

Wastewater Treatment South Austin Regional (SAR) WWTP

**Water and Wastewater Commission
November 10, 2015**

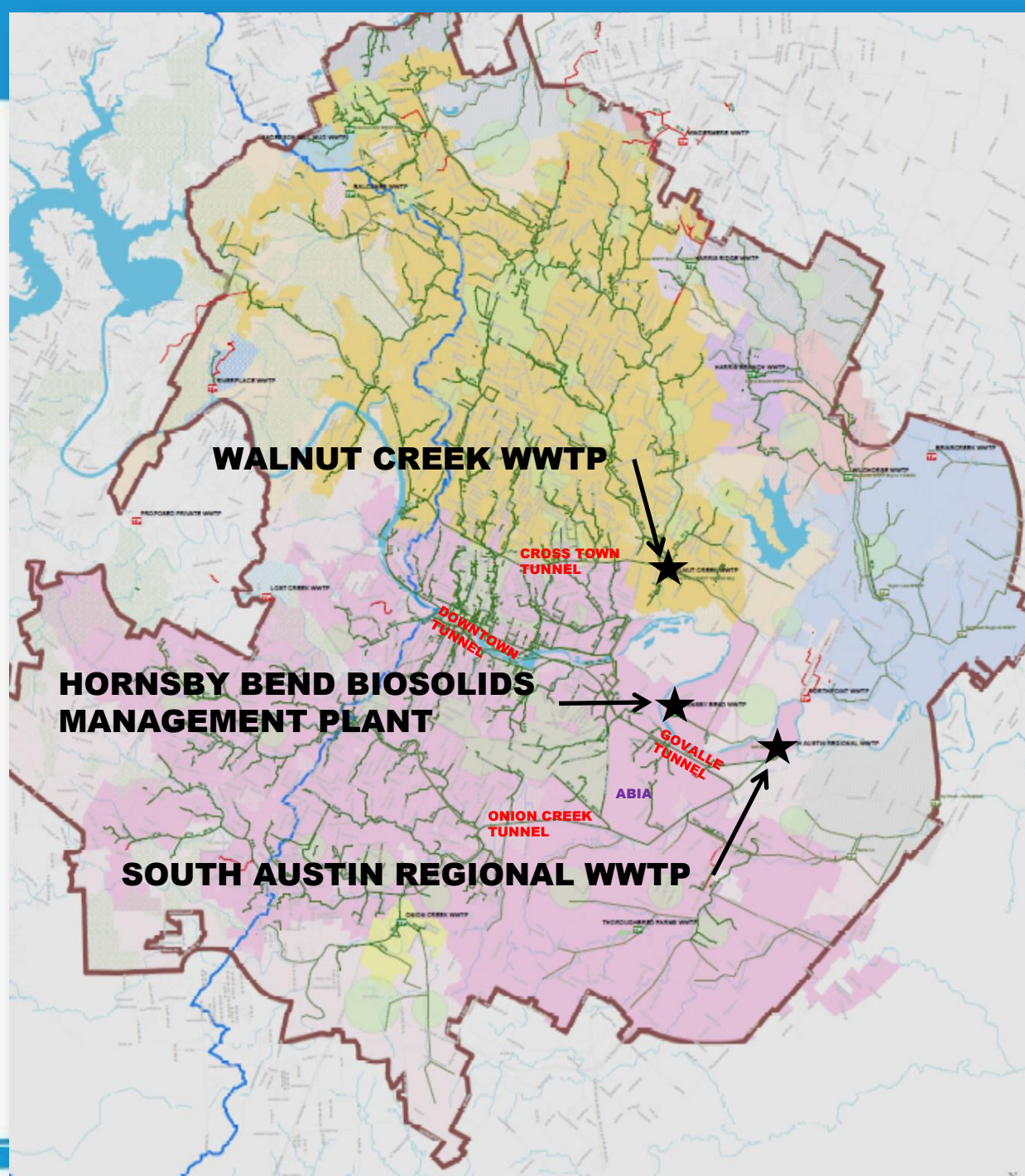
**Austin Water
Facility Engineering Division | Wastewater**

