



Arlington County Water Pollution Control Plant

# Arlington Re-Gen

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## Biosolids Advisory Panel

July 18, 2024



# Introductions

**Mary  
Strawn**

Arlington County Water  
Pollution Control Bureau

**Antron  
Sutton**

Arlington County Water  
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**Lisa  
Racey**

Arlington County Water  
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**Fasil  
Haile**

Arlington County Water  
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**Brian  
Balchunas**

HDR

**Melanie  
Deggins**

HDR

**Tucker  
Cotter**

HDR

**Dan  
Stromberg**

PC Construction

**Laura  
Simmers**

PC Construction

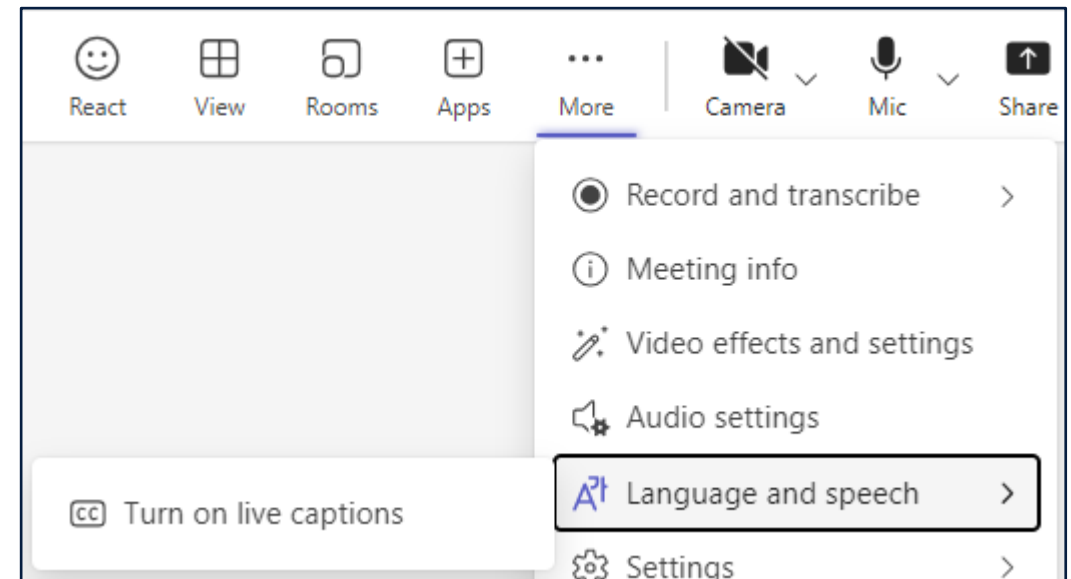
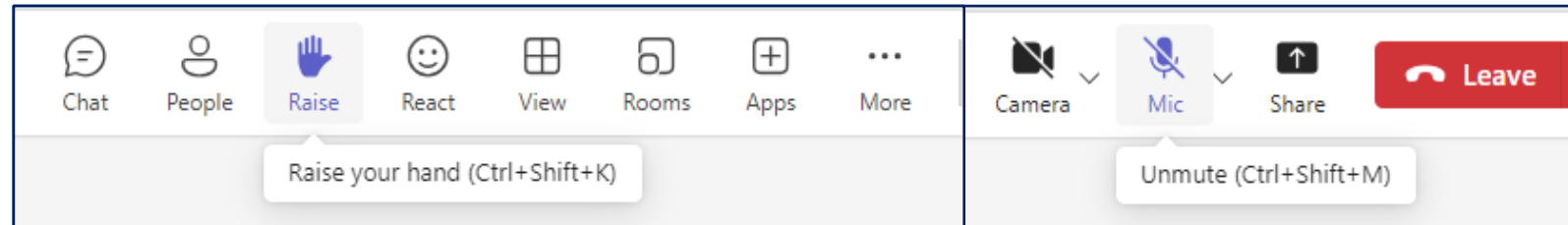
**Joe  
Uglevich**

Stantec

# Meeting Logistics

## MS Teams Controls

- **Everyone will be muted during the meeting**
- **Questions can be entered in the chat or members can raise hands and unmuted themselves**
- **Phone participants can dial \*6 to request to be unmuted**
- **To turn on live language translation captions, click 'More' and then 'Language and speech' in the dropdown menu**

