

MUSINGS FROM A BIOSOLIDS NETWORK PLAYBOOK



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Biosolids Programs*
Water Environment Federation

IN GOOD COMPANY



**NORTHWEST
BIOSOLIDS
MANAGEMENT
ASSOCIATION**

GREATER PURPOSE



NOTICE POTENTIAL



Logging road decommission with Mountains to Sound Greenway
Image credit: King County, WA

UNIFIED FRONT



25th Anniversary BioFest Lunch in Roslyn, WA.
Image credit: Northwest Biosolids



PFAS Congressional Hearing
Image credit: Jim Dunbar

ROOTED IN RESEARCH



Bioaerosol sampling - King County Forestry
Image credit: Northwest Biosolids



Research tour at WSU-Puyallup Extension
Image credit: Northwest Biosolids

REPRESENT THE RESOURCE



Sunflower grown in TAGRO
Image credit: TAGRO



Natural Selection Farms Compost
Image credit: Northwest Biosolids



Tour in Abbotsford, BC
Image credit: Northwest Biosolids

BE ALTERNATIVE

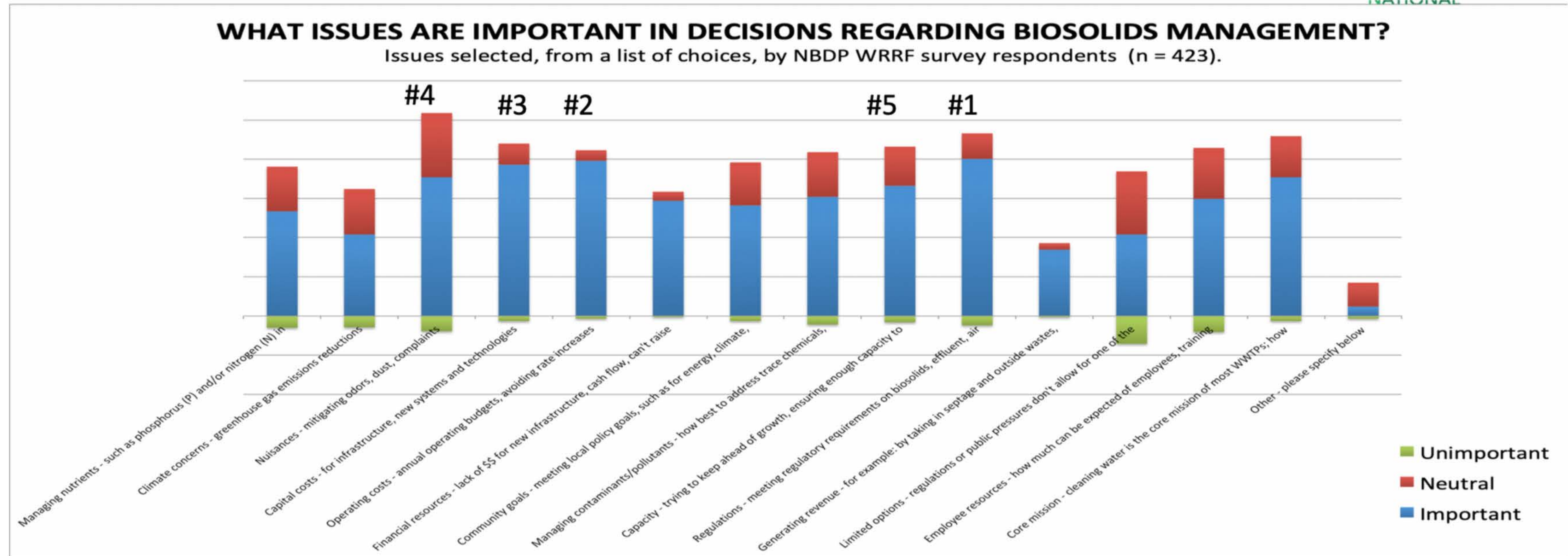


Canola crop in Central Washington
Image credit: King County



Forestry application
Image credit: King County

BY THE BOOK



Most important:

1. Meeting regulatory requirements
2. Operating costs
3. Capital costs
4. Nuisances
5. Ensuring enough capacity

Most unimportant:

1. Limited options - regulations or public pressures don't allow for one of the 3 options
2. Employee resources - how much can be expected of employees, training
3. Nuisances

