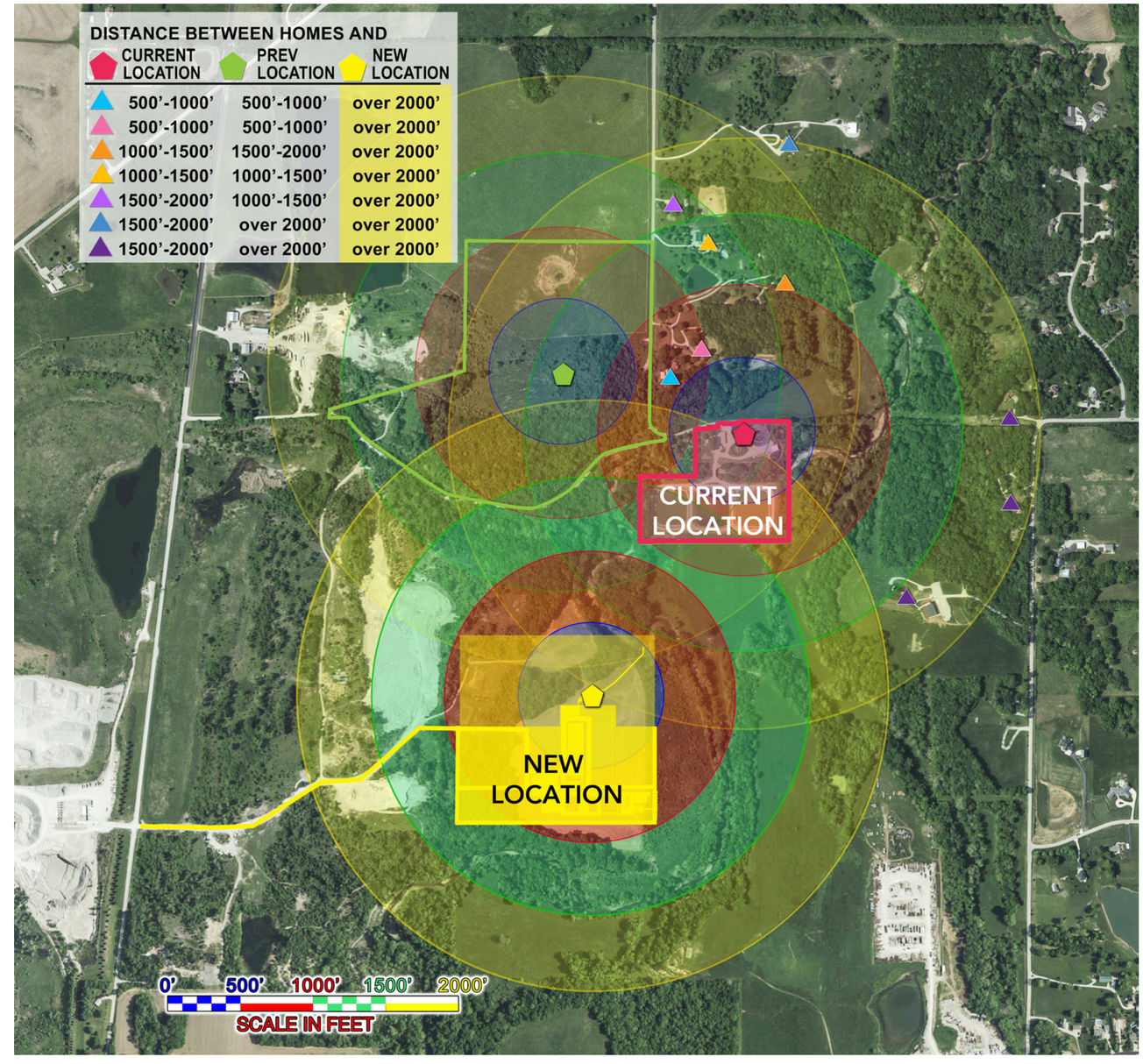
TODD CREEK WASTEWATER TREATMENT PLANT

NEW LOCATION



Additional information on project website: kcwater.us/todd-creek

TODD CREEK WASTEWATER TREATMENT PLANT

BACKGROUND INFORMATION

Why is the Todd Creek Wastewater Treatment plant being moved?

