



Todd Creek WWTP Upgrade

Platte County Commissioners Meeting

September 18, 2023

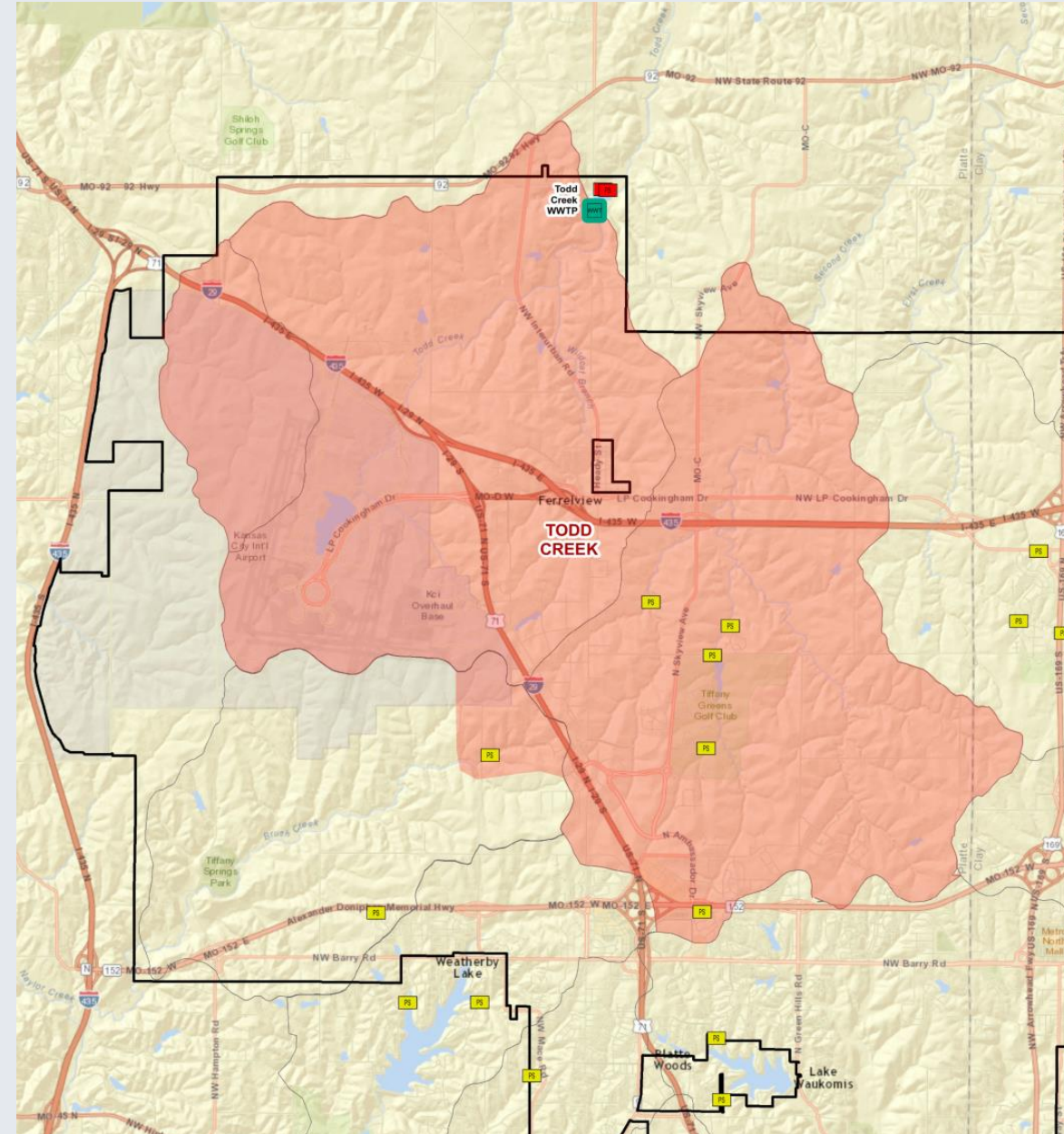


Agenda

- Project Drivers
- Project Timeline
- Sewer Network
- Proposed Site
- Overview of Wastewater Treatment Process and Odor Control
- Site Walkthrough
- Facility Information and Community Benefits
- Community Concerns
- Site Renderings

