



# Operation & Maintenance Tracking Program (O&M)

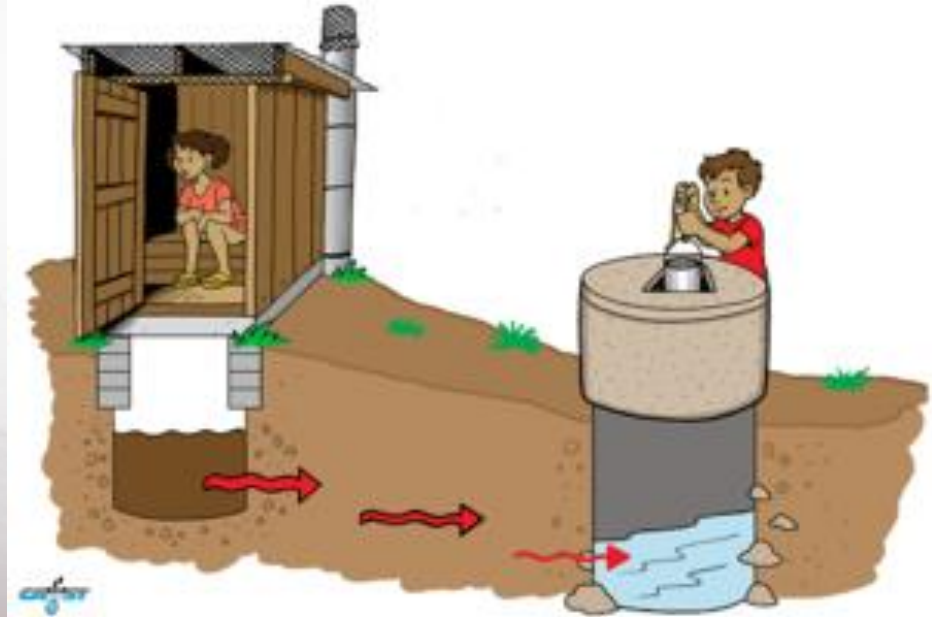
Residential Water and Sewage Program  
Bureau of Environmental Health and Radiation Protection  
Ohio Department of Health

# O&M Program Goals

- O&M tracking program to ensure HSTS are properly maintained, operating as designed.
- No “out of sight out of mind”
- Catch problems early, longer lasting systems. Fewer nuisances, and save \$\$\$ in long run.

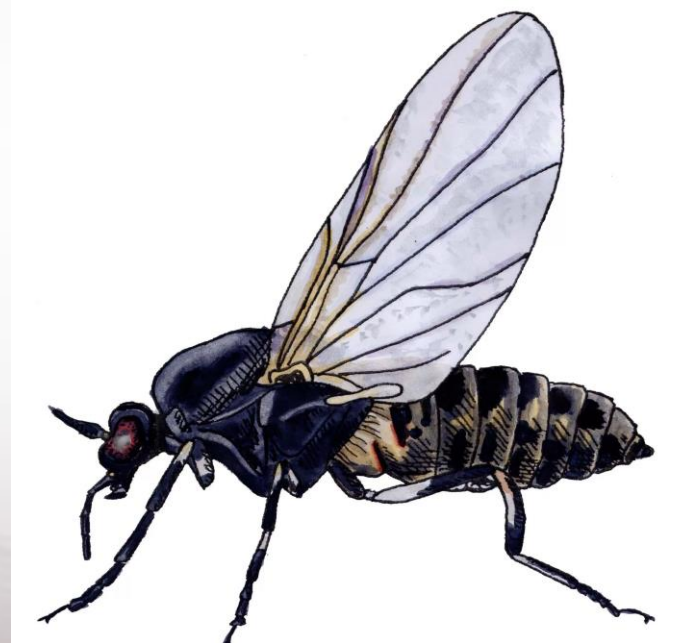
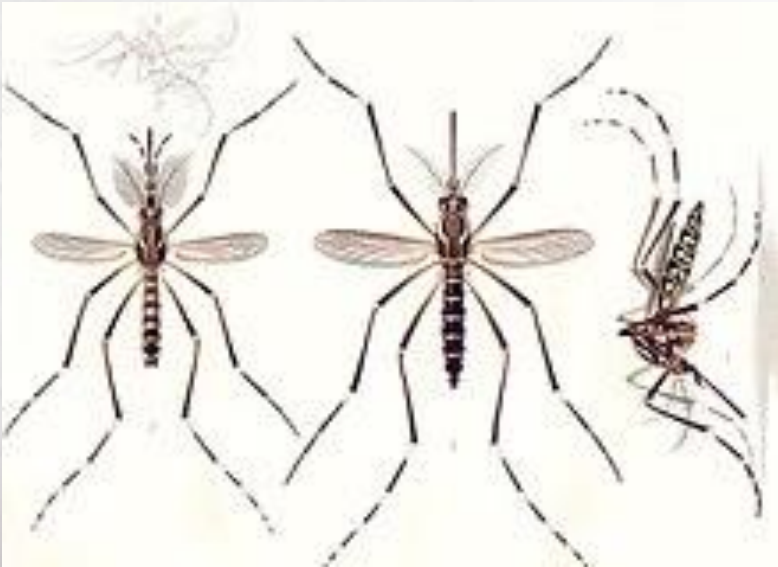
# O&M Goals-Public Health