- The existing plant is reaching its processing capacity and needs to be enlarged to accommodate Northland growth (which is forecast to continue) that has happened since the plant was constructed in the 1960s.
- The existing plant is located in a floodplain so it cannot be expanded where it is currently located.
- The existing plant uses 70-year-old treatment technology.
- The decision to find a new location within workable range of existing pipelines and other underground infrastructure is not only reasonable but also necessary. (see watershed/existing sewer lines board)
- Current regulatory and financially responsible relocation decisions are driven by best management practices of the water industry nationwide.

When was the Todd Creek Wastewater Treatment plant built?

- The facility was built in the 1960s, the plant uses updated but nonetheless 70-year-old treatment technology.
- The new facility will be designed with newer proven technologies and meet stricter EPA standards for water quality.

What is the life span of this infrastructure?

- Technology and equipment have a 20-year life span. The Todd Creek Wastewater Treatment Plant technology and equipment have been maintained and updated over the years since they were installed in the 1960s but they are now needing to be upgraded or replaced.
- Wastewater treatment plant structures have a 50-year life span. The Todd Creek Wastewater Treatment Plant was constructed in the 1960s and so it is at the end of its usefulness and needs either a major rehabilitation or replacement. However, since the facility is located in the floodplain it will need to be replaced as it also must be relocated out of the floodplain.
- Interceptor sewer connections have a 100-year life span. The Todd Creek interceptor was constructed in the 1960s and has approximately another 50 years before needing to be upgraded or replaced.

Were other locations were considered?

- Yes. A wide variety of factors affect wastewater treatment plant locations, including the location of existing sewer pipes, costs of pumping sewage, terrain (hills, valleys, and floodplains), availability of property (i.e., a willing seller), and the need to anticipate future growth in the Northland.
- In 2023, the project team had several meetings with citizens in the area about the location of the new treatment facility and listened to their concerns. An alternate location was explored and the plan for the new facility at the new location is currently under development.

Why was this location selected?

The existing plant:

- Is located in a floodplain.
- Has reached or is reaching its processing capacity and
- Needs to be enlarged to accommodate Northland growth that has happened since construction and is forecast to continue.

The new site:

- Needs to be at the downstream end of the existng sewer infrastructure.
- Needs to be of adequate size to support the new plant infrastructure.

The sewer line maps show that the current Todd Creek Wastewater Plant is the most northern point of all the sewer lines. Wouldn't long term planning for growth make more sense to move this to a more centralized location away from people?

- Wastewater treatment plants typically are located at the downstream end of the watershed and near streams to which treated water can be safely returned to the environment. Adjoining land use is always a consideration, but efficiency, effectiveness and safety are primary considerations with water utilities.
- The location of the Todd Creek Wastewater Plant is at the northern end of the sewer lines (see watershed/existing sewer lines board).
  This location is key as:
  - these lines primarily flow from the power of gravity,
  - the gravity lines work with the natural watershed and here the watershed flows north to the location of the facility.