Project Drivers

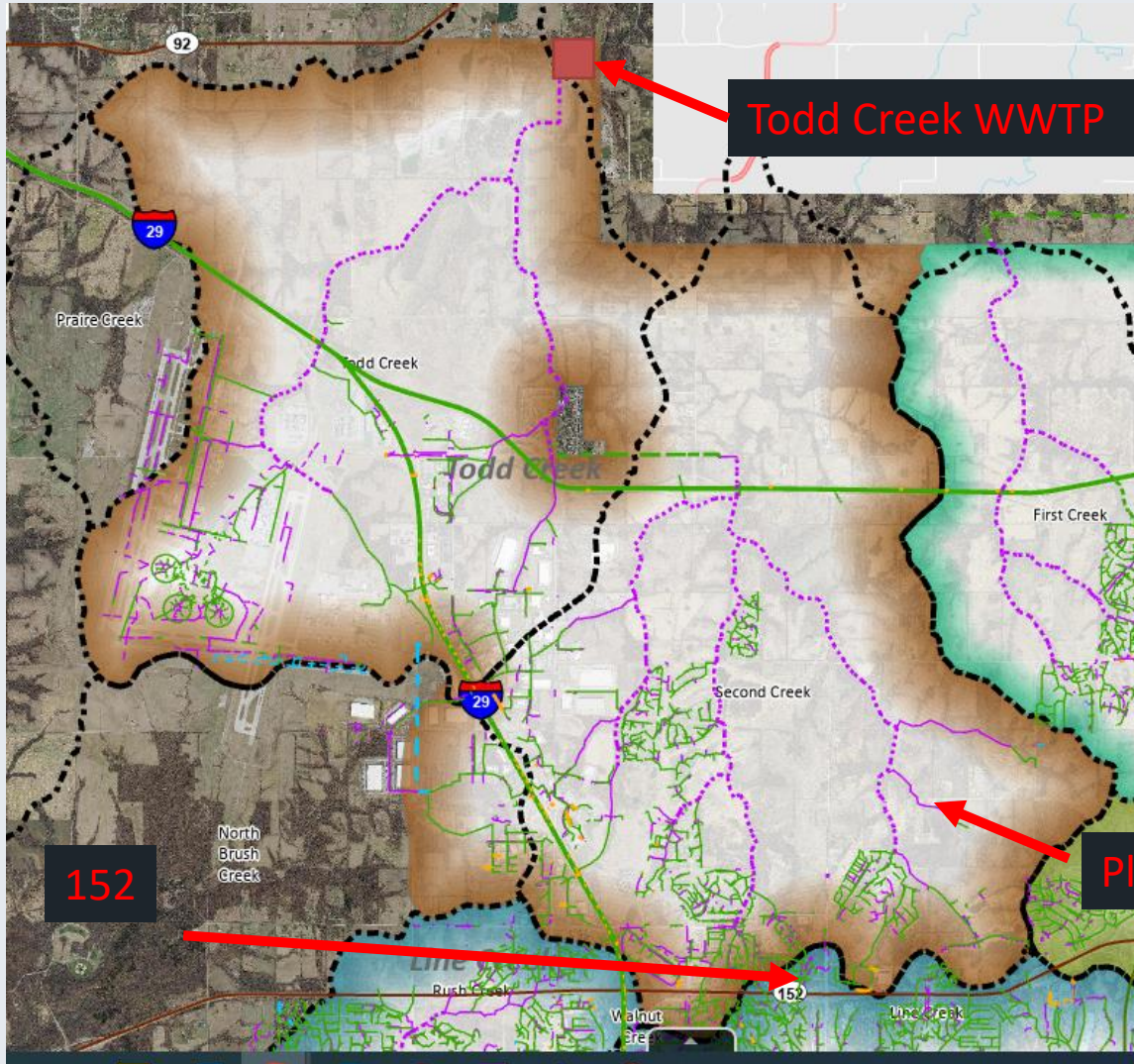
- More Stringent State Regulations
- Existing plant is 50 years old
- Existing Plant is in the Floodplain
- Development in the Watershed



Project Timeline

- December 2019 selected a Designer to study plant upgrades due to plant nearing capacity
- June 2020 Study began
- August 2020 began discussions with first adjacent property owner
- April 2021 existing site was found to be infeasible
- August 2021 began discussions with Hunt Midwest for potential plant sites
- October 2021 Designer Contracted for a new Site and upgrade flow projection due to accelerating development (one-third increase in plant flows)
 - Evaluated adjacent Sites to the existing Plant
- February 2023 Boundary Survey and City Appraisal Completed on a proposed Site
- July 2023 provisional agreement with Hunt Midwest on the purchase price and public meeting scheduled
- August 2023 Public Meeting Scheduled

Sewer Network



- Serves Todd Creek watershed and most of Second Creek Watershed.
- Hoover Heights (Platte County) served
- Major Sewers flow down hill from high areas to streams and take flow via gravity.
- Second Creek flow pumped to Todd Creek Sewer

