Voluntary Central Sewer and Wastewater Treatment Study

Town of Montverde

Community Workshop Presentation

February 2-4, 2023

Woodard & Curran

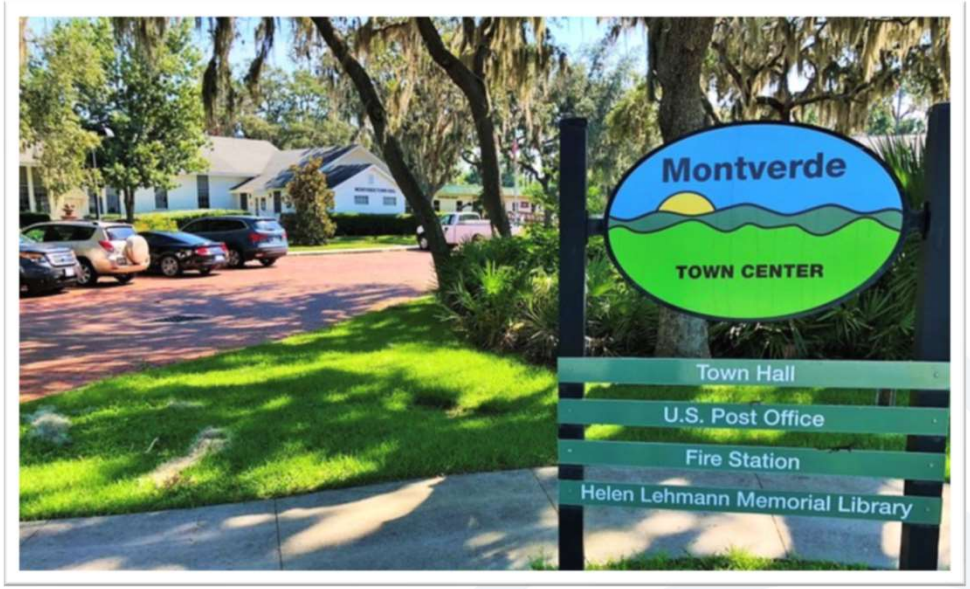
What are we doing?

Overview of Project

The Town of Montverde is **gathering information** and **seeking community input** to guide the development of a central sewer system to serve the downtown area and selected neighborhoods.

Our goal is to shape how the sewer system could be designed and constructed to:

- **Maximize the removal of pollutants** currently degrading our local water bodies (Lake Apopka, Lake Florence, Four Lakes, Franklin Pond, and others) and the aquifer that our drinking water comes from.
- **Serve everyone who voluntarily connects** their home or business to the sewer system within selected areas.
- Build the system and connect those who volunteer first **AT NO CHARGE!**



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Where will the money come from?

Agency	Program	Amount	Approved
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	FDEP Wastewater Grant Program	$4,000,000	✓
The American Rescue Plan Act of 2021	Lake County Federal Stimulus Grant	$4,000,000	✓
Total Received by Montverde:		**$8,000,000**	

$8M in **FREE** state and federal grant money means **NO COST** for the Town and those in the served areas who volunteer to connect.

