

Turnkey Lagoon Systems & Maintenance



## 1. JPS Baffle Curtains

JPS Baffles are custom built for industrial and municipal applications using the most durable materials and construction techniques available. While both applications are designed to similar specifications, JPS Industrial Baffles are engineered with reinforcing nylon straps to withstand severe and extreme environments. JPS Baffles are known for their durability due to the materials used, craftsmanship and time tested quality built into the design, construction and installation of every JPS Baffle Curtain. We are proud to call them the best baffle curtains in the world!



### Innovation & Quality

JPS products are engineered systems, custom-designed and precision-manufactured - specific to each application and environment. Installed in the most demanding municipal and industrial processes, many JPS Baffles and other products continue in service more than 20 years later. Industries served by JPS include: Pulp and paper, food processing, chemical manufacturing, oil storage and transport, power generation and more along with many municipal installations.



### Materials

JPS has pushed the limits of many materials for decades, with one thought in mind – “How can we make a stronger baffle and make it last longer?” Today, JPS Baffles are hand constructed using the strongest nylon scrim available, with rip stops every 5th filament of the material scrim to help prevent tearing. Our anchor system is cast concrete blocks along with a minimum ballast of 5/16-inch galvanized steel chain sewn directly into a special hem in the bottom of each baffle section. Special nylon straps, which maintain a tensile strength between 12,000 lb. and 20,000 lb., are sewn into the sides, tops and bottoms of all sections. All hardware is 304 stainless steel. Definitely ready to take a beating.



### Construction

All structural components of JPS Baffles are manufactured using nylon materials to maintain a uniform rate of linear expansion which helps to eliminate friction. Stress is evenly absorbed throughout the structure; a claim no other manufacturer can make. This is largely due to the construction techniques utilized when building each baffle section. For example, strength and flexibility is added to seams and hems by sewing them together using silicone-treated nylon thread and reinforcing specific areas as recommended by the hydrodynamic model. It is this careful attention to detail and uniformity that insures JPS Baffle Curtains will have minimal wear and tear and a long life in each application.



### Custom-Fit

Developing JPS baffles to fit each individual project requires engineering that is specific to each application including designing for seasonal environmental and weather conditions. Utilizing an onsite engineering study, JPS engineers can evaluate temperatures, flow magnitude and direction, dissolved oxygen and other factors to develop a lagoon profile and predictive model. The result is a digital 3D rendering of a hydrodynamic model of the lagoon. This model helps JPS engineers determine optimal flow patterns, construction requirements and predictable stress points where additional reinforcement may be required. Unlike “canned” baffle solutions, JPS baffles are customized for each application to maximize efficiency and longevity.

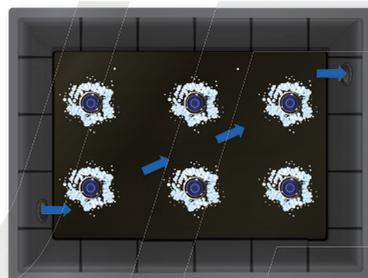


### Turnkey Solution

For generations, JPS has worked to provide a complete solution. From plotting the exact contour of the basin of a lagoon to provide an exact fit, to engineering treatment efficiencies and recommending the layout of all components, to fabricating and manufacturing the baffle curtains to a precise fit – JPS pulls it all together with our turnkey installation. It is why JPS offers a full two-year warranty which can be extended to five years. Once installed, JPS can be called on for maintenance, review or modifications. We don't just sell baffle curtains; we engineer solutions that have helped JPS maintain 99% customer retention and satisfaction.

# Engineered Retention Time

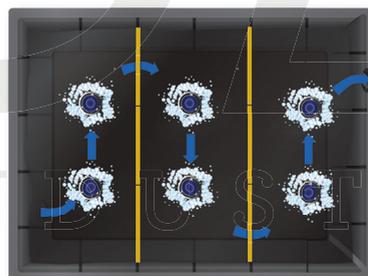
Given the opportunity water will take the path of least resistance, this can result in short circuiting, dead zones, sludge build up and inefficient treatment. Implementing a baffle system to engineer a specific water flow pattern can optimize treatment and retention time.



