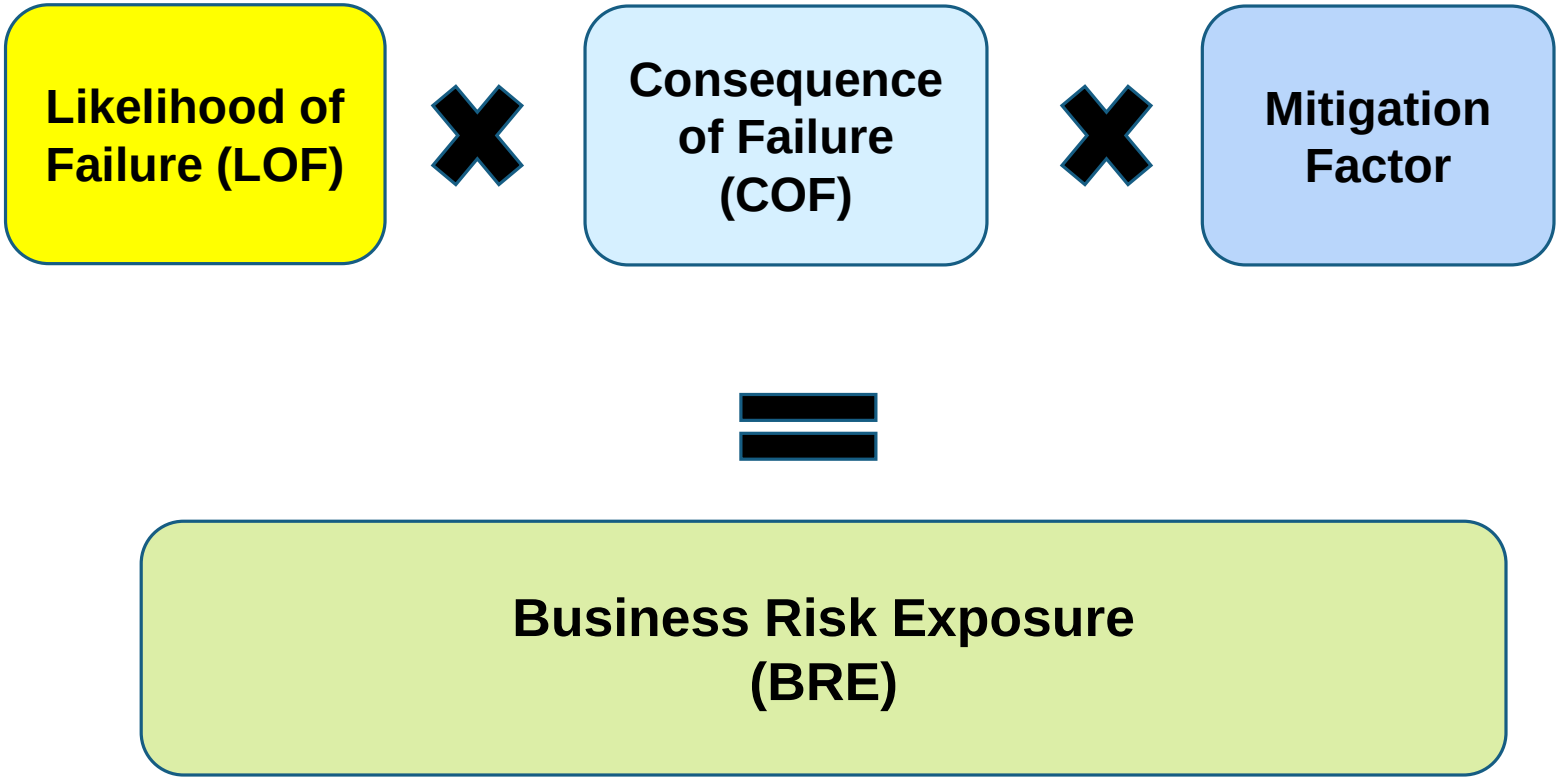
Remember, St. Augustine grass is a warm season grass. It goes dormant in the fall. Please turn off your automatic sprinkler controller and operate manually if and when your turf needs water. Generally we receive enough rain during the colder months to adequ... See More