- Waste water can contain disease causing pathogens: Bacteria, Viruses, Protozoa, Helminths, etc.



# O&M Goals-Public Health

- Waste water can attract vectors.



# O&M Goals-Environmental Health

- Treat contaminants before they reach surface water or ground water:
  - Nutrients-Phosphorous, Nitrates, Organic Overloading, etc.
  - Non-point Source Pollution
  - TMDLs
  - Recreational Water Quality















Before



After



# Operation & Maintenance

- The requirement for operation, monitoring, and maintenance enacted in statute.
- Prescribed in OAC 3701-29 (effective 1/1/2015)
- OAC 3701-29-19: STS Operation and Maintenance Management, and System Owner Education. Outlines Requirements

# O&M Timeline

- BOH's that have established a program prior to effective date of rules may continue provided that the program allows a person to demonstrate required O&M in lieu of BOH inspection.
- Monitoring and assessment may also be performed for real estate transfer programs

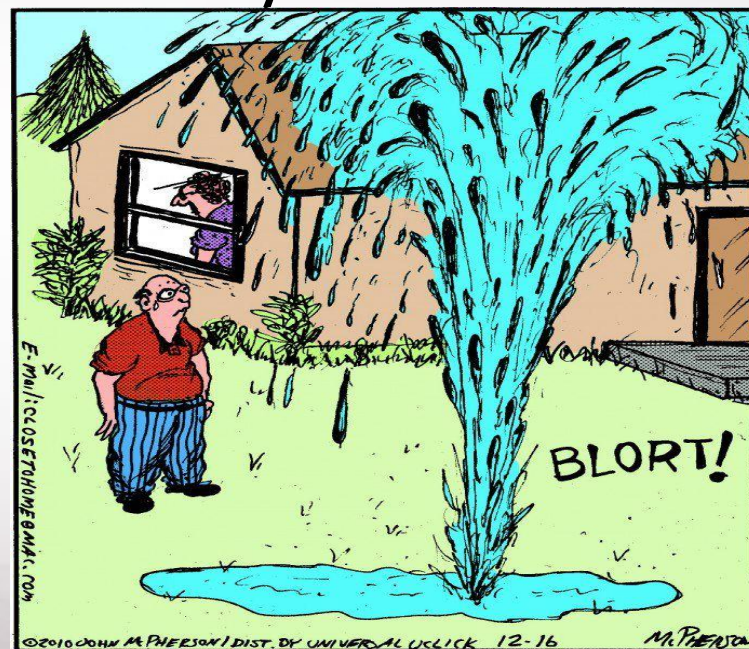


# O&M Timeline

- O&M Management and system owner education required for all systems installed or altered after January 1, 2015.
- All STS that have received coverage under General household NPDES permit (beginning January 1, 2007) shall be included in O&M management plan.

