

# Operation and Maintenance Inspections: Thorough routine visits and handling the unexpected

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@wakegov



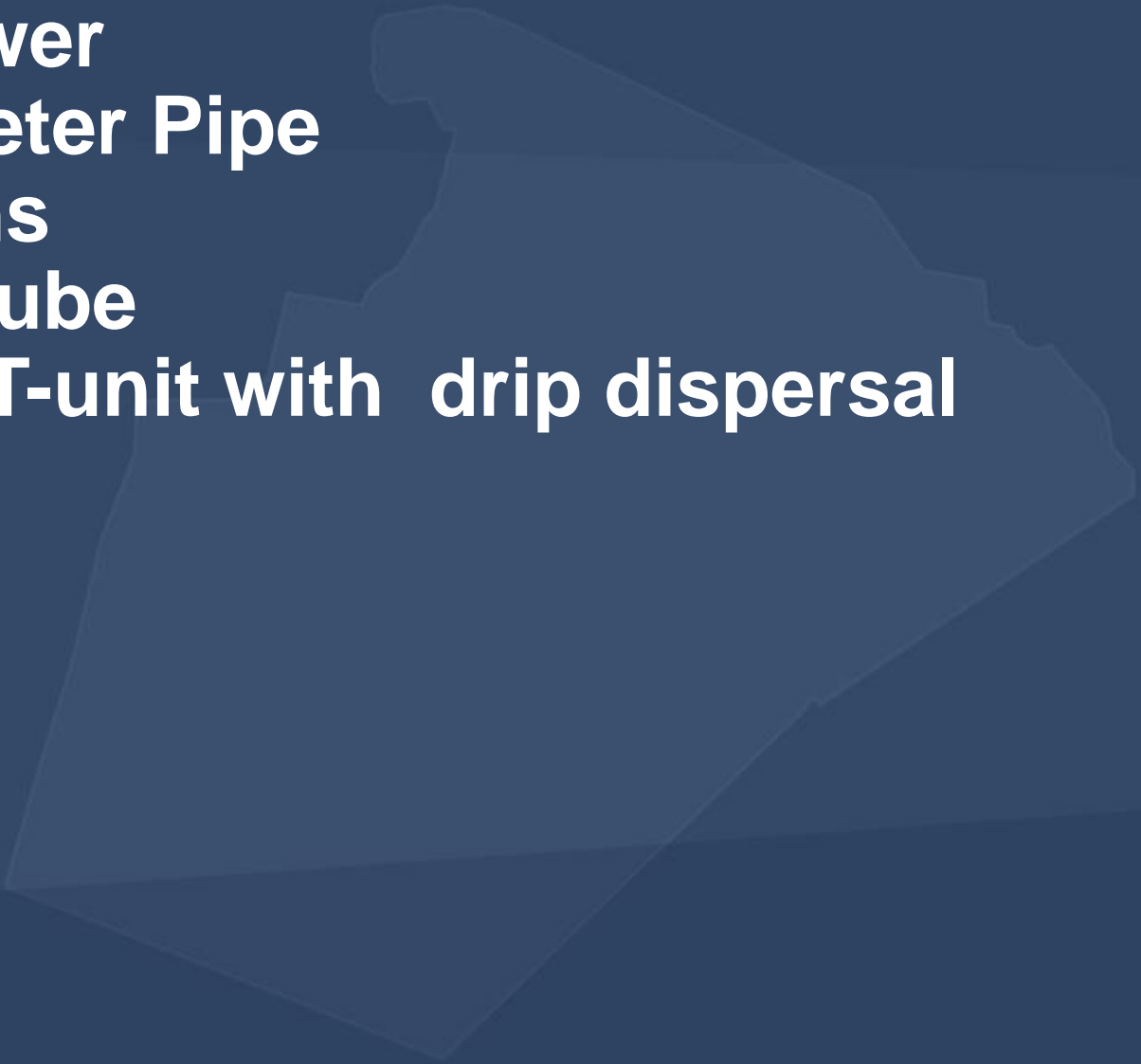
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# Unofficial Title: What am I looking at and how to I inspect this?