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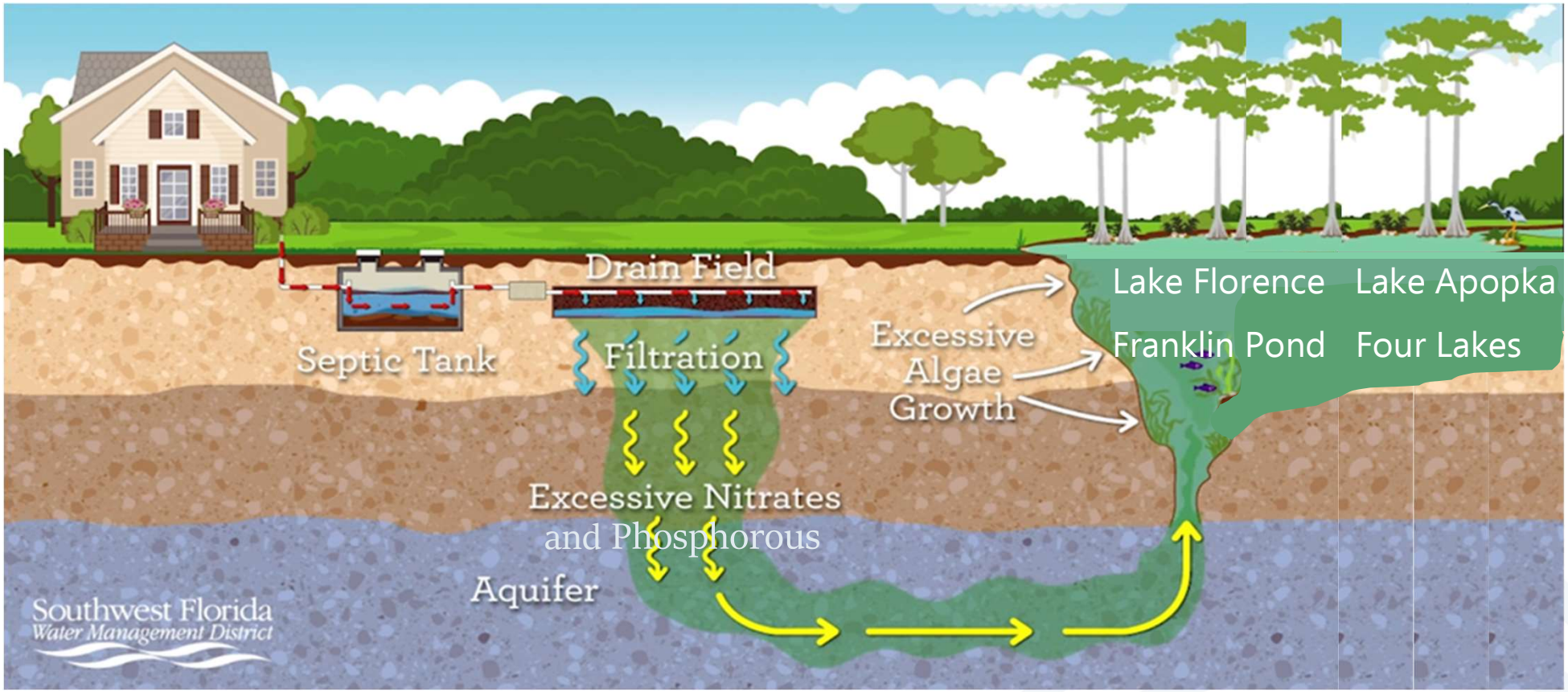
Why are we doing it?

Septic Tanks Impact Water Quality



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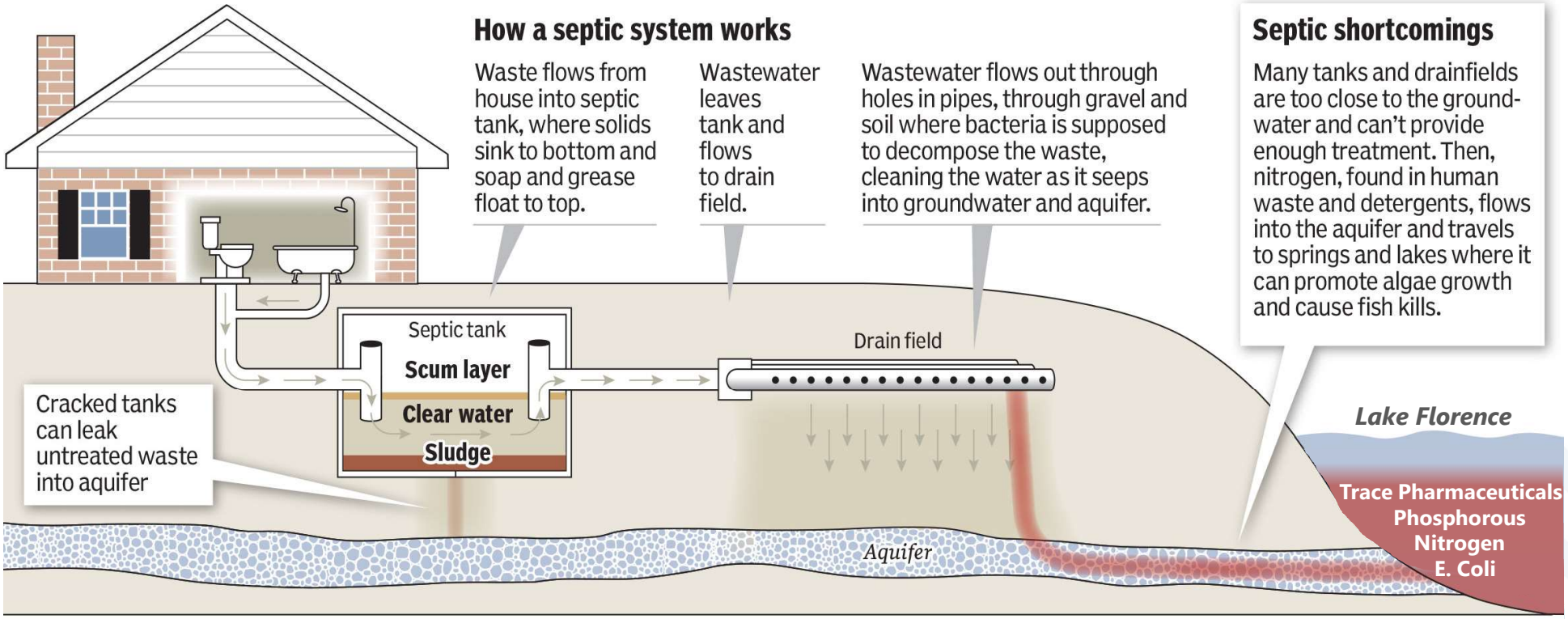
How do Septic Tanks Impact Water Quality?