Current Plant Site

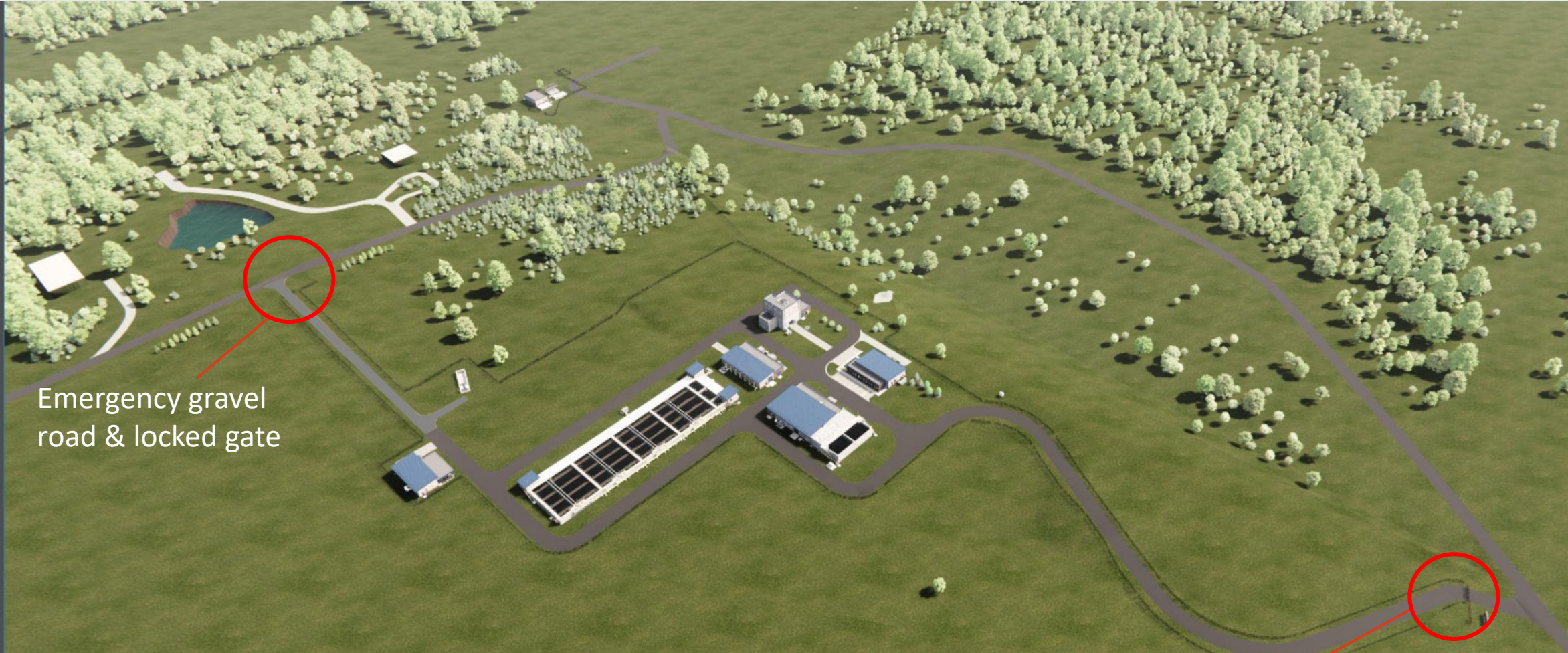
- At the edge of City
- Centralized Location
- New Flood plain takes up the entire Todd Creek Valley at the Existing Plant
- The area is rugged.



Proposed Site

- North of NW 144th St and West of Todd Creek Rd.
- Near the existing Plant
- Similar distance from residences
- 61 acres for full build out and buffer
- Livestock grazing
- Previously surface mined





