MBC Phase 2 Improvements

MBC Customer Bond Authorization Discussion
December 2021

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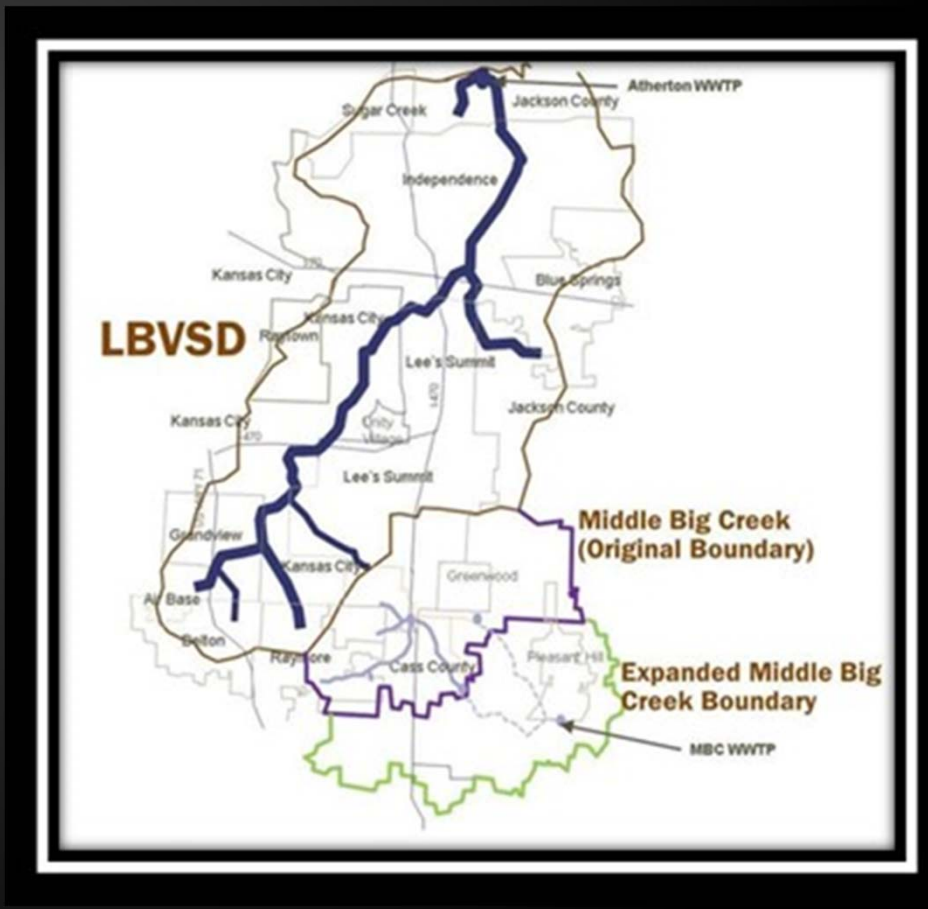
Presentation Outline

1. SubDistrict Background
2. Phase 2 Project Overview
3. Project Cost/Funding
4. Potential Rate Impacts
5. Project Schedule



