

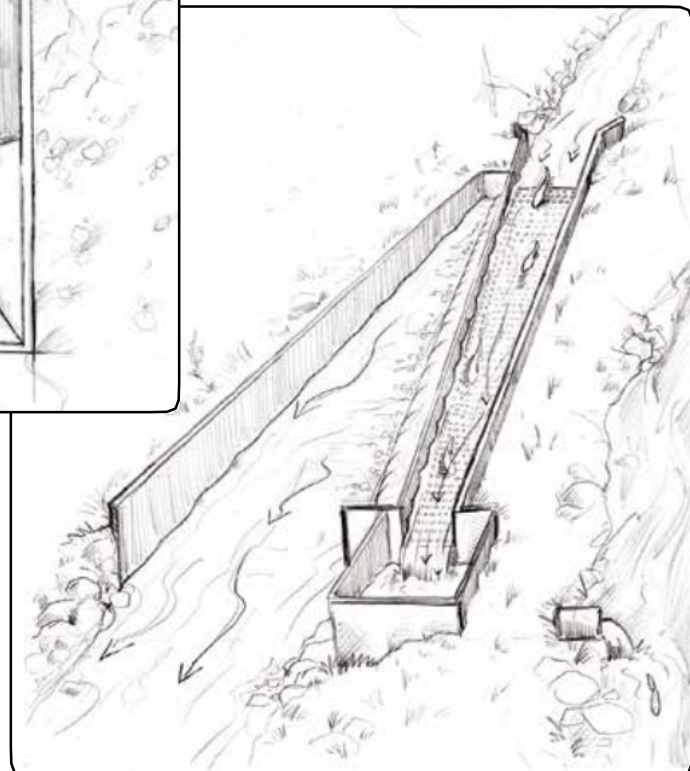
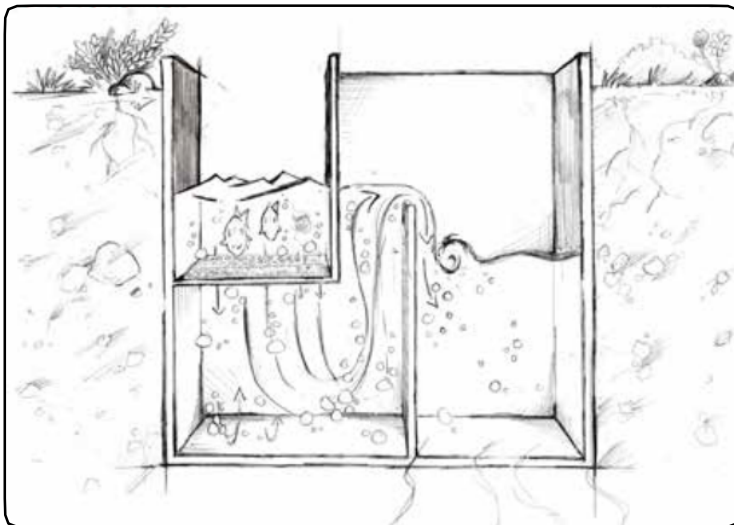


How the Farmers Screen Works

The Farmers Screen uses the physics of water movement to screen water while safely sweeping fish and debris back to the river or stream. Basically, water enters the screen at a high velocity (4 to 6 feet per second) while water moves very slowly through the screen vertically (0.1 to 0.4 feet per second). These velocities keep the fish and debris moving across the screen while keeping impingement from occurring. There are several components to the Farmers Screen that make it work:

COMPONENTS

- **Taper Wall:** The taper wall decreases the cross-sectional area of the screen as the amount of water decreases. This allows the velocity and depth of the water to remain constant as water is taken through the screen.
- **Weir Wall:** The weir wall keeps the depth of water over the screen and the draw through the screen constant. The combination of the taper wall and the weir wall keep the velocity across the screen surface high and the velocity through the screen very low.
- **Cleaning Water:** A percentage of the total flow must be available for cleaning. Typically this is going to be 10 to 15 percent of diverted flow.
- **Screen Material:** The Farmers Screen uses a proprietary 50% open area stainless steel screen material.
- **Inlet:** A proper inlet allows for steady-state uniform flow coming onto the screen. It is important for the water entering the screen to have minimal turbulence.
- **Attenuation Bay:** The attenuation bay allows the screened water to be collected below the weir wall and moved into the conveyance system (pipe or canal) without affecting the hydraulic function of the screen.
- **Fish/Debris Return:** The fish/debris return allows water, fish, and debris to sweep off of the end of the screen and into a plunge pool.



The design must allow for the water to fall freely off of the screen structure without affecting the hydraulic function of the screen.

