Potable Water Connection (Airgap):

- Potable (or other alternative water supply) is added when insufficient graywater is created during the day.
- Potable water received via minimum 2" airgap with a 1" supply, into 2" receiving pipe with vector screen.
- Water outlet inside the basin is above the level of the pipe passing into the basin, creating a trap, preventing gas / odor egress.
- Makeup water supply controlled by 24v AC irrigation solenoid valve, with electrically inline float switch inside the basin as failsafe control.

Pump Connection (Union):

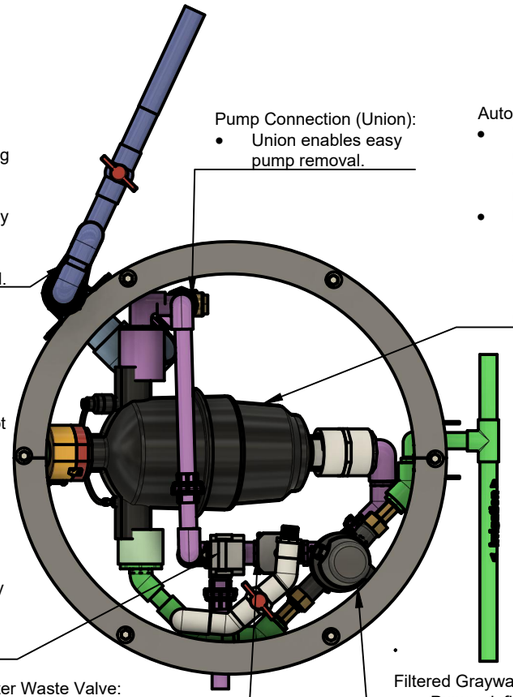
- Union enables easy pump removal.

Automatic Self Cleaning Filter:

- When pressure across filter decreases below threshold, filter waste valve is opened, and filter rotated.
- Pumped graywater is passed through 85% of the filter, cleaned, and then returns backwards through the remaining 15% of filter space, backwashing the filter waste to 3" waste.

Pumped graywater bypass / failsafe:

- Motorized valve, with capacitors, Normally Open (NO). If controller is not operational for any reason, this valve remains in the open position. If the 110v AC circuit has power, any water in the basin will be pumped to waste unless the IrriGRAY controller is running in Auto Mode.
- If enough graywater has already been irrigated during the day (determined by IrriGRAY Controller settings), this valve is opened and all remaining water for the day pumped to waste.



Filter Waste Valve:

- This valve opens when the automatic filter cleaning process starts.
- All filter waste is pumped to waste.

Filtered Graywater to Irrigation:

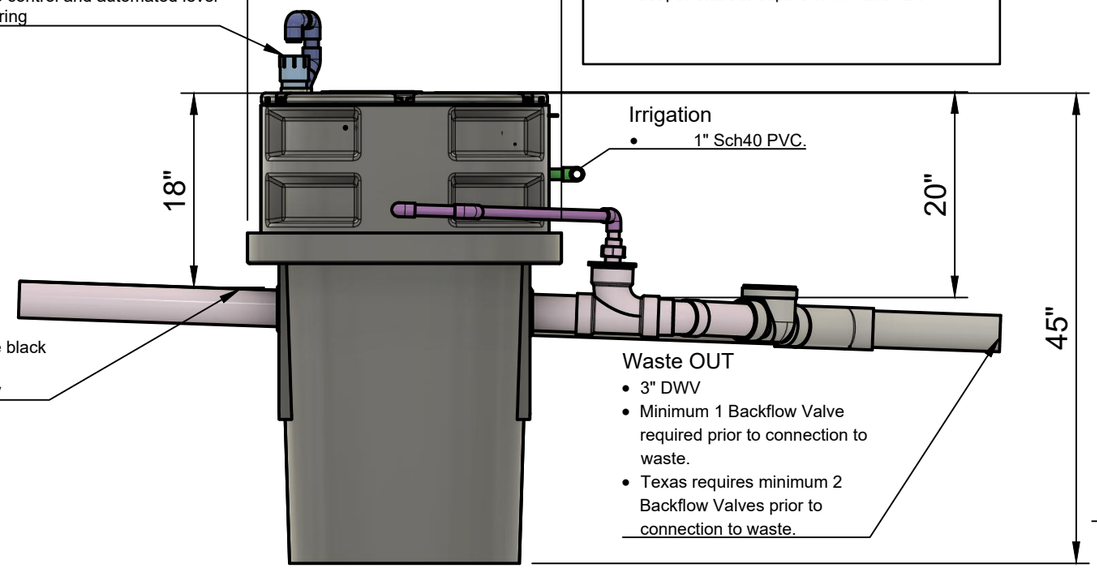
- Pumped, filtered water passes through flow meter, with hall sensor (1 pulse per gallon).
- Filtered water sent to appropriate irrigation zone per daily weather based evapotranspiration / plant coefficient * zone plant density.
- 1" Sch 40 Outlet.