Through reduced demand, groundwater wells are requiring less frequent rehabilitation

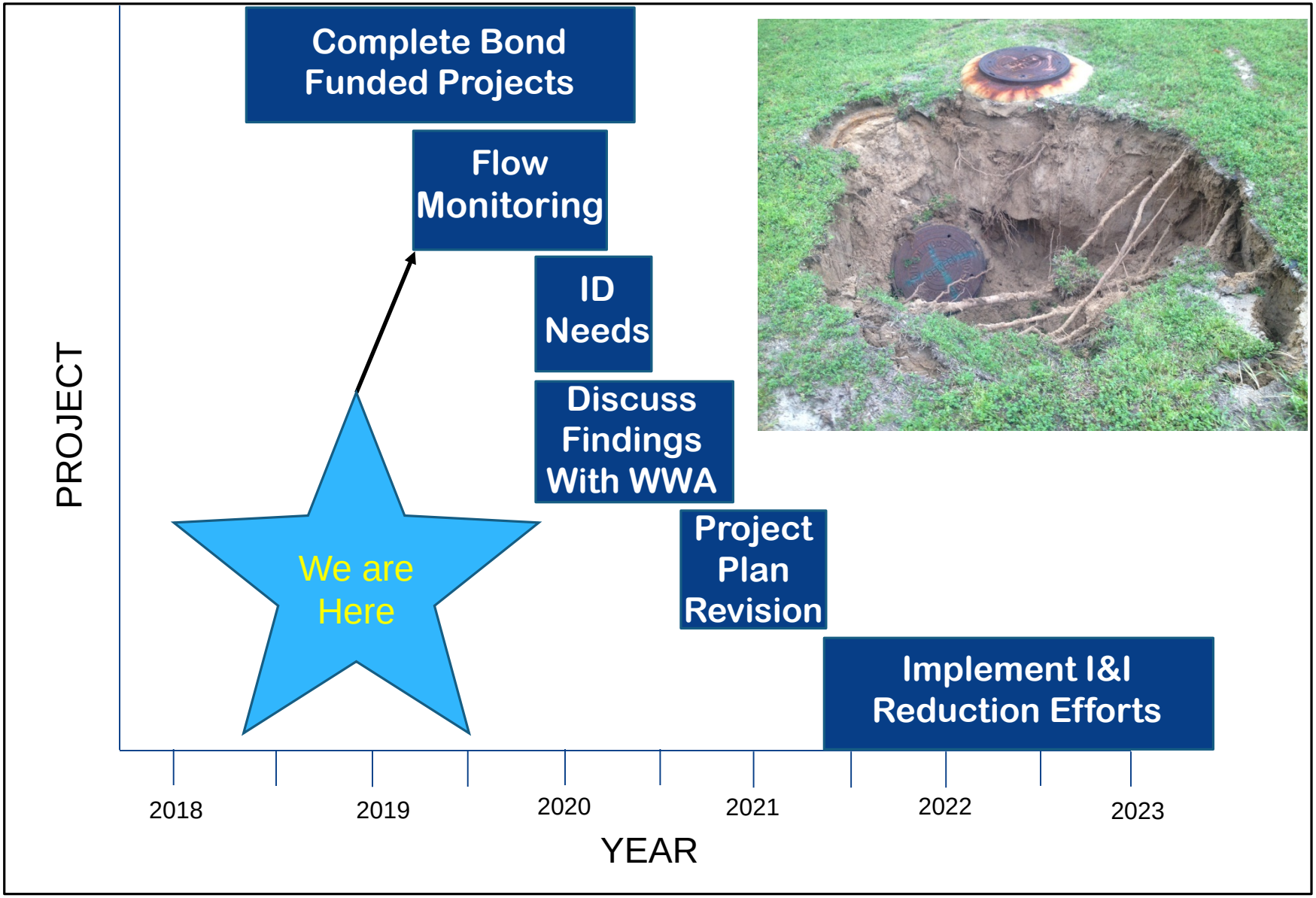


Prior to FY16, 3-4 wells were rehabilitated per year. Current projection is to rehabilitate 2 wells every other year.

