

**East Jackson County  
Consolidated Water Reclamation Facility:  
Planning for Jackson County's Future**

**Jackson County Utility Authority  
Briefing Book  
November 2021**

# Why is a new facility necessary?

## Jackson County Utility Authority needs to upgrade our water reclamation / wastewater treatment system. Why?

Our current wastewater treatment facilities can't meet the increasingly strict environmental requirements designed to protect our natural resources, the properties are susceptible to the impacts from storms and flooding that are getting progressively more frequent and severe, and some have no room for expansion or innovation.

In addition, there are industries in the area that pull water for use in their operations from our rivers. During times of drought, industries may face limits on the amount of water they can pull. These restrictions can cause process slow downs or temporary shut downs, and the practice in general can stress our river's ecosystems.

With room to expand and innovate, Jackson County Utility Authority will be able to address all these challenges and support local industry.



### Hurricane Katrina in 2005 flooded existing facilities

- Flooding incapacitated treatment facility and pump stations
- Employees could not gain access to the treatment facilities for weeks
- Extensive damage to pumps, equipment, and electrical components

### Severe drought conditions in 1999 and 2000 impacted the Pascagoula River

- Required sustained releases from state-owned recreational reservoirs
- Impacted industrial production due to diminished water supply
- Sustained environmental impacts from low flow in river

### Treatment standards are evolving

- Local industries have strict standards for the source water used in processes and operations
- Standards for discharge to local streams are expected to get more restrictive to protect our natural resources

### Current facilities limited in capacity for expansion

- Need to meet existing demands and also provide capacity for future growth
- New facility will allow for innovation and advanced treatment technologies



Source: WLOX  
<https://www.wlox.com/story/26561410/water-service-line-to-bring-clearer-water-to-ocean-springs-residents/>

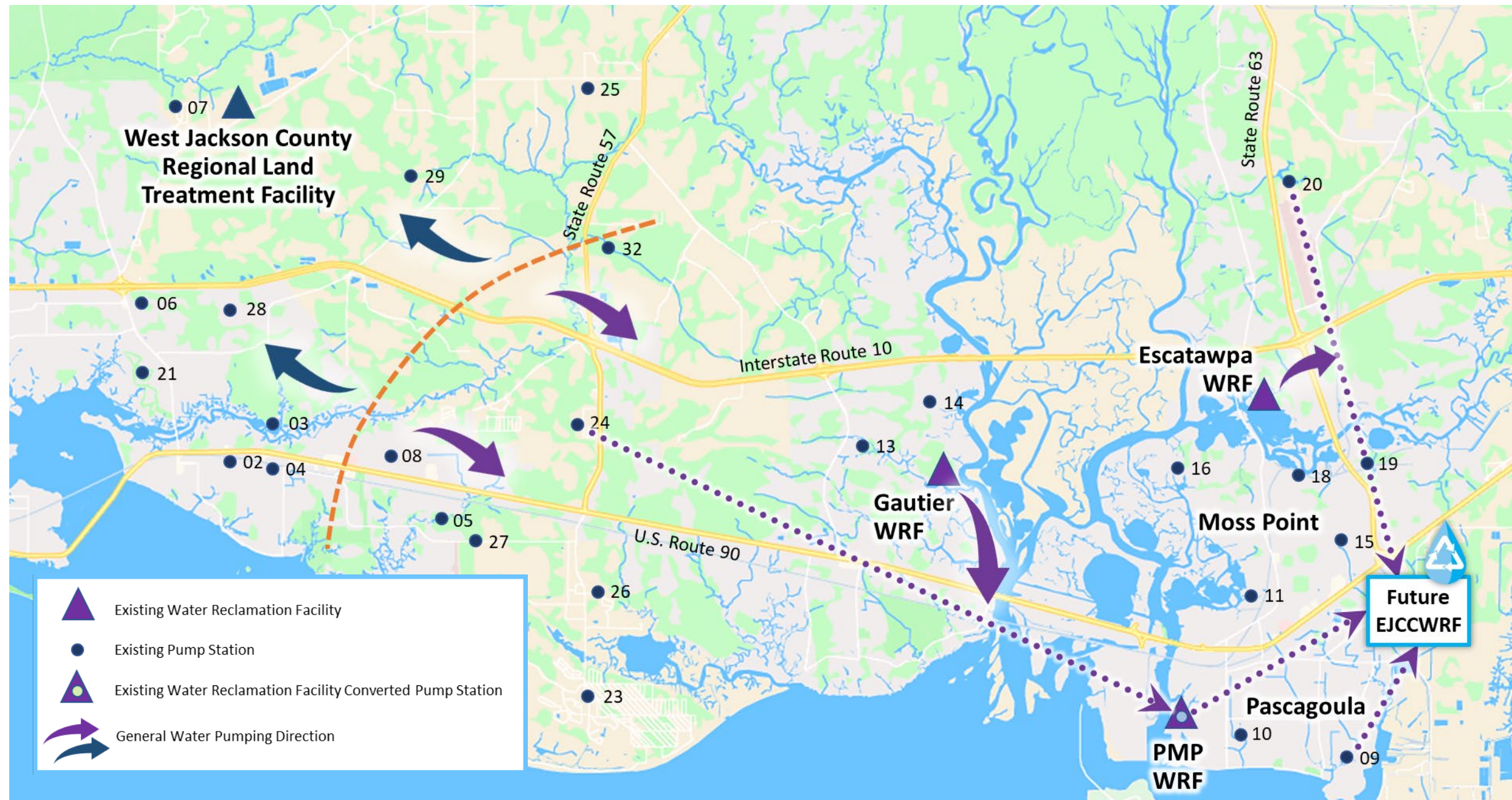
# Service Areas for the Planned New Water Reclamation Facility