PRESENTATION TOPICS

- **Austin Wastewater Infrastructure Overview**
- **Wastewater Service Areas**
- **South Austin Regional WWTP Layout and Overview**
- **SAR Facility Needs**
- **Summary and Questions**

- **Austin Water Statics (City Maintained):**
 - ❖ Retail and Wholesale customers \approx 890,000
 - ❖ Service Area \approx 538 square miles.
 - ❖ Service Connections \approx 187,000
 - ❖ Gravity Lines \approx 2,614 Miles (13,800,000 Linear Feet)
 - ❖ Force Mains \approx 78 Miles (411,800 Linear Feet)
 - ❖ Manholes \approx 49,048
 - ❖ Lift Stations \approx 150
 - ❖ Decentralized Package WWTP = 7
 - ❖ Wastewater Treatment Plants = 2
(Walnut Creek & **South Austin Regional WWTP**)
 - ❖ Biosolids Plant = 1 (Hornsby Bend Biosolids Management Plant)

*2014 Data



SAR WWTP Plant Overview



COLORADO RIVER

OUTFALL

RECLAIMED WATER
TOWER

FILTER
BLDG.

TRAIN C
Completed in 2006

ELECTRICAL
SUBSTATION 2

SLUDGE
THICKENER

LIFT
STATION 2

IFS

LIFT
STATION 1

**FUTURE
TRAIN D**

TRAIN A
Completed in 1986

TRAIN B
Completed in 1988

ELECTRICAL
SUBSTATION 1

ADMIN
BLDG.

