

Bubble Screens

DESIGN GUIDELINES

- 1. Flow velocity 0.4 fps ave. velocity thru openings. Not measured some distance above the screen face.
- 2. Screen submergence 3-8"
- 3. Outlet weir crest set a minimum of 3" above screen face to ensure this minimum submergence throughout all flows.
- 4. Bypass is either overland channel or by conduit.
- 5. Velocity in riser pipe is kept between 1.5 to 2.5 fps.
- 6. System requires between 3"-6" of head to operate.

How it works

- Flow thru the screen at a point is not constant. The turbulence causes localized flow reversals that dislodge impinged trash resuspending it into the water column. Trash randomly moves about in the water column until it is caught up in the bypass flow which it then exits the screen.

THE FIRST ATTEMPT SCREENED FLOW 2 CFS





LATEST DESIGN
SCREENED FLOW 1.8 CFS



Terrestrial Predator Proof 10 gage Lid With Padlock



Screened Water Outlet weir



4" Bypass Conduit



Bypass Pipe Slide Gate



Open Channel Bypass screened flow 4 cfs



Inlet Box



Double Barrel Risers



Submergence Control Weir



Observations

- Fish have the ability to move off the screen by using either bypass or travel back thru inlet pipe.
- Screen can handle large amounts of trash without significant plugging as long as bypass flow is maintained.
- If screen plugs the result is less diverted water which motivates irrigator to clean screen.
- Irrigators in all cases have stated that the screen requires little to no maintenance due to trash.