Wastewater Treatment
South Austin Regional (SAR) WWTP

Water and Wastewater Commission
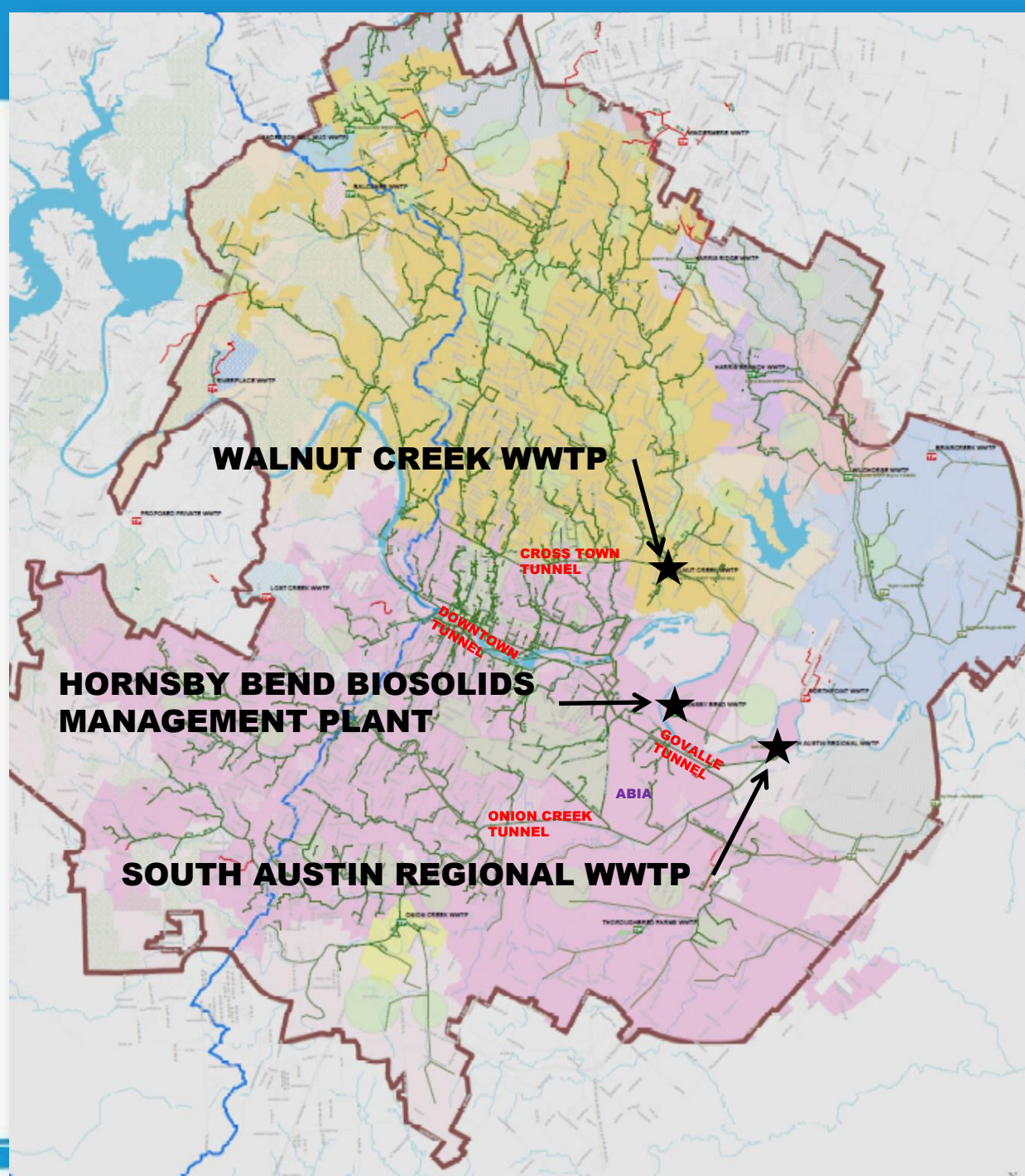## November 10, 2015