INSPIRE - MODEL BEHAVIOR



Crop Yield Comparison
Image credit: King County



PBS Filming at DC Water
Image credit: WEF

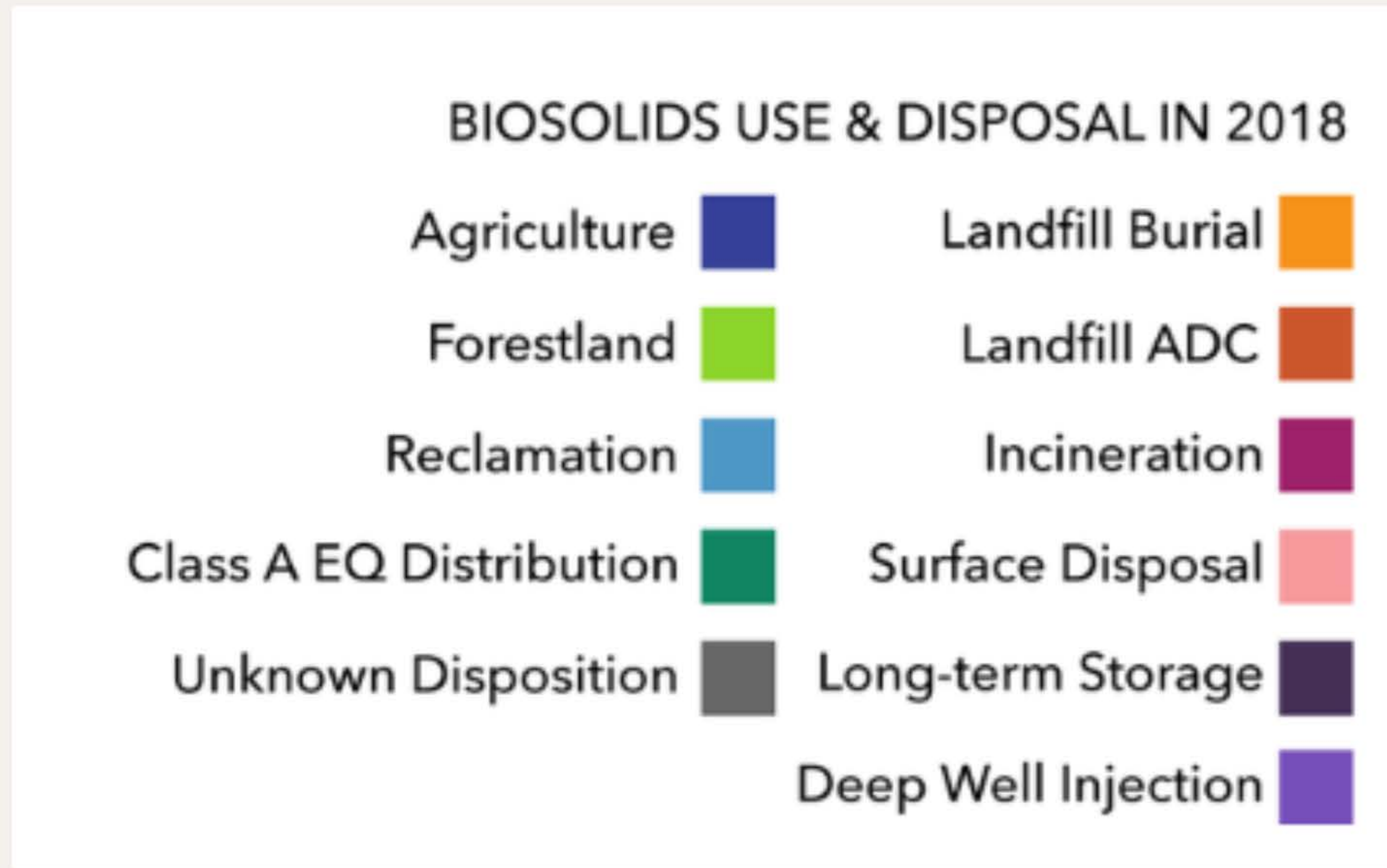
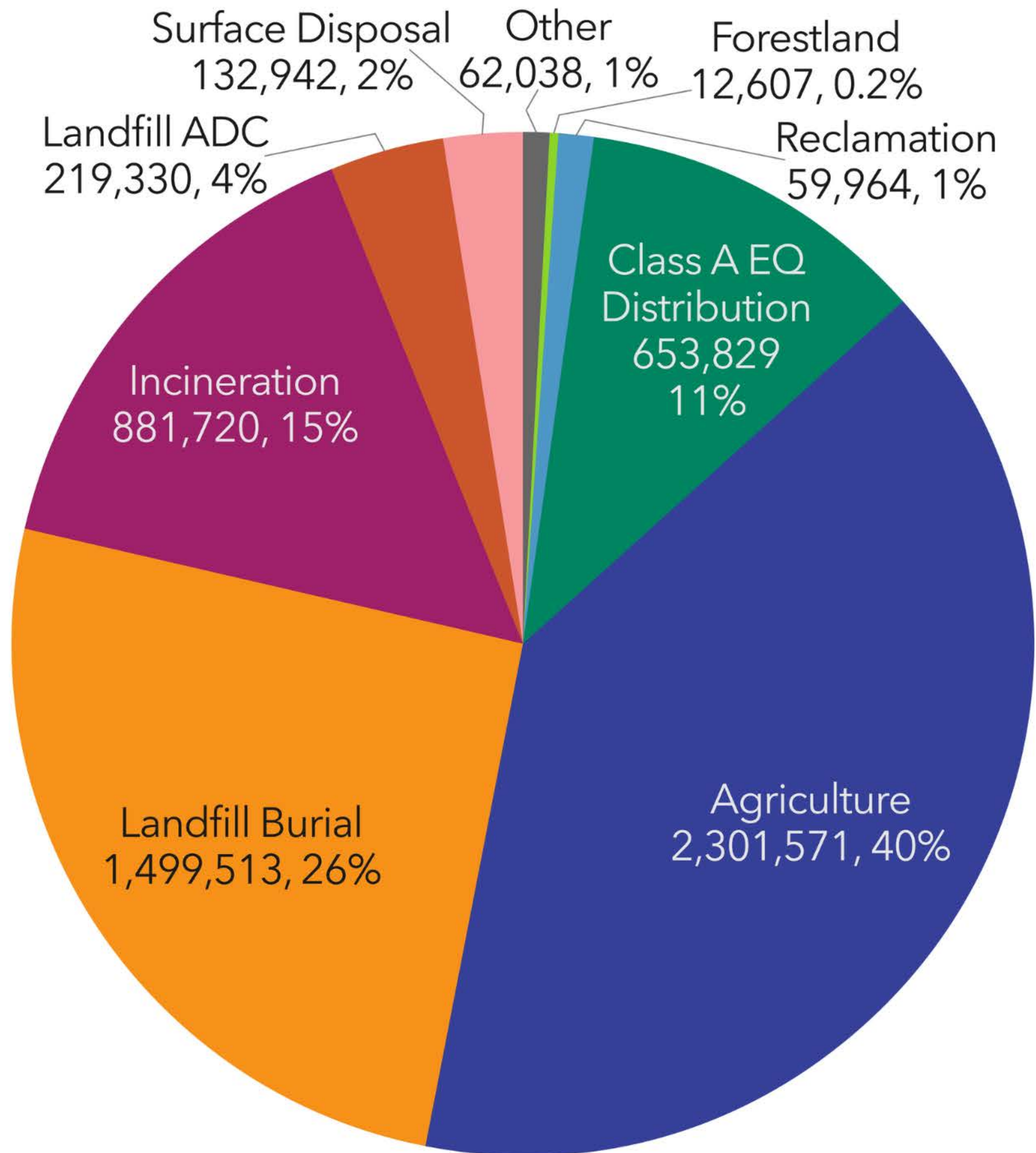
LAUGH • HAVE FUN



30th Anniversary BioFest Banquet in Portland, OR
Image credit: Northwest Biosolids

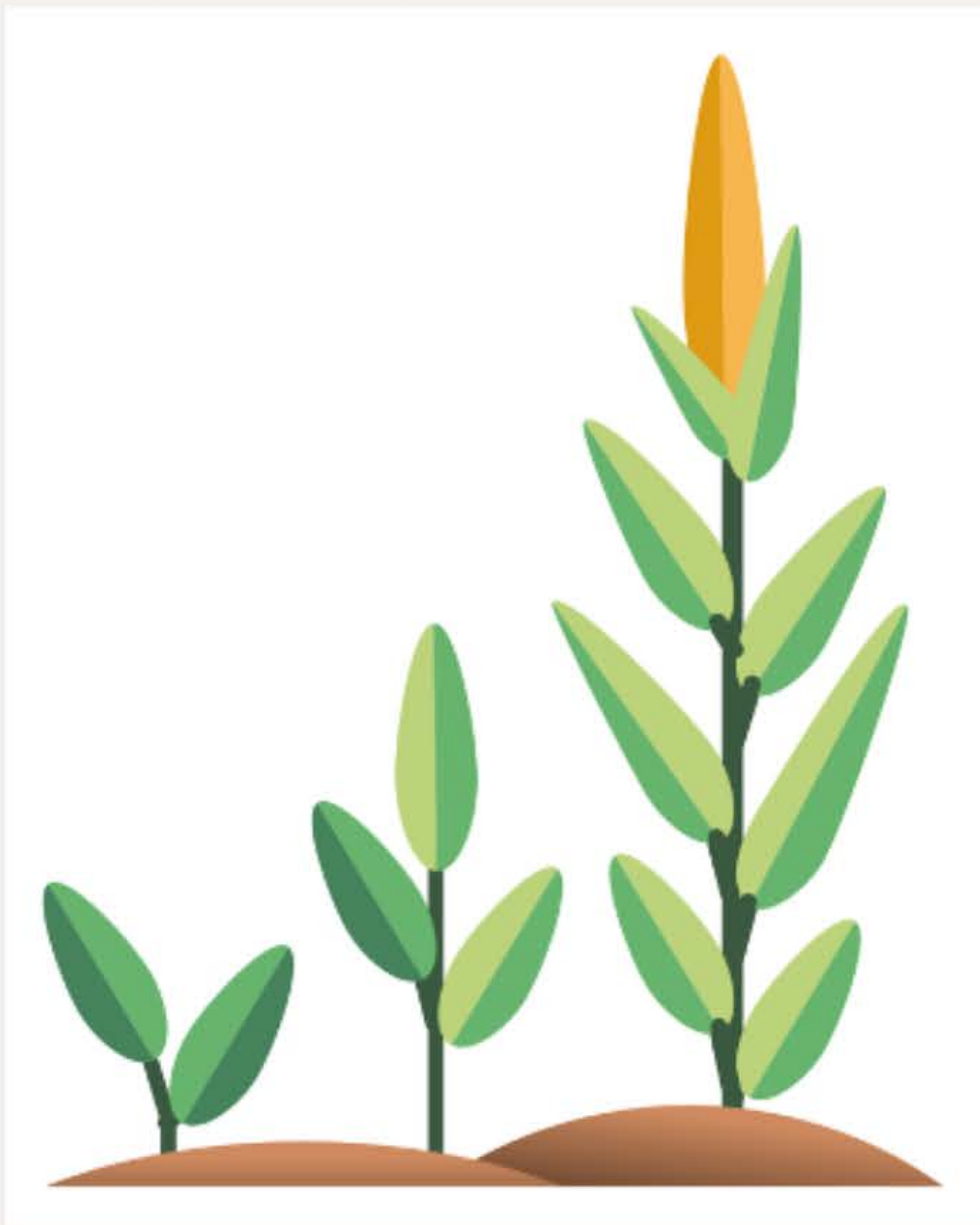
BIOSOLIDS END-USE

United States
 Biosolids Use & Disposal 2018
 (dry metric tons, %)
 Total: 5,823,000