Emergency gravel road & locked gate

Main entrance off NW 144th

BURNS & MCDONNELL

WELLNER ARCHITECTS

Site Plan

New Odor Control Systems

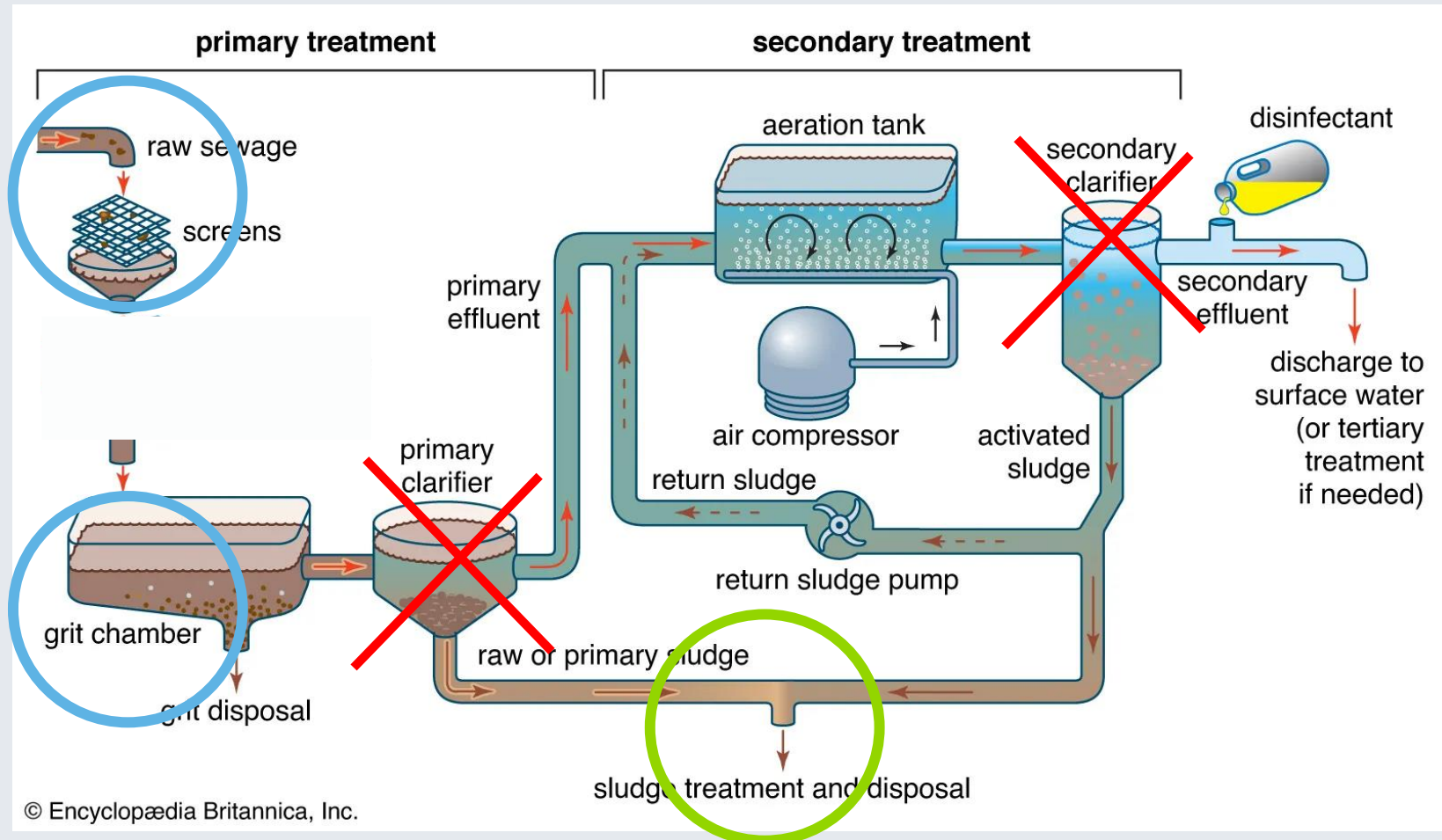
- Hydrogen peroxide
 - Small quantities
 - Familiar materials
- Vapex
 - Hydroxyl Radicals
 - Similar to residential odor control

