

# Hydro-Static® Screen

High Capacity, Non-Powered Wet Weather Screen



## Cost-effective system provides high capacity CSO overflow protection.

The Hydro-Static® Screen is a non-powered screening technology suitable for sites with infrequent overflows. With a small footprint and a low capital cost, the Hydro-Static® Screen offers an economical, customized, and sustainable screening solution for projects that require high capacity but have limited budgets. The Hydro-Static® Screen provides cost effective floatables control with partial cleansing capabilities.

### Benefits

- No power and no moving parts
- Customized solution for each location / structure
- Corrugated screen panels increase capacity without increasing footprint
- Coated screen panel resists grease buildup
- Patented flow-modifying components provide partial cleansing
- Built in emergency bypass

### Applications

- Floatables retention for infrequent wet weather induced overflows
- Retrofit or new CSO / SSO screening facilities
- Retention of aesthetic pollutants prior to wet weather storage facilities

### Performance

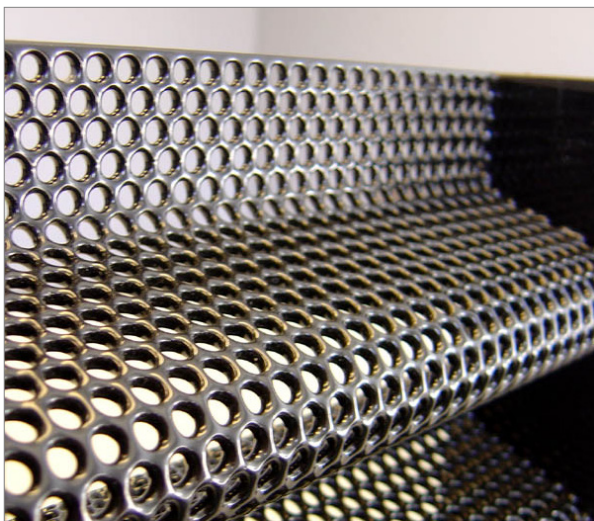
- Retains debris 4mm or 6mm in diameter
- No screenings handling needed, debris stays in the collection system

### How it Works

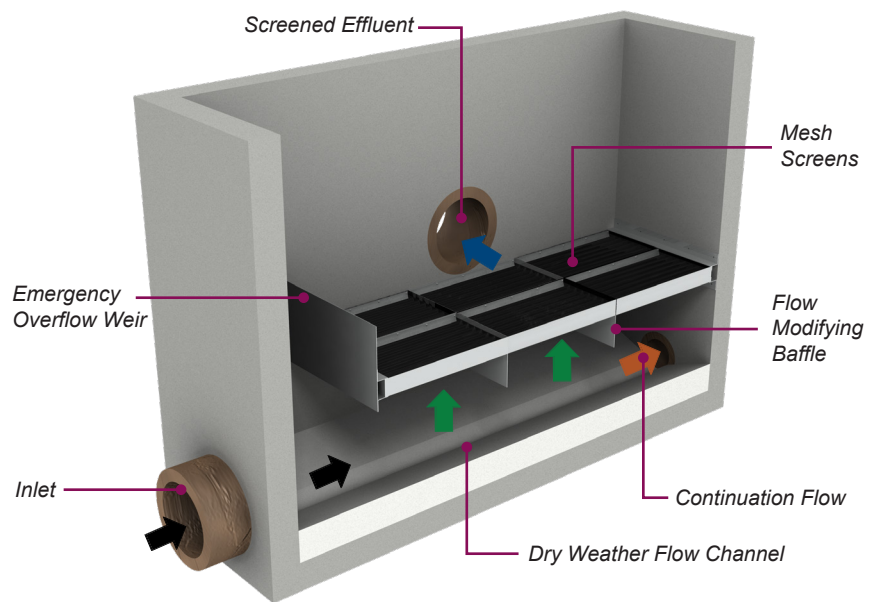
During dry weather conditions the flow to the treatment works will pass beneath the screens unobstructed. During a storm event the inflow rate will exceed the outflow rate causing water levels to rise within the chamber and spill through the screens.

The Hydro-Static® Screen is mounted over the dry weather flow channel (wet side of the diversion weir) so that the flow passes up and through the screen during a storm event (green arrows). Solids and floatables are trapped below the screen and returned to the sanitary continuation flow (brown arrow). Screened effluent is discharged to a receiving waterway (blue arrow).

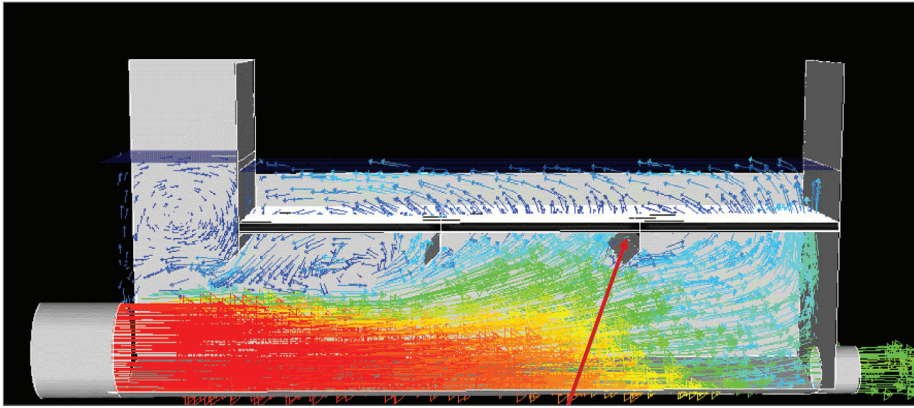
The flow modifying baffle design on the base of the screen (Up Flow configurations only) creates re-circulating flow patterns within the chamber to provide a partial cleansing effect on the screen. An emergency overflow weir is incorporated into the screen should the peak design flow be exceeded.



