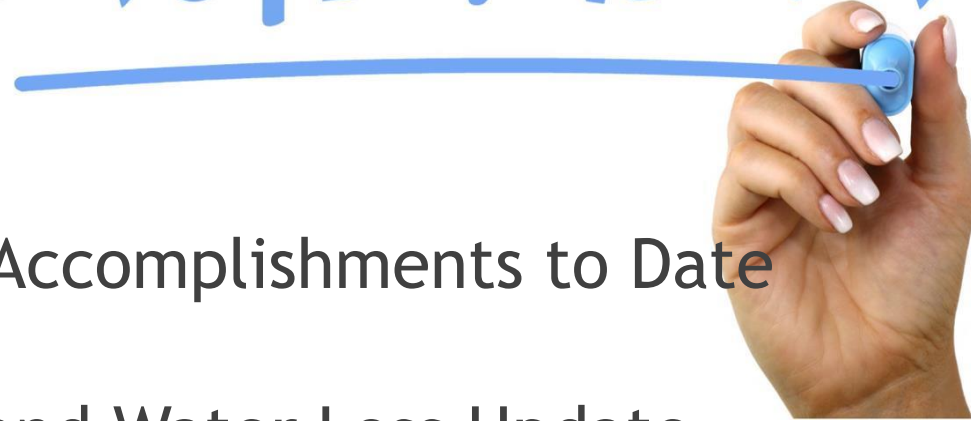


# Alliance Water Resources, Inc. Operations Update

**Martin County Water District**

March 16, 2021

# AGENDA



- ▶ Key Accomplishments to Date
- ▶ GIS and Water Loss Update
- ▶ Project Updates
- ▶ Discussion/Questions

## Key Accomplishments to Date

- ▶ New Excavator purchased for use in Martin County
- ▶ Peracetic Acid has been approved for use at both WWTP's and is being fed
- ▶ New billing software purchased and Implemented
- ▶ QGIS and GEOSYNC CLOUD Implementation.
- ▶ 25 meters GIS Mapped
- ▶ Leak Mapping on GIS
- ▶ Kept reservoir levels up while battling pump issues





# Key Accomplishments to Date



- ▶ Master Meter Zones Identified
- ▶ Water Loss Control Implementation
- ▶ Critical Operational Equipment for Regulatory Compliance and Leak Detection
- ▶ Made several hydraulic corrections in the system with a bore machine and poly water line
- ▶ Purchased New Trench Box for Safe Excavation
- ▶ New Pump at Meathouse Booster Station
- ▶ Repaired broken valve



# Key Accomplishments to Date

- ▶ Replaced a broken and leaking hydrant in the Warfield area
- ▶ Installed New Booster Station Building at Cassell Branch
- ▶ Purchased New Booster Station Building for Meathouse Booster Station
- ▶ **6 Trucks brought from Alliance Water Resources and Provided for District Use**
- ▶ Repaired the District Excavator and Purchased New Tracks
- ▶ **AWR purchased a Dump Trailer for use**
- ▶ **AWR Purchasing a New Excavator for use in Martin County**



