



Līhu'e Wastewater Treatment Plant And Collection System Improvements

September 19, 2025

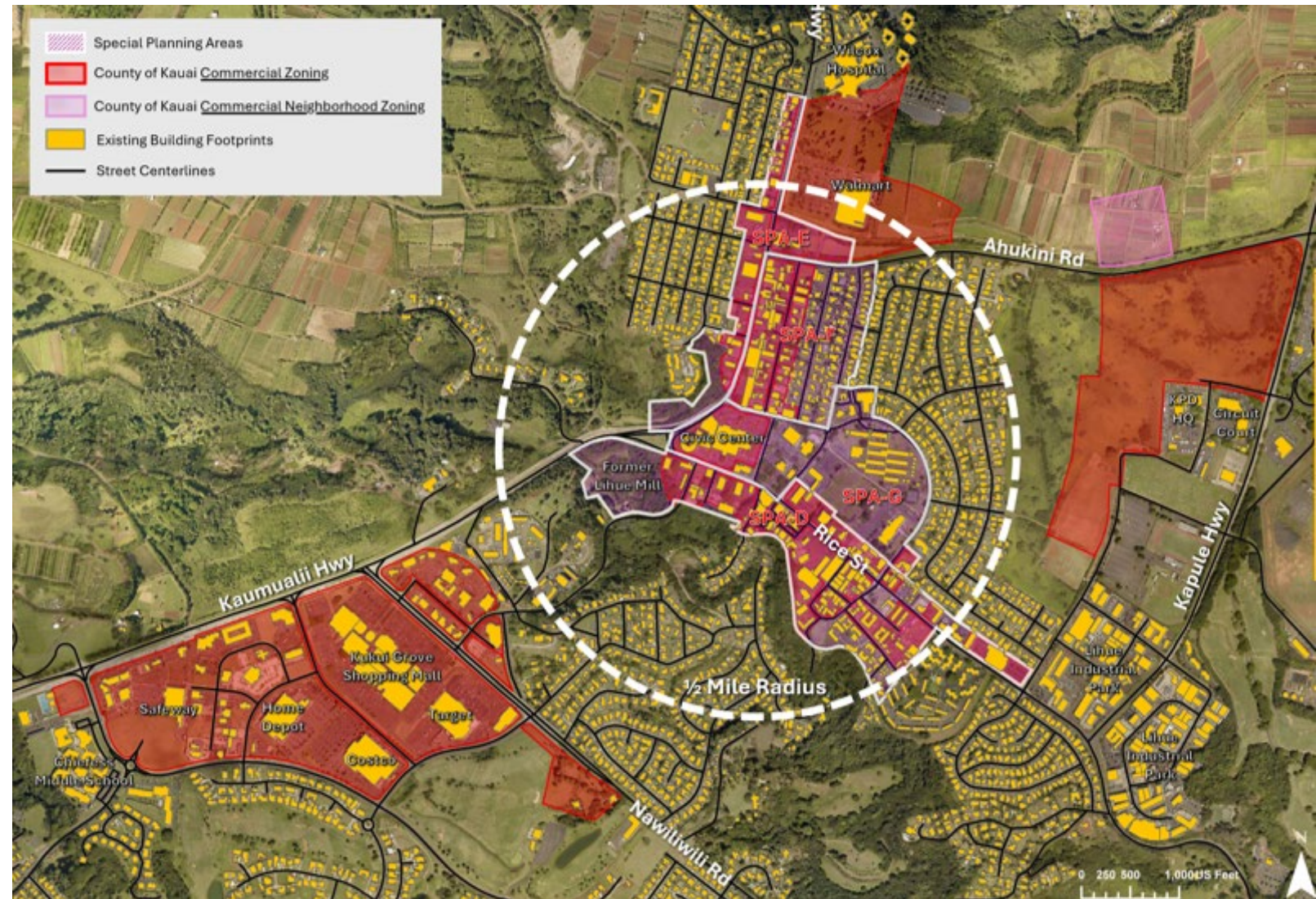
The Līhu'e wastewater system is the County's largest WWTP and sewer collection system. Capacity requirements and aging infrastructure has prioritized the need to evaluate the Līhu'e wastewater system to meet future needs.

Project Purpose

- Identify and address needed improvements to the Līhu'e wastewater system to support proposed affordable housing, prepare for planned development, and address sewer service expansion.