# O&M Timeline

- BOH shall work with interested stakeholders to develop a timeline and process for phasing in O&M for prior installed systems and should consider:
- Risk factors such as system age
- Complexity & risks to public health



**"Rick, I think something is wrong with the septic system. The toilet is flushing kind of slowly."**



# On Paper vs. Reality

- Funding?
- Homeowner & Stakeholder buy-in
- Model Programs and Guidance
- Lack of Political will

# On Paper vs. Reality

- Consequences for non-compliance
  - LHDs & Homeowners
- Quantity & QUALITY of Service Providers
- Public Health implications vs costs



# The reality is...

- Good building sites are rare and expensive...
- Existing dwellings/parcels have limited room for replacement
- Popularity of advanced pretreatment units and alternative systems on the rise...
- Lack of proper O&M=Great implications to Public/Environmental Health...

# Which equates to...

- The need for successful implementation (and sustained O&M programs)
- High demand for qualified service providers
- Need for homeowner education!

# O&M Timeline

- How do we get started?
  - Initial Scope & Outreach
  - Assessing the situation
  - Getting the ball rolling



# O&M Timeline

- Where are we going?
  - Setting Goals & Objectives
  - Identifying stakeholders and their roles
  - Establishing goals and Objectives
  - Convening a stakeholder group
  - Key Questions to consider

# Things to Consider

- Threats to Public/Environmental Health
- Cost (For homeowners, contractors, and regulators)
- Technical Feasibility (Staying Onsite?)
- Public Acceptance Issues

# Things to Consider

- Environmental Sensitivity
  - Impermeable soils
  - Shallow depths to groundwater
  - Rock Layers
  - Hilly terrain with thin soils and steep slopes
  - High density system installations
  - Sensitive bodies of water nearby



# Things to Consider

- Public Health
  - Drinking water wells nearby
  - Recreational waters nearby
  - Effluent surfacing and plumbing issues
  - Potential for rapid groundwater movement
  - Systems old and age and lack of maintenance
  - Illegal System Discharges

# Things to Consider

- Treatment Complexity
  - Electrical and Mechanical Components
  - Heavy Sewage Loads (High Strength Waste)
  - High FOG content
  - Industrial and commercial wastewaters

# O&M Timeline

- What is our current situation
  - Assessing & Analyzing existing conditions
  - Developing a community profile
  - Reviewing regulatory powers & management
  - Assessing public health & environmental risks
  - Analyzing growth, development and future risk



# O&M Timeline

- What is best for our community?
  - Developing or enhancing your management program
  - Selecting a management approach
  - Management framework to address gaps
  - Implementing selected management program
  - Integrating wastewater system management
  - Conducting a reality check
  - Dealing with opposition to management

# O&M Timeline

- How do we make our plan a reality?
  - Program Implementation
  - Consideration of program authority
  - Funding management activities
  - Selecting a management entity
  - Evaluating the program
  - Additional Information & Resources

# Homeowner O&M Concerns

- This leaves the homeowner with many questions where contractors have the ability to ease concerns while also expanding business practices
- More buy in with consistent messaging (LHDs, Contractors, Trustees, additional Stakeholders)
- Knowledgeable about what approved systems used in the area & maintenance requirements



# Positive O&M Messaging

- Consistent positive messaging & homeowner education is key
- Having the same material as LHD helps to reinforce positive messaging.
- Transparency

# Public Education

- EPA Resources:
  - Septic Smart
  - Onsite Wastewater Treatment Systems Manual
- OSU SETLL
- CIDWT
- NOWRA



# Public Education & Participation

- Important for contractors to be knowledgeable regarding local policies and educated before the public
- Consider a common FAQ sheet that can be used within company, as well as, amongst stakeholders.



# Public Education & Participation

- Varying roles amongst stakeholders to help implement a successful O&M program
- Education amongst local government officials
- Streamline communication pathways between Service Providers & LHDs (I.e. Non-renewal of contracts)

# Public Education & Participation

- Hold multiple stakeholder meetings, town halls, open forums, radio appearances, newspaper articles, etc. to inform the public, and continue to keep them informed.
- Stagger Mailings-Inform local companies for preparation
- Prepare for a lot of calls!