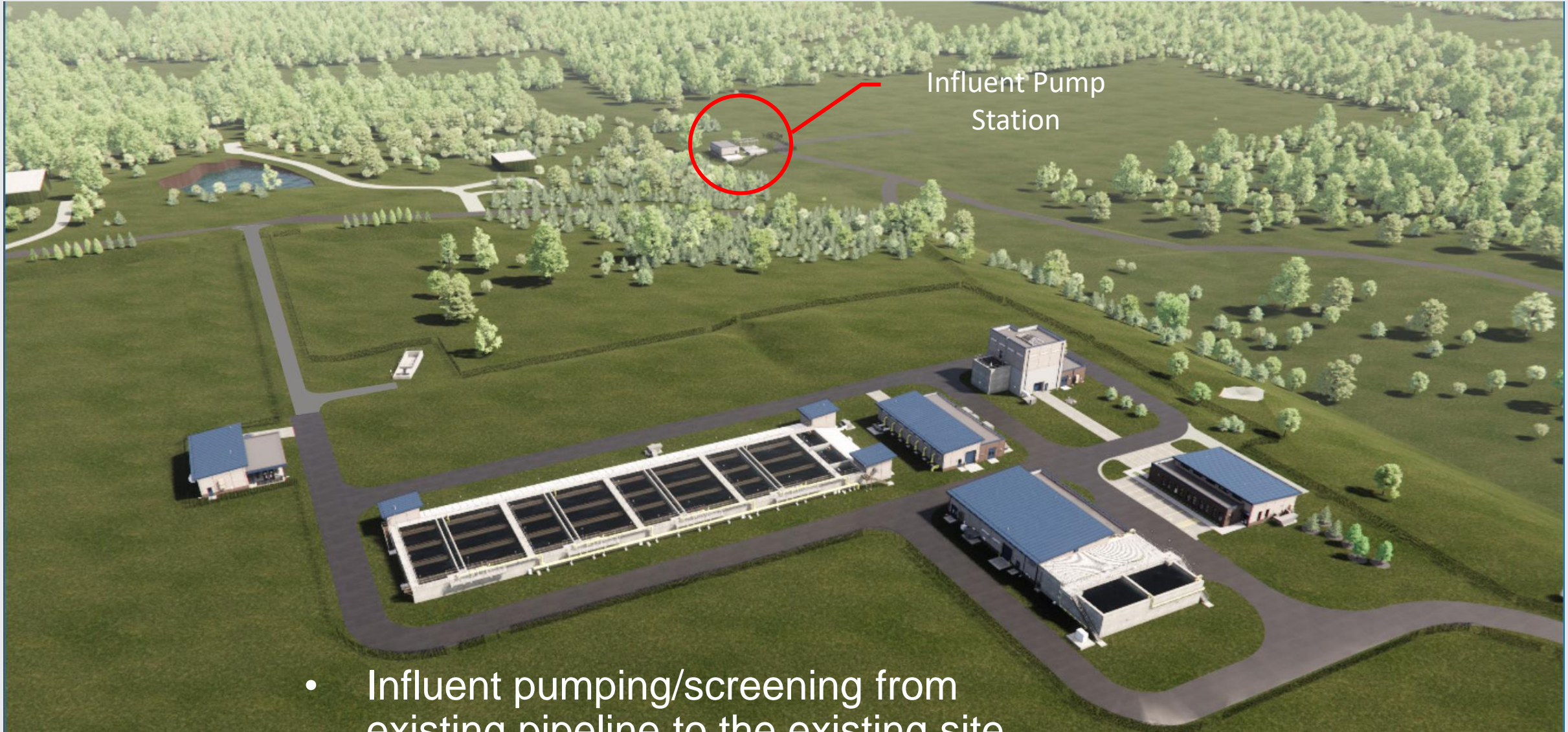


Odor Control

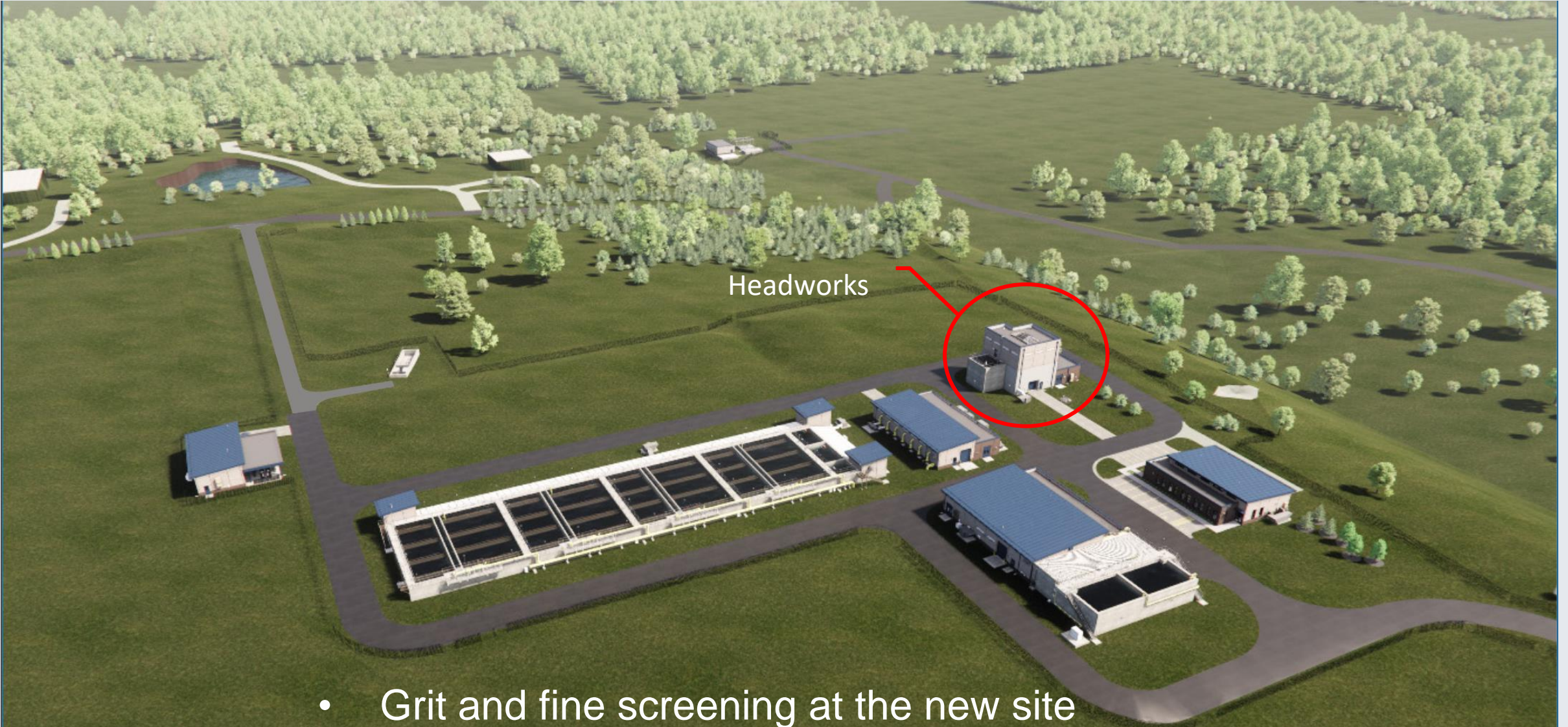
• Where can odors originate?