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 ≈ 890,000**

  - ❖ **Service Area ≈ 538 square miles.**

  - ❖ **Service Connections ≈ 187,000**

  - ❖ **Gravity Lines ≈ 2,614 Miles (13,800,000 Linear Feet)**

  - ❖ **Force Mains ≈ 78 Miles (411,800 Linear Feet)**

  - ❖ **Manholes ≈ 49,048**

  - ❖ **Lift Stations ≈ 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

WALNUT CREEK WWTP

CROSS TOWN TUNNEL

DOWNTOWN TUNNEL

HORNSBY BEND BIOSOLIDS MANAGEMENT PLANT

GOVALLE TUNNEL

ABIA

ONION CREEK TUNNEL

SOUTH AUSTIN REGIONAL WWTP

Austin
WATER
Clearly Reliable

SAR WWTP
Plant Overview

SAR WWTP
Plant Overview

TCEQ RATED CAPACITY

Train A = 25.0 MGD DAILY AVERAGE
Train B = 25.0 MGD DAILY AVERAGE
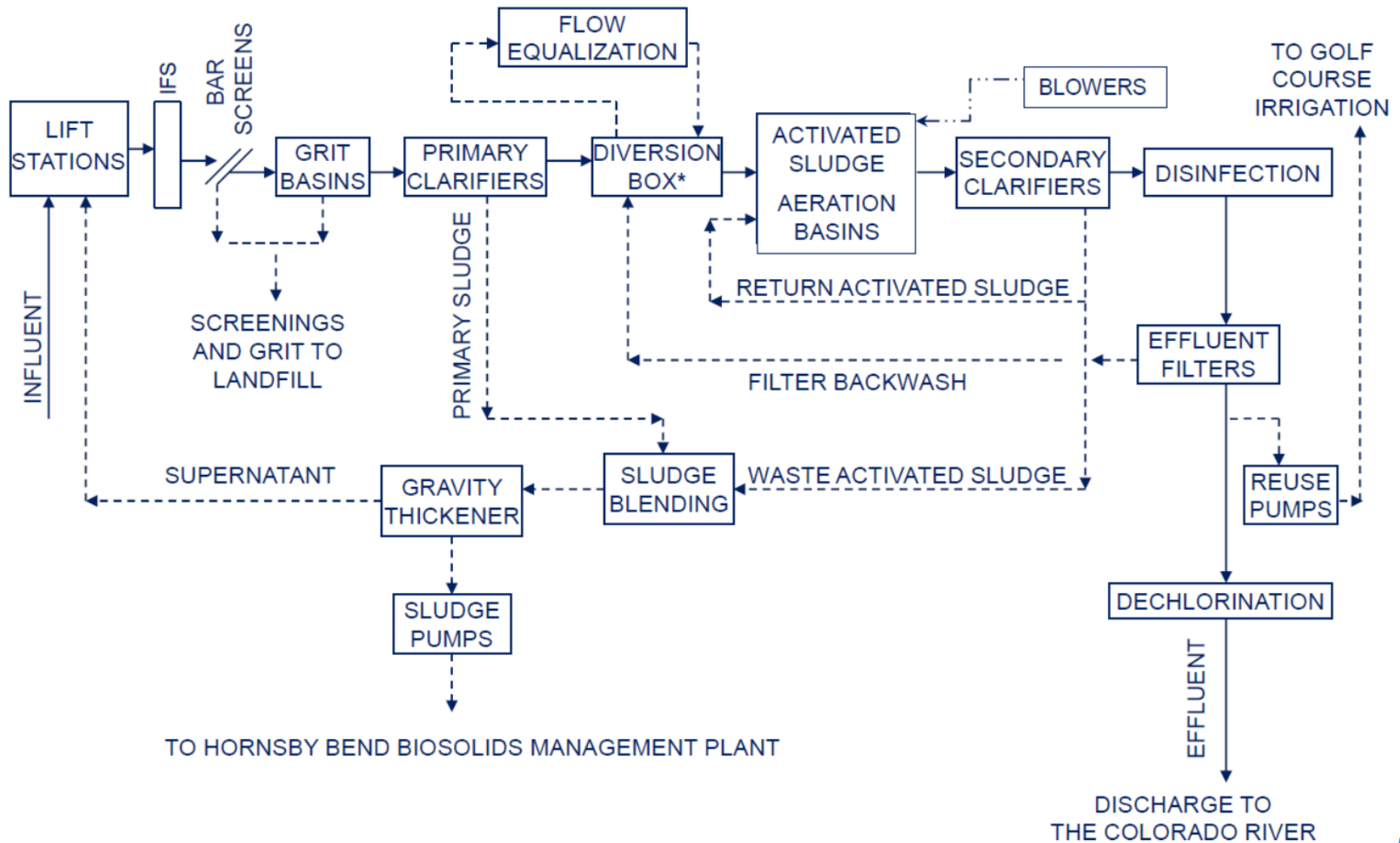**Train C = 25.0 MGD DAILY AVERAGE**
Total   = 75.0 MGD DAILY AVERAGE