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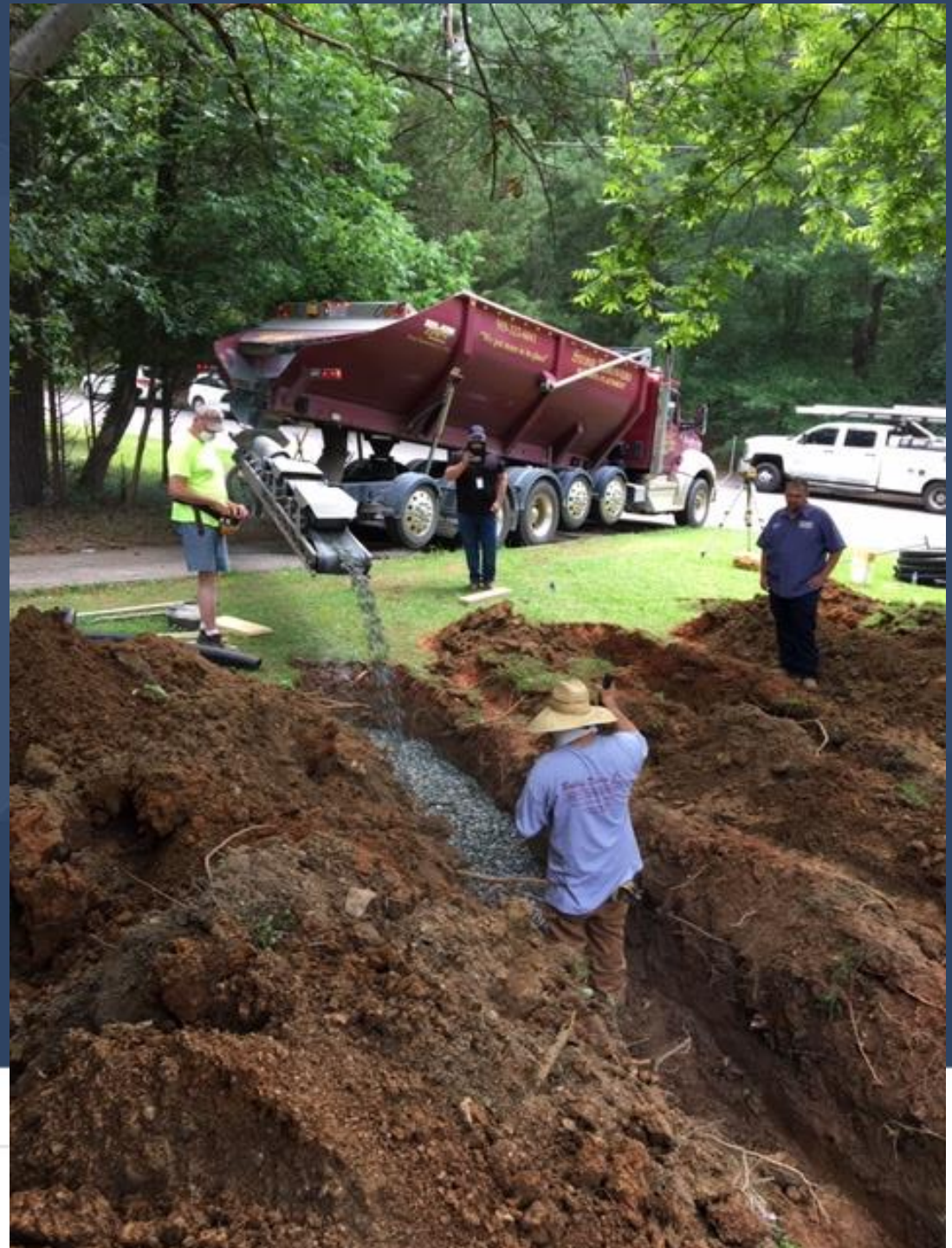
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1. **Stone Thrower**
  2. **Large Diameter Pipe**
  3. **LPP Systems**
  4. **Propak Biotube**
  5. **Advantex RT-unit with drip dispersal**

## 1. Stone Thrower

### Brief site history:

- Site evaluated and denied permit due to expansive clay soils
- Site was permitted with LPP system
- System malfunctioned 2015
- WC LSS determined site unsuitable due to expansive clay 2019







## 2. Large Diameter Pipe

### **Accepted Wastewater System Approval Number: AWWWS 2020-01**

Please remember, if an accepted product fits in the permitted trench locations, with no change in trench depth or distribution method, then it may be substituted for gravel or another accepted product without prior approval from the local health department. If the accepted product does not fit in the permitted trench locations, then an application must be made at the local health department to modify the permitted design

Trish Angoli, PE

# The Man

If you have any  
questions,  
speak up...