The new water reclamation facility – still in the early phases of development and design (see page 5 for a project timeline) – is necessary to meet environmental challenges, provide opportunities for innovation, support growth across the county, and strengthen the resiliency and reliability of our wastewater treatment infrastructure.

The new facility will most likely be located in Southeast Jackson County. This is near the key industrial end users JCUA can partner with on this project, but the facility will handle wastewater from across a significant portion of Jackson County, potentially as far west as Ocean Springs.

The new facility will:

- Replace the older plants – Gautier, Escatawpa, and Pascagoula / Moss Point – with newer, more efficient equipment and facilities.
- Centralize operations of those three facilities into a new facility capable of treating an average of 20 million gallons a day.
- Off-load demands for the West Jackson County facility. That plant is nearing treatment capacity and doesn't have ability to expand. The dashed orange line on the map shows the proposed water flow directions – several pump stations that currently send water west, will be updated to send water to the new facility for treatment.
- Be located and designed to be resilient against storm surges and projected sea level rise.



Existing Facilities	Proposed Changes to Support East Jackson County Consolidated Water Reclamation Facility (EJCCWRF)
Pascagoula/Moss Point (PMP) WRF	PMP facility will be decommissioned. A pump station will be required at this location. The smaller footprint will free up some land for redevelopment.
Escatawpa WRF	Escatawpa facility will be decommissioned. A small pump station will be required at this location to support the new facility.
Gautier WRF	Gautier facility will be decommissioned. This land would be available for re-use.
West Jackson County Regional Land Treatment Facility	West Jackson County facility will remain in place. However, portions of the current treatment area for West Jackson will be diverted to the new facility.