Executive Summary

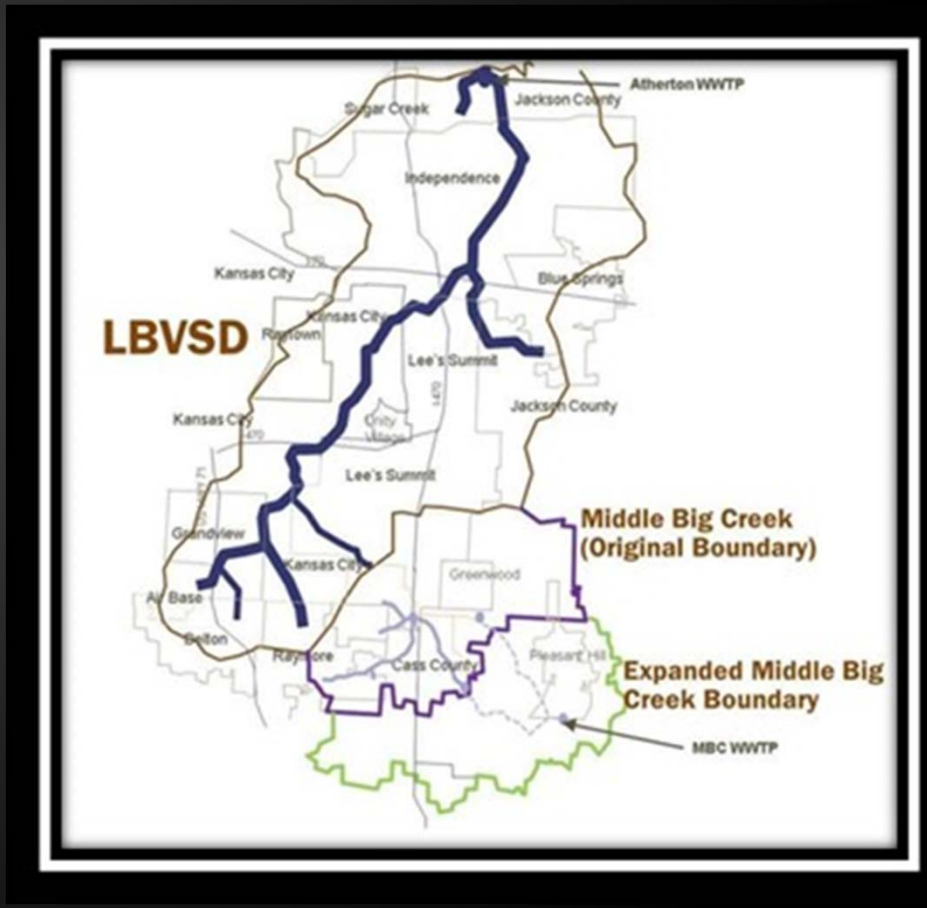
1. Extend Big Creek Interceptor to Greenwood Pump Station
2. Rehabilitation of Raintree Pump Station
3. New Permanent Metering Structures
4. Expand MBC WWTF to 7.5 MGD
5. Fund up to $106M of Improvements

Background

Who We Are

Little Blue Valley Sewer District

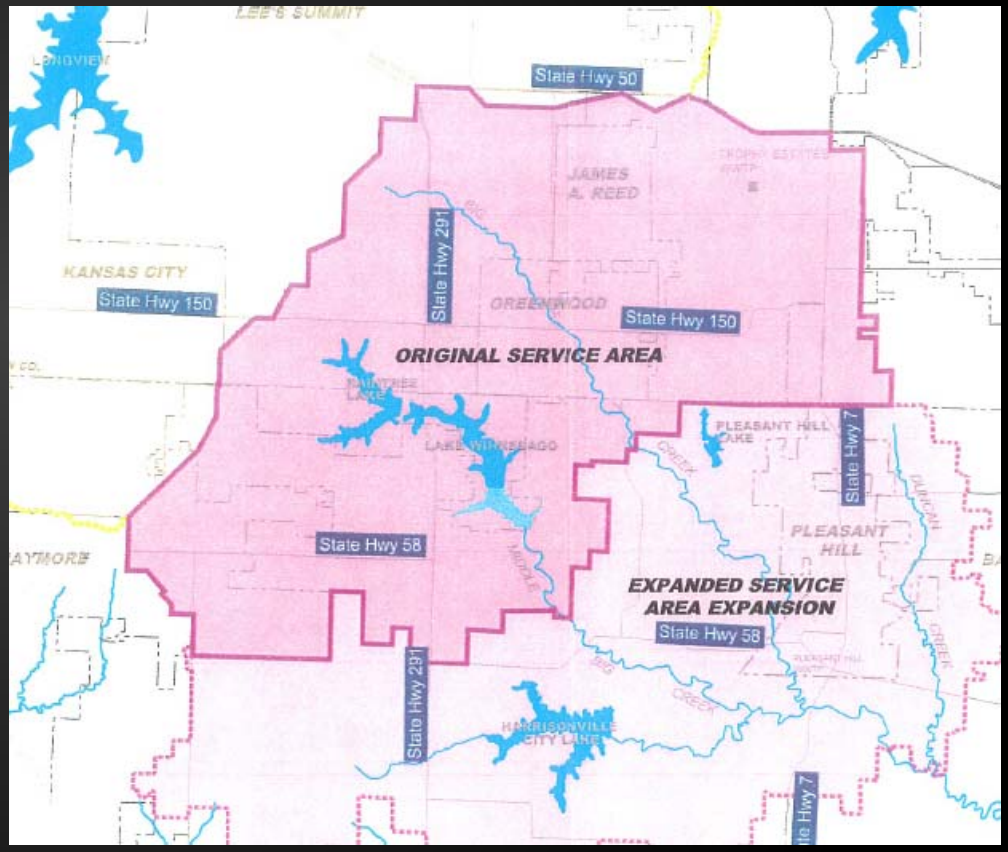
- Wholesale wastewater service provider (serves over 360,000 people)
- Board of Trustees
  - 11 elected officials
- Serves:
  - Jackson County
  - Belton, Blue Springs, Grandview, Independence, Kansas City, Lake Tapawingo, Lee's Summit, Raymore, Raytown, Sugar Creek
  - Fort Osage School District, Lake City Ammunition and MBC Sewer Subdistrict
- Interceptor conveyance system and Atherton WWTF