www.biosolidsdata.org

WHAT WE KNOW



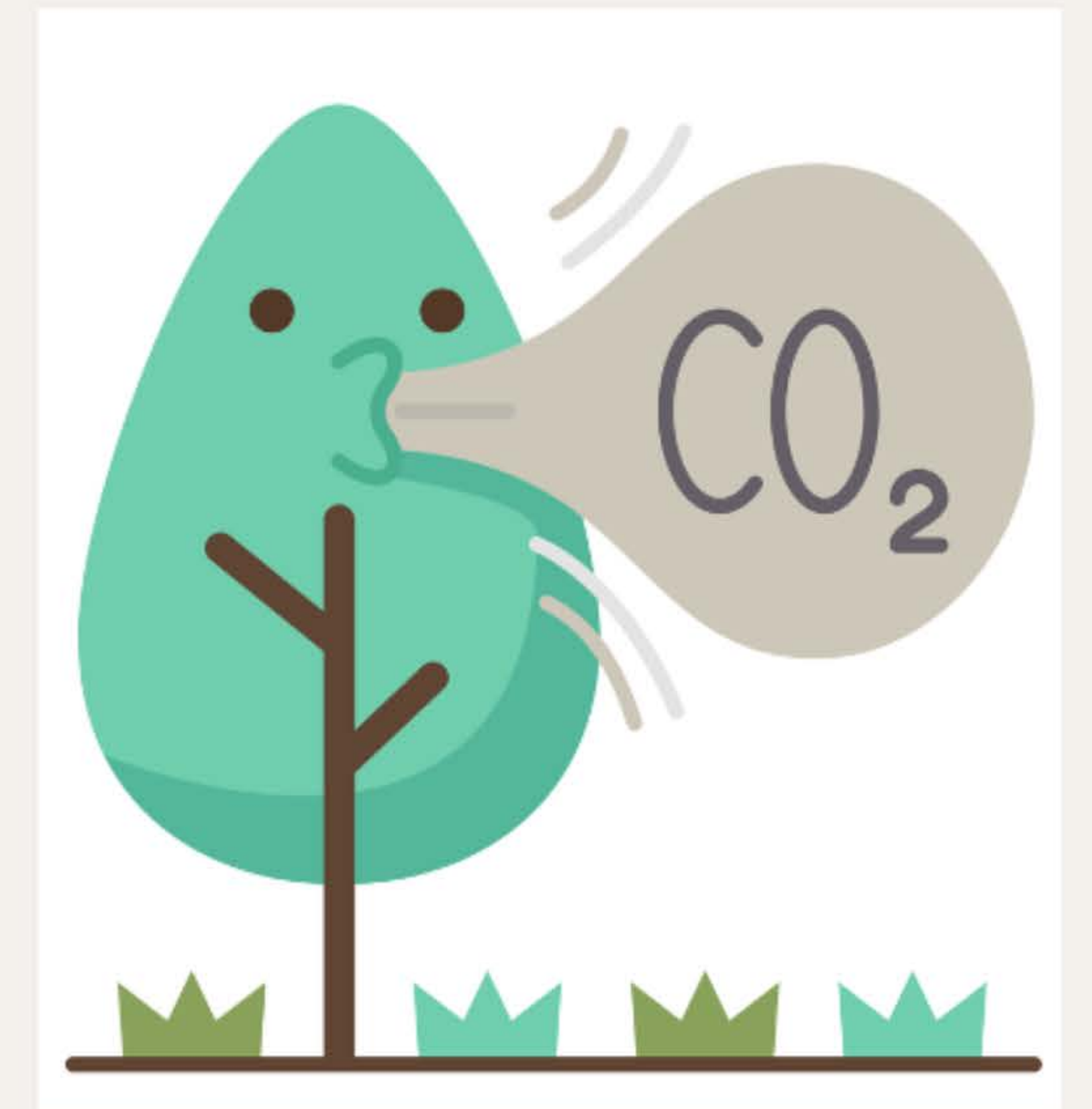
Crop yields
matched or
increased



Builds soil
organic matter



Affordable
alternative to
chemical fertilizer



Captures carbon in
soil

WHAT WE KNOW



Recover heat and energy



Closed loop resource