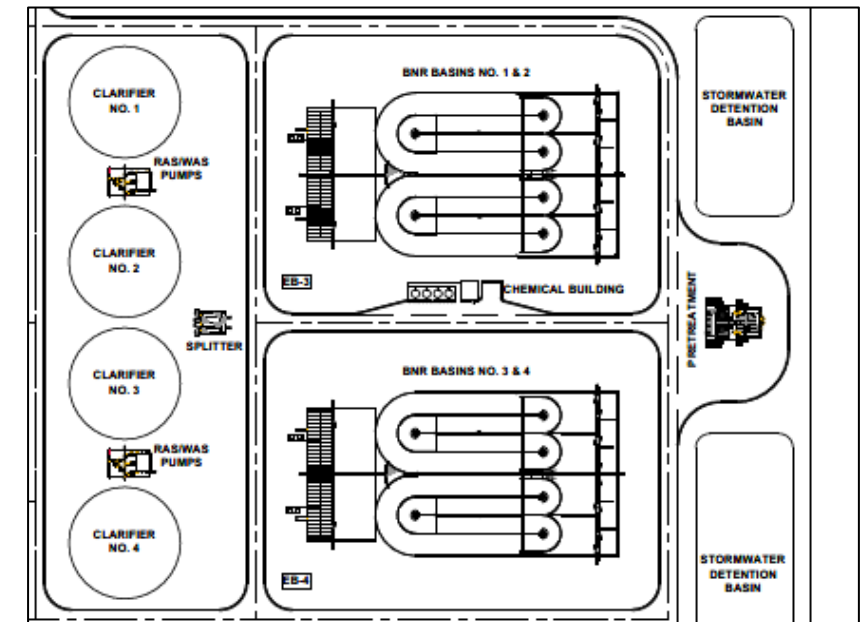
# Critical Environmental Benefits of the Project

- The goal of the new facility is to **achieve zero discharge** to local waterways. This means instead of JCUA discharging treated water to local rivers, the new facility will sell water directly to industry for reuse. This will minimize pollutants being discharged into the rivers AND reduce the amount of water pulled from the river for industrial needs.
- The new facility will have additional post-treatment storage to **maximize capacity for reuse**. With this feature, if more treated water is produced than industry needs, up to 30 million gallons can be stored until needed, and still support the zero discharge goal.
- The new facility is being designed to meet both **industrial standards** (for reuse) and **standards for discharge to local streams** (environmental permits), providing flexibility for water reuse.
- The new facility will **produce Class A biosolids that can be used by local farmers or sold to the public**. The existing site currently receiving biosolids is nearing capacity. There will be space at the new facility to create a completely non-hazardous biosolids product that can be safely used by farmers or home gardeners. Because Class A biosolids are safe, there is no need for extensive record keeping, and the material could be a potential revenue source, further offsetting operational costs.
- The design, construction, and operation of the facility will be **compliant with all permits**. This includes state and federal environmental permits, discharge permits, and permits to protect threatened and endangered species.



Source: The Nature Conservancy  
nature.org/en-us

The new facility will be designed to reduce surface water demand and eliminate or significantly reduce pollutants from entering existing waterways, such as the Pascagoula and Escatawpa Rivers. These innovative processes will improve the health of local waterways.



Innovations at the new facility will allow for advanced treatment options that are efficient, minimize environmental impacts, and decrease overall energy use.



Source: Pascagoula Audubon Society  
pascagoula.audubon.org

Historically, JCUA has been successful in meeting discharge standards – water quality downstream of JCUA discharge points is better than upstream.



Non-hazardous biosolids product produced by innovative processes at the new facility can be sold for use by farmers and in home gardens.



Design, construction, and operation of the new facility will comply with permits designed to protect local species and habitat, such as pine-hardwood forest.

# Planning for Growth & Resiliency

- With a capacity to treat up to an average of 20 million gallons of water per day, the new facility will meet existing demands and also **provide capacity for future growth in Jackson County**.
- The proposed location of the new facility is in the eastern part of Jackson County near industrial users of the process water that will be generated through the innovative processes at the new facility. Proximity to existing infrastructure is important to providing a resilient source of process water to industry, which will **reduce the demand for surface water from the Pascagoula River**. This provides broad ecological benefits all year, but especially during drought seasons when water levels are lower. The proposed location also considers constructability, as well as availability of land to build the facility and associated infrastructure, like piping and pumps and flood protection.
- The generation of water for industrial reuse and Class A biosolids both have **the potential to generate an ongoing source of revenue** – this could offset some portion of treatment and operation costs.
- With the increased frequency and severity of storm events and associated flooding, design of the new facility will incorporate elements to **support more resilient operations, even with the likely impacts of changing weather conditions** including anticipated sea level rise. The new facility will also be designed to include components that are proven to be energy efficient and have extended life cycles compared to traditional options – this will reduce energy demand, drive efficiency and minimize replacement costs.