Who We Are

Middle Big Creek Sewer Subdistrict

- Subdistrict of LBVSD
- Originally established in 1992
- Located on southern boundary of LBVSD service area
- Serves:
  - Greenwood, Raymore, Lee's Summit, Lake Winnebago, Pleasant Hill
  - Cass County
  - Mullendike and Dikeland Sewer Districts

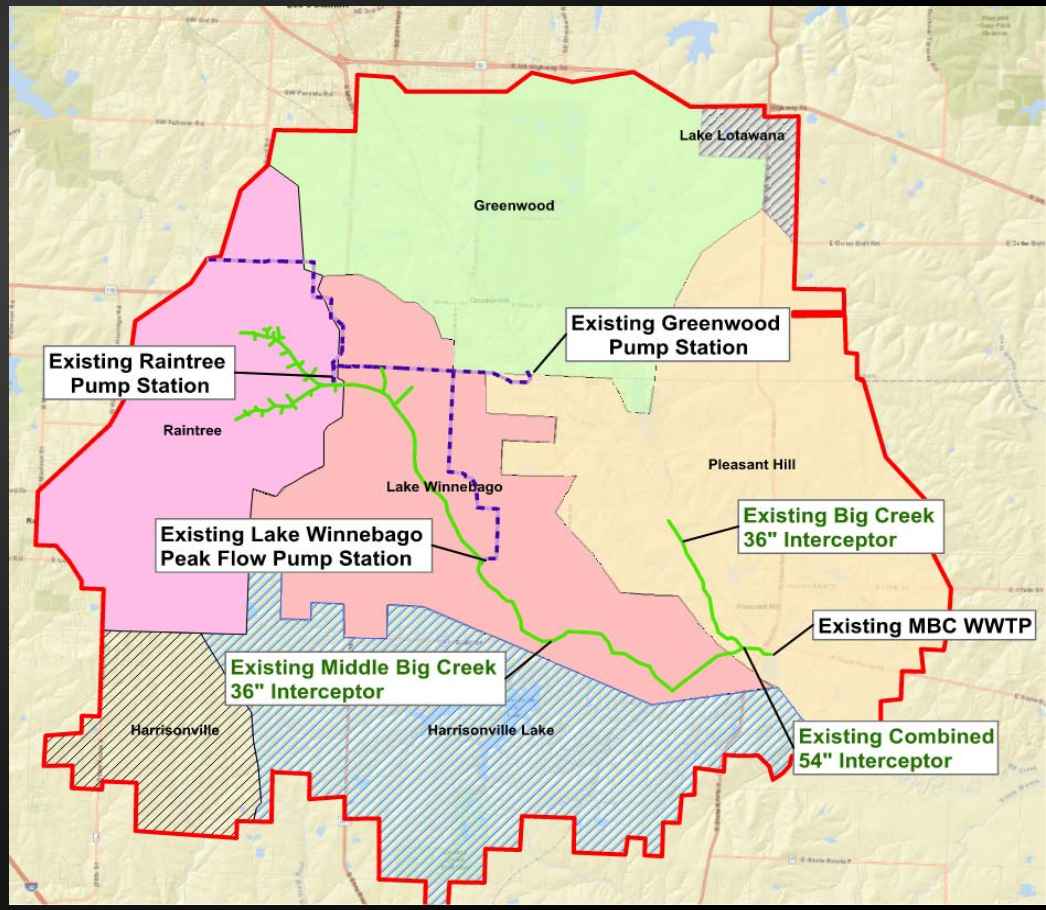


Background

Existing MBC Facilities

Wastewater Treatment Facility
- 2.25 MGD
- Excess Flow Holding

Conveyance System
- ~30,000 LF Interceptor sewer
- 2 Pump Stations
- Excess Flow Holding