Retains water to reduce soil erosion

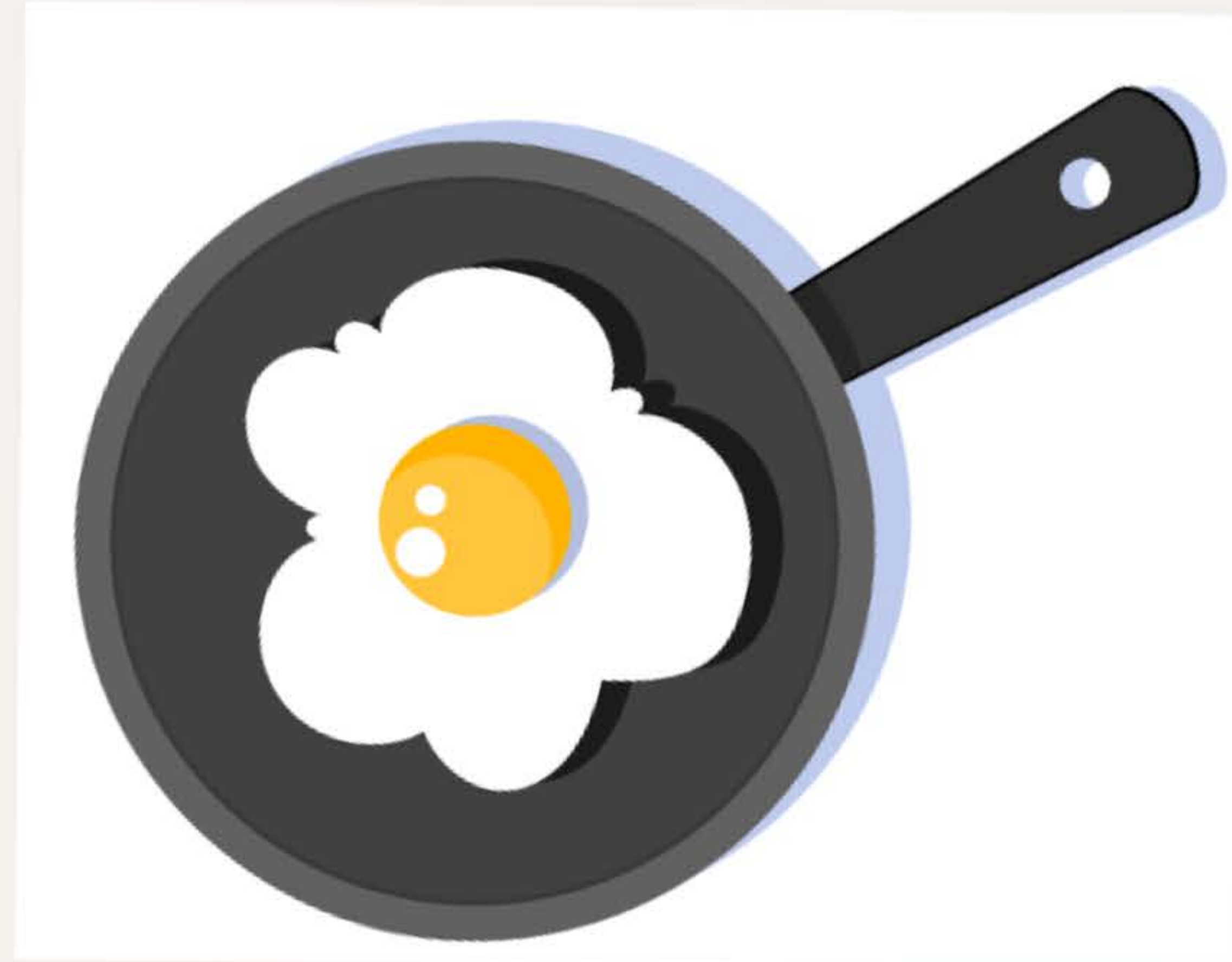


Water to sustain plants

WHAT WE KNOW



Pollution persists



Nonstick
chemicals



Antibiotics



Research is key

WHAT WE ALSO KNOW

Narratives Matter

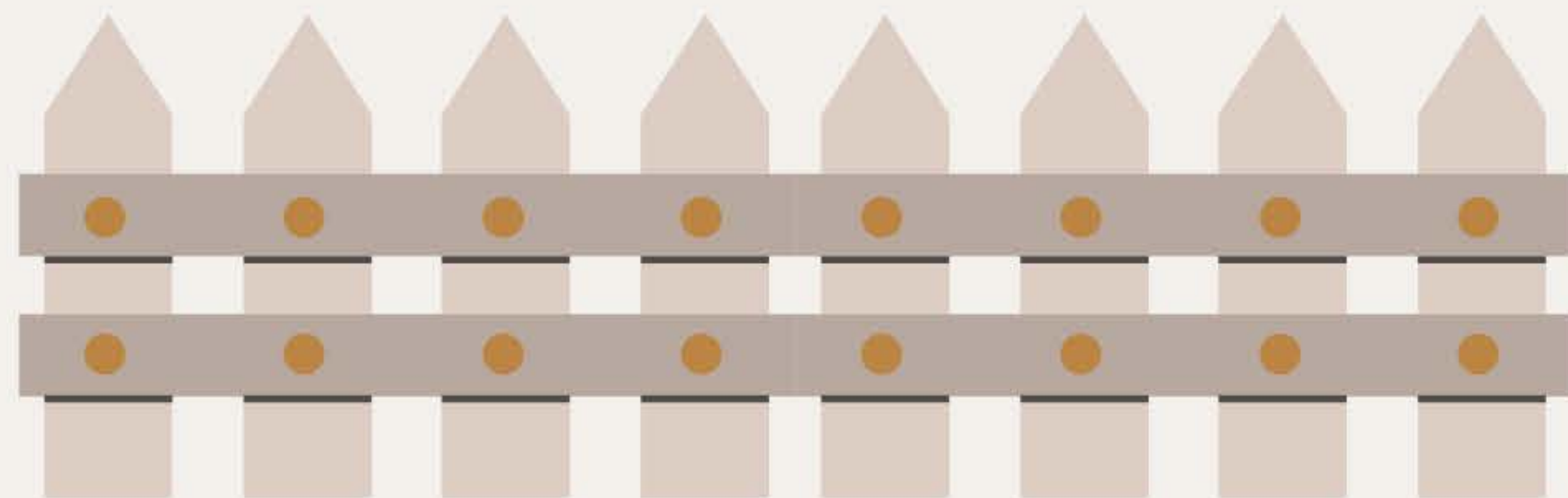
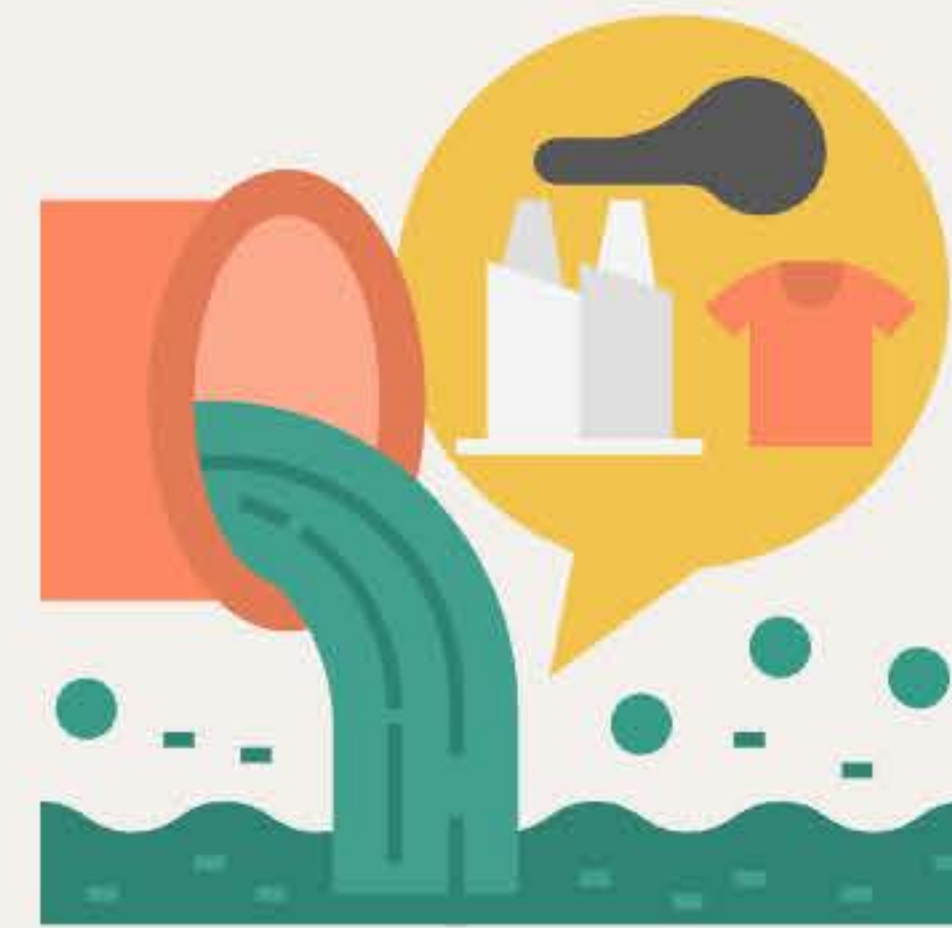