Graywater IN

- 3" DWV
- Recommended sources include Showers, Laundry, Tubs, A/C Condensate, Foundation Drains.
- Avoid Lavatories / basins for new construction to maintain adequate black water flow.
- Check local codes for applicability

Airgap Assembly - Make Up Water Supply

- 2" Sch 40 Receiving Pipe
- Minimum 2 x water supply pipe size as air gap.
- Vector screen included.
- Installer to supply / connect 24v AC Irrigation Solenoid Valve as supply control.
- Master valve not required due to float level switch in basin acting as failsafe control and automated level monitoring



Graywater Stub Out Depths:

- The recommended TOP OF GRAYWATER INLET PIPE depth from FINISHED SURFACE is 18".
- At this level the top of basin will be 1" above finished surface, to avoid debris falling into the basin when the lid is removed.
- The top of the lid will be 2" above finished surface.
- Additional 12" Risers can be added, allowing deeper stubout depths of 30" and 42".

Irrigation

- 1" Sch40 PVC.

Waste OUT

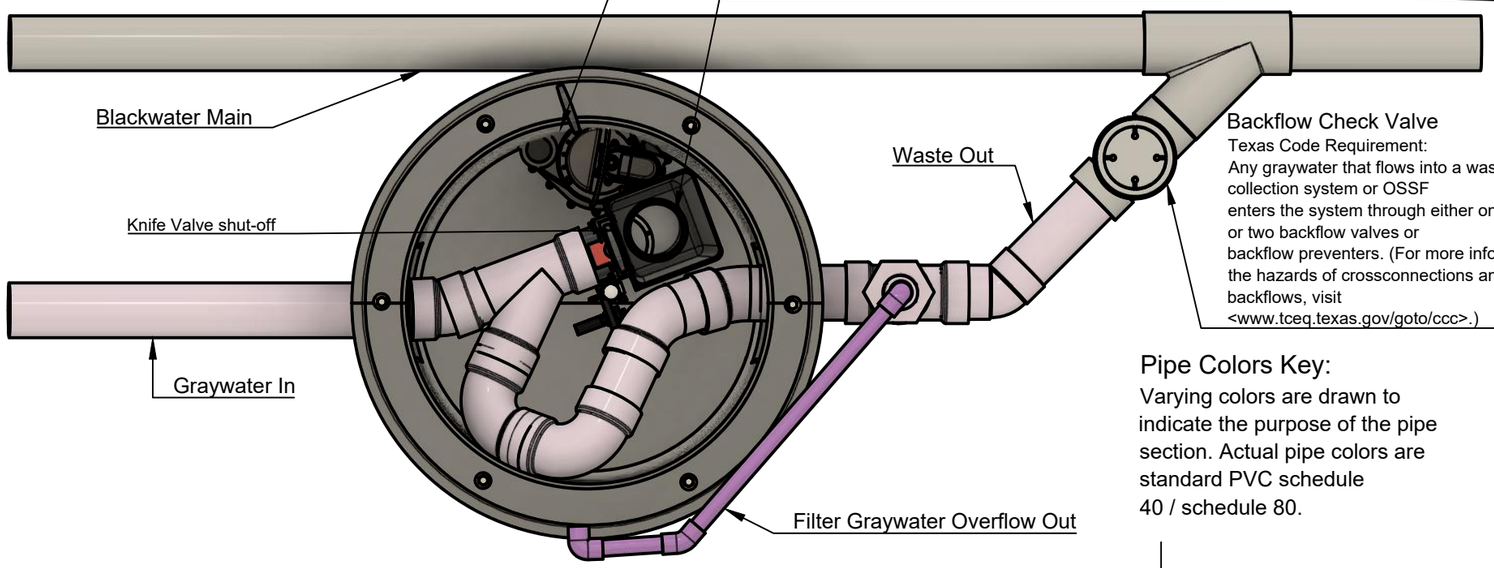
- 3" DWV
- Minimum 1 Backflow Valve required prior to connection to waste.
- Texas requires minimum 2 Backflow Valves prior to connection to waste.