SAR WWTP

Plant Overview



TCEQ RATED CAPACITY

Train A = 25.0 MGD DAILY AVERAGE

Train B = 25.0 MGD DAILY AVERAGE

Train C = 25.0 MGD DAILY AVERAGE

Total = 75.0 MGD DAILY AVERAGE

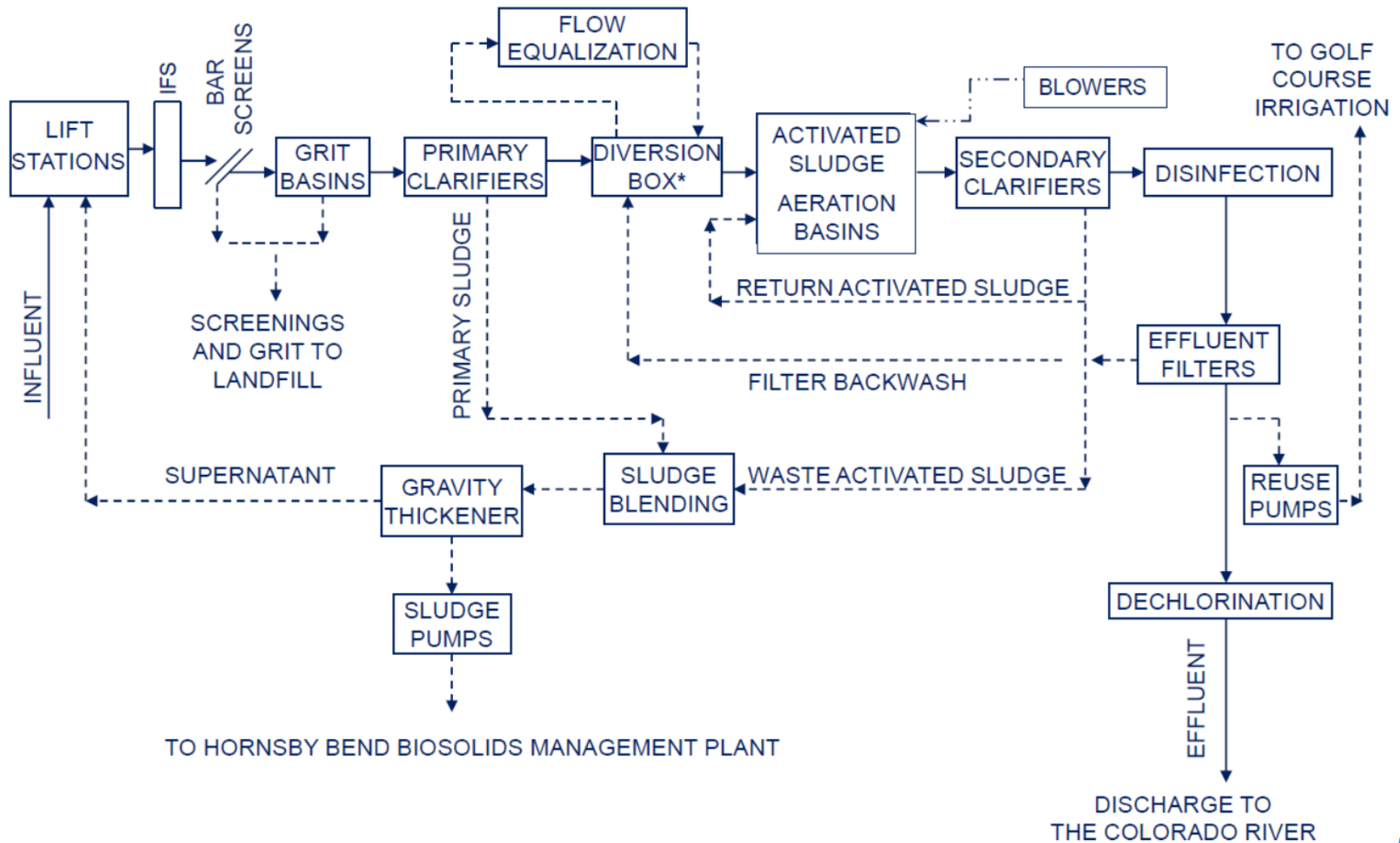
TCEQ DISCHARGE PERMIT			
	7-DAY	MONTHLY	ANNUALLY
BOD (mg/l)	15	10	5
TSS (mg/l)	25	15	5
AMMONIA (mg/l)	5	2	2