Asset Management Plan

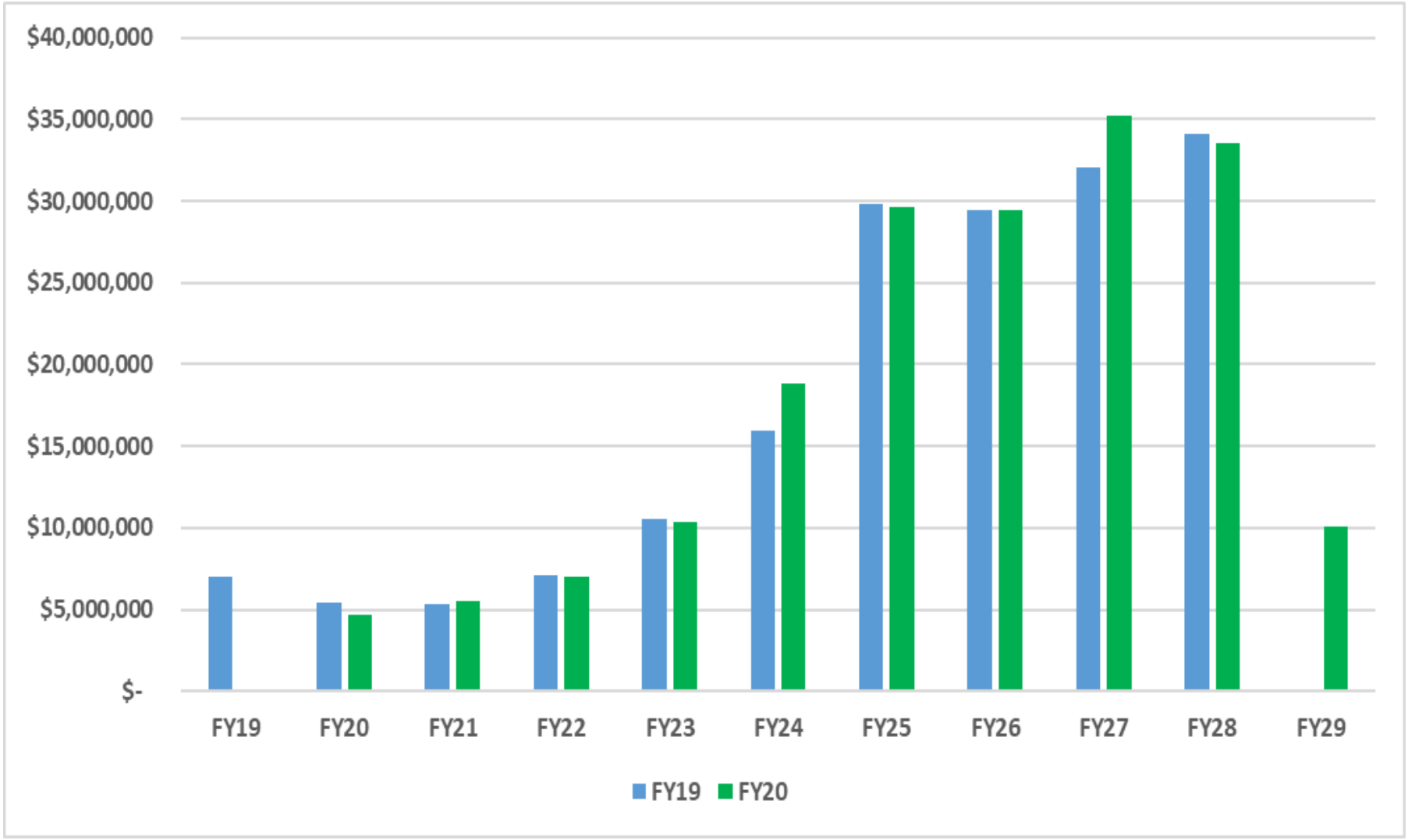


Path Forward for I&I Reduction



I&I – Inflow & Infiltration

FY2019 vs FY2020 Project Plans (Non-Capacity & Non-Bonds)