WHAT WE ALSO KNOW

Narratives Matter

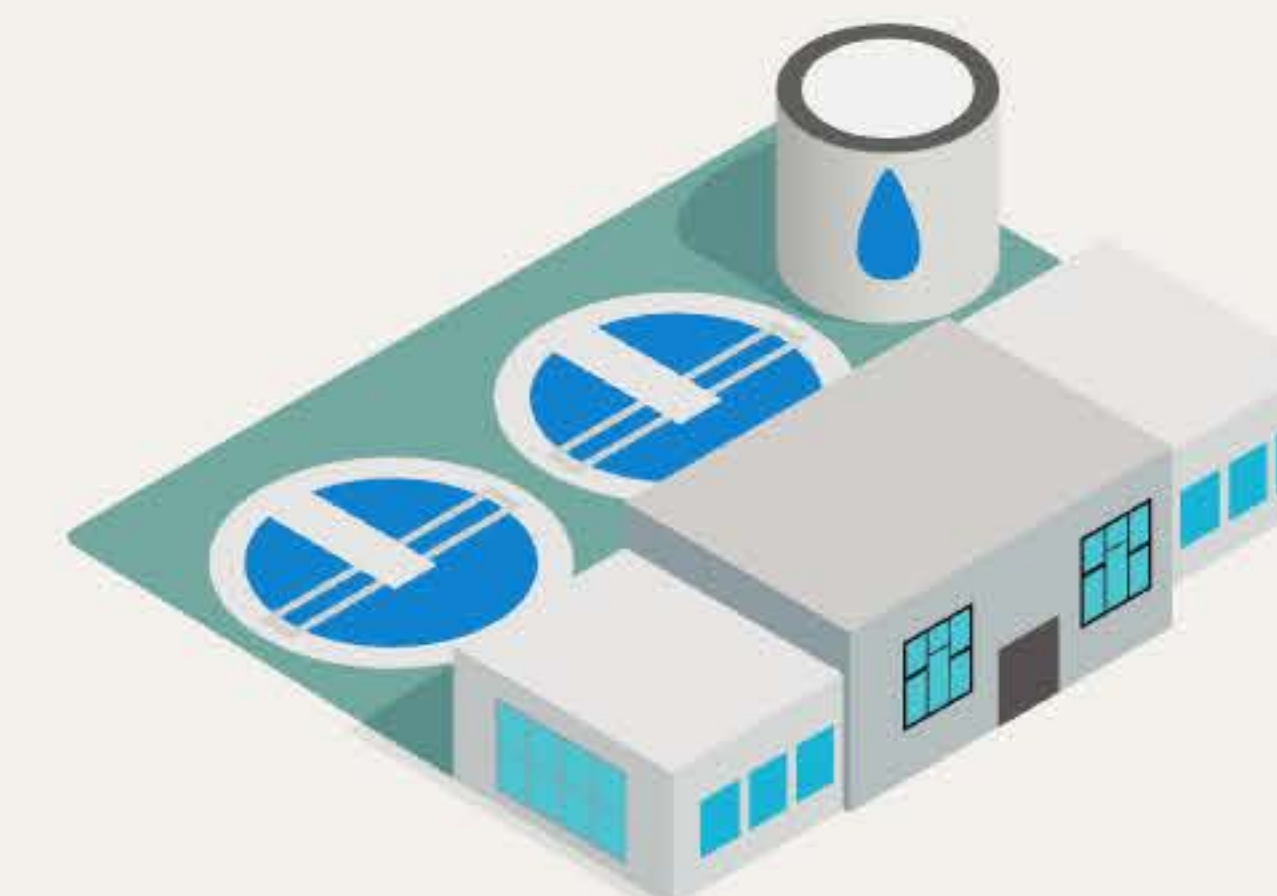
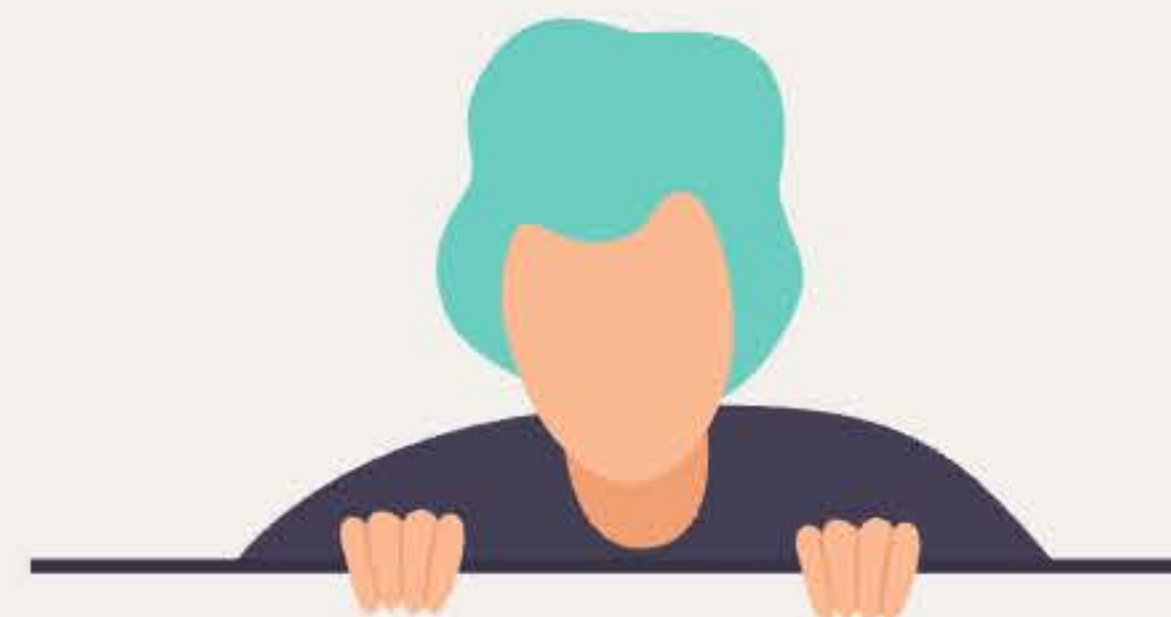
External