# Overview

Site assessment by Wake County EHS,  
Flagging for traditional system, modified for  
LDP installation within identical footprint.





Trench excavation, laser guided installation





Pipe joints snapped together and joined securely with screws before covering entire seam.



Line 1 connected to d-box, pvc pipe into pipe  
(extends 4 to 6 in past end cap, secured with  
tape.





### 3. LPP Systems





# K-Rain Valve





# K-Rain Connected







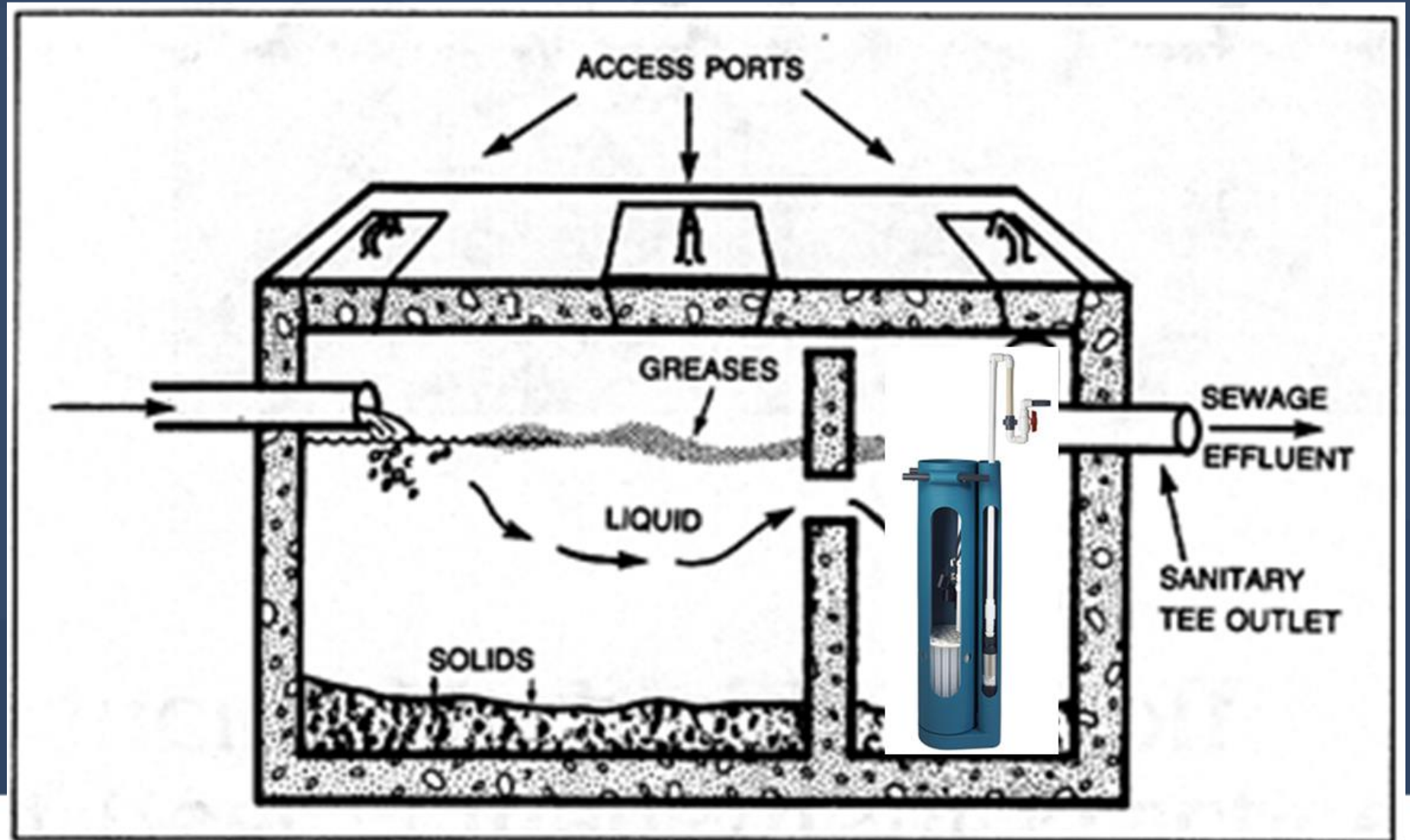
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## 4. Orenco Propak

