



Facts & Information Regarding Revenue Bond Election

Ash Grove Wastewater Collection & Treatment System Improvements

Election Date: February 3, 2026

Bond Type & Amount: Revenue Bonds – \$1,750,000

Purpose: Fund capital improvements to the City's wastewater collection system and wastewater treatment facility (WWTF).

WHY THESE IMPROVEMENTS ARE NEEDED

A dependable sewer system protects homes, businesses, and public health. Old pipes and equipment allow rainfall to leak in, causing very high flows and occasional surcharging and overflow risks.

If the WWTF equipment fails, the City could be unable to meet its Missouri State Operating Permit (MO-0023205) requirements, which may trigger enforcement by the Missouri Department of Natural Resources (MDNR).

CURRENT SYSTEM DESCRIPTION

Sewer Collection System: The City owns about 72,060 feet (~13.6 miles) of gravity sewer mains (8–15 inches in diameter), 249 manholes, 21 lampholes, and one pump station that moves flow under Highway 160. Pipes include PVC, vitrified clay (many 1950s south of Hwy 160), and reinforced plastic (late 1970s north of Hwy 160). Newer extensions use PVC. Older manholes are brick-and-mortar; newer ones are precast concrete.

Wastewater Treatment Facility (WWTF): Located ~1.5 miles northwest of the City, built in the late 1970s. Original components included an inlet structure with a manually cleaned bar screen, an oxidation ditch, two 24-ft clarifiers, sludge pumps, and sludge drying beds. Designed for about 3,300 people and ~330,000 gallons/day average flow. Discharges treated water to the Sac River (~1,700 feet away). Major upgrades were added in the late 1990s (wet-weather capacity, new clarifiers, sludge handling) and in 2007 (UV disinfection and flow metering).

CURRENT SYSTEM DEFICIENCIES

Collection System (Pipes & Manholes): Heavy rain causes infiltration & inflow (I&I), sending peak day flows above 1,500,000 gallons/day compared to an average of ~166,000 gpd. Based on water sales data, over 40% of the WWTF flow is from rainwater entering the system. Investigations mapped the whole system, inspected 220 manholes, smoke-tested 249 segments (67,730 feet), and CCTV-inspected 17 segments (5,120 feet) south of Hwy 160. About 9,780 feet north of Hwy 160 still need CCTV.

- Manholes: 41 showed surcharging, 62 showed I&I, 2 showed overflows, and 3 showed hydrogen sulfide corrosion; several had broken/misaligned frames and covers.
- Smoke testing found 72 public-sector I&I sources and 52 private-sector sources. Public defects include manhole rim defects, vented covers, wall defects, and 6 stormwater cross-connections (from 4 culverts and 2 curb inlets). Private defects include broken/uncapped cleanouts, service line issues, and a driveway area drain.
- CCTV (south of Hwy 160): 8 of 17 segments had active I&I and/or multiple structural defects.

Wastewater Treatment Facility: Hydraulic capacity is expected to be adequate if collection system I&I is reduced. However, much of the mechanical equipment is decades old and near end-of-life:

- Headworks: The flow meter (Parshall flume transducer/receiver) is 25+ years old and needs replacement. A mechanical fine screen would improve removal of rags/wipes than the existing manual bar screen.

- Oxidation Ditch: Motors/gear reducers/bearings were replaced in 2024, but baffles are needed to prevent “standing waves”; structural concrete needs repair.
- Clarifiers: Mechanisms are 25+ years old. The west clarifier (primary secondary settling) drive assembly is at end-of-life; weir trough and ferrous metal parts are badly corroded.
- UV Disinfection: Level control gate doesn’t maintain proper depth (± 1.5 in); some cables have animal damage; spare parts needed.
- Sludge Pump System: Two submersible pumps and an aging control panel; pumps and panel should be replaced; at minimum provide new control panel and a spare pump.
- Outfall & Discharge: Floods displaced protective concrete aprons; need riprap. Extreme flooding can surcharge the outfall up to the top of the UV structure.

DESCRIPTION OF PROPOSED IMPROVEMENTS

Collection System: Rehabilitate priority manholes (spray-applied cementitious lining or cured-in-place liners; replace defective frames/covers). Rehabilitate/line defective pipe segments (CIPP, sectional repairs, or point repairs). Repair main-to-lateral connection defects via trenchless or open-cut methods.

Wastewater Treatment Facility:

- Headworks: Install new ultrasonic flow meter; modify bypass weir to stop peak-flow bypassing (no longer allowed); add mechanical fine screen if budget permits (with structural modifications).
- Oxidation Ditch: Install baffles to prevent standing waves; repair spalled/deteriorated concrete.
- Clarifiers: Sandblast/repaint ferrous metal components; replace effluent weir trough, effluent pipe, and other parts with stainless steel; refurbish west clarifier first, then east.
- UV System: Extend concrete structure; install fixed serpentine weir; replace failed effluent flow meter; replace damaged power/control cables and needed electrical components.
- Sludge Pumps: Install new control panel for proper pump cycling; replace pumps if funding allows; provide a spare pump at minimum.
- Outfall: Remove displaced concrete aprons; install sized riprap; add a relief outfall to reduce surcharging during extreme floods.

COST, FUNDING, AND RATES

Estimated Project Cost: \$1.4–\$1.75 million, depending on final scope and bid prices.

Funding Plan (If Voters Approve): Apply for Missouri DNR State Revolving Fund (SRF) financing (~2.0% interest, 20-year term). MDNR may award a Water Quality Incentive Grant for collection system rehabilitation (availability varies each year). SRF application deadline is March 1, 2026. Any grant would reduce the final loan amount and rate impact.

How Bonds Are Repaid: From sewer user charges after paying operations and maintenance. No property tax increase; no general tax funds used.

Rate Impact: Current average residential bill is \$32.50/month gallons at 5,000 gallons (fixed \$19.50 + \$2.60 per 1,000). With SRF loan/grant, the average bill is projected to increase by \$9.00–\$15.50/month. If bonds are not approved and the City uses lease-purchase financing (~5% over 20 years), the average bill is projected to increase by \$20/month.

TRANSPARENCY & MORE INFORMATION

A more detailed **Official Fact Sheet** can be obtained at City Hall. A comprehensive **Engineering Report** has also been prepared and can be reviewed at City Hall during normal business hours. Residents and business owners may contact City Hall for answers to any additional questions they may have regarding the project.