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
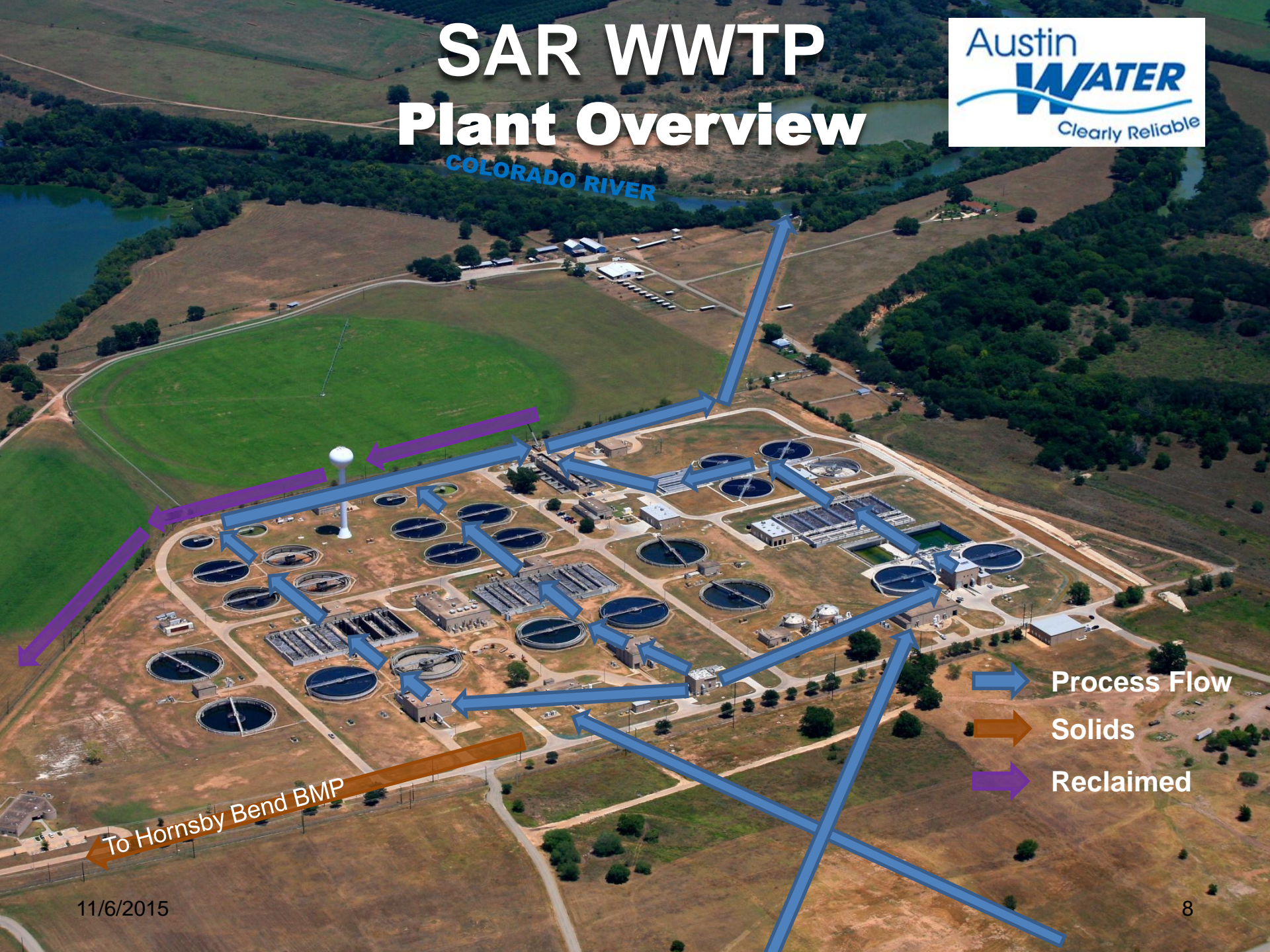BOD – Biochemical Oxygen Demand
TSS – Total Suspended Solids

SOUTH AUSTIN REGIONAL WASTEWATER TREATMENT PLANT

SAR WWTP
Plant Overview

COLORADO RIVER

Austin **WATER** Clearly Reliable

To Hornsby Bend BMP

Process Flow

Solids

Reclaimed

SAR WWTP PLANNED CIP PROJECTS

Tertiary Filter Improvements Phase 1 and 2

11/6/2015

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

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 ?