With septic systems, it really does flow downhill. Here's how:

At least 2.7 million septic tanks lie beneath the ground in Florida, handling billions gallons of wastewater a year. No one knows for sure how many there are or how much algae-bloom-causing nitrogen and other pollutants escape the tanks and flow to springs and other waterways through groundwater.



Sources: News-Journal research and U.S. Environmental Protection Agency and Florida Department of Health

GATEHOUSE MEDIA

Poor treatment causes algae growth and fish kills

Blue-green algae, or cyanobacteria, occur frequently in Florida's freshwater environments. Blue-green algae are microorganisms that function like plants in that they use light energy from the sun and nutrients acquired from the environment to help them grow.

Blooms occur when rapid growth of algae leads to an accumulation of individual cells that, in turn, discolor water, often produce floating mats that produce unpleasant odors, and may negatively impact fish and other aquatic animals.

Microcystin aeruginosa is a species of freshwater cyanobacteria which can form harmful algal blooms. This bloom was observed by the St. Johns River Water Management District.

Some environmental factors that contribute to blue-green algae blooms are sunny days, warm water temperatures, still water conditions and a plentiful supply of nutrients. **Reducing the supply of nutrients – nitrogen and phosphorus in particular – can help decrease the intensity and duration of blue-green algae blooms.**

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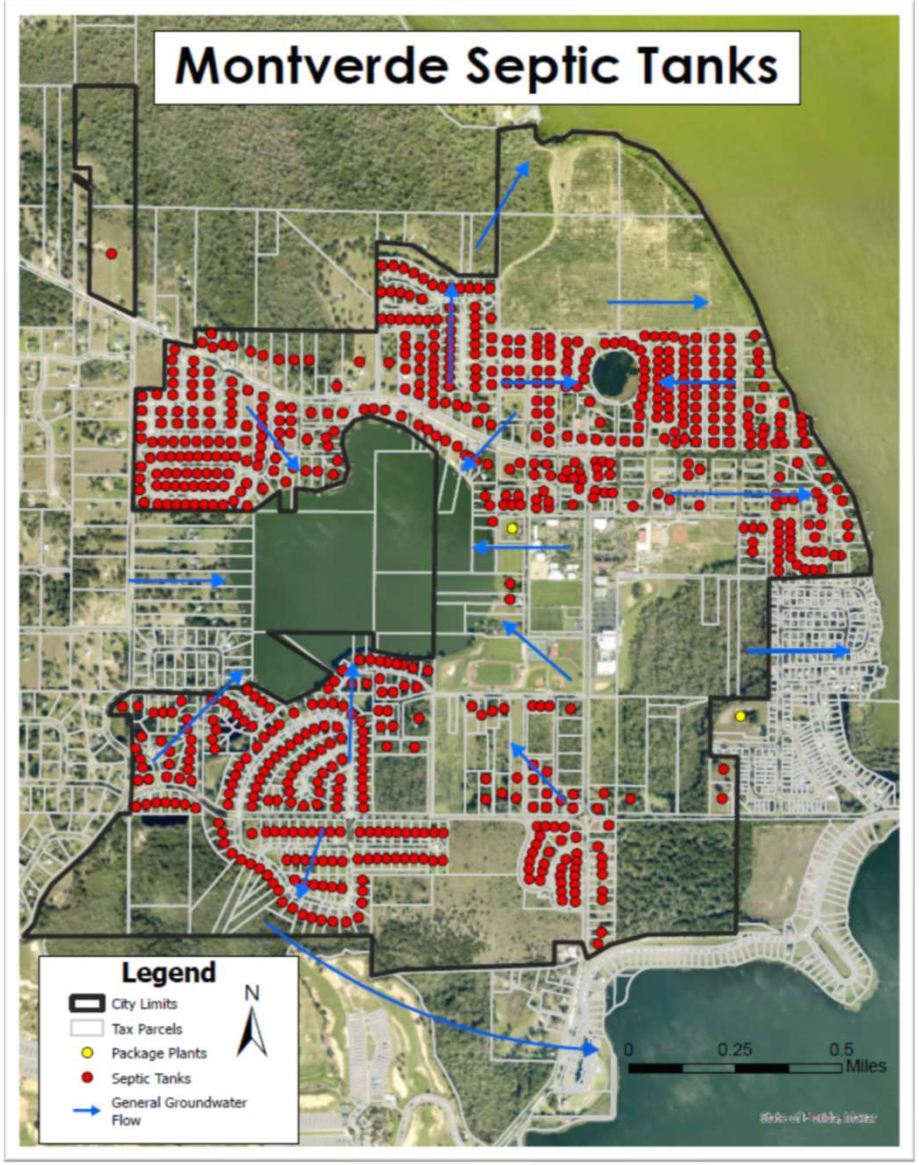