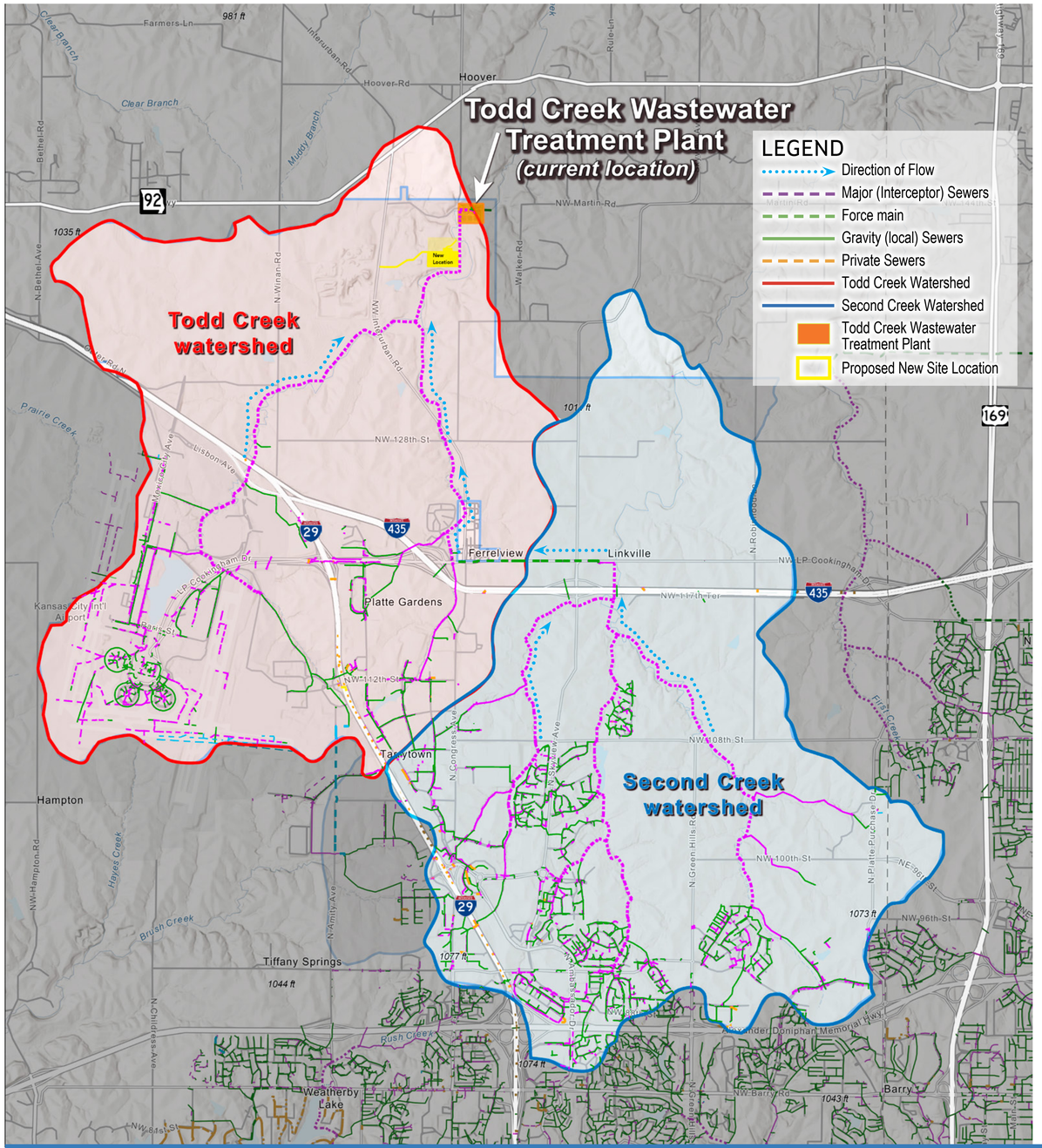
Why was all the acreage at the airport not considered? Isn't the bulk of the sewage from the airport and the new logistics center?