Background

Project Needs/Drivers

Capacity

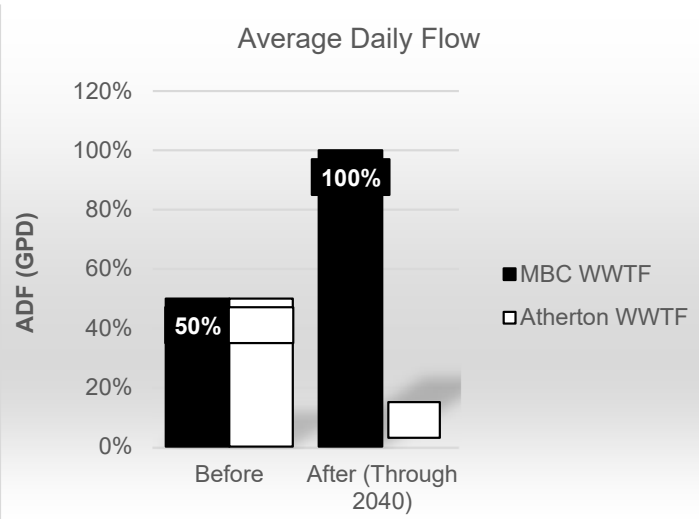
- Address growth within MBC service area
- Improve wet weather resiliency

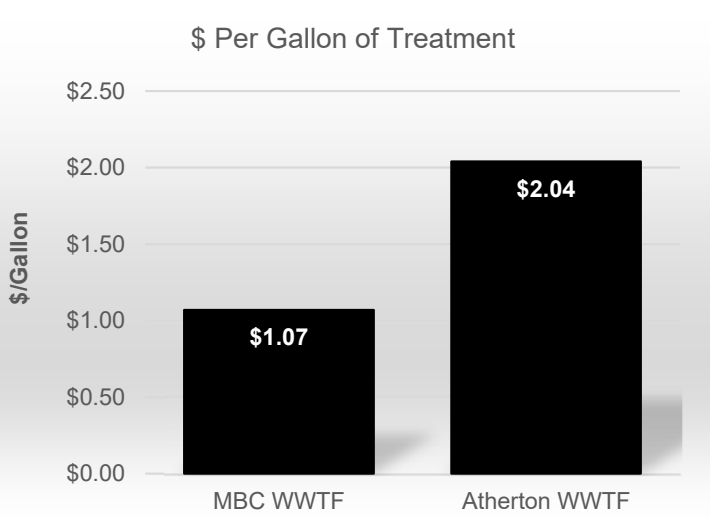
Environmental

- Regulatory Drivers
- Green biosolids approach
- Gravity flow vs pumping

Financial

- Reduce long term operating costs
- Treat within watershed vs Atherton WWTF
- Transition to demand-based billing