Controlled Demonstration  
Approval CDWS 2013-01

Orenco® Systems  
Biotube® Propak™ Pump  
Package.



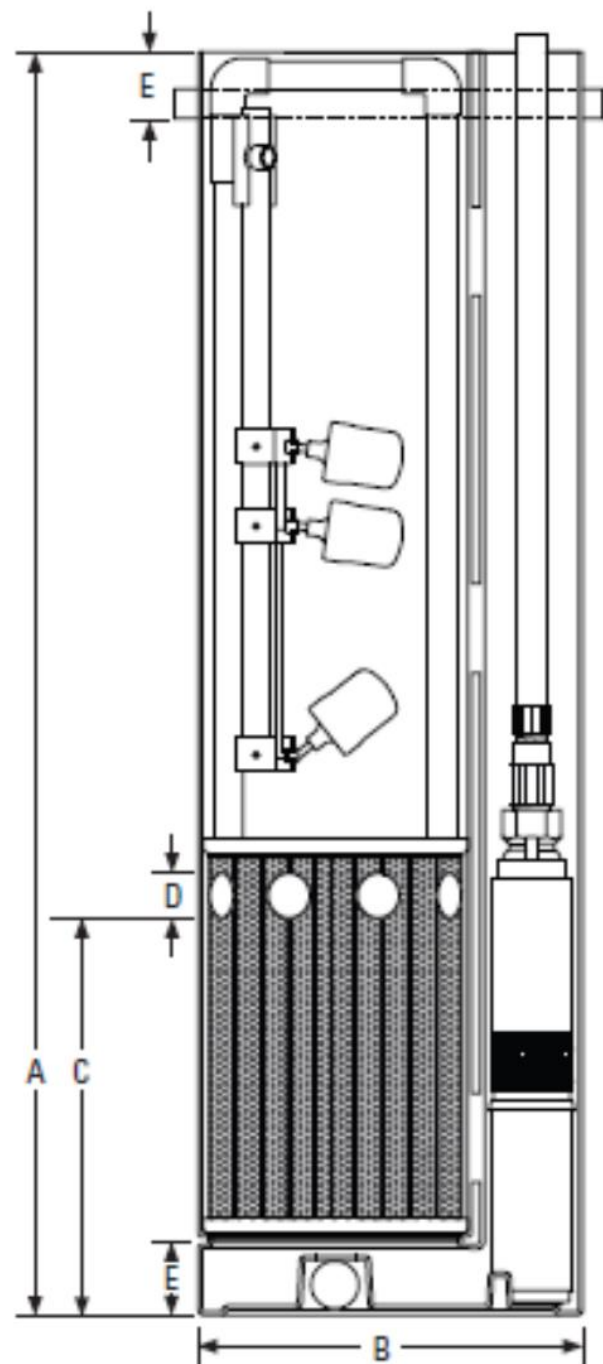
## ProPak™ Pump Vault

### Materials of Construction

Vault body	Polyethylene
Support pipes	PVC

### Dimensions, in. (mm)

A - Overall vault height	57 (1448) or 68 (1727)
B - Vault diameter	17.3 (439)
C - Inlet hole height	19 (475)
D - Inlet hole diameter (eight holes total)	2 (50)
E - Vault top to support pipe bracket base	3 (76)
F - Vault bottom to filter cartridge base	4 (102)



