ENVIRONETICS, INC.

DIRECTOR™ FLOATING BAFFLE SYSTEM

Manufacturers of
Environmental
Control Systems

Installation, Operation & Maintenance Manual

Carbon Run, Site# 42
Shamokin, PA

1201 Commerce Street, Lockport, Illinois 60441 815-838-8331 FAX: 815-838-8336 envnet@aol.com

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

Receiving, Handling & Storage Instructions

Baffles will be shipped in protective wooden crates.
Crates should be pulled to the rear of the truck by attachment to the runners of the skids. The crates should then be lifted off the truck using a fork lift truck or front end loader of sufficient capacity. Maximum weight of crates is approximately 2,500-3,000 lbs.

If the baffle is not going to be installed immediately, crate(s) should be stored in a warehouse or shelter out of direct weather at ambient temperatures above 60°F.

If the baffle must be stored on the job site, place crate(s) out of direct sunlight. If a shaded area is not available, the crate(s) should be covered with a waterproof reflective cover, (PVC or Polyethylene). Leave an air space between this cover and the crate(s). Baffles should be left covered until they are ready to be installed.

Care should be exercised in cutting the crating bands as they are under tension and will snap and spring open. When the crates are opened, the accordion folds of the baffle will be apparent.

NOTE: Director Floating Baffles are manufactured from thermoplastic materials which are subject to blocking due to heat or pressure. Due to the black color, when the baffle is exposed to direct sunlight the material will heat up to well above ambient temperatures (e.g.,160° to 180°F) This may cause sticking between layers, especially when walked on, etc. Leave material covered until ready to install.

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

*** Before uncrating baffle(s), read these instructions carefully and refer to notations on shipping crates. ***

Shipping Crate Labeling

All crates are labeled to show contents. Information includes baffle size, section number (if applicable), and any special details of that section. This information will be listed on the crate and will be duplicated on the baffle flotation collar:

Item	Example
Baffle No.:	1
Baffle Length:	820'
Baffle Section:	A
Section Length:	275'
End Types:	Top of Crate - 3:1 Miter Bottom of Crate - Vertical Bolt Through
Special Details:	Window

This example indicates this crate contains Section A equaling 275' of the 820' long Baffle #1 and this section has a 3:1 mitered end (will come out of the crate first) and a vertical bolt through end and a flow through window.

Note: Refer to project drawings for information on the correct placement of each baffle.

Boat Requirements

Boat(s) should be large enough for 2 men plus several concrete anchors. Ideally, one boat should be a flat decked work/pontoon type. The boat used for towing the baffle into place should have a motor.

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

General Installation Procedure

1. Baffle should be installed on a day with minimum wind velocity.

2. Place the baffle crate(s) on the back side of the berm approximately 10' behind the shore anchor point. Crate(s) should be placed parallel to the berm. Remove the top three 10' long side planks of the crate on the side facing the lagoon. The first end connector will be accessible at the top of the crate. Pull the end connector section to the shore of the lagoon. Carefully transfer the baffle from the crate to the lagoon berm. The baffle should remain accordion folded on the berm, one layer deep. Exercise care during removal to prevent tearing or abrasion of the baffle material.

   To prevent damage to the baffle material, do not drag the baffle along a rough surface.

   The baffle sections must not be twisted. The flotation collar should be completely exposed on the shore and any twists should be clearly visible. If the baffle is twisted as it is put into the lagoon, the twists will be very difficult to remove since the entire baffle will need to be rotated while in the water.

   The baffle skirt has been folded and tied to flotation collar to ease towing across lagoon. Do not cut any of these tie lines until the baffle has been towed across lagoon and you are ready to install the bottom anchors. Cut these ties only as the bottom anchors are attached and lowered.

3. Loosely attach the baffle to one berm anchor. Attach the other end of the baffle to the boat. From the shore, feed the baffle float sections into the water and slowly tow the baffle to the opposite shore. Loosely attach the baffle to the opposite shore berm anchor.

4. After baffle is attached to the berm anchors, bottom anchors can be installed. Start at one end (toe of berm) of the baffle. Locate the first anchor lifting line and cut the ties on either side. Pull the anchor lifting line until the bottom anchor quick connect is accessible. Attach the bottom anchor to the bottom tension member with the quick connect, then lower the anchor to the bottom with the anchor lifting line.
(The anchor lifting line is left in place for anchor repositioning or removal.)
While installing anchors, care should be taken to keep the baffle in a straight line is maintained. Work from one end towards the other, pulling baffle slack in the direction of travel. Remove ties along the baffle collar until the next anchor lifting line is located. Repeat this procedure until all anchors are in place.

