



Antioch Township Sanitary Sewer Feasibility Study Task II

Previous Study: 2021 Study

Objective
Update
the 1996
Study.

Renewed interest in sanitary sewer service by residents.

Updated cost estimates.

Explored alternate service options.

- Phasing of Project
- Examined wastewater treatment service via the Antioch Wastewater Treatment Plant (WWTP), but it currently lacks capacity.

Existing Conditions

No publicly owned collection systems.

IEPA is aware of over 200 communities with inadequate/non-existent wastewater collection/treatment facilities.

Many Antioch Township communities rely upon older and/or individual septic tank designs that often provide inadequate treatment and illegal surface discharges.

Lake County Health Department (LCHD) has issued several health advisories regarding toxic levels of bacteria in the Chain of Lakes.

Site constraints on Antioch Township lake lots have resulted in the allowance of “Compliance Impossible” systems by the LCHD: 38 in 2019, 43 in 2020, 31 in 2021.

80% of approvals are now for Compliance Impossible systems.

2022 Study – Task II

Objective: Explore sewer service through the use of sub-areas.

Service Areas – Connections

- Loon Lakes – 1,100
- Channel Lake/Lake Catherine – 1,900
- Grass Lake/Petite Lake – 2,400

Service Type

- Pressure sewers
- Gravity sewer (Task I costs)

Cost Estimates

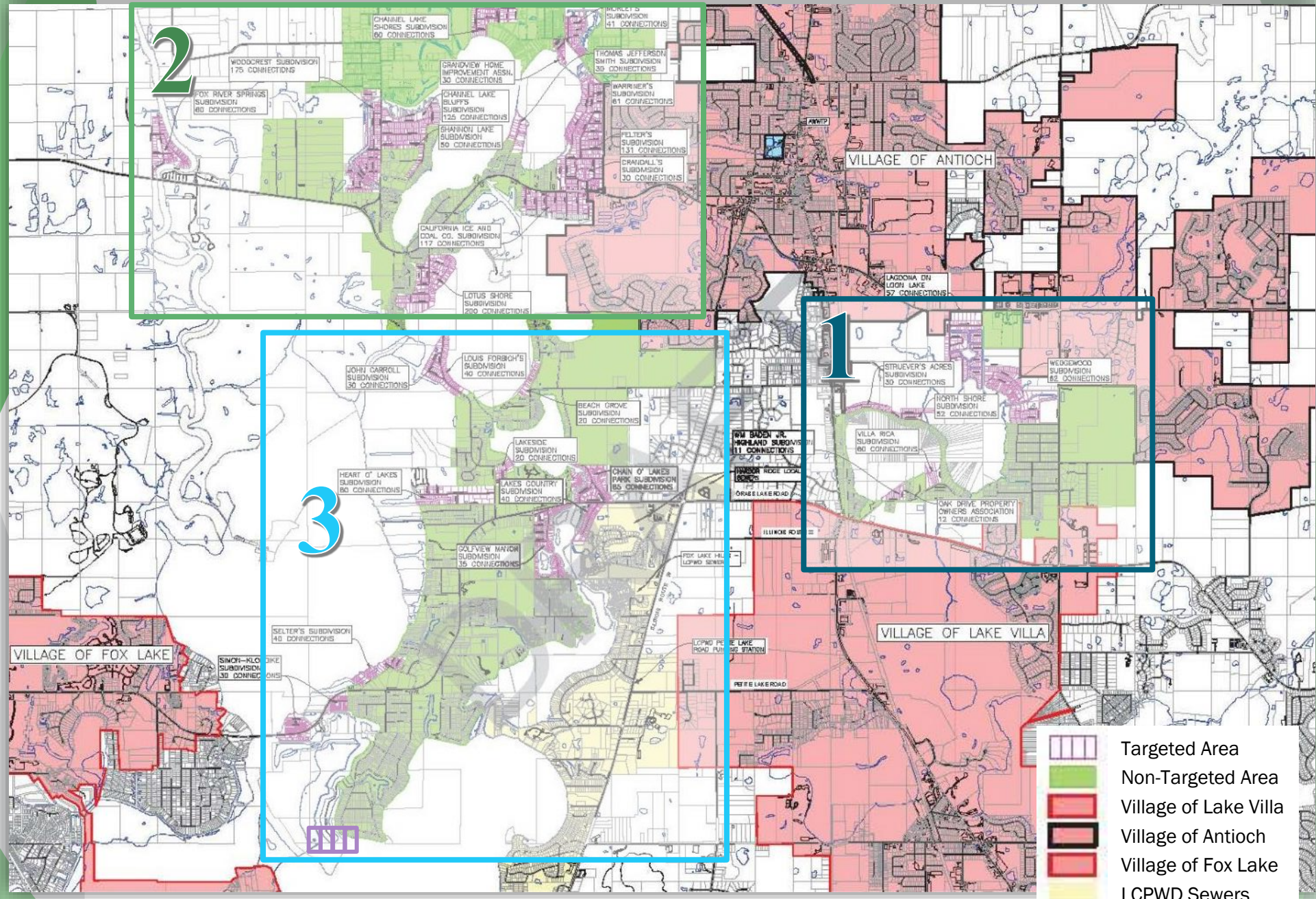
- Infrastructure construction and installation
- Connection fees
- Septic tank abandonment
- Engineering fees for design and permitting