- Flush and forget
- Utility creates it
- Not in my backyard



Internal

- Arrow off the map
- Under the radar
- Non-association



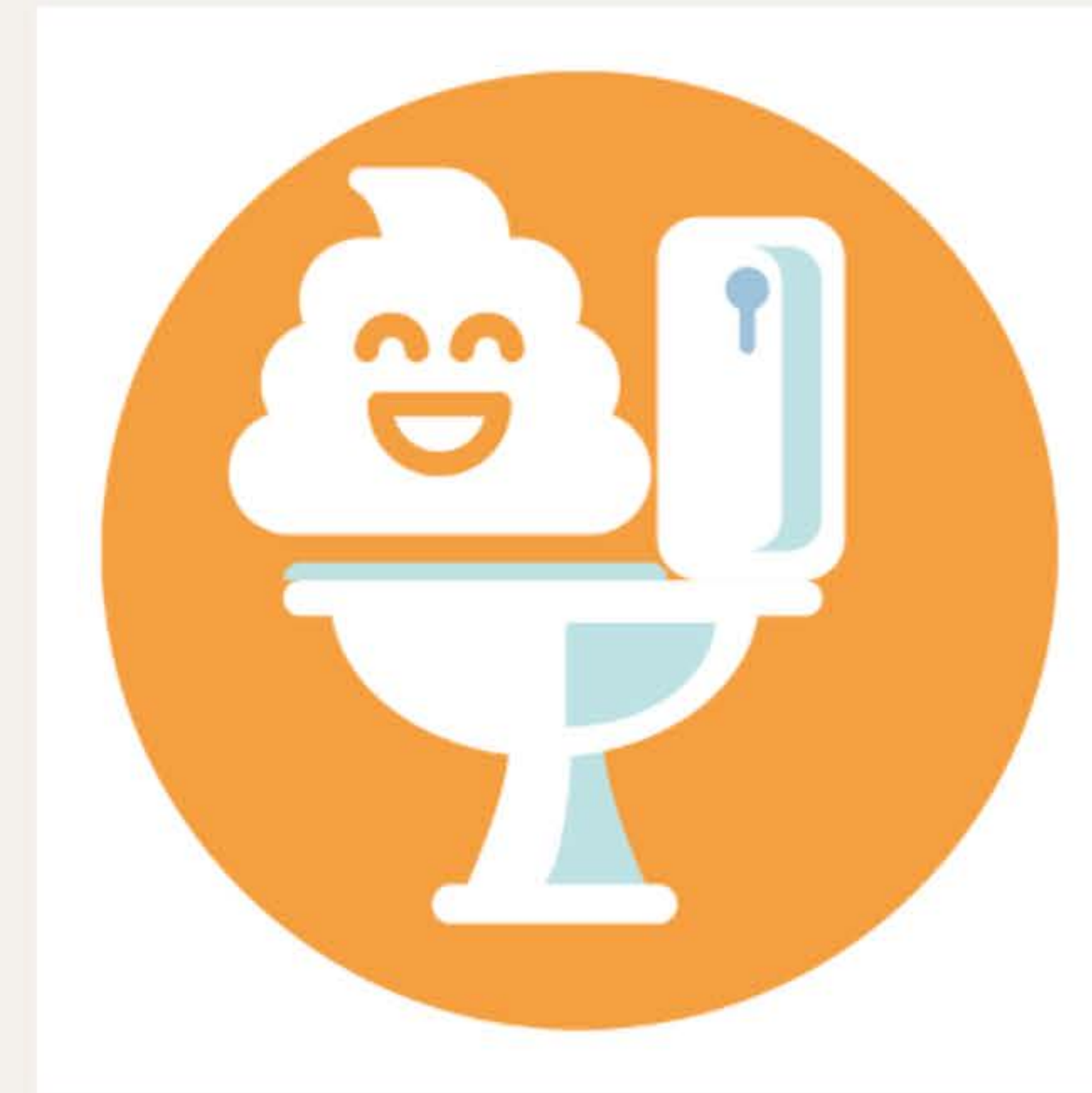
UNIQUE APPROACH



Our Role



Leaders



Humor



Intrigue



FUN FECAL FACTS

DIGESTIBLE CHUNKS OF PIPELINE WISDOM THAT ARE POSITIVELY POO-FORWARD



2024 POO GALORE

Putting poo on the throne it so rightly deserves

FUN FECAL FACTS

FRIDAY FLUSH



FRIDAY FLUSHES

MEET THE MOVEMENT MAKERS THAT HAVE MADE POO A PART OF THEIR REPOOTOIRE

yearofpoo.org



@PooandU



@Poo And You



@PooandU

ENGAGEMENT EXAMPLES



FUN FECAL FACT



LET'S GET PERSONAL

When you flush, computing your daily or annual contribution of the recovered poopie is not likely on your radar. That is unless you are part of an elite audience seeking to lift the lid to understand the the power beyond the flush.

A few facts on annual production to stash in your back pocket:

U.S. total = 5.823 million dry metric tons
You = 37 lbs average per person

FUN FECAL FACT



FLUSH TO FERTILIZER

Food is at the root of human patterns – both in consumption and digested contribution. Across much of the U.S., our poo (digested food) is refined into a nutrient-rich product used to fertilize crops, build carbon reserves in soil, retain water for plant growth, and improve soil health. Just as early cultures recognized, our food loop can benefit from the nutrients in our poo being recycled and returned to the soil.

ENGAGEMENT EXAMPLES



FUN FECAL FACT

FATBERG AHEAD

London is host to the Royal Family, Thames River, London Loo Tours, and a creature of gigantic proportions beneath the city - a 130-ton fatberg slopped together from grease and wipes. Encountered in 2017 and estimated to possibly be the largest on record. A crew harnessing fatberg blasters, had to work around the clock to de-chunk it bit by bit.

WHAT SECRET WEAPON WOULD YOU WIELD TO BLAST THE FATBERG?

FUN FECAL FACT

SUPER POO

Did you know that poo has played a starring role during the COVID pandemic? Wastewater-based epidemiology has become an early alert system for viruses. If you have COVID-19, "wastewater surveillance" can detect it. SARS-CoV-2 RNA can be counted in post-flush samples to see if cases are increasing or decreasing in communities.

Superpower

Poo doesn't just detect it doesn't lie!

FLUSHER ENGAGEMENT



FRIDAY FLUSH



Questions

- Introduce yourself and your organization
- How did you happen upon the fascinating world of poo? When and why did you choose to lift the lid and make poo a part of your repootoire?
- If you had to pick one key floatable nugget of wisdom to share with flushers about your work - what would it be?
- If poo could talk, what would it tell us?



• CAUTION: THE FOLLOWING INTERVIEW SERIES MAY CATCH YOU OFF GUARD AND EVEN CAUSE YOU TO FALL OVER LAUGHING. TOILET TALK CAN ALSO SURFACE CONTENT THAT MAY BE HIGHLY HUMANIZING OF POO. •

FLUSHER ENGAGEMENT



LINA ZELDOVICH, THE OTHER DARK MATTER



FLUSHER ENGAGEMENT



LIV JOHANSSON, WOODLAND PARK ZOO



FLUSHER ENGAGEMENT



CODY DIEHL, POLK COUNTY (FLORIDA)



FLUSHER ENGAGEMENT



30 Movement Makers



- ANCHORAGE WATER & WASTEWATER UTILITY
- ATKINSRÉALIS
- BIOCYCLE MAGAZINE
- ENGLOBE
- EPIC CLEANTEC
- FLUSH LLC
- FLUSH: THE REMARKABLE SCIENCE OF AN UNLIKELY TREASURE
- INSTITUTE FOR SYSTEMS BIOLOGY
- JACOBS
- LONDON LOO TOURS
- POINT OF SHIFT
- RON ALEXANDER & USCC
- OCEAN SEWAGE ALLIANCE
- POINT OF SHIFT
- THE POOP PROJECT
- PINELLAS COUNTY, FLORIDA
- POLK COUNTY, FLORIDA
- RAIN INCUBATOR
- RARE - CENTER FOR BEHAVIOR & THE ENVIRONMENT
- ROGUE WATER
- SH*T SAVES THE WORLD
- CITY OF TACOMA - TAGRO
- TOILET BOARD COALITION
- THE OTHER DARK MATTER
- UNIVERSITY OF WASHINGTON
- UNKO MUSEUM
- WEF STUDENTS & YOUNG PROFESSIONALS
- WOODLAND PARK ZOO
- WORLD TOILET ORGANIZATION
- XYLEM

FLUSHER ENGAGEMENT



Scaled-up Flusher Engagement



Thank Before You Flush

"GALLONS OF GRATITUDE"

CITY RESIDENTS BUILD BATHROOM SHRINES TO THEIR LOCAL WATER TECHS

OUTCOMES

- 1) HUMANIZATION
- 2) EDUCATION
- 3) RESPECT

MESSAGE

ELEVATING THE HIDDEN FIGURES OF THE PROFESSION



Adult Potty-Training

"LIFE AFTER FLUSH"

CHILDREN ASK GROWN-UPS IF THERE'S A LIGHT AT THE END OF THE (PVC) TUNNEL

OUTCOMES

- 1) EDUCATION

MESSAGE

FLUSHING OUR IGNORANCE



Pipeline Products

"POOP DE LOOP"

RESOURCE RECOVERY EXPERTS SEE GOLD IN CITY PIPES

OUTCOMES

- 1) HUMANIZATION
- 2) EDUCATION
- 3) RESPECT

MESSAGE

TURNING CONSUMERS INTO REGENERATORS



Year of Poo

"2022 - POO & YOU"

LIFTING THE LID ON THE POWER BEYOND YOUR FLUSH

OUTCOMES

- 1) HUMANIZATION
- 2) EDUCATION
- 3) RESPECT

MESSAGE

UNCOVERING HOW EVERYDAY CHOICES CAN AFFECT YOUR POO-PRINT

FLUSHER ENGAGEMENT

VIEWPOINT
WITH DENNIS QUAID

PBS VIEWPOINT - BIOSOLIDS



 Biosolids Are Valuable Resource For Communities  Share

Climate change • Climate change refers to long-term shifts in... 