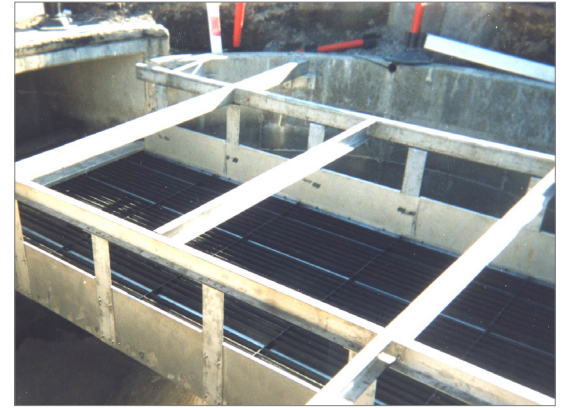
Debris does not stick to the polymer or powder coated corrugated mesh screens.



Up Flow Configuration Shown



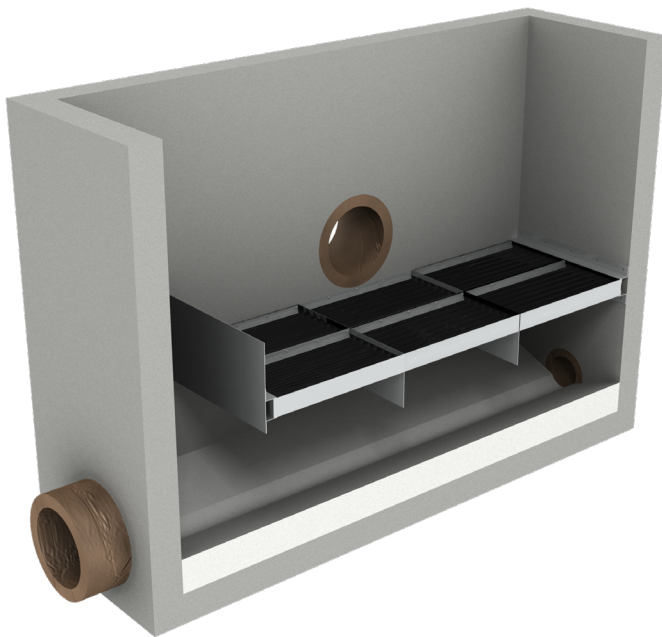
*Recirculation of flow paths as shown through CFD modeling demonstrates the partial cleansing capabilities*



*The Hydro-Static® Screen is well suited for retrofits*

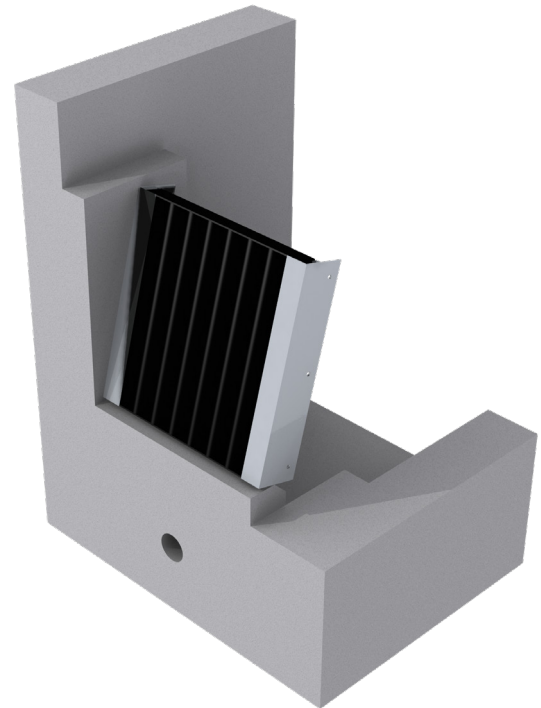
## Hydro-Static® Screen Design

The Hydro-Static® Screen is available as either an Up Flow Screen or a Through Flow Screen.



### **Up Flow Screen**

The Up Flow Hydro-Static® Screen is mounted horizontally over the dry weather flow channel so that the flow passes up and through the screen in a storm event.



### **Through Flow Screen**

The Through Flow Hydro-Static® Screen is offset from the vertical to encourage screenings to drop away from the corrugated mesh once the storm has subsided.

## Maintenance

Maintenance is typically required after each storm event, however the patented flow-modifying baffles provide partial cleansing to minimize maintenance requirements.

The Hydro-Static® Screen is unique because of flow modifying components which enhance the naturally occurring recirculation patterns and therefore reduce the blinding effect when the screen is in operation.

The mesh screen panels are coated in a polymer or powder coating to keep debris from sticking to the screen.

## Learn more

To learn more about how the **Hydro-Static® Screen** can help, visit [hydro-int.com](http://hydro-int.com), or contact us:

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