Automatic Graywater Pump:

- Float switch activates with approx. 10 gallons of water in basin.
- If controller is not working for any reason, pump continues to receive power and pumps to waste, via the failsafe bypass valve located in the extension plumbing assembly.
- Pump outlet includes 12" open tube pointing down, with jet ofwater agitating contents in the bottom of the basin. Agitation ensures solids do not settle and are sent to filter.

Pre-Filter:

- Approx. 15 Mesh nylon filter bag inside open holder with side walls.
- For typical residential use, bag should be emptied annually.
- If the bag fills prematurely, graywater can continue into the basin by overflowing the side walls of the holder.



Backflow Check Valve

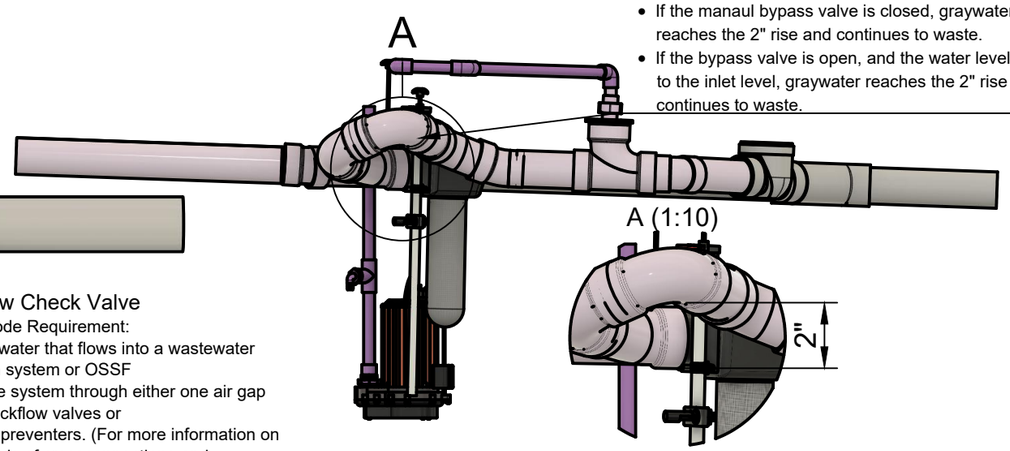
Texas Code Requirement:
Any graywater that flows into a wastewater collection system or OSSF enters the system through either one air gap or two backflow valves or backflow preventers. (For more information on the hazards of crossconnections and backflows, visit <www.tceq.texas.gov/goto/ccc>.)

Pipe Colors Key:

Varying colors are drawn to indicate the purpose of the pipe section. Actual pipe colors are standard PVC schedule 40 / schedule 80.

Bypass branch of 3" DWV has 2" rise above grade:

- If the manaul bypass valve is closed, graywater reaches the 2" rise and continues to waste.
- If the bypass valve is open, and the water level rises to the inlet level, graywater reaches the 2" rise and continues to waste.



IrriGRAY Single Collection & Filtration Graywater System

Approved by
Paul James 12/13/2023

Rev.	Date of issue	Sheet
2.1	12/13/2023	1/1

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