10-Year Project Plans Key Changes

10 Year Project Plan Total (non-Bond & non-Capacity)	FY19	FY20	Comment
	$ 176,867,500	$ 184,476,200	
Projects			
Water Line Renewal	$ -	$ 4,584,000	New
EST No. 3 Rehab	$ -	$ 1,771,000	New
Wells 11 & 35 Rehab	$ -	$ 713,000	New
LS No. 5 Forcemain	$ -	$ 1,100,000	Moved from FY19
LS No. 13 Rehab	$ 1,460,000	$ 2,200,000	Moved to FY21
LS No. 25 Rehab	$ -	$ 4,303,000	New
WWTF 2 Filter 2	$ 3,181,000	$ 3,500,000	Moved to FY21
WWTF 1 Digester 1	$ -	$ 2,731,000	New

R&R Fund

Beginning Balance + Monthly Contributions

FY2018	FY2019	FY2020	FY2021

A — Design | Construction

Funded entirely in FY18

B — Study

Funded in FY19 and FY20

C — Design | Construction

Funded in FY19 and FY20

Multiple ways to structure projects to minimize rate increases year to year

PLEASE REFER TO THE PROJECT PLAN PROVIDED.

R&R Funded Projects
(Repair and Replacement)
FY2020 Projects

Elevated Storage Tank No. 2 Rehabilitation