   Note: Bottom anchors should weigh a minimum of 100# each, for unlined lagoons. Environetics suggests the use of concrete filled 5 gallon plastic buckets with an eyebolt set into the concrete for attaching to the bottom chain. For lined lagoons Environetics suggests the use of a 13" to 14" tire filled completely with concrete with an eyebolt set into the concrete for attaching to the bottom chain. The minimum weight for this anchor should be between 200 to 300 lbs.

5. Once all anchors are connected and full operating water level are reached, final adjustments to the berm anchoring chain/cable sets should be made. Adjust collar tension in small increments. Increase tension by hand or with a "come-along" only. Allow time for the baffle to adjust to the change. Repeat procedure as necessary. Berm anchoring hardware provides secondary tension to maintain the baffle's position in the lagoon and reduce lateral movement. Some lateral movement or "bowing" is permissible and within product design specifications. Do not pull the baffle into a straight line using power equipment (winch, pickup truck, backhoe, etc.).

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

The baffle flotation collar should be floating on the water surface at all times. DO NOT pull baffle tight enough to cause the flotation collar to rise above the water surface. The baffle is designed to operate by floating on the water surface. Let the water do all the work required to bring the baffle to its final operating position.

Special Details

A. Bolt-Through Connectors

For baffles with multiple sections, always complete bolt-through connections on shore. To connect sections: Cut the last set of white tie ropes from the ends of baffle sections to be connected. Orient the ends of the baffle sections to be joined and spread baffle skirts flat. Beginning at flotation collar, align the bolt through pressure plates and install bolts & nuts. Make sure all bolts are installed and tightly secured.

B. Flow Through Windows

Baffle crates are marked showing which baffle section and end contains window(s). The flotation collar above window is marked with an opposite color (black on white or white on black) strip to identify the window location . Refer to the project plans for the correct window location. If window has closure flap(s), two tabs with grommets will be visible on flotation collar. Baffles are shipped with window flaps in the down, or closed position. To open window flap, simply pull up both lifting lines at same time and tie them off above grommets on collar.

C. Mid-lagoon/Lateral/Wind/Corner Anchoring

Diagrams are included in the submittal drawings for additional cable anchoring systems. All hardware is installed on baffle(s) to ease deployment. In general, once step 5. above has been completed, remove tape holding cable(s) assembly on flotation collar and stretch assembly out from the collar at 90° or 45° angle (depending on application) until fully extended, attach anchor and lower to lagoon bottom.

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

Note: Cables to anchor vertical end baffles are installed in the same way.

Operating Instructions

As noted previously, the baffle flotation collar should be floating on the water surface at all times.

DO NOT pull baffle tight enough to cause the flotation collar to rise above the water surface. This baffle is designed to operate by floating on the water surface. Let the water do all the work required to bring the baffle to its final operating position.

After proper installation has been completed, very little, if any, operator intervention is required. Should the treatment system design, or special circumstances (storm flows, etc.), cause the water level to vary more than a few inches, it will be necessary for the operator to adjust the tension on the berm anchoring cable(s) or chain(s).

Under normal circumstances, no maintenance is required.

Should cleaning be desired, use only mild detergents. Do not use any harsh chemical cleaners!

Repair / Technical Assistance

If there are any questions about proper installation, operation, maintenance, or repair procedures , contact:**Environetics at (815) 828-8331 FAX (815) 838-8336.**

Should it ever become necessary, Director™ floating baffles can normally be repaired on site, without removal from the lagoon. Should damage ever occur, your being able to supply pictures of the damage and information regarding possible cause(s) will greatly assist Environetics, Inc. to provide a timely solution recommendation.

DIRECTOR™ Floating Baffle System
Installation, Operation & Repair Manual

Warranty Disclaimer

The above procedures are based on the cumulative knowledge gained by Environetics through years of in-field experience. The information offered herein is supplied for your general information only. Adherence to these procedures is beyond the control of Environetics, Inc. No liability for direct, indirect or consequential damages will be accepted nor is an implied warranty hereby given to anyone for end results experienced by using these procedures. Damage resulting from improper installation will be corrected at Customer's expense.

Technical assistance can be purchased from Environetics, Inc. to advise on specific installation procedures and details.