### Random Flow Pattern

Water will go directly from the inlet to outlet of a lagoon. This results in decreased retention time and reduced BOD removal. The dead zones are not treating waste and the cost to operate these aerators is lost.

JPS Erosion Barrier Only.



### Intentional Flow Pattern

The application of two baffles creates a serpentine flow pattern resulting in increased retention time. The baffles also force the water column through the aerators' sphere of influence. The entire lagoon is now utilized and aerators maximum potential is realized.

JPS Erosion Barrier in Combination with JPS Baffle Curtains.



Patented Design



## 2. JPS Erosion Barrier

Erosion of a lagoon bank can be a constant headache in maintenance and cost. JPS Erosion Barriers are designed to protect the embankment from erosion caused by wave action, aeration turbulence and extreme elements. Each JPS Erosion Barrier is constructed of individual panels, custom fabricated to fit the lagoon architecture, depth, slope and known exposure to elements. The paneled construction allows easy access to equipment, maintenance and repair, without draining the lagoon or damaging the barrier, which can temporarily shut down treatment. Made of the same reinforced scrim and 304 stainless steel hardware as our baffles, JPS Erosion Barriers maintain uniform rates of linear expansion and are engineered to withstand chemicals, extreme temperatures variations, abrasions, hydraulic shock and severe elements.

## 3. T-HEX™ Cover System

The patented T-HEX™ Cover System provides more efficient production and management of municipal and industrial wastewater lagoons. Molded from HDPE, T-HEX™, hexagon modules are placed on the surface of a lagoon, a self-filling ballast maintaining the stability of each module independently. The interlock design of the modules provides a self-arranging shield against UV, heat, and evaporation, while maintaining odor and algae control. The T-HEX™ Cover System is ideal for small lagoons, ponds or tanks where permanent covers are too costly or impractical, and may be installed or removed by workers on site.

## 4. Dive Services

JPS provides the most qualified “Blackwater” divers in the industry; a claim supported by maintenance of thousands of treatment lagoons and countless hours of maintenance to those lagoons. From complete installation of baffle curtains, erosion barriers and aerators, to repairing baffles, air laterals and river outfalls; JPS certified personnel are ready for any task. JPS offers services during hot or cold shutdowns providing annual maintenance to treatment system components. Aside from scheduled maintenance and repair, a JPS Dive Team can be on site within 24 hours for emergency service. As a longstanding member of the ADC, JPS maintains an attitude of preparation and safety-first in order to save time on site and to be as thorough as possible. Emphasis on equipment, including backup equipment, dive support equipment, boats, and the constant maintenance of such equipment promotes our longevity and reliability.

## 5. Lagoon Profile Services

JPS provides complete services to map the topography and characteristics of a lagoon system include gathering thousands of measurements with integrated sonar and real-time GPS systems, providing detailed volume of sediment throughout the entire lagoon basin. Our 3D modeling service capabilities predict flow patterns and temperature reduction achieved by modifying the retention time, allowing JPS to build and install custom baffles to suit specific applications. This information also provides a precise roadmap for dredging needs, baffle implementation and aerator location to optimize efficiency of treatment.

## 6. Dredging

JPS provides dredging solutions to clients throughout the South Eastern United States. Our team of certified technicians provides expertise in planning, equipment performance, and dredging support to ensure optimal productivity and a safe operating environment. JPS dredges use a trolley system to systematically pump the lagoon to optimize efficiency and precision of sludge removal. Combined with the versatility, portability and performance capabilities of JPS’s dredging equipment and 24-hour emergency onsite service, JPS is ready and able to provide custom design solutions to suit any dredging project.

Since 1964 JPS Industries has been best known for the manufacture and installation of the finest baffle curtains in the world. Baffle Curtains so strong, many are still outperforming, 30 years after installation.

In addition to custom lagoon baffles, JPS offers a number of Industrial Services including: Industrial Diving, Dredging and Lagoon Profile Services, plus a number of products to improve efficiencies of wastewater lagoons.

Solutions have been provided by JPS for pulp and paper mills, oil and gas refineries, wastewater treatment, food processing plants, chemical facilities, manufacturing processes, power generation plants and many other municipalities and industries.



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