Courtesy of Tim Crissman



# AWT



# Limitations/Conditions

**Residential use only**

**50 permits maximum (state-wide)**

**Two-compartment tanks only**

**Daily design flow is 720-gallons or less (maximum 6-bedrooms, 12-occupants)**

**5-year manufacturer warranty pump for materials and workmanship defects**

- **System sizing in accordance with Residential use only**
- 50 permits maximum (state-wide)
- Two-compartment tanks only
- Daily design flow is 720-gallons or less (maximum 6-bedrooms, 12-occupants)
- 5-year manufacturer warranty pump for materials and workmanship defects
- System sizing in accordance with 15A NCAC 18A .1900 regulations

**15A NCAC 18A .1900 regulations**

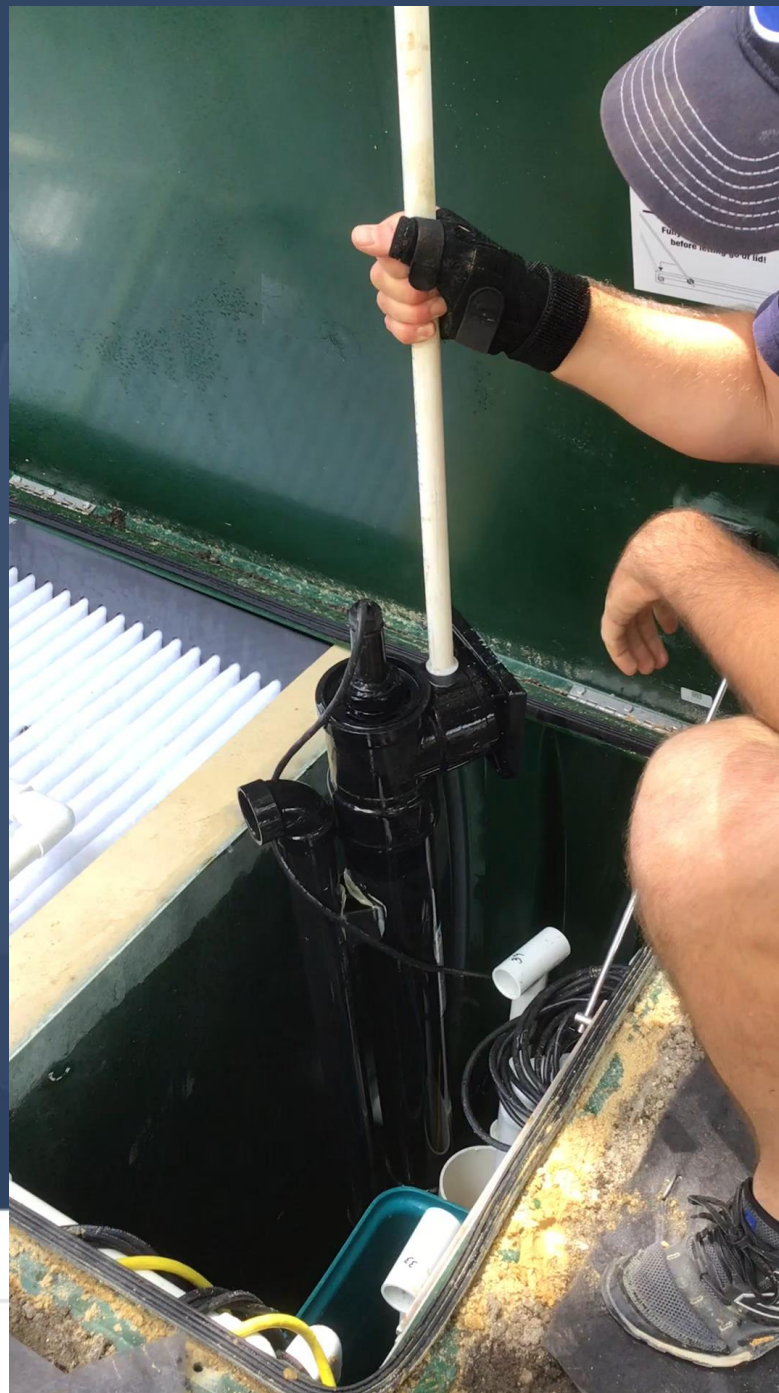


## 5. Advantex RT-unit with drip dispersal





# UV



## Tubing Installation Methods: Efficient Machinery





## Unskilled laborer





# Wet Spots

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# Air Release Valve

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# Questions?

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