Phase 2
Project Overview

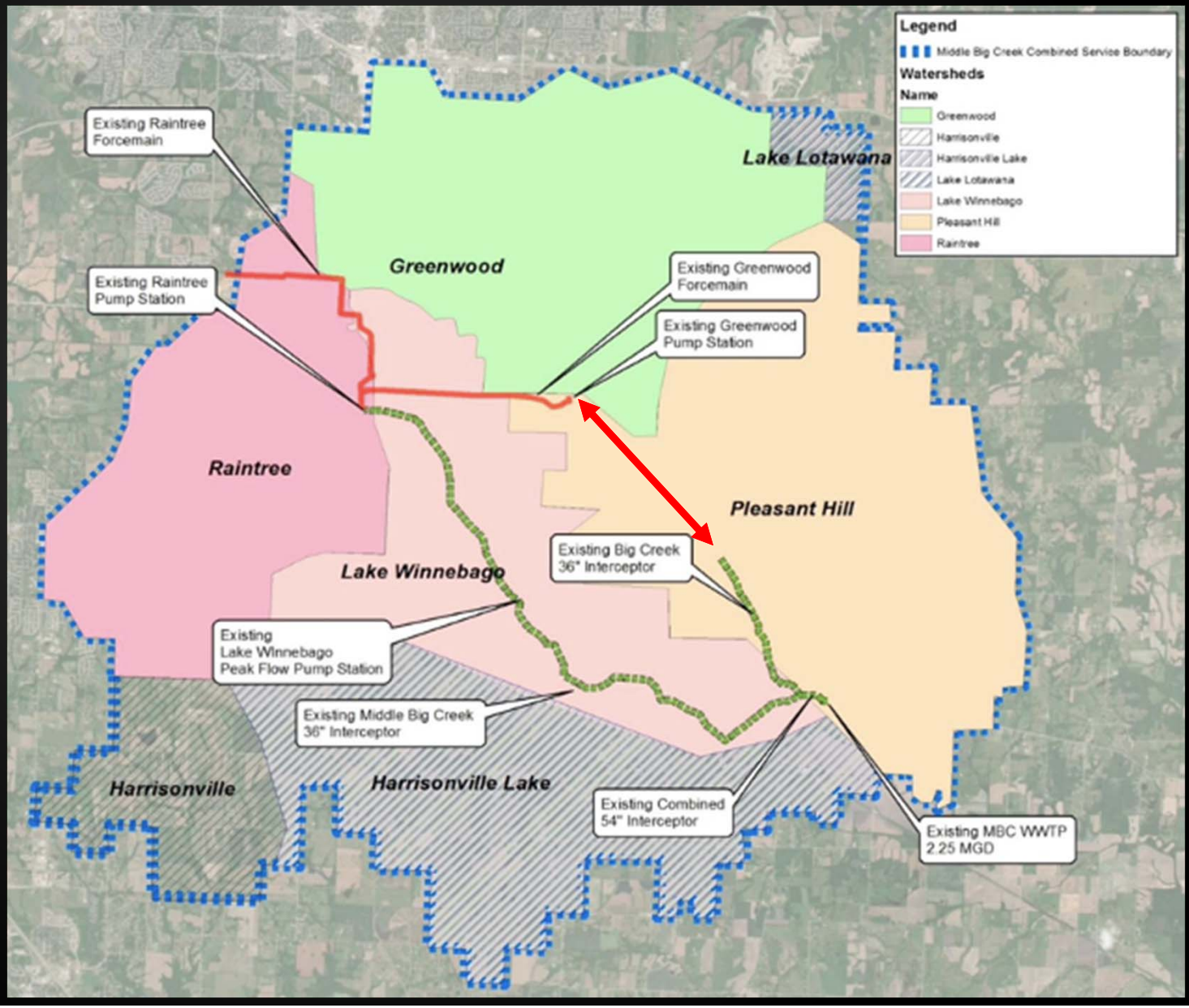
Phase 2 Project Overview

Big Creek Interceptor Extension

Relieve capacity limitations at Greenwood PS by construction of 17,500 ft 36" Sewer

Multiple Alignments Considered

- Railroad/Trail Conflicts
- Depth Considerations
- Rock Excavation
- Cultural Resources