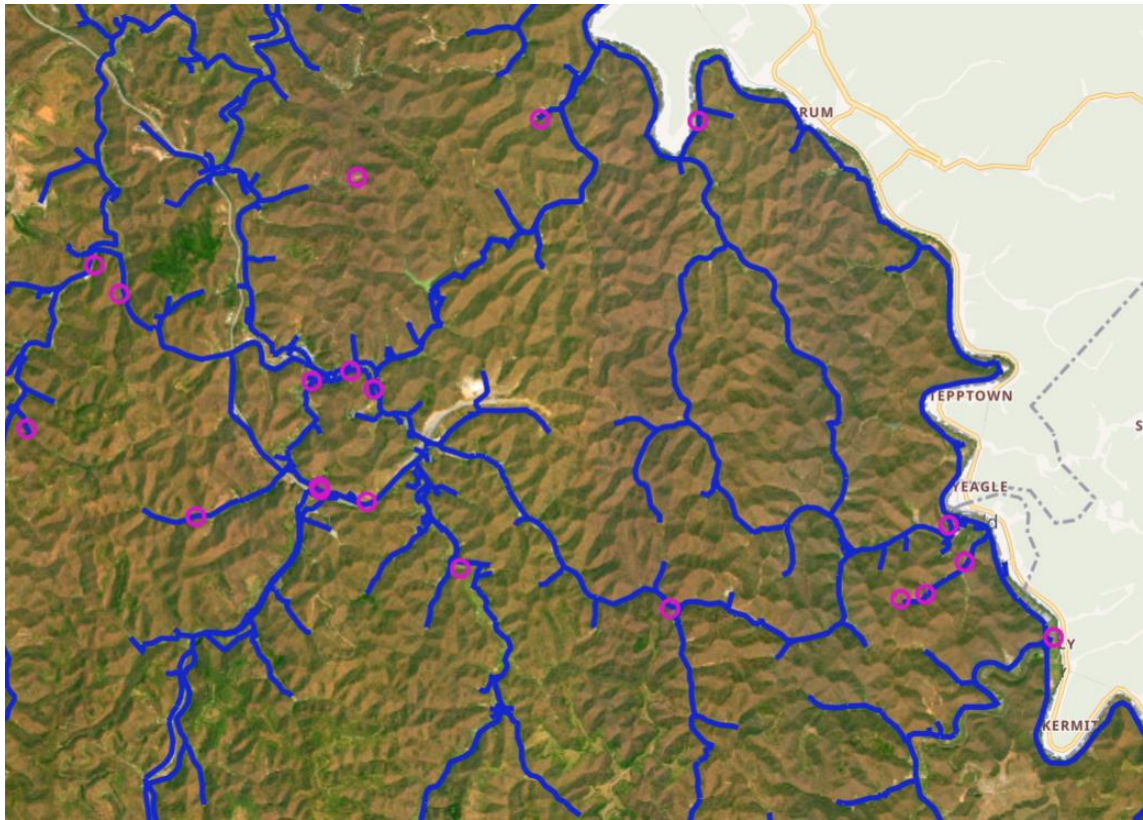


# Key Accomplishments to Date



- ▶ Fixing Hydraulic and System Issues the Right Way
- ▶ 10 Newly Acquired Licenses in the District
- ▶ Improved Efficiency in Meter Reading
- ▶ 10 Theft of Water since January
- ▶ Inventory Control Program
- ▶ Graveled Access Road for Clearwells
- ▶ Pump Redundancy at 292 Booster Station
- ▶ New Pump at Buffalo Horn Booster Station