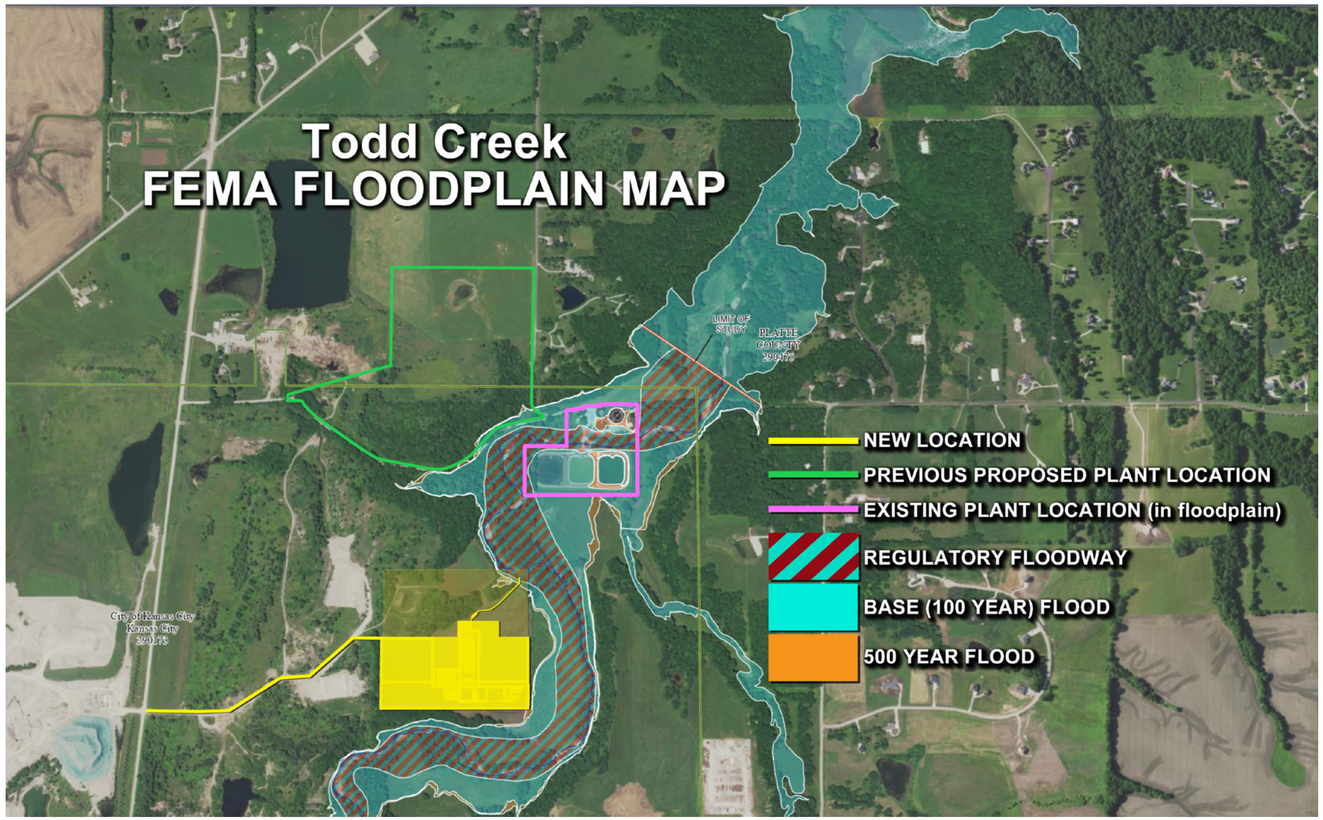
- The bulk of the sewage is from residential and commercial users and not the airport and logistics center. The airport and logistics center make up less than 20% of the flow, combined.
- The airport location is not feasible as it is located in the watershed, not at the bottom where the majority of the flow (by gravity lines) is directed. (sss the watershed/sewer lines graphic)

Full FAQs on project website: kcwater.us/todd-creek

TODD CREEK WASTEWATER TREATMENT PLANT

WATERSHED / FLOODPLAIN





COMMUNITY BENEFITS

- **Improved Water Quality**
  - Nitrogen & Phosphorous Removal
- **Environmentally Responsible**
  - Primary Nutrient Removal via Biology
- **Compact Footprint**
  - No Primary or Final Clarification
- **Supports Watershed Growth**
  - Greater Housing & Business Capacity