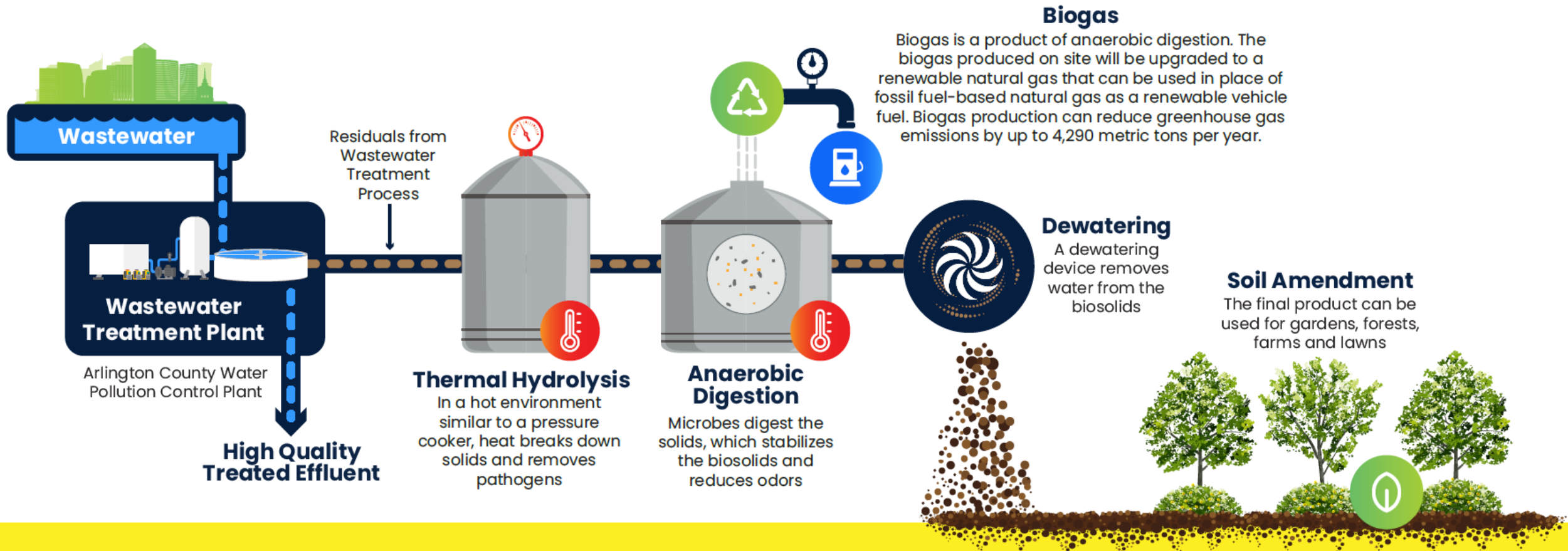


# Agenda

- 01** 6:00 – 6:05 **Introductions**
- 02** 6:05 – 6:25 **Overall Program Updates**
- 03** 6:25 – 7:05 **Site Plan Review**
- 04** 7:05 – 7:20 **Schedule Updates and Upcoming Site Activities**
- 05** 7:20 – 7:30 **Communications Update**
- 06** 7:30 – 7:45 **Open Discussion**