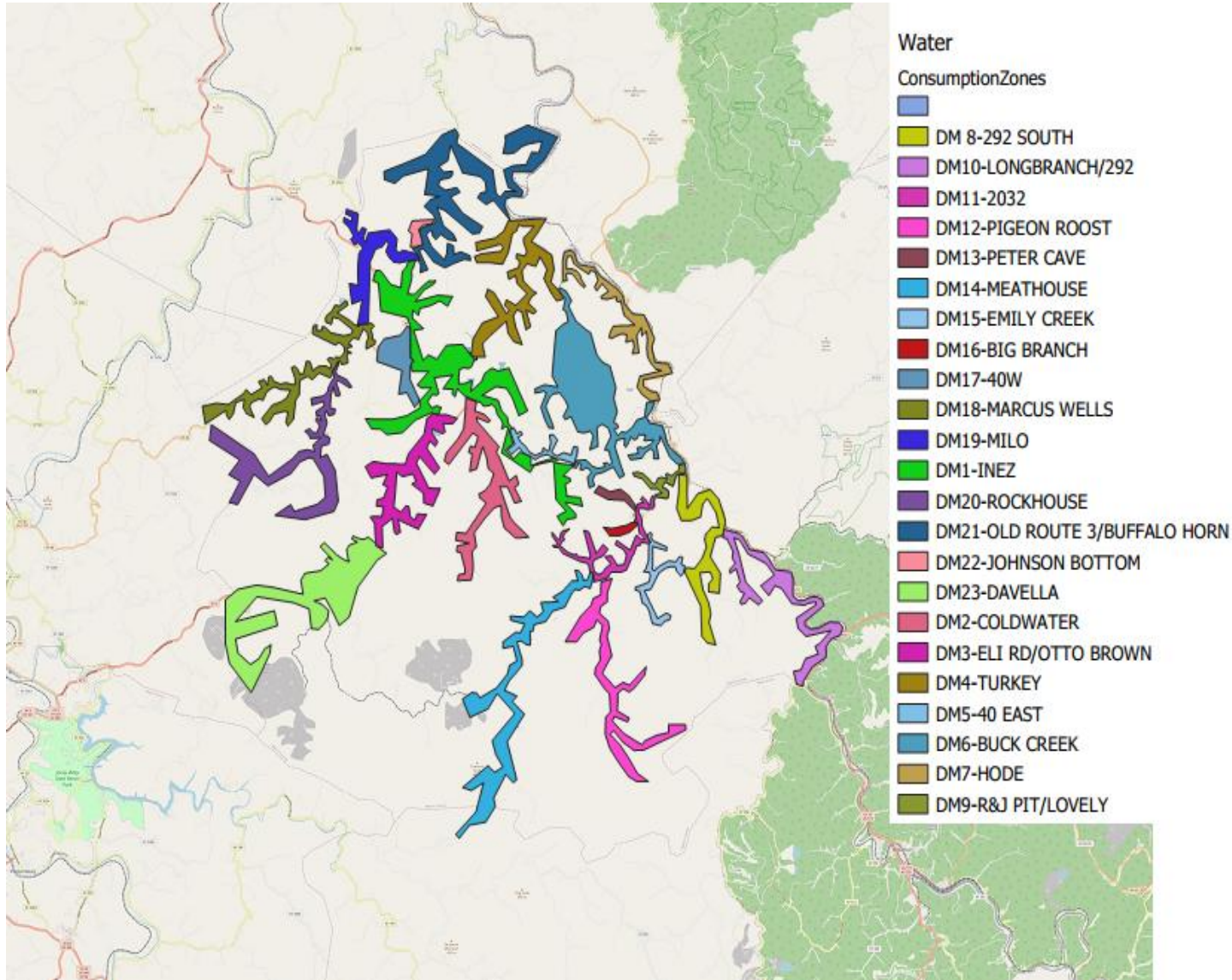
# Key Accomplishments To Date



- ▶ Data collection for CIP
- ▶ PSC rate increase
- ▶ Loan approval from KRWA board and MCWD board
- ▶ Customer Complaint Tracking