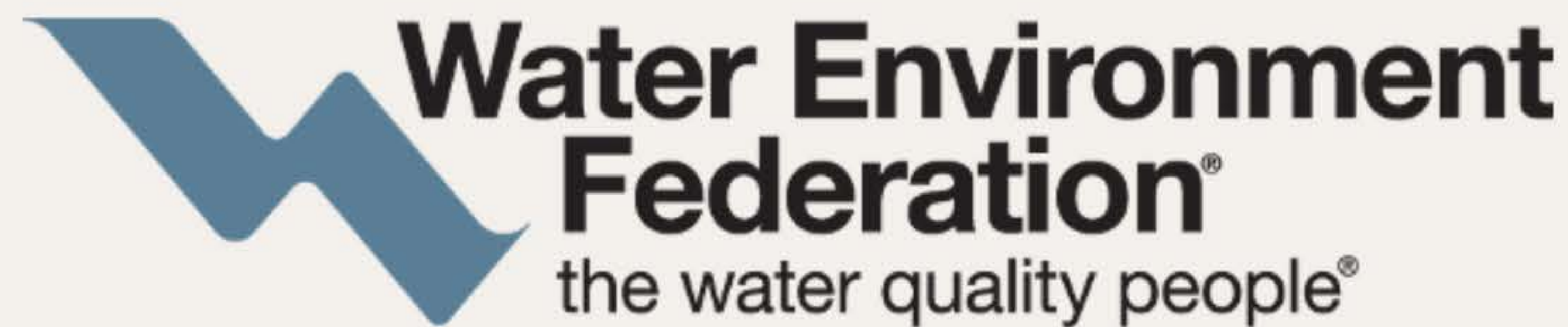
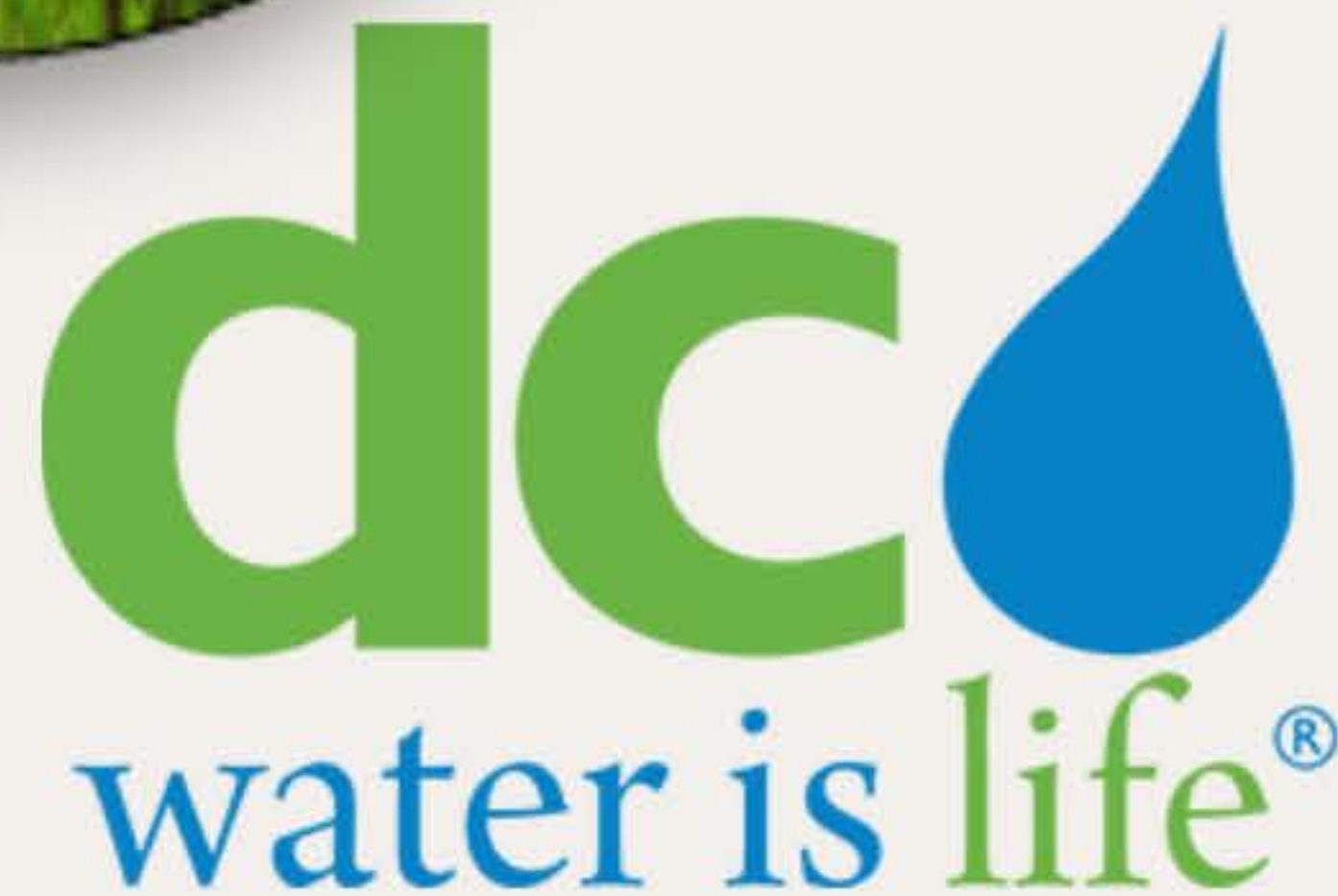
Watch on  YouTube