1100 Lake Front Circle (between IH-45 and Pinecroft Dr.)

Construction

FY2019-2020

FY2020 Construction Estimate:
$1.05MM

Total Project Estimate:
$1.15MM

Elevated Storage Tank No. 1 Rehabilitation

3310 South Panther Creek (at Woodlands Parkway)

Design

FY2020-2021

FY2020 Design Estimate:
$0.10MM

Total Project Estimate:
$1.01MM

Water Plant No. 5 Generator Replacement

17501 St. Luke's Way

Equipment Purchase and In-House Installation

FY2020

Total Project Estimate:
$0.30MM

Lift Station No. 5 Force Main Replacement

Construction

8,100 LF of 24-Inch Force Main

FY2018-2020

FY2020 Funding Estimate:
$1.10MM

Total Project Estimate:
$4.61MM

Wastewater Treatment Facility No. 2
Plant Process Water MCC Replacement

5402 Research Forest Drive (west of Gosling Rd.)

Construction

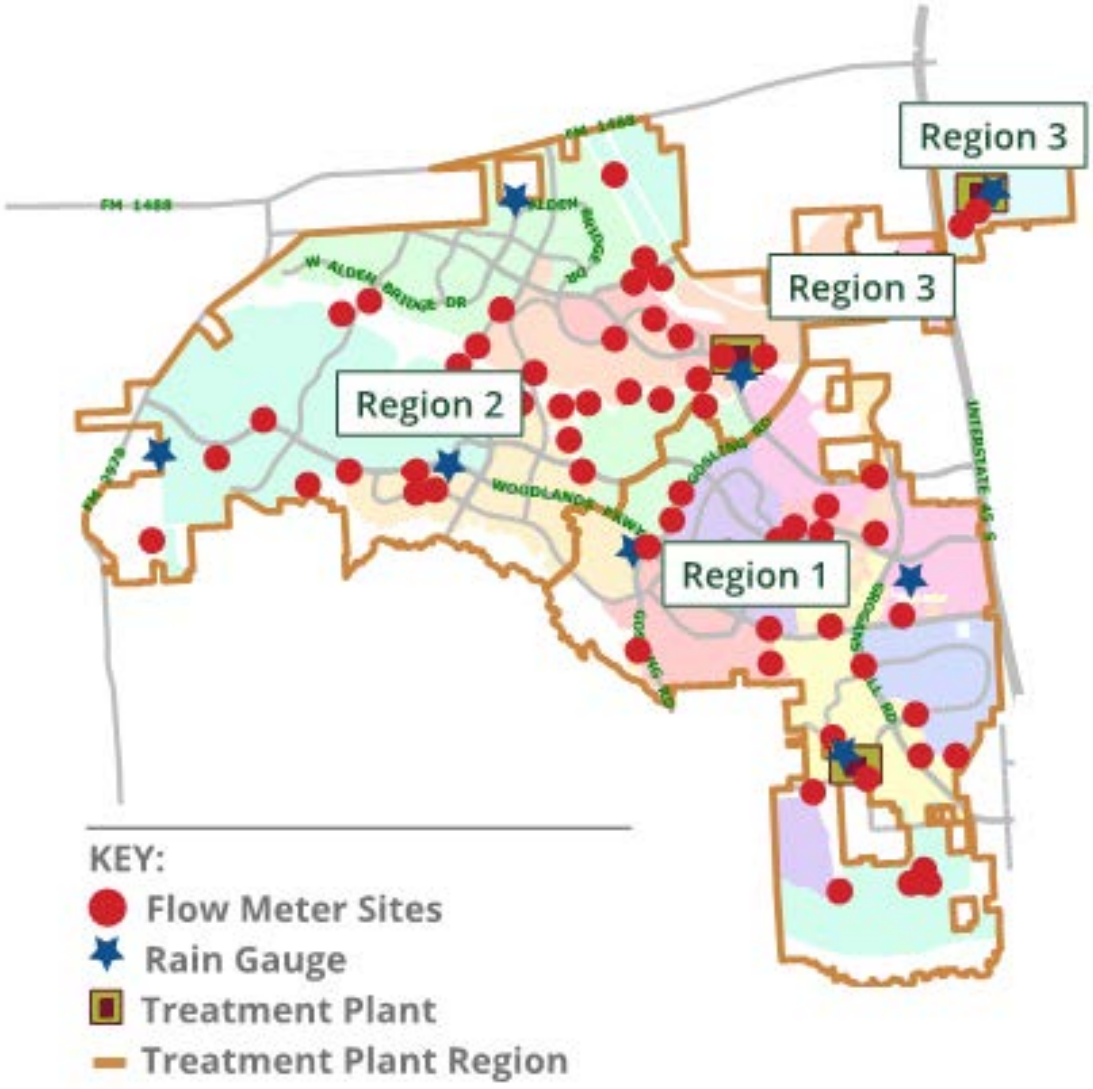
FY2019-2020

FY2020 Construction Estimate: $0.35MM

Total Project Estimate: $0.41MM