Phase 2 Project Overview

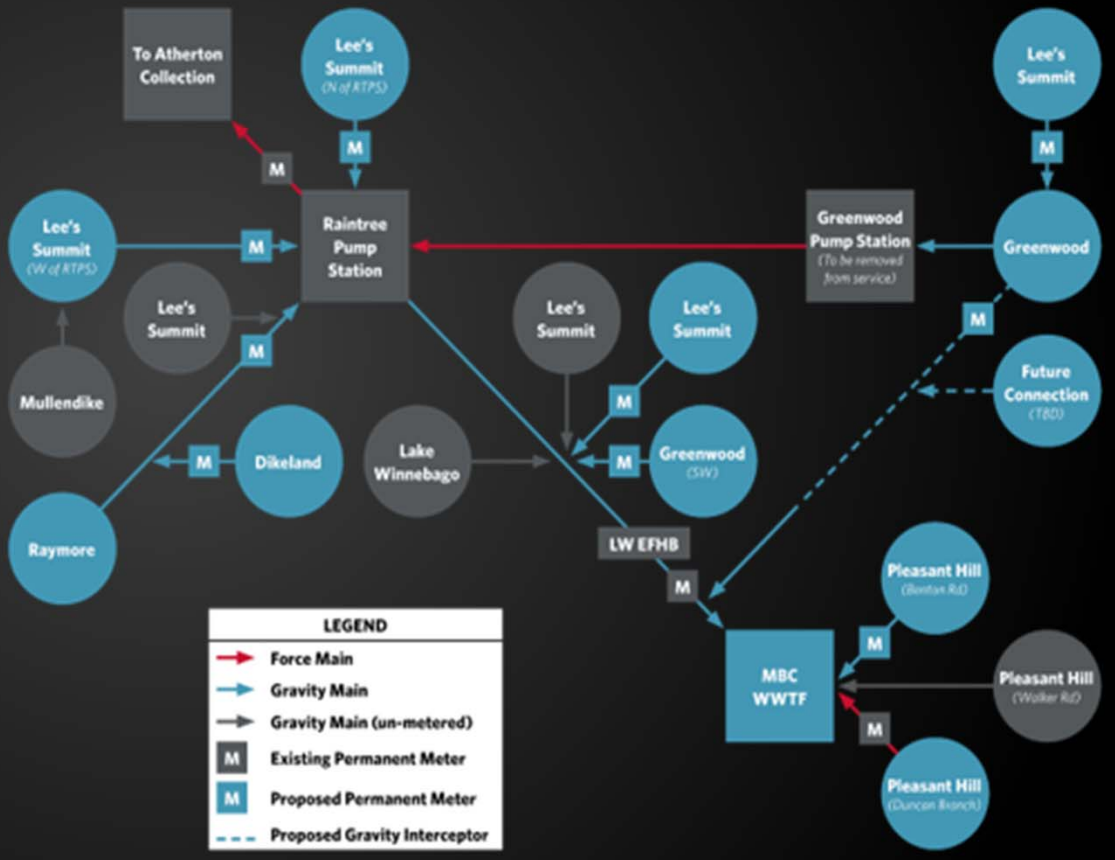
Conceptual System Metering Improvements

Overview

- Install new meter structures
- Billing based on sewer usage (large commercial vs small residential vs I/I)