Source: Treatment Plant Operator  
[www.tnomag.com/editorial/2018/07/plant-ensures-quality-effluent-through-sound-maintenance-and-continuing-education-for-staff](http://www.tnomag.com/editorial/2018/07/plant-ensures-quality-effluent-through-sound-maintenance-and-continuing-education-for-staff)

Existing facilities are nearing capacity and have limited ability to make process modifications to meet more stringent treatment standards. The new facility will provide capacity to meet growth challenges along with the ability to innovate.



The new facility is being designed with resilience in mind, including berms and floodwalls to minimize disruptions to operations during storm events, and incorporating renewable energy components throughout the process.



Innovative operations and treatment options will support the zero discharge goal, protect the environment, promote resiliency and growth, and conserve valuable resources.

# Project Timeline Overview

Planning for the **design**, **construction**, and **operation** of a facility that meets all the objectives for protecting the environment, partnering with industry, accounting for population growth, advancing innovation, and incorporating resiliency is a complex process. Work is still in the early phases. The project team submitted the preliminary design (also referred to as the 30% design) to the US Army Corps of Engineers in September 2021, and spent the fall of 2021 responding to comments and input.

Attention now shifts to seeking funding to complete the facility design and finance construction, as well as engaging partners in the community to support conversations about the many benefits of the project.



## Plan & Design the New Facility

**October 2021:**  
Present Community Outreach Approach & Seek Funding for Design / Construction

**December 2021:**  
Finalize Community Outreach Plan

**1Q-2Q 2022:**  
Implement Initial Phase of Community Outreach

**TBD:**  
Award Contract to complete facility design

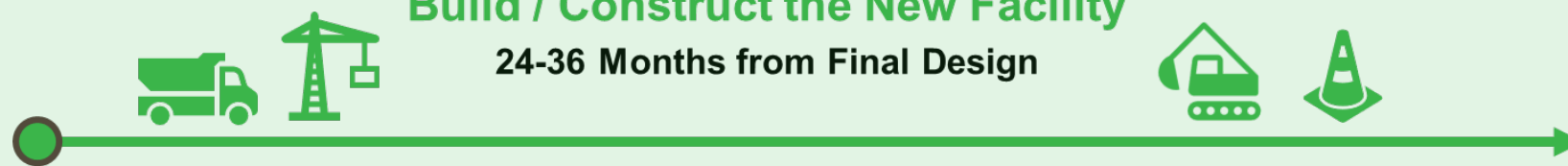
**18-24 Months from Contract Award:**  
Work through 60% -> 90% -> Final Design Phases



... in the **Planning** phase. We'll use the different logos as we move into the **Building** and **Operating/Delivering** phases of the project. See page 6 for more details on Community Outreach.