Sanitary Sewer Transmission Assessment and Renewal (SSTAR) Program

Study



FY2019-2020

FY2020 Estimate: $1.30MM

Total Estimate: $1.80MM

Emergency Repair Service Center

Wastewater Treatment Facility No. 1 – 2436 Sawdust Road

Design and Construction

FY2020

FY2020 Total Project Estimate:
$0.50MM

Alternate Project Plan
Increased Groundwater Pumpage

38 Wells in The Woodlands

0 Evangeline wells can be lowered

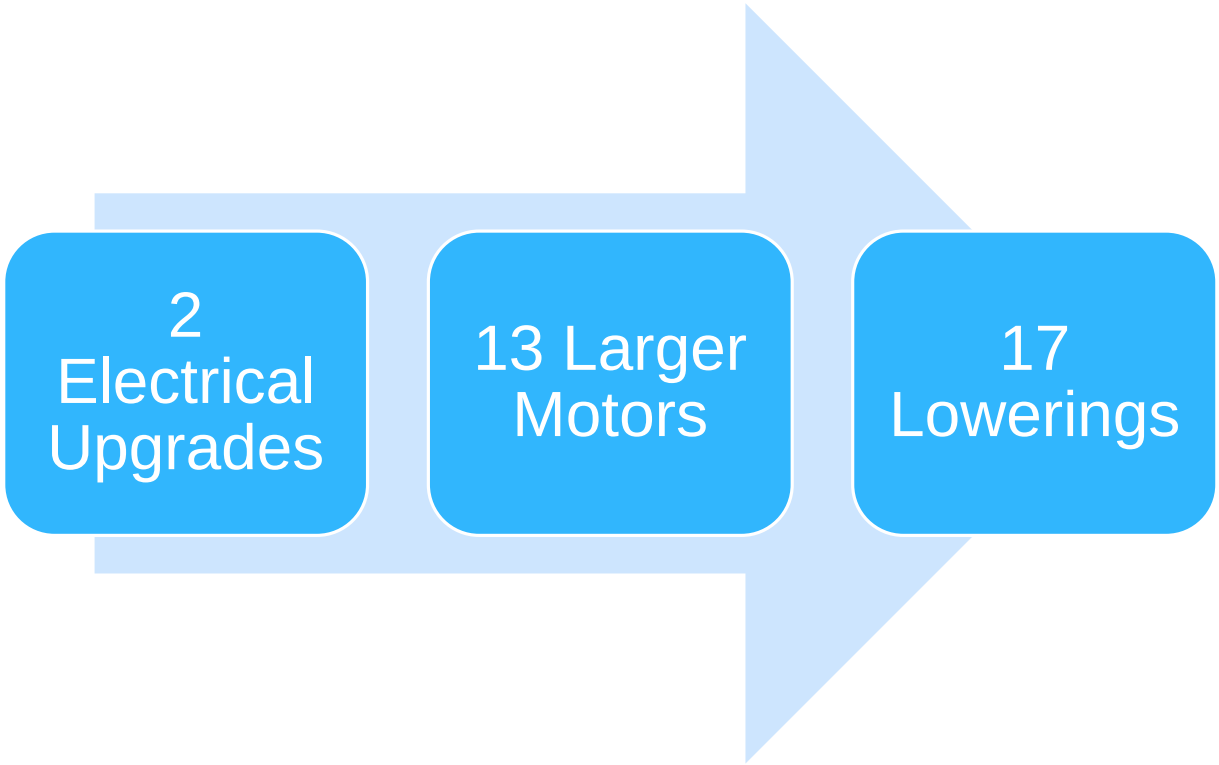
17 Jasper wells can be lowered

Alternate Project Plan – Well Rehabilitation

Average well costs (in 2018 dollars)	
Rehab w/o lowering	$150,000
Rehab w/ lowering	$180,000
Lower well (only)	$115,000
Increase electrical size	$600,000
Larger motors	$70,000
New Jasper well (w/o land)	$3,000,000
Total Rehab, lower and increase electrical size	$850,000

Additional groundwater pumpage would require 3-4 well rehabilitations per year at an estimated cost of $750,000 - $1,000,000