Aimed to support and facilitate the Līhu'e Town TOD Infill Development

- Promote denser, walkable, mixed-use neighborhoods
- Enhance mobility and transit in close proximity within/to/from Līhu'e Town
- Workforce Housing



Examples of Līhu'e Town TOD Infill Development

Rice Street Affordable Apts (66 units)



Weinberg Affordable Housing (28 units)

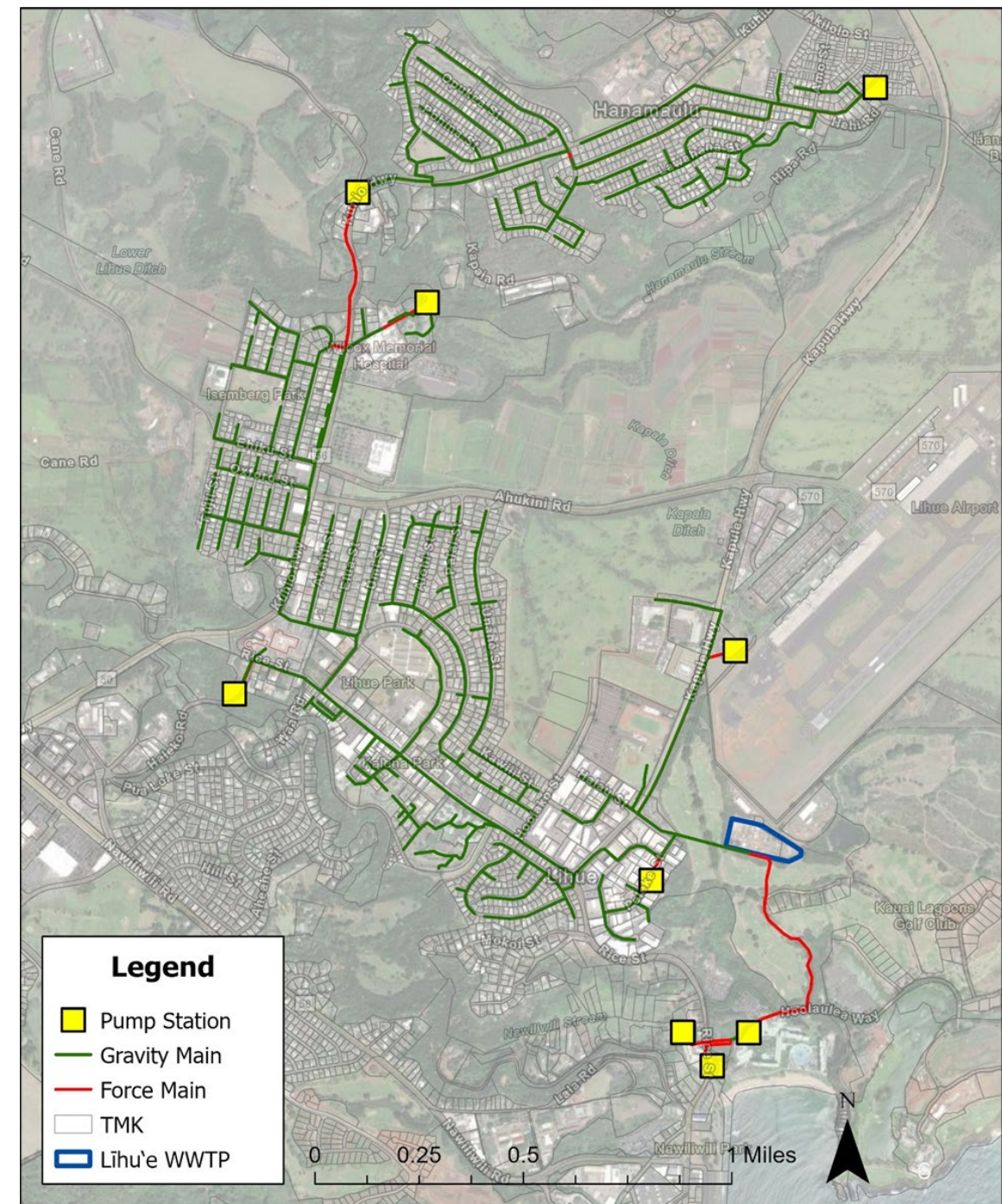


Project Description

- Population, and flow, and wasteload projections
- Wastewater sampling and characterization
- Capacity evaluation – meet existing and future flows for population and development needs
- Condition assessment – ensure asset and infrastructure reliability
- Meet regulatory compliance and ensure operational resiliency at the Līhu‘e WWTP
- WWTP liquid and solids treatment process evaluation
- Evaluate plant expansion needs
- Identify alternative effluent disposal and reuse opportunities
- Sustainability and energy recovery opportunities