Pressure Sewer System

Wastewater is discharged from the home to a grinder pump with discharge to a small diameter pressure sewer main.



Antioch Township Sewer Service Areas

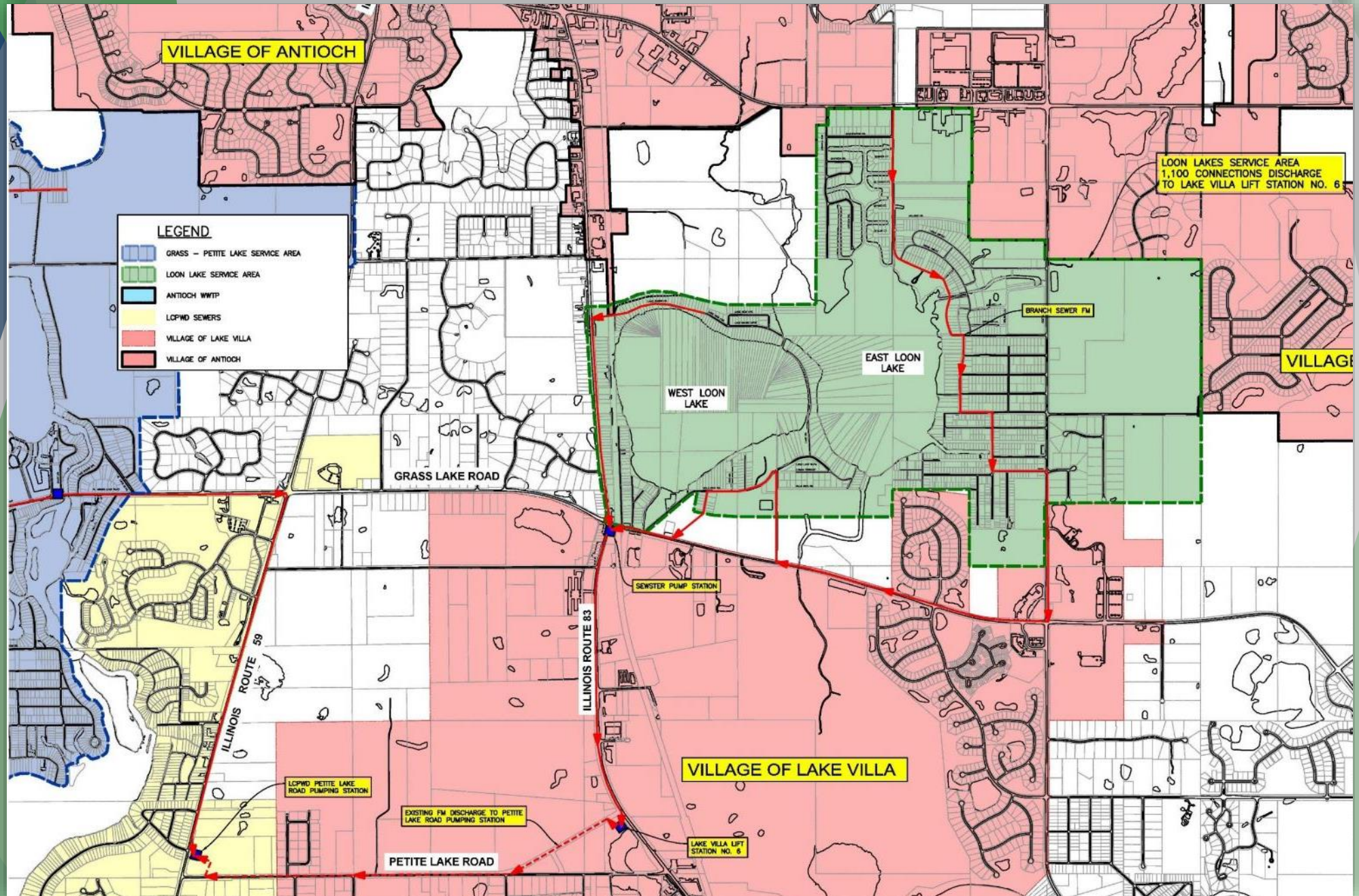


5,400 Connections

- 1 - Loon Lakes
- 2 - Channel Lake/Lake Catherine
- 3- Petite Lake/Grass Lake/Lake Marie, Fox Lake

- Targeted Area
- Non-Targeted Area
- Village of Lake Villa
- Village of Antioch
- Village of Fox Lake
- LCPWD Sewers
- Antioch WWTP

Loon Lakes Service Area



Loon Lakes Service Area

Flows and Connections

1,100 sewer
connections

Flows would be conveyed
via Lake Villa's Northern
Interceptor and LCPWD's
Interceptor and treated
at the Northwest
Regional WRF in Fox
Lake.

