



TODD CREEK WASTEWATER TREATMENT PLANT

Environmental Impact Review

August 31, 2023

AGENDA

- Purpose of Meeting
- Purpose and Need for Project
- Environmental Setting / Location
- Future of Environment without Project
- Alternatives to the Project
- Description of Proposed Project
- Financial Impact of Project
- Evaluation of Impacts
- Short-term impacts
- Long-Term Impacts
- Irreversible and Irretrievable Commitment of Resources
- Intergovernmental Review
- Next Steps

Purpose of Meeting

- **This meeting is required for projects supported by the Clean Water State Revolving Fund (CWSRF)**
 - **Described in CW 10 CSR 20 – 4.050(4)(B) "Guidance for Environmental Information Document Requirements"**
- **After public disclosure, 30-day public comment period**

Purpose and Need for the Project

- Existing plant built in 1968 plus multiple upgrades
- Major plant assets beyond their design life, in need of replacement
- More stringent water quality requirements set by the EPA and MDNR are more stringent
- Changes to the flood plain along Todd Creek

Environmental Setting / Location

- North of NW 144th st. and West of Todd Creek Rd.
- Approximately 61 acres



Future of Environment Without Project

- **Water Quality**

- Inability to remove nutrients (nitrogen/phosphorus) and meet permit as watershed grows

- **Facility Reliability**

- Failure of critical assets beyond service life, resulted in untreated wastewater

- **Floodplain**

- Revisions by FEMA to the area FIRM map now show plant underwater during the 100-year and 500-year storm event

Future of Environment Without Project



Alternatives to the project

- **Technologies Considered**

- Regionalization
- No Discharge
- Onsite Upgrade with MBR
- 3 Greenfield Alternatives

- **Locations Considered**

- Property Southeast of the current facility
 - Landowner uninterested in selling property
- Property to the Northwest

*Cost estimates in 2021 dollars

- *All Alternatives considered for the project including estimated cost of each alternative. This can be broken out like the proposed project description with each specific project and its own description of the project. This section should also include the reasons for the selected alternatives. The alternatives not selected for the project should be provided with the reasons why they weren't selected.*

Onsite Alternative - MBR with A2O

- Onsite retrofit and expansion plus nutrient removal
- MBR tank replacing clarification
 - Small footprint
 - Larger energy consumption
- Estimated cost of \$87.8M in 2021 dollars
- Protection of floodplain makes this infeasible



Greenfield No. 1 Conventional A2O

- Relies of gravity separation in clarifiers instead of membrane
- Larger footprint, large open basins
- Estimated cost of \$82.6M in 2021 dollars



Greenfield No. 2 Oxidation Ditch

- Three (3) Oxidation ditches for biological treatment
- Largest footprint
 - Hard to maximize property setbacks
- Low energy cost
- Estimated cost of \$84.0M in 2021 dollars



Greenfield No. 3 Aerobic Granular Sludge (AGS)

- Smallest greenfield footprint
- Low energy cost
- Estimated cost of \$76.4M in 2021 dollars



ALTERNATIVE SELECTED

- **Technology Selected**

- Aerobic Granular Sludge

- **Locations Selected**

- Property to the Northwest

DESCRIPTION OF PROPOSED PROJECT

• **New Wastewater Treatment Facility**

- Influent Pump Station
- Headworks Building
- AGS Basins
- Blower Building
- UV Disinfection Building
- Cascade Aeration Effluent Structure
- Solids Holding and Processing Building
- Administration Building

- **Increase treatment capacity to support development**
- **Improved reliability of Wastewater Infrastructure**

FINANCIAL IMPACT OF PROJECT

- **current user charge: \$64.57/5000 gal**
- **Proposed: \$68.50/5000 gal**
- **Project construction cost has been incorporated in KCMO capital improvements plan and proposed rates**

EVALUATION OF ENVIRONMENTAL IMPACTS - Land

- Minor increase in impermeable area
- Loss of usable grazing land
- Wetlands/endangered species – none identified
- Cultural resources – none identified
- Improvement in floodplain
- Area had already been disturbed from historic mining activities

EVALUATION OF ENVIRONMENTAL IMPACTS - Water

- Improvement of water quality in Todd Creek



EVALUATION OF ENVIRONMENTAL IMPACTS - Air

- No significant emissions of any kind
 - No onsite power generation
 - Odor control



SHORT-TERM IMPACTS DURING CONSTRUCTION

- Large construction vehicles entering and leaving the site
- Increased traffic from personal vehicles of construction workers
- Earthwork / altered landscape during construction
- Erosion control measures

IMPACTS DURING OPERATION

- **Operations**
 - Traffic
- **Yard maintenance**
 - Mowing
 - Erosion control

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

- **Construction Phase**

- Construction materials (e.g. steel, concrete)
- Fuel for vehicles, generators
- Power

- **Operation**

- Chemicals
- Fuel
- Operating cost

INTERGOVERNMENTAL REVIEW

- **Army Corps of Engineers**
- **Department of Conservation**
- **United States Fish and Wildlife**
- **Federal Assistance Clearing House**
- **Pawnee Nation**
- **DNR Division of Geological Survey**
- **DNR Historic Preservation Office**
- **DNR Division of State Parks**
- **DNR Financial Assistance Center**
- **Osage Nation**

Contact Information

- Email: water.projects@kcmo.org
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UP NEXT

- Todd Creek Public Meeting.
- Please sign out for this meeting and sign in for the next meeting.

THANK YOU

Todd Creek WWTP Upgrade

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