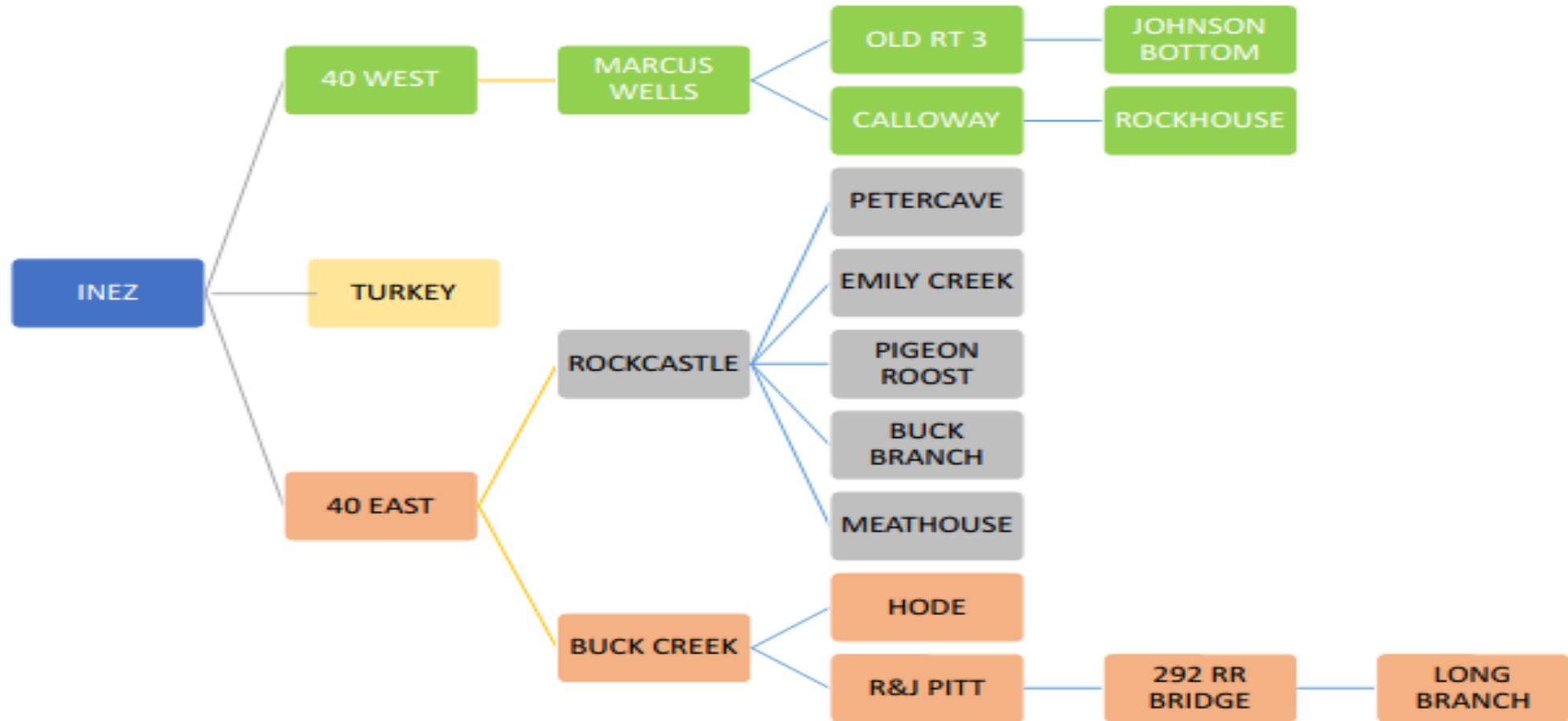


# GIS Mapping and Water Loss





MASTER METER FLOW CHART



# MASTER METER FLOW CHART





# Water System Improvements Project Status Update

**Martin County Water District**

March 16, 2022

# Completed Projects



# Telemetry & Utility Relocation Projects

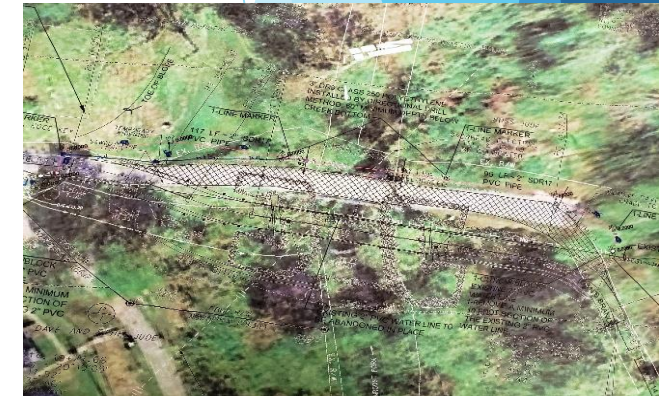
## ▶ High School Water Storage Tank & Booster Station Telemetry

- New telemetry at the Holly Bush Pump Station
- New telemetry at the High School Water Storage Tank



## ▶ Willis Dials / Dans Branch Road Utility Relocation

- Replaced Existing Waterline to Facilitate Construction of a new Bridge for the KYTC Bridging Kentucky Program



# Hydraulic Model, Pump Purchase, Lovely Line/Meter Replacement Project

## ▶ Hydraulic Model

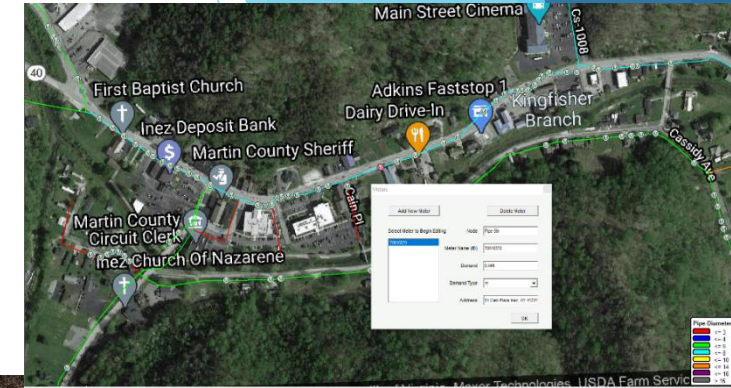
- Bell and UK Continue to adjust the Respective Models to reflect Modifications to the system.

## ▶ RWI Improvements - Pump Purchase Only

- New 2 MG Raw Water Intake Pump with Variable Speed Drive
- New 4 MG Raw Water Intake Pump with Variable Speed Drive
- New 4,000 GPM River Screen