More than 700 Septic Tanks in Montverde!

Each of these is a potential contributor to excess nitrogen, phosphorous, and other pollutants that degrade the quality of our local water bodies.

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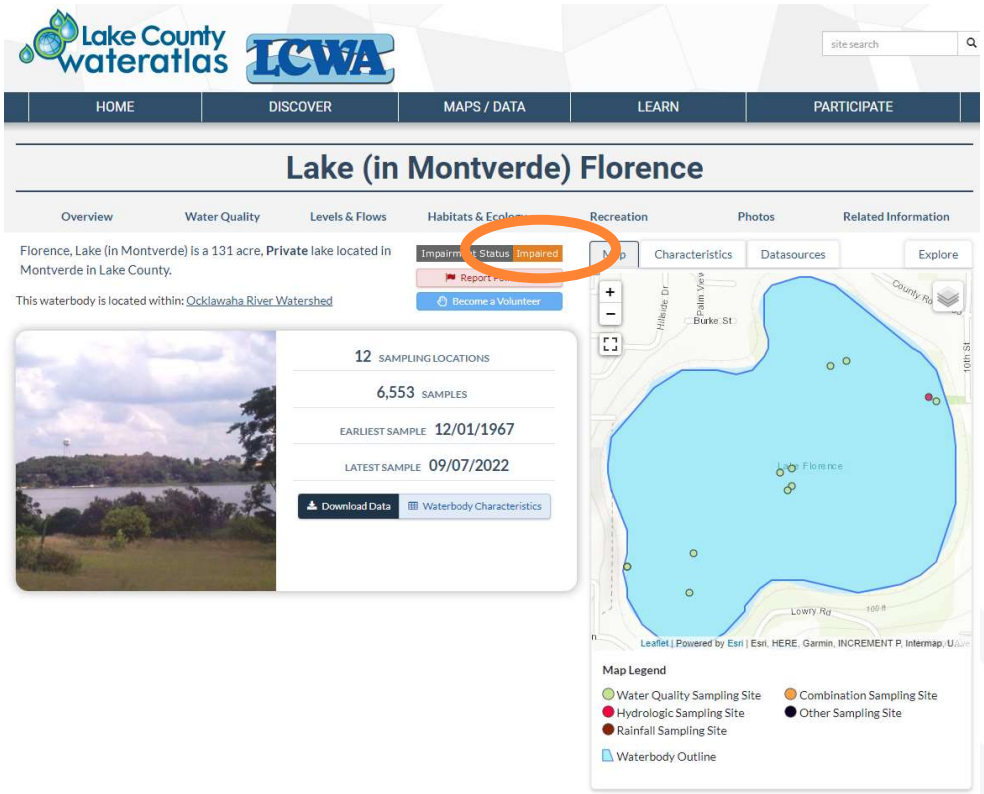
Recent assessments of Lake Florence indicate water quality is impaired

Florida Department of Environmental Protection (FDEP) has placed Lake Florence on its study list due to non-attainment of water quality standards. Recent Lake Vegetation Index (LVI) values indicate impairment.