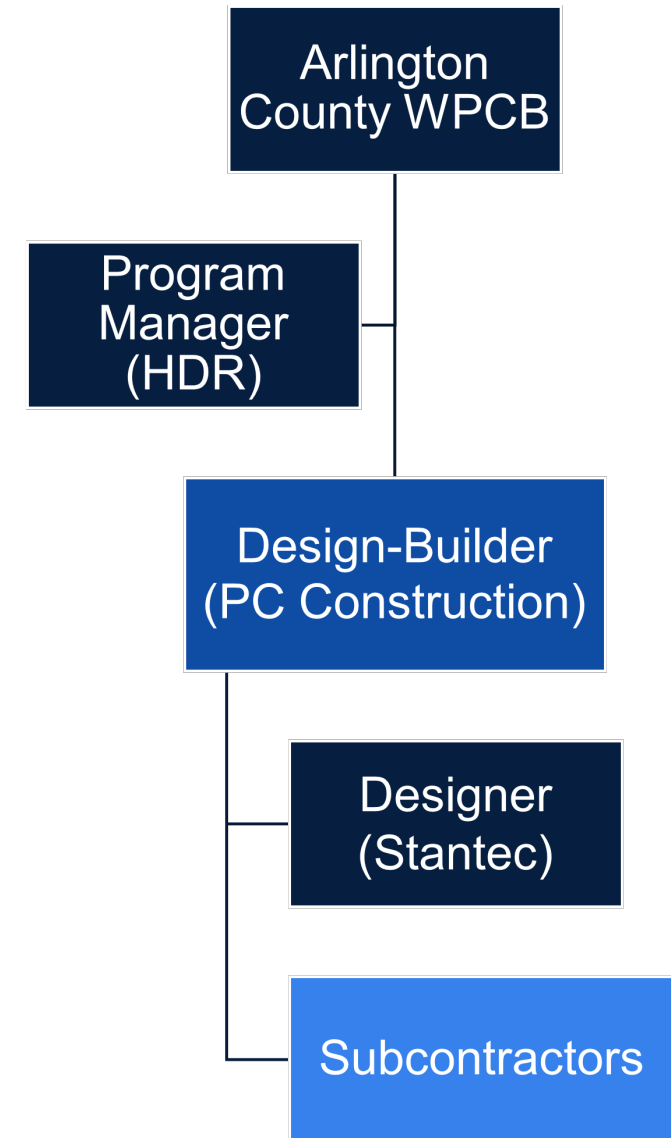
# Program Overview

## Recovering renewable resources from wastewater



# HDR Roles and Responsibilities

- HDR serves as an advisor to Arlington County
- Moving to new phase:
  - Oversee design and construction
  - Assist with start-up and commissioning
- HDR is prohibited from participating in any design and construction







# 02

## Overall Program Updates

# Technical Updates

## “What”

- Design confirmation
- Detailed design



## Completed

- Design confirmation (discuss today)



## Upcoming

- Detailed design
- Planning for the start of construction





# Project Update and Activity

- Kicked off the Design Confirmation Phase in late February.
- Established 19 subcommittees to draw on the expertise of all team members and drive collaboration.
- Frequent pace of administrative and technical meetings to ensure forward progress

# What is Design Confirmation?

- Period where the team uses collective expertise to confirm key aspects of the program, such as:
  - **Confirm the facility's existing systems have the capacity to support the biosolids upgrades.**
  - **Will the existing dewatering building be reused or decommissioned?**
  - **How do we layout the site and make the most effective use of the site in the most cost-effective manner?**

# Delivery Updates

## “How”

- Risk Analysis
- Constructability
- Maintenance of operations
- Site logistics
- Schedule
- Procurement planning



## Completed

- Began design-build project
- Initiated construction planning activities



## Upcoming

- Continue design of gravity thickeners
- Develop construction planning documents
- RFP on gas marketing