## ▶ Lovely Mainline, Service Line & Meter Replacement Project

- 22,629 LF of Mainline/Service Line Replaced
- 61 Meters Relaced





# Project to Utilize Remaining ARC Funds

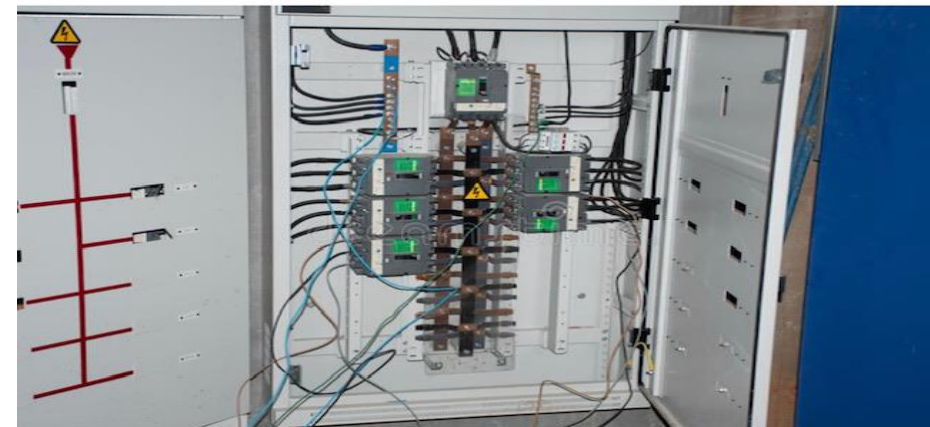
# Kentucky 292 South Pumping Station & 292 South Tank Telemetry

## ► Need for the Project:

- ARC project has \$85,832 in unspent funds.
- KY 292 Pumping Station is located where the ARC Water Improvement Project ended.
- Neither the Pumping Station nor Water Storage Tank it pumps to have operating telemetry.
- Being unable to monitor equipment remotely inhibits the District's ability to respond in a timely manner to system water loss and may lead to overflow of the tank.

## ► Major Items of Work:

- A solar powered tank site PLC-RTU with panel, coax & antenna
- A pump station PLC-RTU with panel, coax & antenna
- Level sensor for monitoring tank level
- Mechanical/Electrical Improvements to the Pumping Station



# Projects Under Construction



# RWI & WTP Improvements

## ▶ Raw Water Intake Improvements:

- Concrete Ramp & Winch System for Moving Raw Water Pumps Up & Down Slope
- Electrical Building Upgrade, Telemetry, Line Reactors and Instrumentation

## ▶ Water Treatment Plant Improvements:

- Rehabilitation of Clarifiers 1 & 3 with New Valve Vault for Clarifier 1
- Replace Outside Chlorine Chemical Feed Piping
- Replace Master Meter

## ▶ Status:

- Project Construction Began: October 4, 2021
- Scheduled Construction Completion Date: July 31, 2022
- Contractor Performing Work: Pace Contracting, LLC of Louisville Kentucky

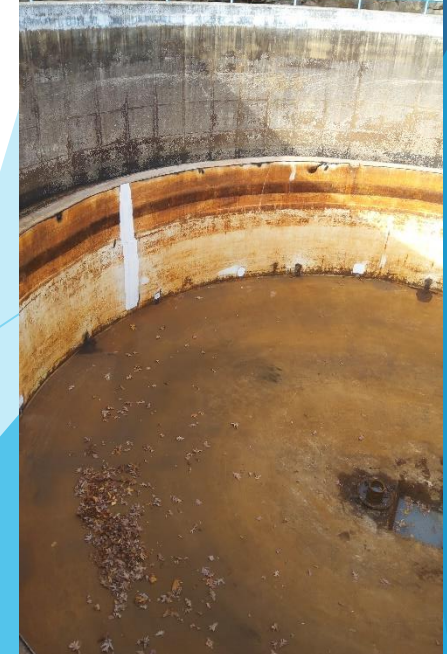
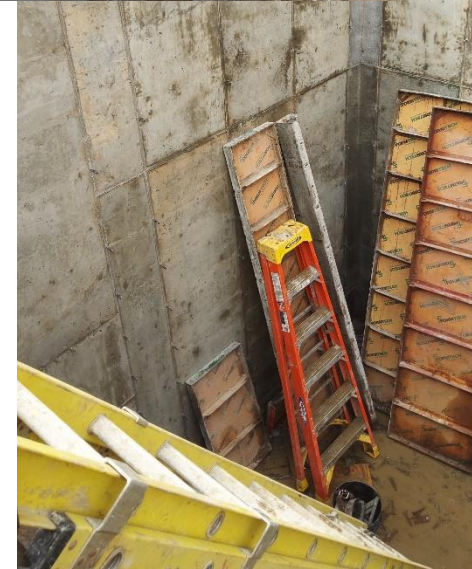
# WTP Improvements