Lake Villa Meeting

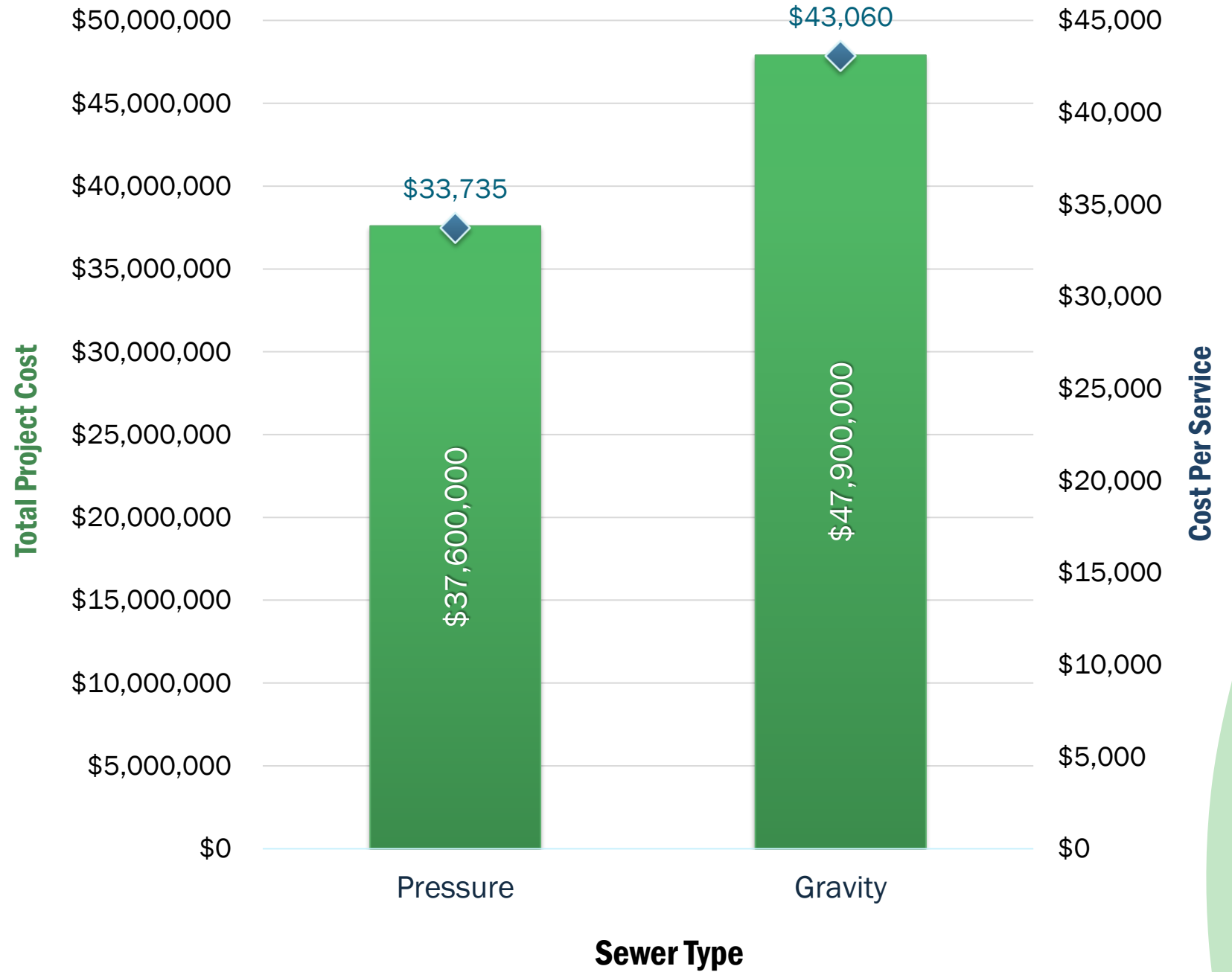
Mayor Jim McDonald and
Water/Sewer
Superintendent Jim
Bowles were receptive to
providing service pending
Board discussions and
an Intergovernmental
Agreement (IGA).

Interested in possible
service to Village
properties along pipe
route.