# Program Components

## Program Management

- Assistance with program development and oversight

## Gravity Thickeners

- Rehabilitate existing gravity thickeners

## Early Work Package

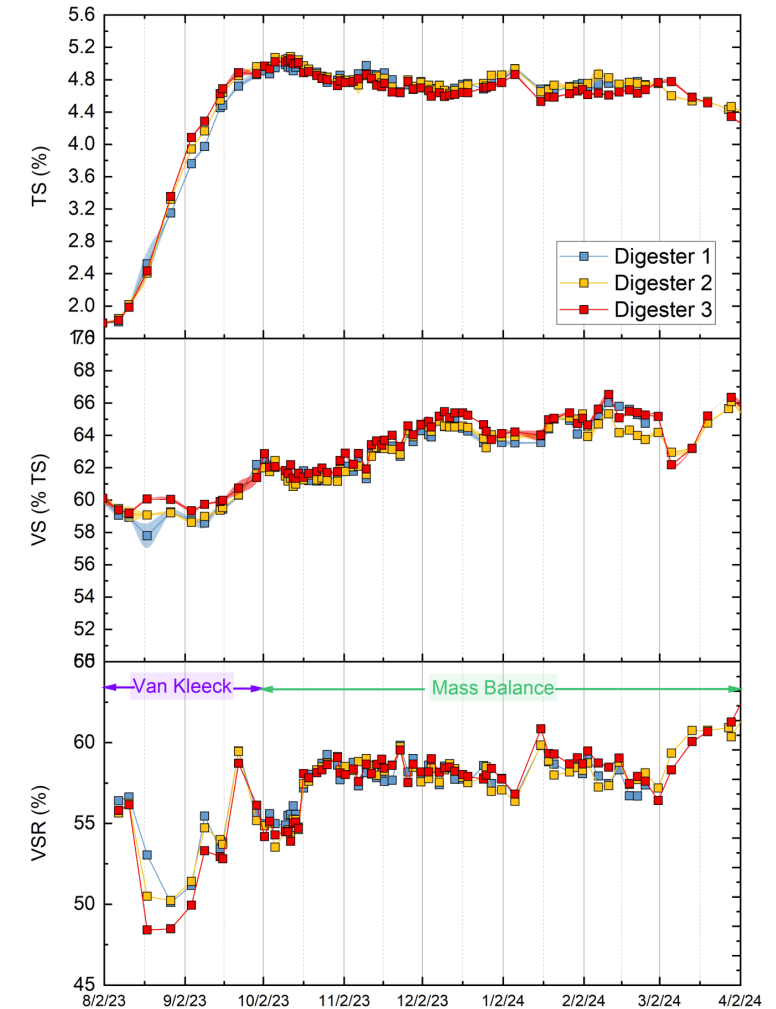
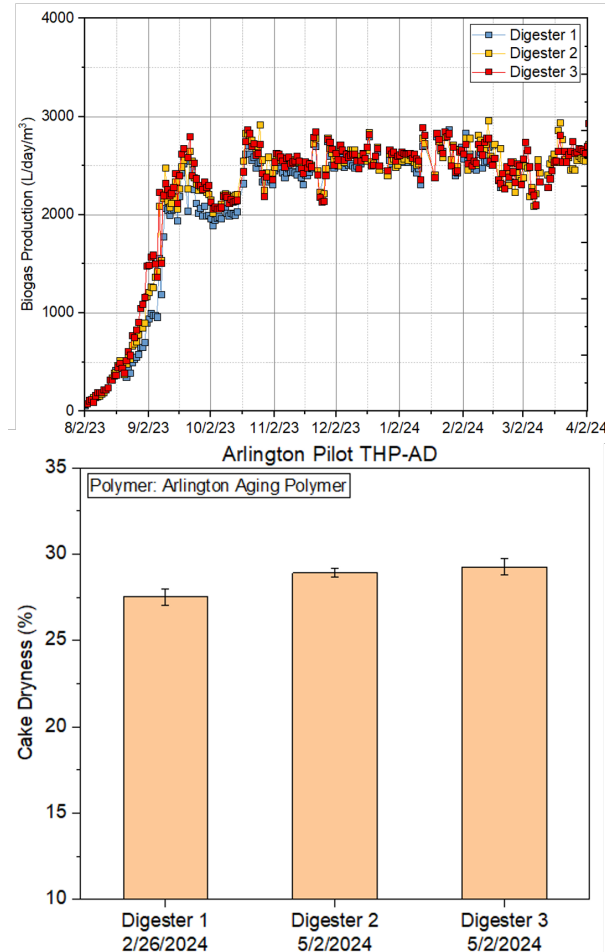
- Demolition
- Utility relocation
- Site Preparation

## Main Work Package

- New processes and facilities

# THP Digester/Pilot

- Virginia Tech supporting research
- Piloting complete – supports implementation of program



# Renewable Natural Gas - Commercial

- Arlington continues to investigate potential commercial partners for marketing and disposition of environmental credits for RNG
- Responses to Request for Information (RFI) reviewed to better understand options
- Key goals:
  - Use RNG with ART for as long as natural gas buses are in the fleet
  - Understand that timeline is finite, so identify other outlets long-term
  - Maintain GHG credits within Arlington County
  - Identify balanced risk and revenue profile



# Funding Updates

- Capital Improvement Plan (CIP)
  - Updated CIP has been submitted and Board adoption is 7/23
- Inflation Reduction Act Tax Credit
  - Potential to act as a grant toward the project
  - Compliance with additional administrative requirements that are not necessary with traditional funding
  - Strict timing requirements
- Other funding/financing sources may be possible although County funding might be more advantageous

# Envision Update

- Sustainability subcommittee formed to ensure sustainability goals are carried forward during design
- HDR completed updates to Sustainability Management Plan – a living document that will guide the sustainability principals moving forward
- PC-Stantec to update Draft Envision Action Plan identifying actions required and potential increases to level of credits
- HDR and PC-Stantec will use these documents with Arlington County to drive Envision process and documentation