FLUSHER ENGAGEMENT

Biosolids special feature on PBS Viewpoint



PBS **VIEWPOINT**
WITH DENNIS QUAID

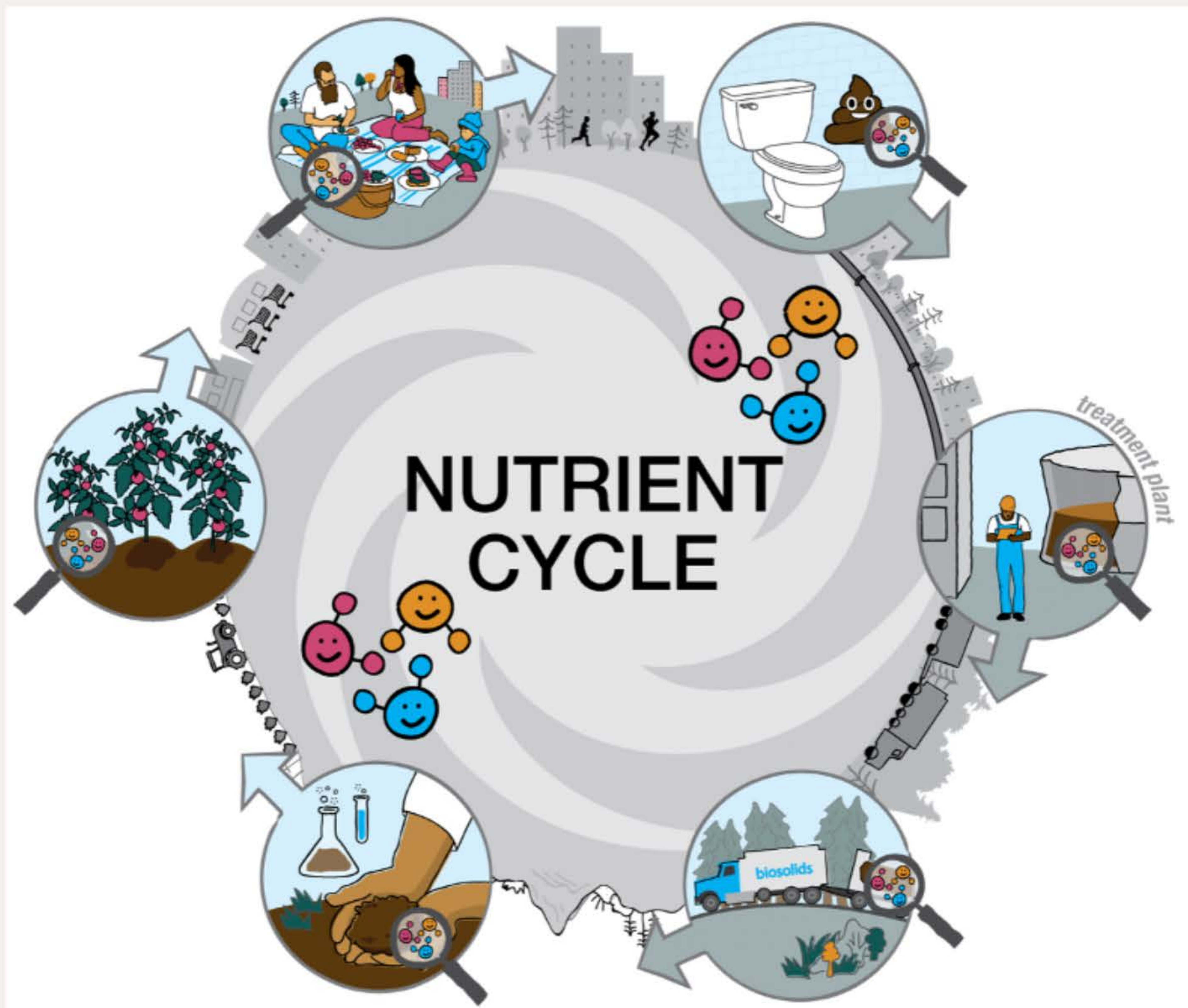


THE **SPECIAL FEATURE** RELEASED NOV. 7 TO PUBLIC TELEVISION AFFILIATES
NETWORKS CAN PLAY SEGMENT FOR **ONE-YEAR**

COMMERCIAL 400 TIMES REGIONALLY > **50+ MILLION** HOUSEHOLDS
NATIONALLY ON FOX BUSINESS > **93,000,000** HOUSEHOLDS WEEKLY
EMAIL CAMPAIGN > SENT TO **1,000,000** SELECT RECIPIENTS

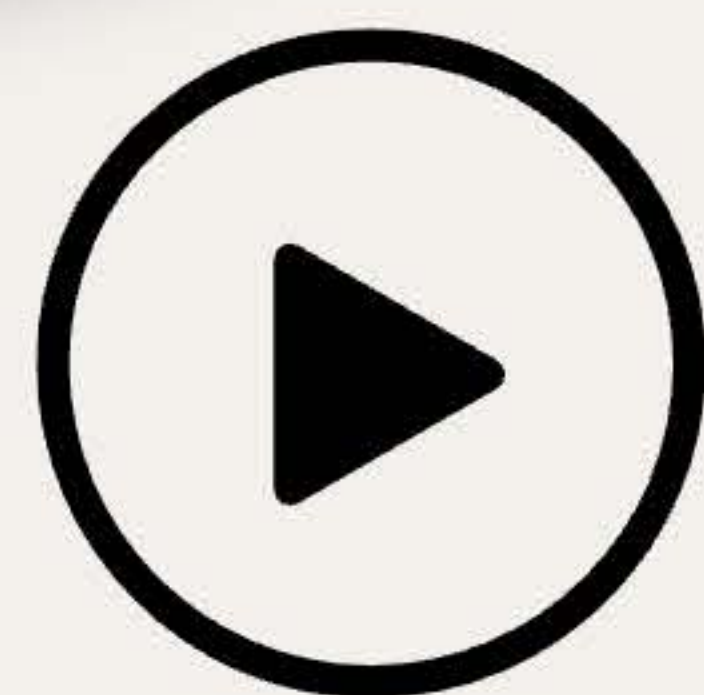
NEW ~~CHALLENGE~~ OPPORTUNITY

Power Beyond the Flush

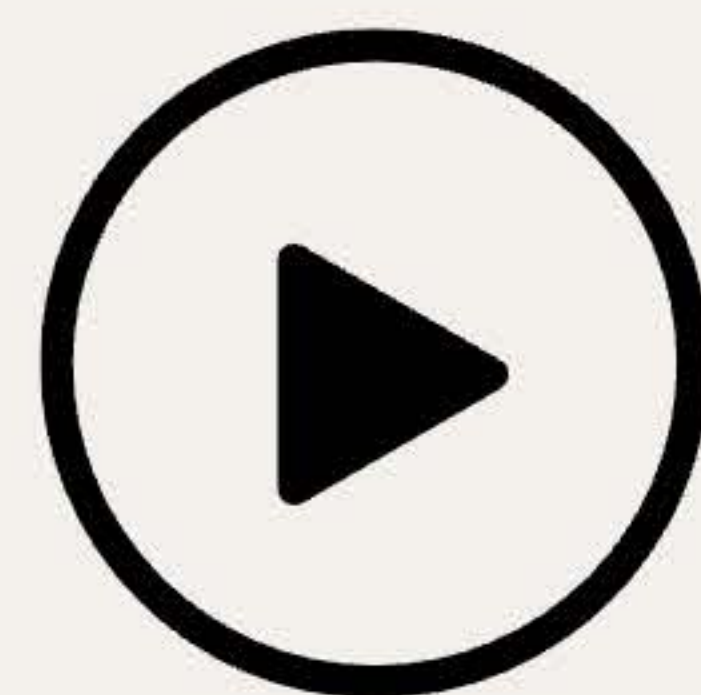




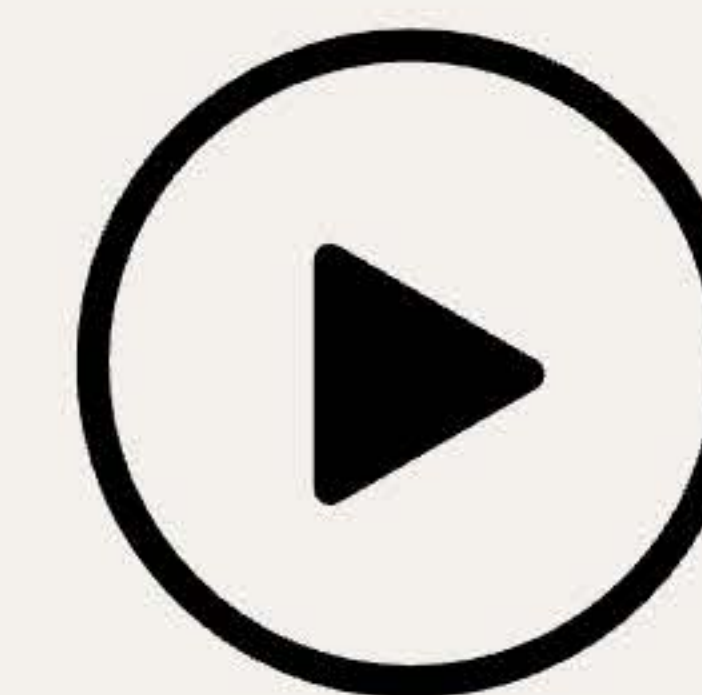
GET ENGAGED



Biosolids Communication
Toolkit



Tour a Biosolids
Project



Flush and Follow



@PooandU



yearofpoo.org

wef.org/pbs



RESOURCES



**BIOSOLIDS
COMMUNICATION
TOOLKIT**



**WEF CIRCULAR
WATER ECONOMY
SUMMIT
7/15/24-7/17/24**



**FLUSHER
ENGAGEMENT
CAMPAIGN**



**PBS VIEWPOINT
BIOSOLIDS SPECIAL
FEATURE**