Temporary Metering

- May to August 2021:
- Metered 10 sites to characterize community flows



Phase 2 Project Overview

WWTF Improvements

Increase WWTF to 7.5 MGD

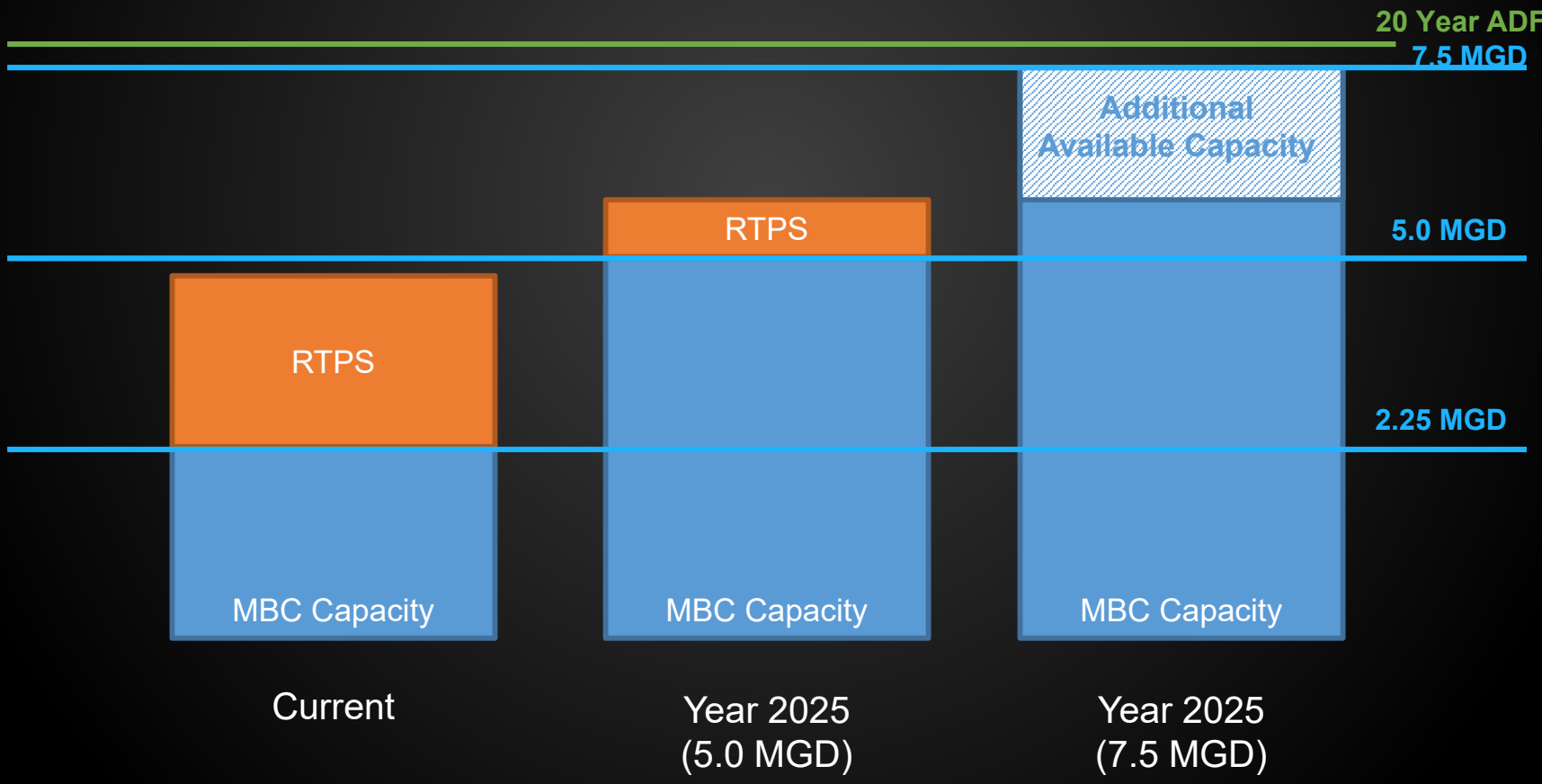
Increase WWTF Peak Capacity

Nutrient Removal

Improved Biosolids Treatment

Phase 2 Project Overview

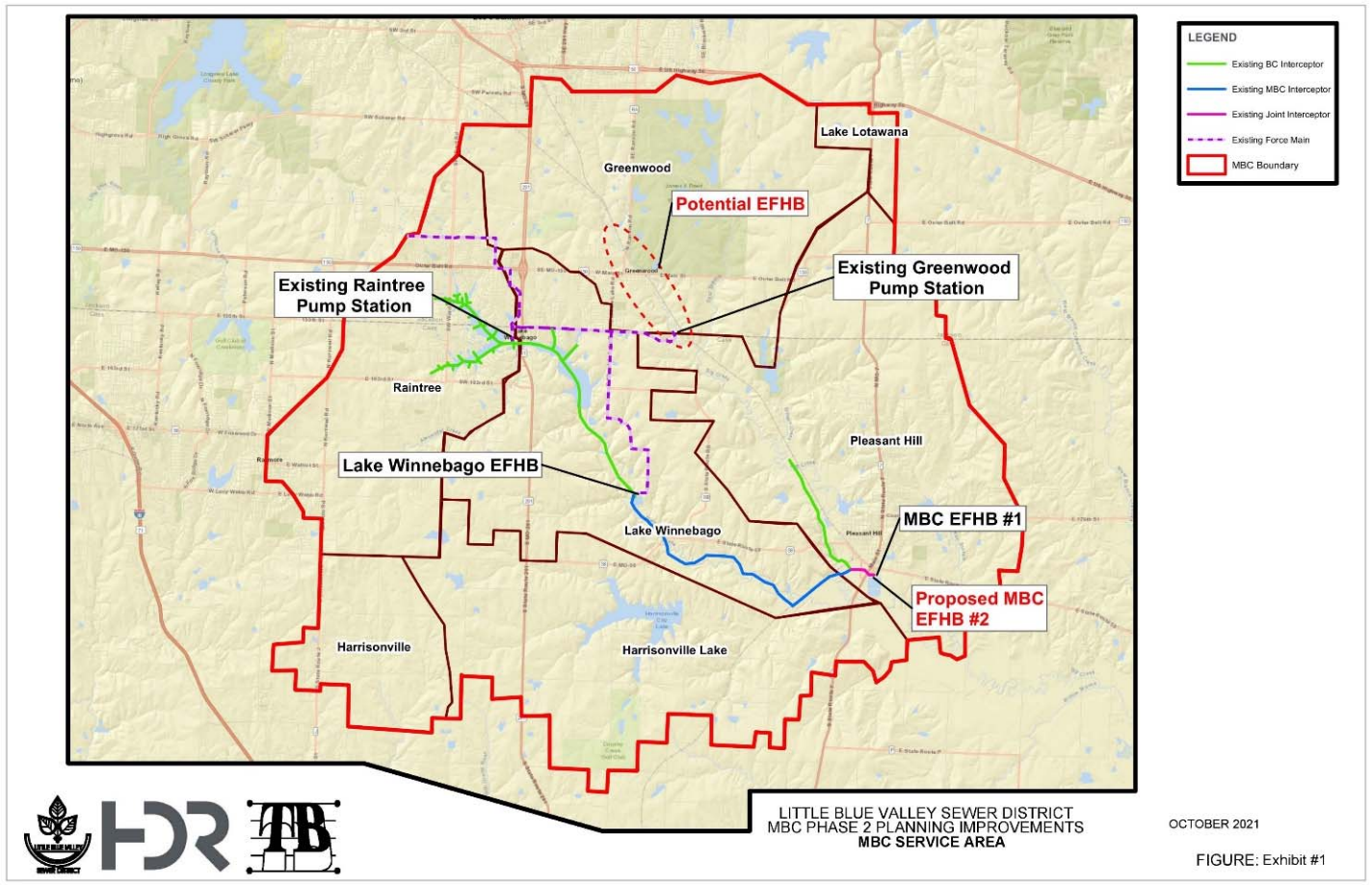
Average Daily Flow Projections



Phase 2 Project Overview

Peak Daily Flow Projections

- The project includes additional peak flow storage at the Pleasant Hill WWTF
- Additional storage in Big Creek basin to be evaluated during design



Biosolids Improvements

Sludge Reedbeds Offer…

- Elimination of Ongoing Truck Hauling
- Minimize Staffing Requirements
- Lower Life Cycle Cost
- Potential for Class A Biosolids Reuse

Project Cost/Funding

Project Cost/Funding

SRF	Conventional
• Subsidized interest rate • Additional administrative requirements (MDNR) • Subject to fund availability	• Higher interest rate • Increased repayment options/flexibility • Requires third party bond rating

Clean Water State Revolving Fund

Planning List (Current) → **Contingency List** → **Funding List**

Project Area	Project Cost
Big Creek Interceptor Extension	$27 M
System Wide Metering	$2 M