FDEP evaluates whether waters meet their designated uses, which include aquatic life use support, primary contact and recreation use support, fish and shellfish consumption use support, and drinking water use support.



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Florida Department of Environmental Protection

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Water Clarity in Lake Florence has Declined

Water clarity or turbidity measurements show the degree to which light is blocked by suspended particles such as sediment or algae. In a healthy aquatic system, sunlight penetrates the water column and is available for photosynthetic plants and the creatures that depend on them.

Water clarity measurement using Secchi disk

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Through Legislation and Funding, the State is moving away from septic systems

> Since I first took office, expediting water quality restoration has been one of my top priorities.

- Governor Ron DeSantis

On Jan. 10, 2019, Governor DeSantis issued an executive order (EO), addressing harmful algae blooms. The EO included multiple directives to improve water quality throughout Florida. Another historic step was taken on June 30, 2020, with the governor's signing of Senate Bill 712. This bill carries a wide range of water quality protection provisions aimed at minimizing the impact of known sources of nutrient pollution, realigning the state's resources to enhance the protection of Florida's environment and strengthening regulatory requirements.

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Local Government supports this initiative

> Protecting our water resources for future generations is paramount. The science shows converting septic to sewer will remarkably reduce nutrient loading and medical waste that degrades our drinking water, wetlands, and lakes.
>
> Moving forward with a sewer project not only proactively keeps a municipality ahead of inevitable State legislation and policy changes, but it shows great growth management leadership and environmental stewardship.
>
> Future generations will look back and praise this move.

- Sean M. Parks, AICP, QECP
  Chairman, Lake County
  Board of County
  Commissioners

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Nearby Communities Are Already Taking Action

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Lake Apopka Restoration

Lake Apopka — the state's fourth-largest lake — was once a world-class bass fishery. However, impacts to the lake over many decades, primarily phosphorous from agricultural runoff, caused degraded its water quality and fueled a continuous algae bloom that led to the bass fishery's collapse.

The St. Johns River Water Management District and its partners have been writing a new chapter to the story: restoring wetlands and reducing phosphorus and suspended solids in the water. **Phosphorus concentrations have since decreased 64% and water clarity increased 55%**. The recovery of clearer water and return of sunlight to the lake's bottom has caused the regrowth of submerged aquatic vegetation, missing for 50 years, and the critical bass habitat.

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What will the system look like?

Sewer System Layout

The layout of the sewer system is still to be determined. The pipes that collect wastewater from individual properties will be constructed underground on public property beneath or adjacent to the Town's roadways.

The system will include several lift stations that pump wastewater to the treatment plant. These photos show what the visible portion of these lift stations look like.

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Wastewater Treatment Plant

Wastewater collected from the sewer system will be conveyed to a small treatment plant that fits on one acre and stands about ten feet tall. The plant will be:

- screened with fencing and vegetative buffer, so you won't see it from ground level,
- equipped with state-of-art controls, so you won't hear it or smell it from anywhere, and
- automated, so it won't require permanent or dedicated staff to operate.