## Build / Construct the New Facility

24-36 Months from Final Design



## Operate the New Facility



# Community Outreach and Engagement: Objectives & Approach

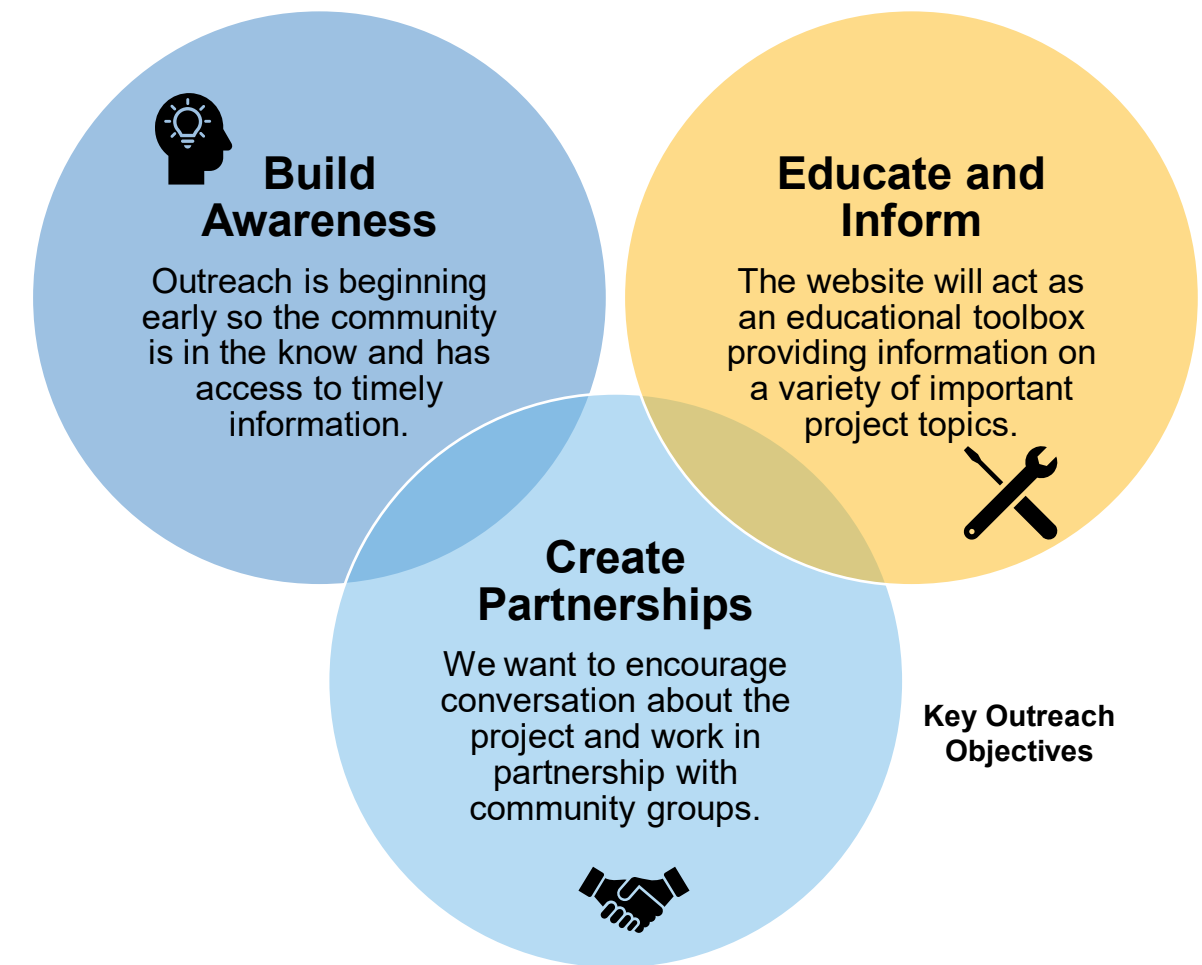
The Jackson County Utility Authority is developing a community outreach program to meet these important objectives: Build Awareness, Educate and Inform, and Create Partnerships. The program will include a variety of tools and programs to help customers, community members, and other stakeholders understand current utility operations, why we need to plan now for the county's future wastewater treatment needs, and how we'll support meeting those needs. A project website will be online in early 2022 to provide updates on the project, promote access to the educational materials, and share opportunities for connection.

## Why start now? Early outreach sets a foundation for further engagement as the design progresses:

- Details of the design may change, but community needs and drivers for the project can be discussed now.
- Building awareness early can minimize the surprise from the community during final design and construction.
- Established community partners can remove roadblocks and facilitate decision-making in later phases of design and construction.

## A toolbox approach provides for connection with a variety of audiences, and materials can be expanded and updated as the project progresses. The team is planning a range of tools:

- Website
- Factsheets
- Videos, audiograms
- Posters, flyers, postcards
- Coloring pages/books
- Hands-on classroom kits
- Interactive games
- Material for educational events
- Social media campaigns



Key Outreach Objectives

**Resilient Wastewater Management: Planning for Jackson County's Future**

The Jackson County Utility Authority (JCUA) recently completed a concept design for a new wastewater reclamation facility. The project – which is still in the early phases of development and design – is necessary to meet environmental challenges, provide opportunities for innovation, support growth across the county, and strengthen the resiliency and reliability of our wastewater treatment infrastructure. While construction and operation of the new facility is still several years away, building awareness about the need for the work, the opportunities for innovation, and the benefits of broad-based partnerships throughout the entire JCUA service area can start now. The frequently asked questions and answers below will help start the conversations. Additional resources and information will be available throughout the first half of 2022.