# Public Education & Participation

- Message carefully to reduce initial backlash
  - Program is intended to document the maintenance that should already be occurring
- Explain the thought behind, and the process of enrolling existing HSTS to reduce questions about fairness of why some homeowners are being enrolled now vs. those that are not

# Public Education & Participation

- Consider joining with neighboring LHDs to conduct CEU trainings to provide consistent messaging.
- Request manufacturers to come speak on the importance of the upkeep of their products



# Performance

- Use hands on training to walk homeowners through the do's and don't's for their specific HSTS
- Tailor education materials for Homeowners specific HSTS
- Simple documents for O&M inspections to be reported with standardizing results.

# Record Keeping, Inventory, & Reporting

- Barcoding permits can increase accuracy and reduce time and input error.
- Electronic forms from LHDs with dropdown options for service providers to report on can help standardize responses
- Fields to consider: System type, frequency, status, etc.

# O&M Permit Conditions

- Can include conditions of a product approval (Components approved by TAC)
  - Service Provider or Homeowner that's received manufacturer training
- Service reports must include minimum information as required for a specific technology or product, BOH Requirements, for every component (Provided to BOH w/in 60 days)

# O&M Permit Conditions

- Operational permits issued with terms and conditions that need to be met during the term of the permit. (Can not exceed 10 years)
- Can vary by system type (Mound, Tank to leach, etc.)
- Can vary by system complexity (Mechanical vs Non-Mechanical)



# O&M Permit Conditions-Leaching

- May Include:
  - Monitoring of liquid level in trenches
  - Management of Flow Diversion (resting)
  - Checking for Surface Water Infiltration
  - Monitoring mechanical components
  - Checking surface grade for cover, erosion, seepage
  - Any other O&M Requirements specified by manufacturer

# O&M Permit Conditions-Mound

- Checking for vegetative cover, erosion, settling
- Flushing Distribution Laterals
- Checking for ponding in distribution area
- Monitoring dose volume and operating pressure
- Checking for surface water infiltration
- Review event counters elapsed time meters, flow meters, alarm conditions, where present

# O&M Permit Conditions-Drip

- Drip Assurance
- Inspected annually (minimum)
- Measure & Record Scum & Sludge Layers
- Activate/Verify Float Settings
- Hydraulic Unit Insulation
- Check filters flow differential pressure, clean
- Flow meters, event counters, pump amperage, control panel, air release valves, scouring, etc.

# O&M Permit Conditions-LPP

• Must Have:

- Observation ports & Turn-Ups
- Shut-off mechanisms
- Check for ponding in distribution area
- Surface water infiltration
- Vegetative Cover, Erosion, Settling
- Flushing of laterals
- Review event counters, time elapsed meters, flow meters, alarm conditions, operating pressure



# O&M Permit Conditions-Spray

- Must maintain service contract
- Conditions of the product approval
  - (manufacturer requirements)
- O&M must occur at least semi-annually.
  - (manufacturer or LHD may require more often)
- Inspection forms provided to system owner and LHD
- Additional conditions as part of permit
  - (Clean spray heads, nozzles, verify throw distance, pressure, etc.)

# O&M Permit Conditions-NPDES

- Maintain O&M Permit with LHD
- Operate HSTS under Service Contract
- Annual Diagnostic Sampling
- Permit Renewal

# Verification of O&M

- BOH may conduct compliance inspections for the purpose of oversight of installers, haulers, service providers.
- May still require fee for management of program. (Staffing time, enforcement, postage, software licenses, etc.)

# Financial Assistance & Funding

- LHDs can apply for:
  - Water Pollution Control Loan Fund (WPCLF)
  - EPA 319 Grant

# Financial Assistance & Funding

Homeowners can apply for:

- CDBG (Community Development Block Grant Funds)
- CHIP (Community Housing Improvement Program)
- USDA - Rural Development in Ohio
- HUD – Title 1 Home and Property Improvement Loans
- Operation Homefront



# Promoting Compliance

- A little bit of annual maintenance goes along way. (Health Risks & Financially)



# Contact Information

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