# 03

## Site Plan Review

# Key Decisions Made

Issue/Decision	Description	Decision/Resolution
Sludge Storage	Total Capacity Required	500,000 gallons
Digester Mixing System	Pump Mixing, Draft tube or other	Pump Mixing System
Gas Treatment System	Membrane vs. PSA system	Membrane system
Flare Redundancy		Single stack w/multiple burner rings and redundant pilot gas with independent panels
Boiler Type	Dual fuel or not	NG/rNG off-spec gas boiler / NOT dual fuel
Gas Treatment	Enclosures	Enclosures for compressors/blowers to avoid freezing. Membrane may come from manufacturer enclosed.
THP Cooling	Once through PEW vs. Cooling Tower	Once Through PEW system
DWB Disposition	Reuse DWB building or Build new Solids Processing Building	Build new facilities and decommission existing dewatering building. Demolition of DWB is not included.
Odor Control	Total load the system will need to handle	GT odor control separately through the GT upgrades contract
Site Layout	General layout agreed to at 6/26 workshop	Graphic shown later in this presentation

# Dewatering Building Evaluation

Multiple factors were considered in the evaluation of the possible reuse of the existing Dewatering Building including:

- Environmental Impact
- Community Impact
- Operations Impact
- Construction and Safety Risk
- Cost

After a detailed investigation, the team determined that decommissioning the existing building and constructing new facilities provides significant benefits including:

- Most cost-effective solution
- Least impact to operations during construction
- Lower risk during construction
- Most efficient for future operations



Site Overview  
from Southeast Corner









South Eads Street



31st Street



Site Overview from  
Northwest





Street view of the Solids Processing Building, Odor Control and Digesters from the East





Street view of the Solids Processing Building, Screenings Building and Digesters from the Northwest





Street view of the gas upgrading system from the Northeast







# 04

## Schedule Updates and Upcoming Site Activities

# Tentative Program Timeline



Program Management	Facilities Plan Biogas Utilization	Facilities Plan Procurement	Procurement Design Oversight	Design Oversight	Design and Construction Oversight	Construction Oversight	Construction Oversight	Start-up Assistance	Start-up Assistance
Gravity Thickeners	--	--	Design	Design	Construction	Start-up			
Early Work	--	--	--	Design	Design and Construction				
Main Work Package	--	--	--	Design	Design	Construction	Construction	Construction Check-out	Start-up

# Near Term Project Schedule

Project Phase	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Gravity Thickeners																			
Design																			
Bidding and Award																			
Construction																			
Design Build																			
Design Confirmation																			
Early Work Design																			
Early Work Construction																			
Main Project Design																			

# Deliverables and Next Steps

- Design Confirmation Phase deliverables in late July
- Begin the Schematic (30%) and Early Work design effort in July
  - Refine and optimize site and building layouts
  - Develop early work package scope
  - Continue active value engineering efforts
  - Begin permitting process
- Construction Activity
  - Early work package construction is currently envisioned to begin in August 2025





# 05

## Communications Plan Update

# Communications Plan Revisions

## Support Phase 2 Activities

- Final Design
- Pre-Construction Activities
- Early Construction Outreach

## Plan Revision Goals

- **Program Information:** Provide clear, concise information to community members and program stakeholders.
- **Neighborhood Relations:** Continue to improve and solidify reputation with the facility's immediate neighbors through responsive, compassionate construction outreach, and issue resolution.
- **Sense of Pride:** Foster a sense of pride and accomplishment among facility employees, County leaders, and customers.
- **Employee Engagement:** Increase information facility employees receive about the program. Generate dialogue about the upcoming changes to identify concerns and address potential issues.



# Good Neighbor = Good Communication

## Working Together

How can we best serve your organization in Phase 2?

## Outreach Tools

- Neighborhood Update Meeting
- Biosolids Advisory Panel
- Stakeholder Briefings
- Pop-up Outreach Events
- Videos
- Social Media Content
- Re-Gen Website
- Digital Media Packets
- Public tours of the WPCP

# Upcoming Outreach Activities

- Partnering with Arlington Art Truck on what not to flush
- Opportunity to talk about Re-Gen as well
- Participating in a variety of events throughout late summer/fall, starting with County Fair
- See County website for details on other events







# 06

## Open Discussion

# Project Contact

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**Thank you!**