Increased Pumpage Effect - Jasper Wells



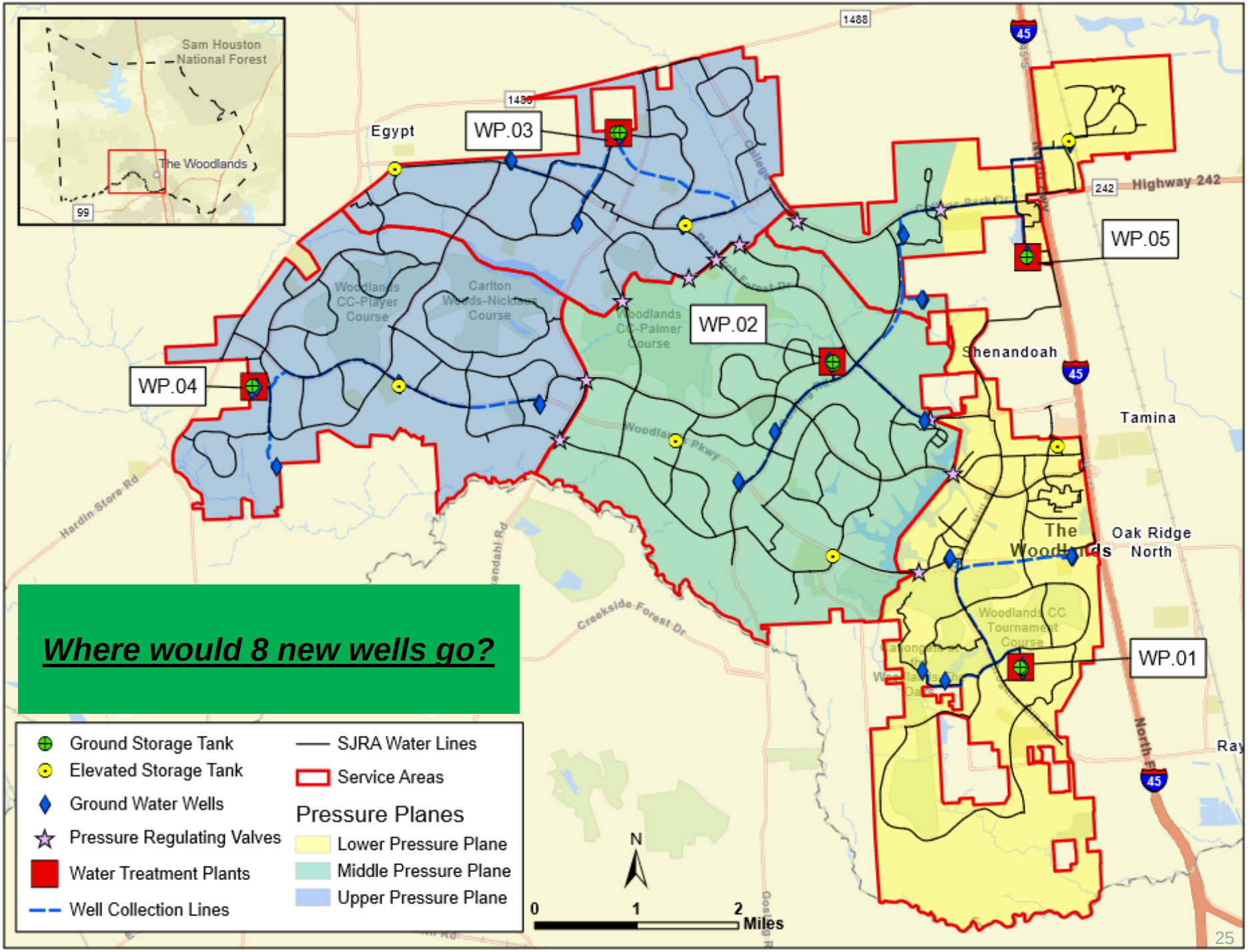
10-Year estimated Rehab cost - $14,500,000

10-Year Additional O&M Cost for 0% Surface Water
$6,500,000

Increased Pumpage Effect - Evangeline Wells

Based on current projections, no Evangeline wells are anticipated to stop producing groundwater within the next 10 years.

19	• Evangeline Wells
22	• Million Gallons per Day from Evangeline Wells
8	• New Jasper Wells Required to Replace Evangeline Wells
$3M	• Estimated cost of new Jasper Well in 2019 $
$30M	• Estimated Cost of 8 New Jasper Wells in 2029 $


Sam Houston National Forest
The Woodlands
99
1488
1486
Egypt
WP.03
WP.05
WP.02
WP.04
WP.01
242
Highway 242
45
Shenandoah
Tamina
The Woodlands
Oak Ridge North
Woodlands CC-Player Course
Carlton Woods-Nicklaus Course
Woodlands CC-Palmer Course
Woodlands CC Tournament Course
Hardin Store Rd
Creekside Forest Dr
Ray
Where would 8 new wells go?
Ground Storage Tank
Elevated Storage Tank
Ground Water Wells
Pressure Regulating Valves
Water Treatment Plants
Well Collection Lines
SJRA Water Lines
Service Areas
Pressure Planes
Lower Pressure Plane
Middle Pressure Plane
Upper Pressure Plane
N
0
1
2
Miles

Questions?