MGD – Million Gallons per Day

BOD – Biochemical Oxygen Demand

TSS – Total Suspended Solids

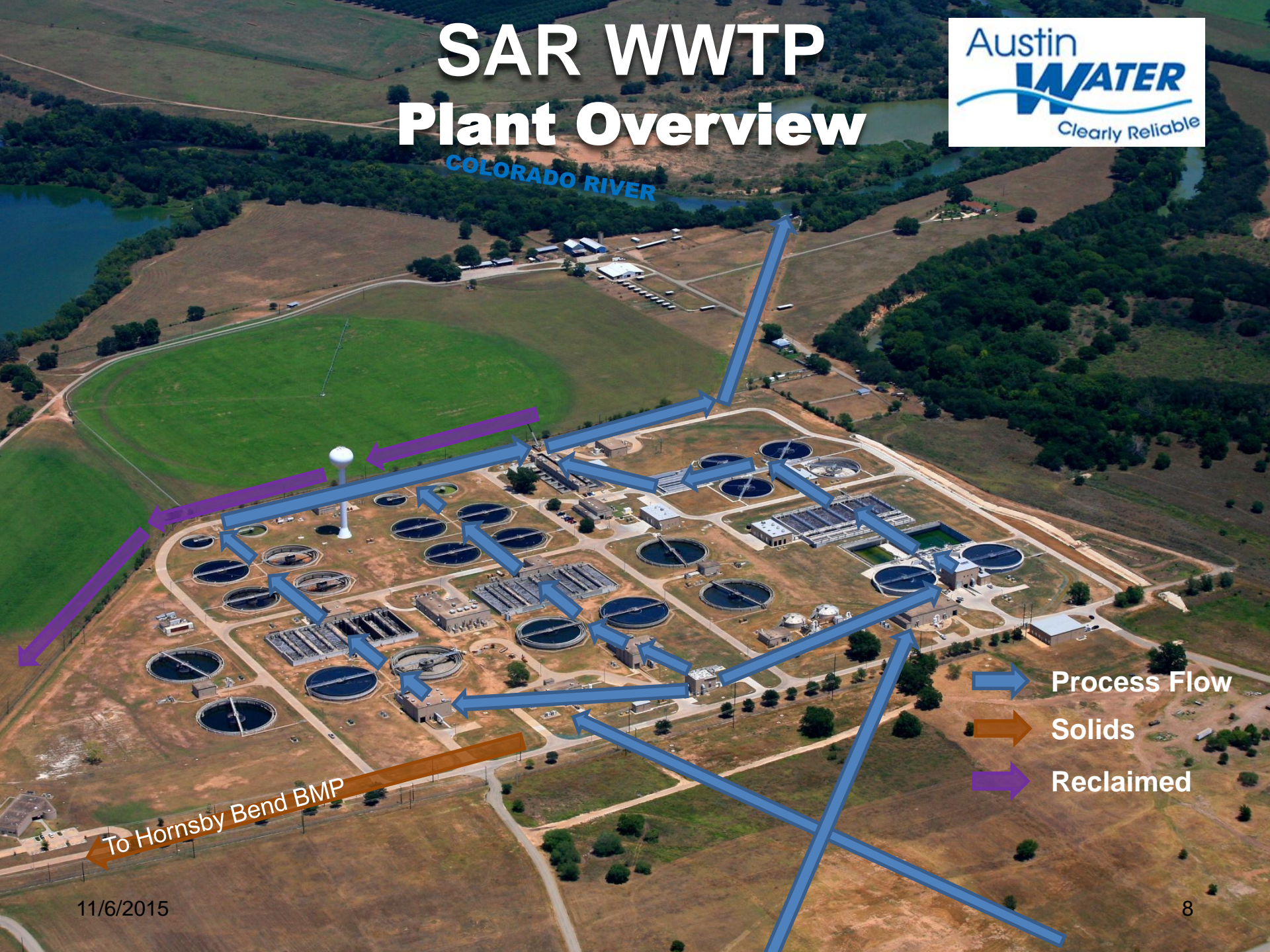
SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT



SAR WWTP Plant Overview



COLORADO RIVER



- Process Flow
- Solids
- Reclaimed

To Hornsby Bend BMP

SAR WWTP PLANNED CIP PROJECTS

**Tertiary Filter
Improvements
Phase 1 and 2**



SAR WWTP PLANNED CIP PROJECTS



**Train A & B
Blowers**

Train B Aeration Diffusers
Train A Aeration Diffusers
Train C Aeration Diffusers

SAR WWTP PLANNED CIP PROJECTS



**Train A & B
Improvements**

An aerial photograph of the SAR Wastewater Treatment Plant (WWTP). The facility includes several large circular aeration tanks, rectangular clarifiers, and various industrial buildings. A prominent white water tower stands on the left side of the plant. A red starburst graphic is drawn over the central part of the facility, specifically highlighting the area labeled 'Train A & B Improvements'. The plant is situated next to a green baseball field and is bordered by a river and wooded areas.

SAR WWTP PLANNED CIP PROJECTS

Electrical
Substation No. 1
Replacement

Lift Station 2
Rehabilitation

Sludge Thickener
Improvements
Phase 1 and 2

SUMMARY

- **Train A & B are 29 and 27 years old and has a number of operational and process challenges due to aging infrastructure.**
- **Significant capital investment (nearly \$100 million) planned for the next 5 to 10 years aimed at maintaining reliable long term 75 MGD capacity.**
- **Staff continues to balance needs, priorities, risk and affordability.**

QUESTIONS ?