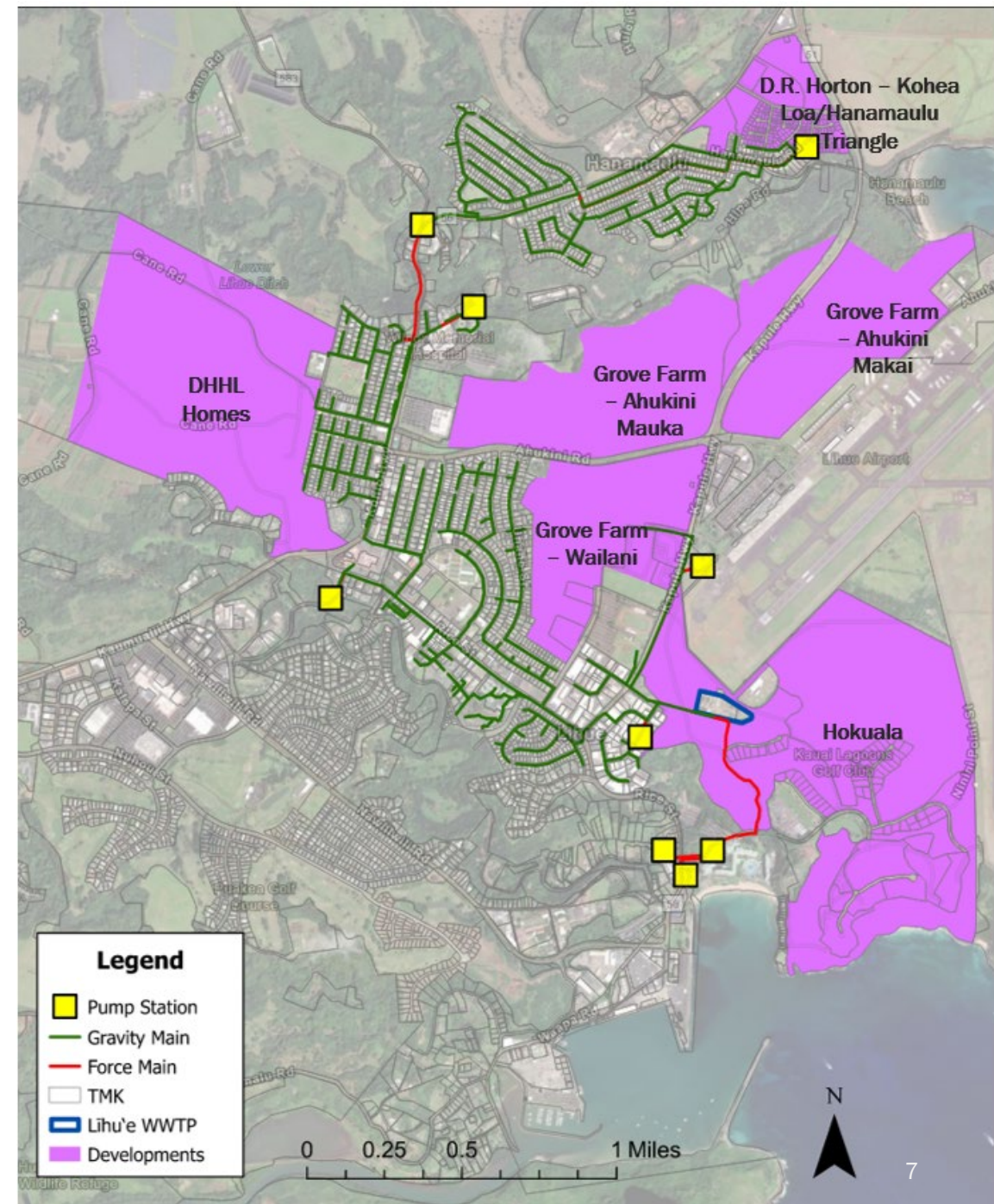
Existing Līhu'e Wastewater Collection System

- 20 miles of gravity sewer
- 600 manholes
- 9 pump stations



Future Development Projects

- Significant areas of proposed future development
- Existing Līhu'e Population ~22,000
- Additional future development contributory population ~34,000
- 2.5X increase in population and flow



Plant Expansion Evaluation

Near-Term Needs



Current Plant Flows:

- ADWF = 1.2 mgd
- Peak Flow = 4.3 mgd

Mid-Term Needs



Partial Buildout Flow

- ADWF = 2.5 to 3.5 mgd
- Peak flow = 8.0 to 10.9 mgd

Long-Term Needs



Full Buildout Flow

- ADWF = 5.0 mgd
- Peak Flow = 15.1 mgd

*HUD PRO Housing grant awarded to support the Līhu'e WWTP expansion (aeration system improvements)

Sewer Condition Assessment Task

- Provide the County a complete picture of how new connections can be made to the existing sewer system and improve existing system reliability.
- Focus on conducting condition inspections of prioritized portions of the existing sewer collection system pipelines, manholes, and pump stations.
- Develop rehabilitation and replacement recommendations to reduce impacts of inflow and infiltration (I/I) and extend the life of the existing assets.

Thank you.

– Questions?

Brown AND **Caldwell** :