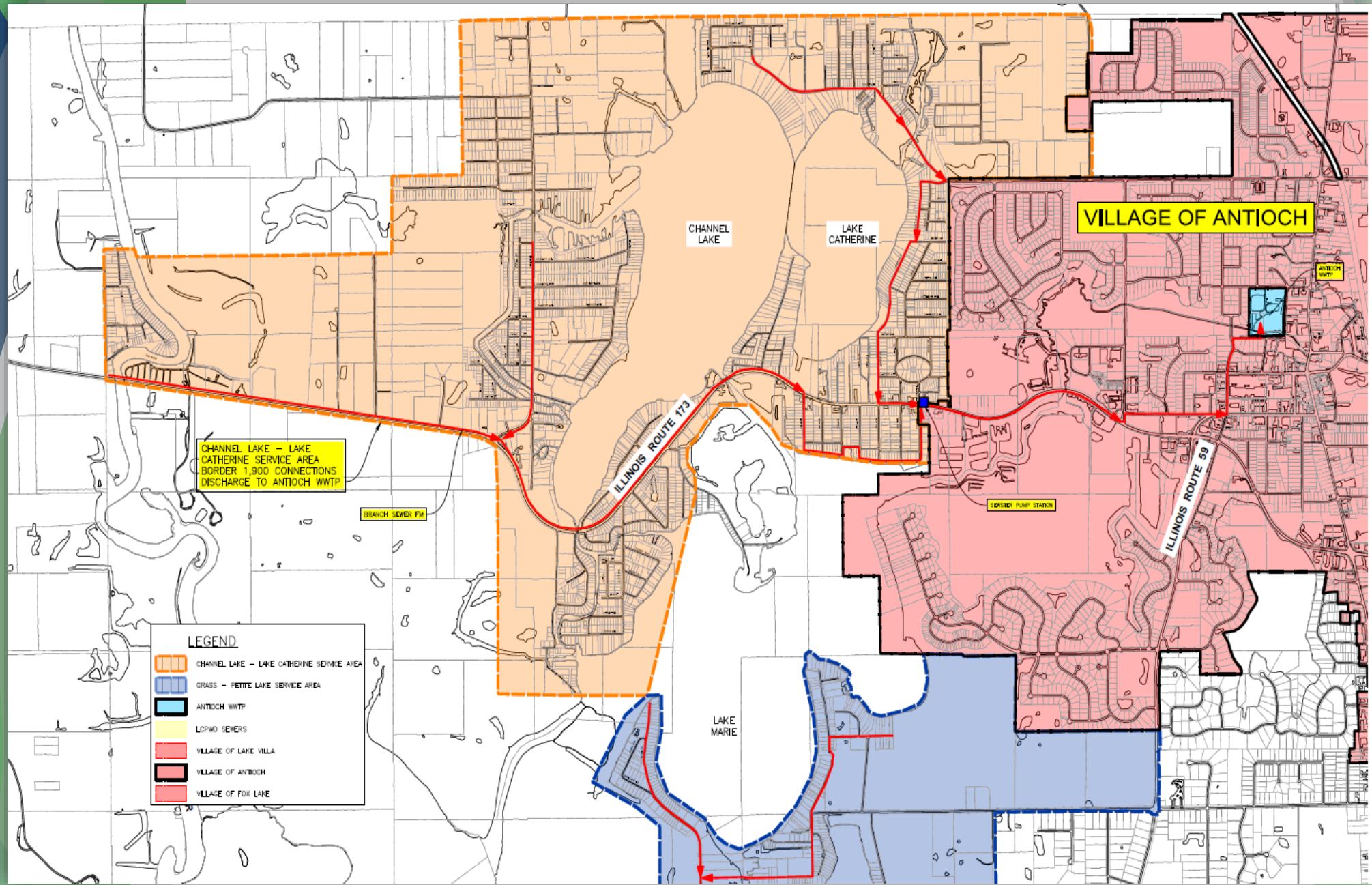
Loon Lakes Service Area

(1,100 Connections)

Cost Summary



Channel Lake/ Lake Catherine Service Area



Channel Lake/ Lake Catherine Service Area

Flows and Connections

1,900 sewer
connections

Flows would be
conveyed to the
Antioch WWTP.

Antioch Meeting

Jim Keim, Village Administrator, was receptive to providing sewer service to the service area subject to:

- Village Board authorization
- WWTP re-rating study
- Connection fee discussion
- IGA creation