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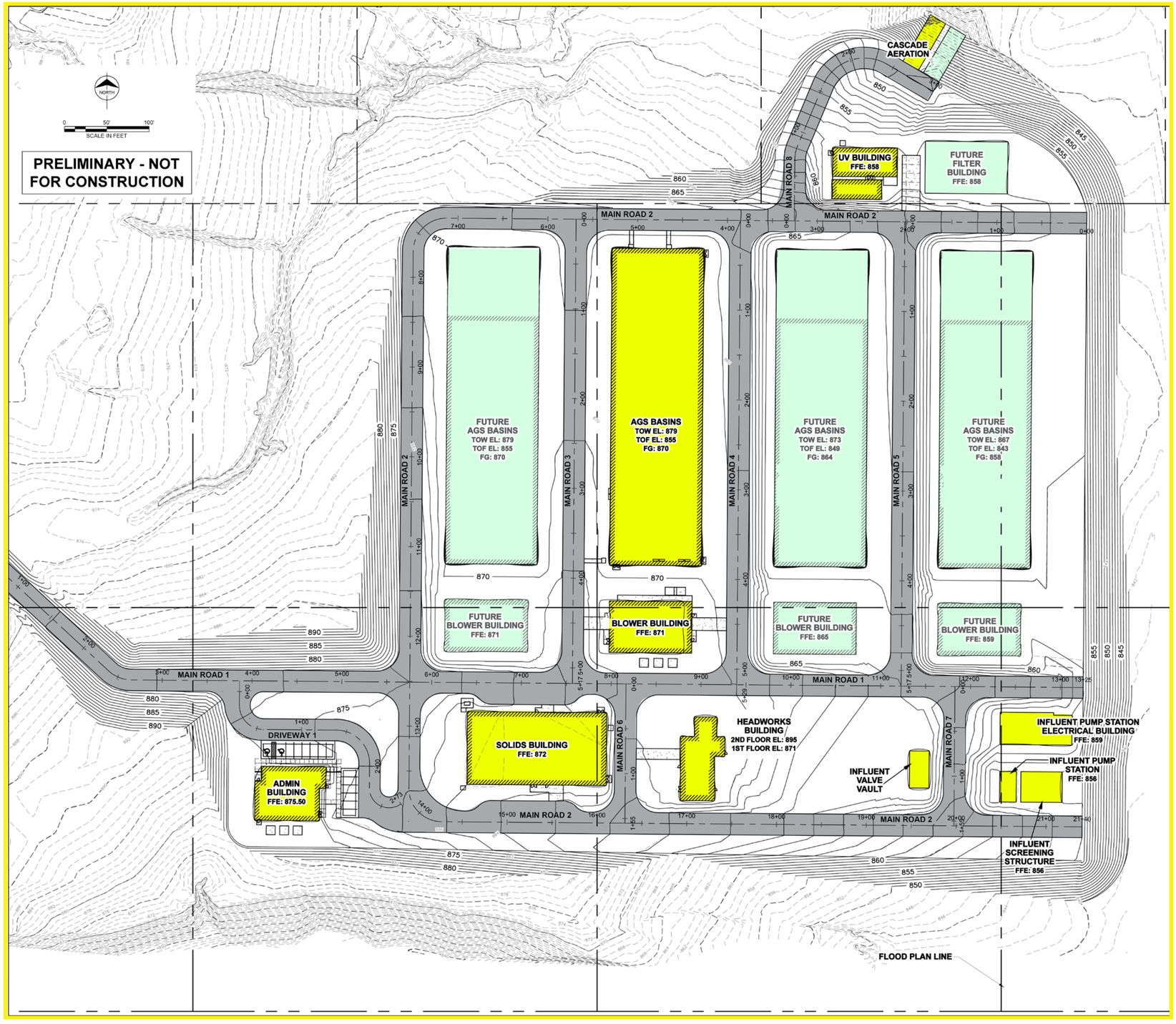
TODD CREEK WASTEWATER TREATMENT PLANT

PRELIMINARY SITE PLAN



CURRENT STRUCTURES

- Influent Screening
- Influent Pump Station
- Influent Pump Station Electrical Building
- Influent Valve Vault
- Headworks Building
- Solids Handling Building
- Administration Building
- Blower Building
- AGS Basin
- UV Building
- Cascade Aeration