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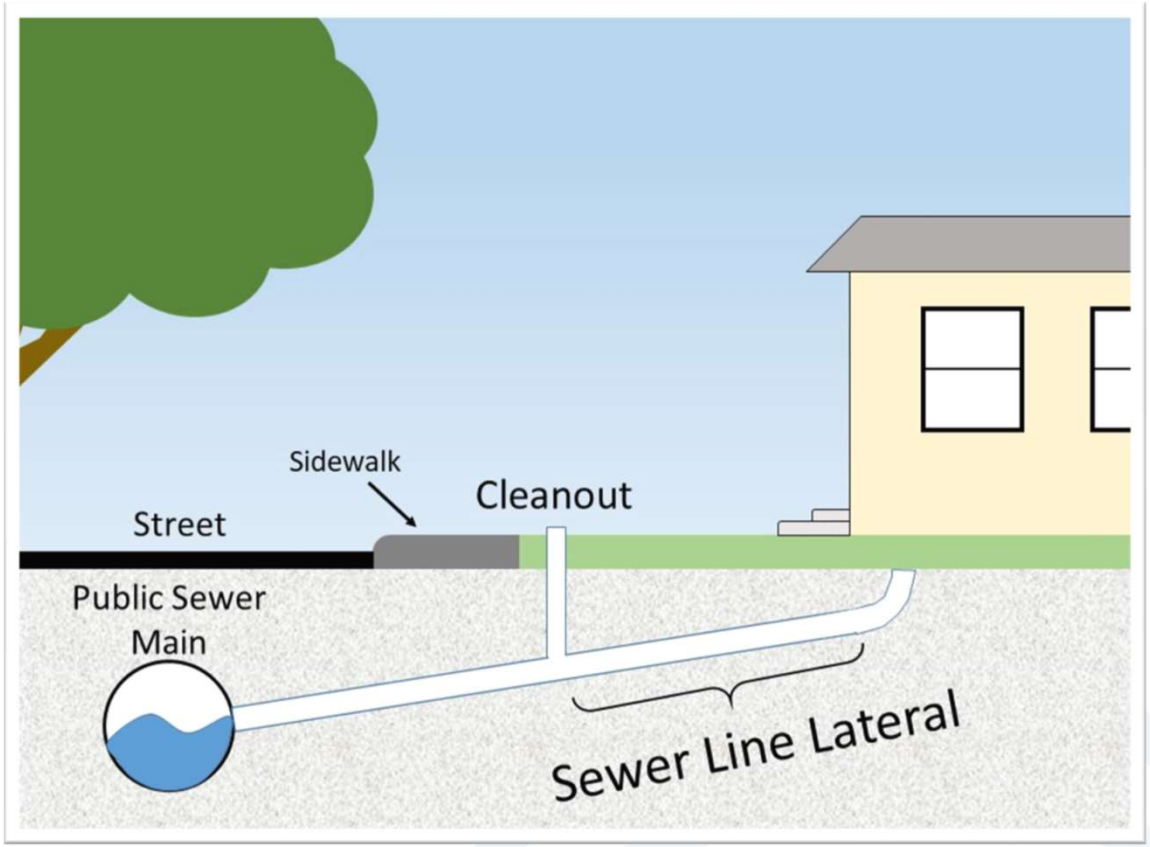
Improvements to Individual Properties

A 4-inch diameter "service lateral" will be installed on each property **at no cost to the owner** that connects to the public sewer main be constructed in the road right-of-way.

Septic tanks will be decommissioned as required by Florida law. Disturbances of landscaping and other property features that result from this work will be restored to pre-installation conditions.

Typical sewer cleanout, 4-inch diameter



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Benefits to Individual Properties

In addition to improving environmental health and reducing water pollution, converting from a septic system to a public sewer system can:

- **Reduce maintenance cost and related risk the property owner**, because the Town becomes responsible for all collection, treatment, and safe disposal done off your property
- **Increase your property's value**
- **Be done at no cost** ($20,000 value)
- **Free up space** on your property for other purposes
- **Reduce the potential storm-related flooding** on your property by providing greater area for water to infiltrate

