

Constant Q Pond Outlet

Product Note

Description

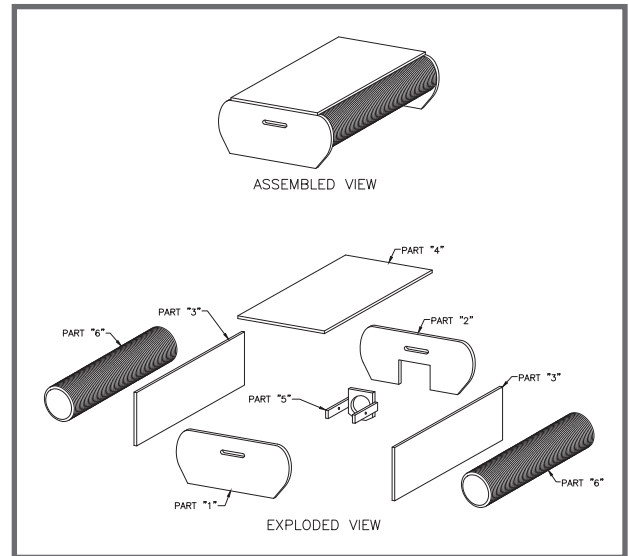
The Lane Constant Q Pond Outlet (CQ) is a unique and extremely cost effective storm water BMP which significantly improves the quality of the water being discharged from ponds. The CQ is a constant discharge device that draws water from the highest level of a pond, insuring that only the cleanest water is discharged.

The Lane Constant Q Pond Outlet is the fixed depth orifice cousin of the variable depth Reverse Q. Whereas the Reverse Q orifice depth changes inverse to the depth of the pond, the Constant Q depth remains the same regardless of pond depth or volume. This fixed orifice depth feature allows for a much shallower float body, allowing the Constant Q to be utilized in even the shallowest of ponds.

The Lane CQ is designed to be utilized in even the shallowest ponds. The smallest CQ, the 1.5" model requires only 3.5" of draft, meaning that it will function in only 3.5" of water above the bottom of the CQ float body.

General Notes

- The Lane Constant Q Pond Outlet is designed to be used with either a straight pipe through the berm of the pond, or attached to a riser structure. In either case, the CQ is supplied with the necessary flexible coupling that will allow for the connection to and smoothwall pipe outlet.
- The CQ is available in three sizes: 1.5", 2.0" and 2.5".
- The CQ is constructed from dual wall corrugated polyethylene pipe and 0.5" thick HDPE sheet. The dual wall pipe conforms to AASHTO M-252, type S. The pipe floats are filled with a closed cell expanding urethane foam (U.S. Coast Guard Marine Foam). The outlet lever arm is constructed from Schedule 40 PVC pipe conforming to ASTM D2566.
- Lane Constant Q is supplied with three orifice plates. The two extra orifice plates can be drilled to the appropriate diameter for additional projects.





Constant Q Sizing

The Constant Q is very easy to size. The model and orifice size can be determined from the chart below. Determine the desired flow rate and chose the model and orifice size which comes the closest to the target rate.

Constant Q Discharge Rates (Cubic Feet/Day)					
1.5" Model		2.0" Model		2.5" Model	
Orifice	Ft3/day	Orifice	Ft3/day	Orifice	Ft3/day
0.5"	225	1.4"	1840	1.8"	3410
0.6"	310	1.5"	2110	1.9"	3780
0.7"	420	1.6"	2410	2"	4180
0.8"	540	1.7"	2690	2.1"	4600
0.9"	680	1.8"	3010	2.2"	5040
1.0"	830	1.9"	3280	2.3"	5500
1.1"	990	2.0"		2.4"	5980
1.2"	1170			2.5"	6230
1.3"	1370				
1.4"	1580				
1.5"	1720				

Constant Q Depth Requirements

The Constant Q is designed to operate in the shallowest of ponds. The draft for each of the models is below:

Constant Q Draft (in inches)			
Size	1.5"	2.0"	2.5"
Draft	3.5"	4.2"	5.0"

The Constant Q requires only 3.5" of water (for the 1.5" model) in order to float and discharge water from the pond. This means that the landing pad on which the CQ is designed to rest upon needs to only be 3.5" below the invert of the pond outlet.

General installation recommendations are the same as that for the Reverse Q and can be found on the Lane Enterprises website:

<http://lane-enterprises.com/Reverse-Q-Pond-Outlet>