FUTURE STRUCTURES

- (3) AGS Basins
- (3) Blower Buildings
- Filter Building
- Cascade Aeration

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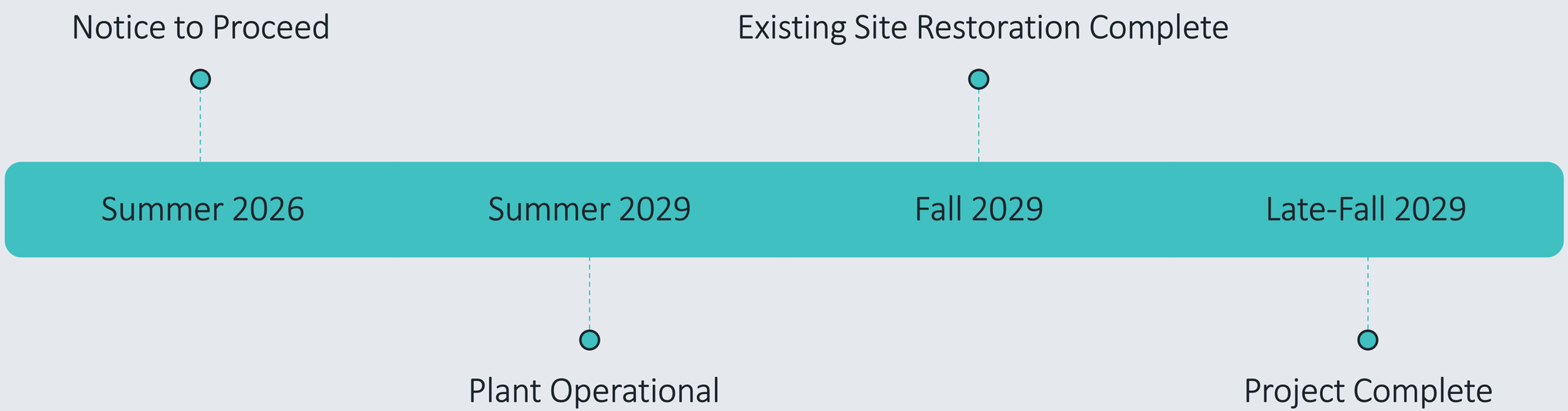
KCWATER

TODD CREEK WASTEWATER TREATMENT PLANT

PRELIMINARY SITE RENDERING

TODD CREEK WASTEWATER TREATMENT PLANT

SCHEDULE



Projected Schedule

- 40 months
- Includes new facilities, demo and restoration of floodplain

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TODD CREEK WASTEWATER TREATMENT PLANT

ENVIRONMENTAL IMPACTS

ENVIRONMENTAL IMPACTS - LAND

- **Minor increase in site impermeable area**
- **Loss of usable farm/grazing land**
- **Some forested area reduction; minimized through KCMO tree replacement policy**
- **Plant access off Interurban Rd**
- **No identified wetlands or endangered species**
- **No identified cultural resources**
- **Floodplain improvement**
- **Earthwork regrading to flatten site and cut in roads**

ENVIRONMENTAL IMPACTS - WATER

- **Improved Water Quality in Todd Creek**
- **New potable water line from Winan Rd supporting future area growth**
- **Potable water demand minimized by use of in-plant non-potable water system**

ENVIRONMENTAL IMPACTS - AIR

- **No significant emissions**
- **No on-site power generation**
- **Ozone (on-site odor control)**
- **Enclosed screenings building**

SHORT-TERM (CONSTRUCTION) IMPACTS

- **Construction traffic off Interurban Rd**
  - No access via 144th St or Todd Creek Rd
- **Earthwork and construction noise**
  - Daytime hours only
- **Erosion Control BMPs (Best Management Practices) utilized**
- **Deep excavation method undetermined**
  - Digging, drilling, and/or localized blasting

LONG-TERM (OPERATION) IMPACTS

- **Permanent plant access off Interurban Rd**
  - No access via 144th St or Todd Creek Rd
- **Yard Maintenance**
  - Mowing & erosion control
- **Noises minimized with all process-mecahnical equipment enclosed in buildings**
- **Resource Commitment**
  - Construction materials
  - Fuel (vehicles, equipment, generators)
  - Power
  - Chemicals (Hydrogen Peroxide, polymer)
  - Operating costs

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