- Clarifiers
 - No Clarifiers
- Solids storage
 - Vapex
- Grit and Screening
 - Hydrogen Peroxide





- Influent pumping/screening from existing pipeline to the existing site



- Grit and fine screening at the new site

An aerial rendering of a water treatment facility. The central focus is a long, rectangular structure with multiple dark rectangular basins, circled in red. A red line points from the text "AGS / Biological Treatment" to this circled area. Other buildings with blue roofs are scattered around the site, which is surrounded by green fields and trees. A winding road or path is visible in the background.

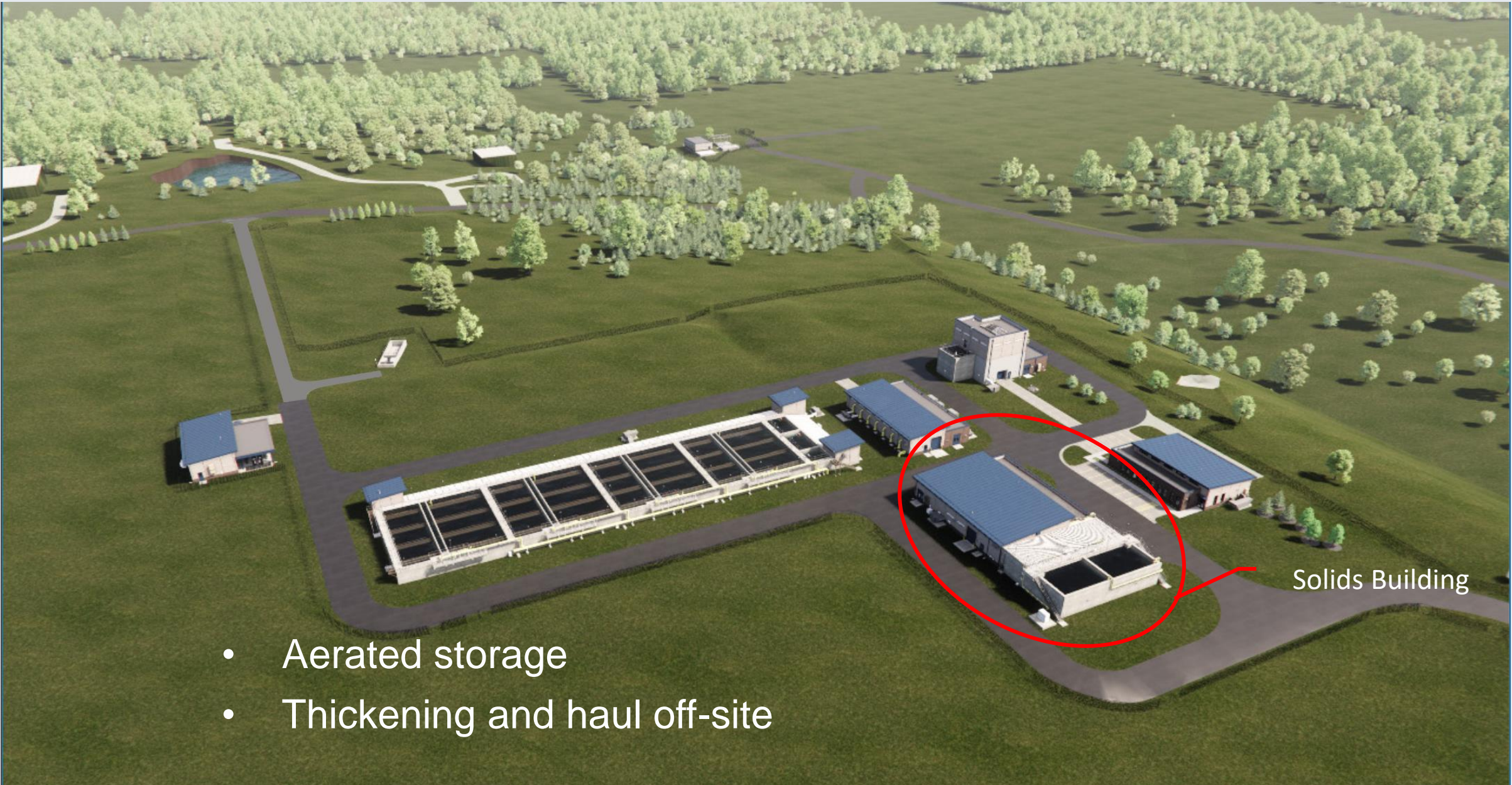
AGS / Biological
Treatment

- Small footprint, low energy, high quality water
- Removes organics and nutrients