MBC Phase 2 WWTF Expansion to 7.5 MGD	$77 M
Total	$106 M

THE AMERICAN RESCUE PLAN

Potential Rate Impacts

Potential Rate Impacts

- The project is projected to increase the Subdistrict budget an average of 5.2% annually over the next 10 years until the existing 2011 bonds are paid off.

- Per connection rate increases are estimated to average 3.8% annually over the next 10 years.
  - These rate increases are based upon a projected annual growth in connections of 2.0% as communicated by customers.
  - Increase in per month per connection charge range from no increase to $5 per connection.

- Transition to flow-based billing will result in varying increases for individual customers.
  - Average rate based upon flow is $4.70 per thousand gallons and is projected to go as high as $5.10 per thousand gallons over the next 10 years.

Project Schedule

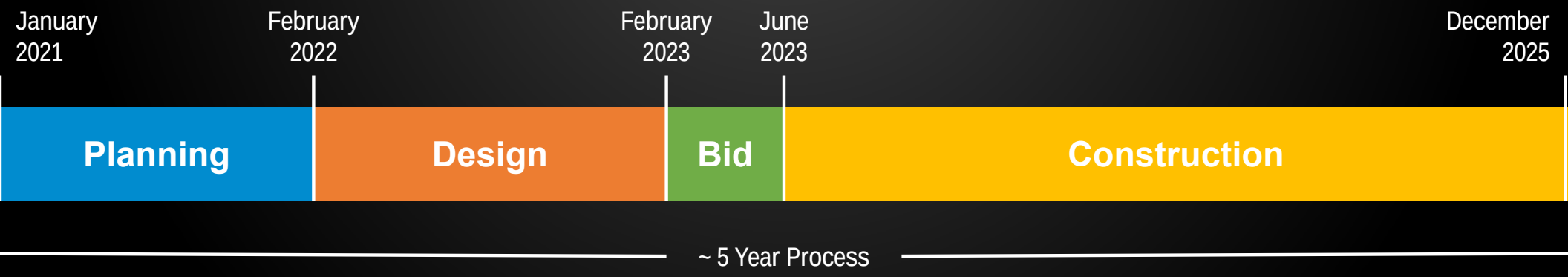
Project Schedule

Key Project Dates

November 10, 2021
Board of Trustees (BOT) requested MBC Customers approve bonds

November/December 2021
MBC Customer governing bodies consider bond request

~January 2022
(upon bond authorization)
MBC Advisory Board/BOT approves bridge loan for design contracts



Questions