**Why is this project necessary?**  
We need to upgrade our system. Our current wastewater treatment facilities can't meet more strict environmental requirements, they are susceptible to the increasingly severe impacts from storms and flooding, and there is no room for expansion or innovation. In addition, there are industries in the area that have to reduce the amount of water they pull from the local rivers during droughts – this can cause process slow downs. With room to expand and innovate, JCUA would be able to address all these challenges and support local industry.

**How will I be impacted by this project?**  
The new facility will most likely be located in Southeast Jackson County near the industrial end users, but the facility would handle wastewater from across a significant portion of Jackson County (potentially as far west as Ocean Springs). In addition to updating infrastructure and treatment capacity and improving drought resilience, the new facility would provide environmental benefits across the county – for example, the current plants ship waste materials to landfills, but in the new plant, some of those wastes would be transformed into a safe fertilizer that could be used by any gardener or farmer. JCUA will be developing tools and resources to highlight the innovative elements and environmental benefits, and will share more information about those and other aspects of the project in the first half of 2022.

**Why will it take so long to complete this project?**  
Design of the project is complex, and we are still in the early phases of design. It will take approximately 2 to 3 more years to complete the design process before construction can begin (see page 2 for a project timeline overview). The lengthy process is necessary to design a new facility that meets our needs for environmental protection, growth, and resilience; incorporates innovative elements; and balances other community needs.

**If it will take a long time to complete, why am I hearing about this project now?**  
JCUA wants to help our customers, community members, and other stakeholders understand our current operations and future needs. We also want to be transparent about this project and provide as much information as we can from start to finish to keep leaders and decision makers informed and engaged in the process. It is our goal to create partnerships to help advance the project and deliver the important benefits to the communities we serve. The critical objectives for the community outreach work are summarized on page 2.

**How can I learn more?**  
Providing information and engaging the community is an important part of the project. Stay tuned for announcement of a project website in early 2022 that will provide updates on the project, educational materials, and opportunities for connection.

Jackson County Utility Authority  
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Pascagoula, Mississippi 39567  
228-266-2225  
www.jcua-ms.us

October 2021

**Resilient Wastewater Management: Planning for Jackson County's Future**  
continued from front...

**Project Timeline Overview**

September 2018: Finalize contract with Arcadis & initiate Concept Design  
July 2020: Finalize Interim Project Definition  
September 2021: Deliver Concept Design

18-24 Months from Contract Award: Work through 60% -> 90% -> 100% Design Phases  
24-36 Months from Final Design: Construct New Facility  
Operate New Facility


**Community Outreach Objectives**

The Jackson County Utility Authority is developing a community outreach program to meet these important objectives: *Build Awareness*, *Educate and Inform*, and *Create Partnerships*. The program will include a variety of tools and programs to help customers, community members, and other stakeholders understand current utility operations, why we need to plan now for the county's future wastewater treatment needs, and how we'll support meeting those needs.

Look for announcement of a project website in early 2022 – that's where we'll share project resources, learning opportunities, and more plans as the project evolves.

Jackson County Utility Authority  
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The first information sharing tool was the release of a released Frequently Asked Questions guide. A variety of materials designed to support awareness of the project and general water treatment education will be added to the toolbox as the project continues.



**Questions?  
Contact the project team:**

**Jackson County Utility Authority**

1225 Jackson Avenue  
Pascagoula, Mississippi 39567  
228-266-2225  
[www.jcua-ms.us](http://www.jcua-ms.us)

Check out the project website at [jcua-waterreuse.org](http://jcua-waterreuse.org)  
The team will share updates on the project,  
materials to explain the wastewater treatment &  
reclamation process, and opportunities for  
connection and engagement.