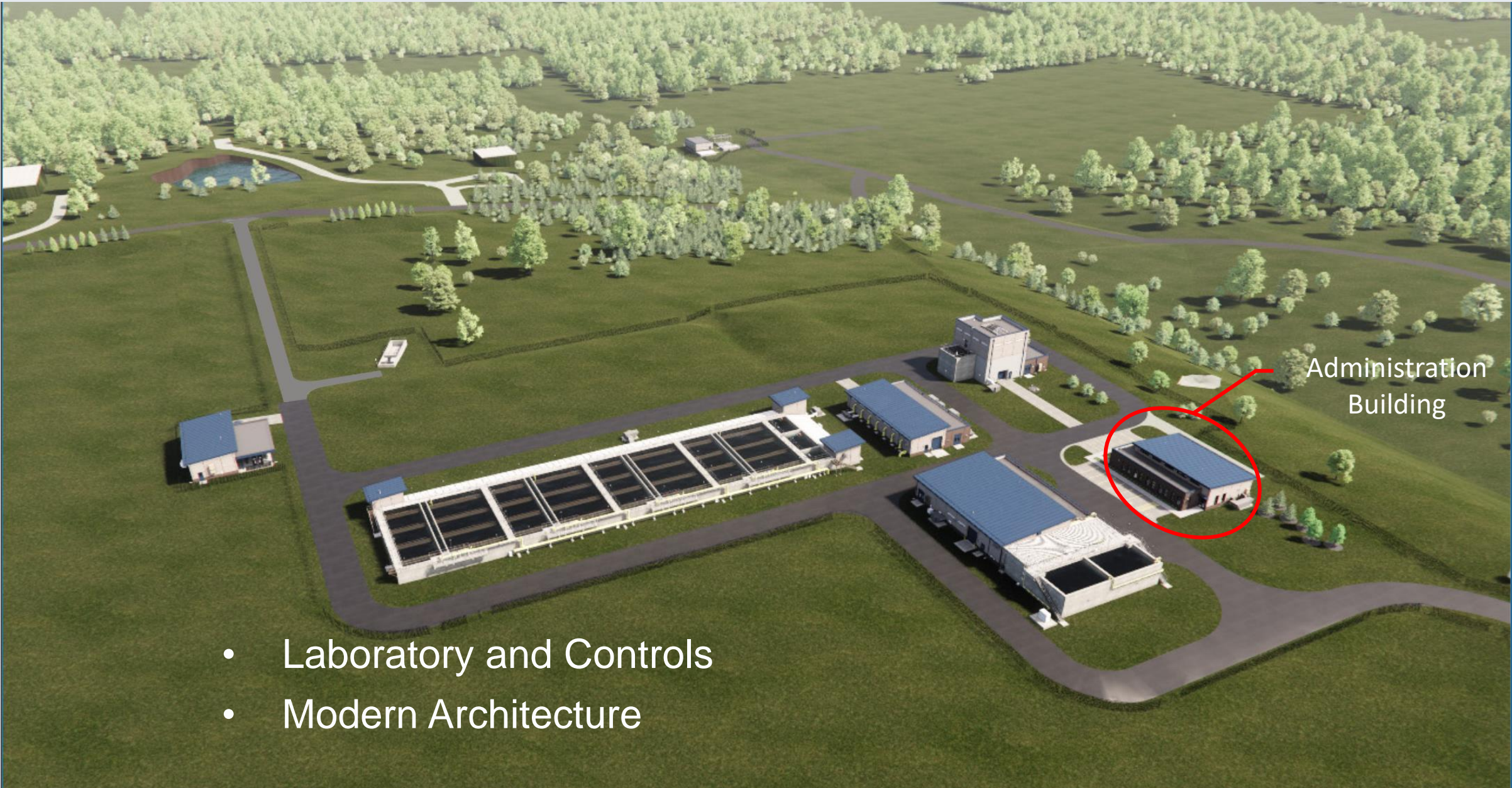
Disinfection
Building

- UV Disinfection – chemical free deactivation of pathogens
- State of the Art
- Discharge to Todd Creek



Solids Building

- Aerated storage
- Thickening and haul off-site



- Laboratory and Controls
- Modern Architecture

Community Benefits

- Improved water quality
 - Nitrogen and Phosphorus removal
- Environmentally Responsible
 - Process does not rely on chemicals for nutrient removal.
 - Lower energy consumption
- Small footprint
 - Selected process does not need primary or final clarification
- Supports growth in the watershed
 - More jobs and homes in the area

Community Concerns - Noise

- Equipment in buildings + noise reducing enclosures
- Additional silencing methods
- Complying with OSHA limits for noise plus 500 ft setback from road