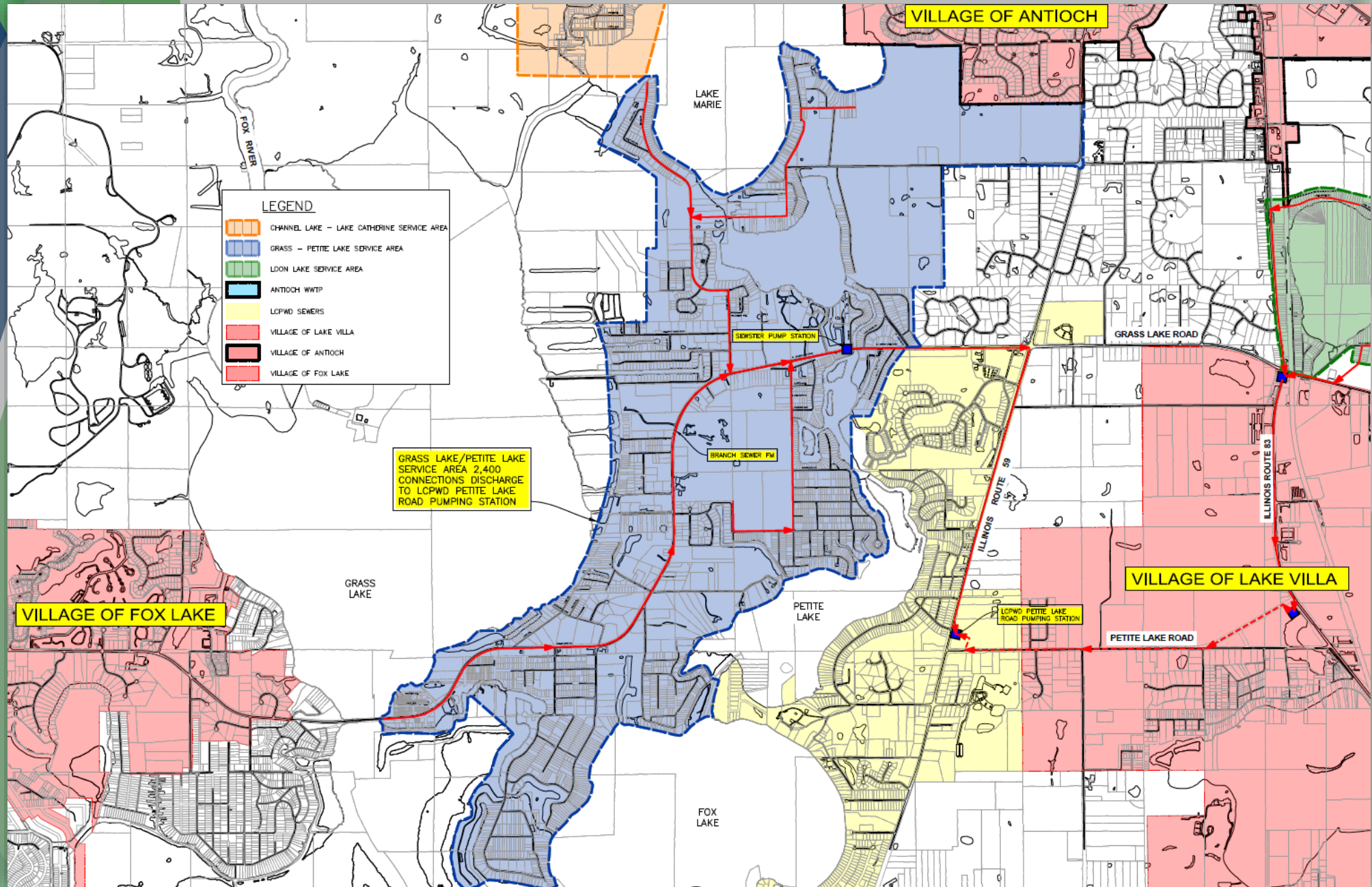
Channel Lake/ Lake Catherine Service Area

(1,900 Connections)