## ► Work to Date:

- Completed Demolition of Existing Treatment Unit 1
- Removed Media from Filters in Treatment Unit 1
- Removed Underdrains from Treatment Unit 1
- Poured Valve Vault for Treatment Unit 1
- Tied in Treatment Unit 1 Drain Pipes to Valve Vault 1

## ► Projected Major Equipment Delivery Dates:

- Tube Settles for Treatment Unit 1: 4/8 - 4/18
- Tube Settlers for Treatment Unit 3: 5/8 – 5/18
- Valves: 3/28 - 4/7
- Westech Underdrains: 5/6





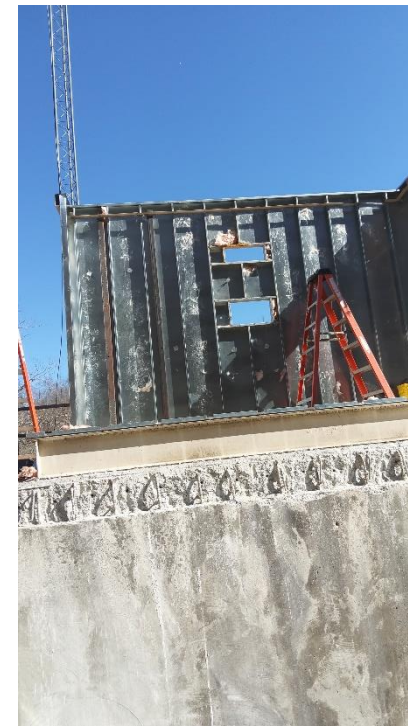
# RWI Improvements

## ► Work to Date:

- Performed Excavation for the Concrete Ramp
- Removed Existing Gabion Baskets
- Poured New Valve Vault
- Poured Concrete Pump Ramp
- Switched Pumps to Temporary Power
- Demolished the old Raw Water Intake Electrical Building

## ► Projected Major Equipment Delivery Dates:

- Remaining Electrical Gear: May 2022





# Designed Projects Awaiting Funding

# Mainline, Service Line, Meter Replacement In the Warfield Area

- ▶ **Project will Replace the following in the Warfield Area:**
  - Existing Mainline
  - Existing Meters & Service Line
  - Existing Valves & Hydrants
- ▶ **Status:**
  - Due to overage on the RWI/WTP Project, the District deferred construction of this project to a later date in order to use the funds associated with this project for construction of the RWI/WTP Project.
  - The District is submitting funding requests in an effort to obtain funding to construct this project as soon as possible.
  - Permits and Approvals (DOW, KYTC, Floodplain Management, Corps of Engineers, AML, etc.) required for construction have been obtained.



# Projects Seeking Funding



# FEMA Backup Generator Project

▶ **Project includes the following:**

- One Generator to operate 750-HP VFD Controlled RWI Pump
- Two Generators to operate 60-HP VFD Controlled Pumping Stations



# Projects in Design

# USP Big Sandy, Eastern Kentucky Business Park & Big Sandy Airport Water Improvements

- ▶ **Submittal to Revise Scope has been forwarded to AML for Consideration**
- ▶ **Components Remaining in Project from Original Scope**
  - Upgrade of the Existing Davella Pump Station
  - Construct Master Meter & Booster Chlorination
- ▶ **Proposed Revised Scope Components:**
  - Relocate the proposed Pump Station so that it replaces the existing Otto Brown Station. This station is beyond its useful life and subject to confined space constraints.
  - Replace existing waterline in the vicinity of the Otto Brown Station that is subject to leaks.
  - Provide Modifications to the Middle Fork Tank rather than construct a new tank.





# Rockhouse Creek Utility Relocation

## ▶ Rockhouse Creek Utility Relocation:

- Relocation of existing waterline to facilitate construction of a new bridge for the KYTC Bridging Kentucky Program



# High School Pump Station/Tank Piping Modifications

## ▶ Construct Valve Vault and Check Valve

- Install Valve Vault and Check Valve to allow District to feed additional service areas with the High School Water Storage Tank.

# KYTC Utility Projects Awaiting Funding



# Hunters Lane Utility Relocation & KY 908 Guardrail Project

## ▶ Hunters Lane Utility Relocation:

- Relocation of existing waterline to facilitate construction of a new bridge for the KYTC Bridging Kentucky Program

## ▶ KY 908 Guardrail:

- Relocation of existing 14” waterline along Route 908 to facilitate installation of new guardrail.





Questions?