- Year-round vegetative screening
- Protections during construction
 - Limited hours of construction
 - White noise backup alarms on tractor vehicles

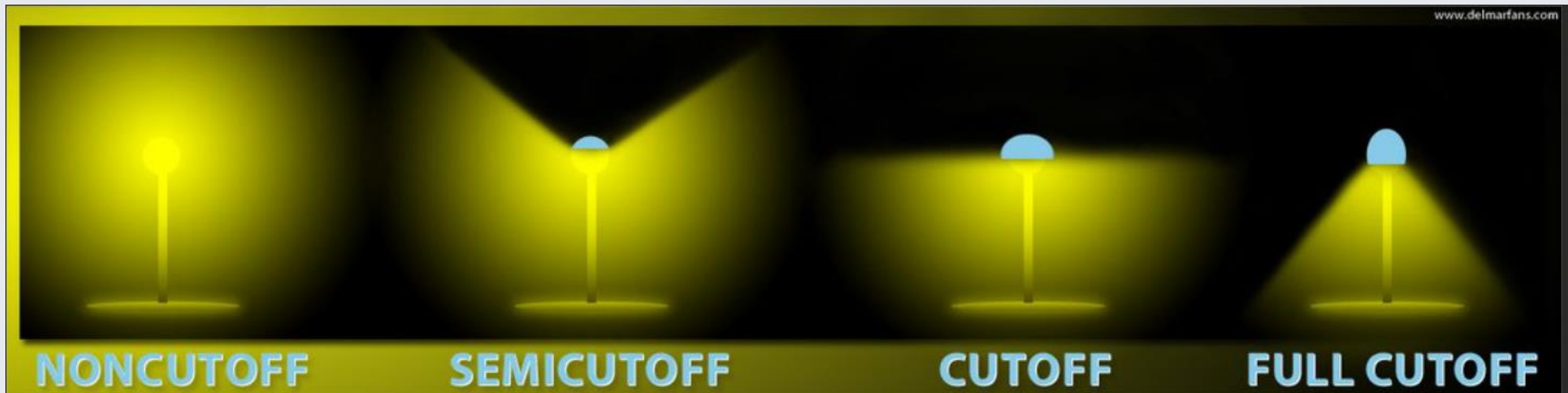


Architectural Fit



- Sloped Metal Roofs
- Brick or Stamped Pre-cast Panels
- HVAC on ground

Community Concerns - Light



- “Dark Sky” design technology
- Lighting as-needed at night for security purposes
- Year-round vegetative screening

Community Concerns – Traffic

- All regular traffic on Interurban Road & 144th
- Todd Creek is an emergency access/egress point only
- Locked gate, unpaved road



Site Renderings – View from East of Todd Creek Rd



Contact Information

- Email: water.projects@kcmo.org
- Phone: 816-513-0234

Questions?

THANK YOU

Todd Creek WWTP Upgrade

Public Meeting

Aug 31, 2023

Todd Creek WWTP Public Information Meeting