Cost Summary



Grass Lake/ Petite Lake Service Area



Grass Lake/Petite Lake Service Area

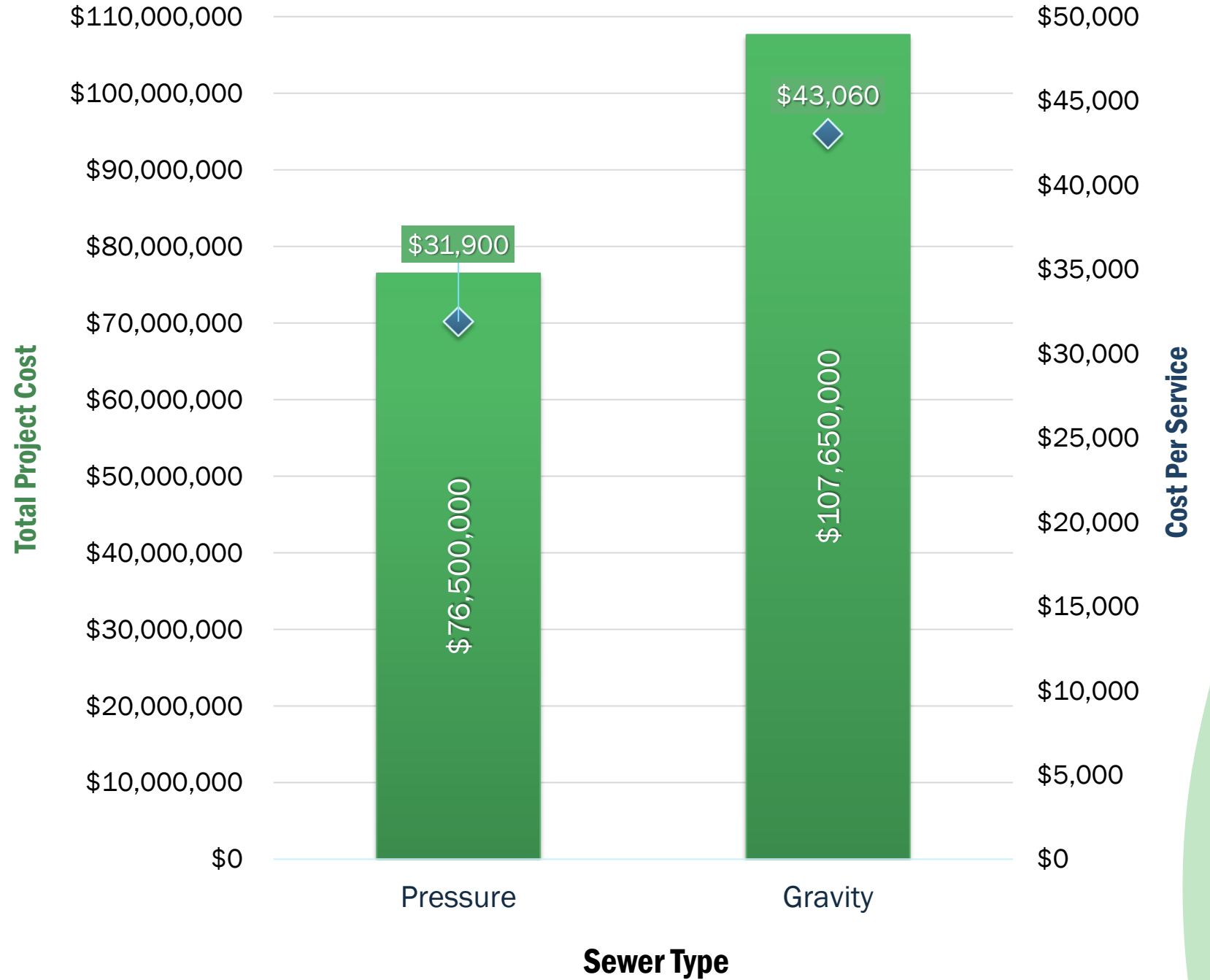
2,400 sewer
connections

Flows would be conveyed
to LCPWD's Petite Lake
Road Pumping Station
and treated at the
Northwest Regional WRF
in Fox Lake.

Grass Lake/ Petite Lake Service Area

(2,400 Connections)

Cost Summary



Potential Funding Sources

IEPA Unsewered Communities Grant Programs

- Construction Grant Program (UCCGP)
 - \$30,000 available for completion of project plans
 - \$5 million available for successful application

IEPA SRF Loan Program SSA

- SRF 2023 Loan Rate 1.24%

Infrastructure Investment and Jobs Act

- Passed by Congress in November 2021
 - Funds distributed via existing IEPA Loan Program
 - Maximum \$2 million available for successful applications.

Considerations and Decision Points

Initiate Discussions
with Villages of
Antioch, Lake Villa, and
Fox Lake on IGA's for
Service

Use of Municipal
Wastewater Disposal
Zones Act via Village
IGA's or Special
Service Area

Local service provider

Discussion of
Service Type

Rerating of Antioch
WWTP

MUNICIPALITIES

(65 ILCS 90/) Municipal Wastewater Disposal Zones Act.

(65 ILCS 90/0.01) (from Ch. 24, par. 1400)

Sec. 0.01. Short title. This Act may be cited as the
Municipal Wastewater Disposal Zones Act.

(Source: P.A. 86-1324.)

Discussion