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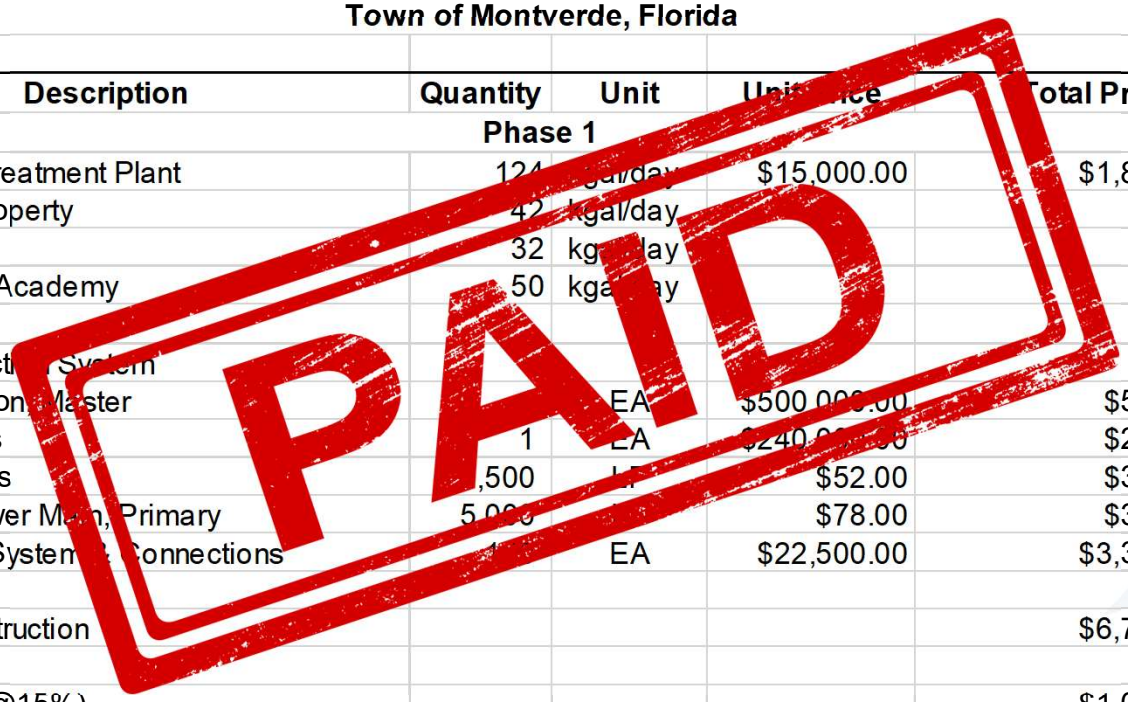
What are the costs?

Conceptual Cost Estimates: Construction

Table 1. Sanitary Sewer System Conceptual Cost
Town of Montverde, Florida

Description	Quantity	Unit	Unit Price	Total Price
Phase 1				
Wastewater Treatment Plant	124	gal/day	$15,000.00	$1,860,000.00
Osgood Property	42	kgal/day		
Downtown	32	kgal/day		
Montverde Academy	50	kgal/day		
Primary Collection System				
Pump Station, Master	1	EA	$500,000.00	$500,000.00
Lift Stations	1	EA	$240,000.00	$240,000.00
Force Mains	7,500	LF	$52.00	$390,000.00
Gravity Sewer Main, Primary	5,000	LF	$78.00	$390,000.00
Collection System Connections	150	EA	$22,500.00	$3,375,000.00
Subtotal Construction				$6,755,000.00
Engineering (@15%)				$1,013,250.00
Subtotal Phase 1				**$7,768,250.00**



NO COST
to property owners in priority areas who initially volunteer to connect!

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Potential Costs to Property Owners

	Voluntary (Now)
Sewer System Connection[1]	FREE
Septic Tank Decommissioning	FREE
Property Restoration	FREE
Sewer Impact Fee[2]	FREE
Total Connection Cost[3]	**$0**
Estimated Service Fee[4]	**$40-50 per month**

1. Service lateral from home to right of way, physical connection to the sewer system, and connection fee
2. Capital cost of all downstream infrastructure: collection, treatment and disposal for a single customer
3. Avoids future connection cost ($18,000 est.), septic system replacement ($5,000 est.) and routine tank pumpouts ($400 est.)
4. Base fee of $25 plus $5.00 per 1,000 gallons. Range reflects 3,000 to 5,000 gallons per month.

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What's next?

Anticipated Project Timeline

Secure $8M Grant Funding.....	**COMPLETED**
Hold Town Hall Meetings.....	**IN PROGRESS**
Gather Community Input.....	**IN PROGRESS**
Review with Town Council.....	February 28, 2023
Develop Conceptual Plan.....	March 2023
Accept or Refuse $8M Grant.....	March 2023
Begin Design and Permitting.....	May 2023
Begin Sewer System Construction.....	June 2024
Begin Connecting Properties.....	June 2025

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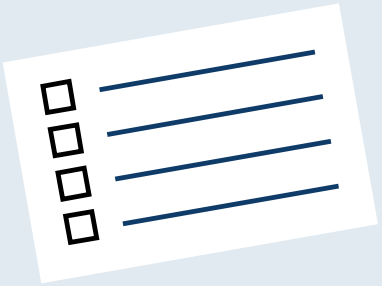
Let us hear from YOU!

Ask us your Questions



Fill out a Survey Card

Attend Council Workshop & Meeting

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