



The Pioneer Of Geosynthetics  
S I N C E 1 9 7 2

## Aquaculture

### GSE GEOMEMBRANES IMPROVE YOUR BOTTOM LINE

the aquaculture farming production process can be greatly improved by utilizing GSE polyethylene geomembrane lining systems. GSE geomembranes offer significant operation and cost benefits over soil, clay, concrete and steel in aquaculture applications. These benefits include:

- Secure water containment
- Enhanced water quality control
- Cleaning & disinfection capabilities
- Erosion protection
- Low turbidity
- Minimized pumping costs
- Consistent pond volume control
- Dissolved oxygen level control
- Smooth harvesting surface
- Rapid installation
- Low installation & maintenance cost
- Long life
- Easy repair



GSE geomembrane product.

GSE is the world's largest manufacturer and installer of geomembrane lining systems and has extensive experience supplying liners for aquaculture facilities.



GSE aquaculture experience extends around the world.

### WATER CONTAINMENT

As clean water becomes more expensive to acquire and the cost to pump water increases, the need for secure water containment grows. Efficient operation of any aquaculture facility requires consistent water volumes, high water quality, and low operating costs. Additionally, location of aquaculture facilities, like other food producing facilities, has become more difficult as concerns about clean surface water and groundwater resources grows.

Installing a GSE geomembrane is the solution. GSE geomembrane not only has extremely low permeability rates to help keep pond water volume consistent, they also keep waste product contained, and prevent the intrusion of groundwater borne pollutants from entering aquaculture ponds.



A large aquaculture facility in Indonesia.

### WATER QUALITY CONTROL

GSE HDPE geomembranes are certified by NSF61 for potable water containment. These high quality geomembrane liners contain no additives or chemicals which can leach out and impact water quality or harm animal life. GSE geomembranes can be repeatedly cleaned and disinfected with no decrease in the liner's performance. The result is improved water quality, allowing for higher crop densities, healthier crops due to greater dissolved oxygen levels and improved feed conversion ratios. This produces better tasting product and improves profit potential.

### EROSION CONTROL

Effective erosion control is another significant advantage of a GSE lining system. The liner eliminates slope deterioration caused by surface rains, wave action and wind. The liner prevents eroded materials from filling the pond and reducing the volume. In addition, costly erosion repair and dredging are eliminated.

**DISEASE AND MICROBIOLOGICAL CONTROL**

While diseases cannot be eliminated, lined ponds reduce their occurrence. They also assure rapid and dependable recovery because the liner can be cleaned, disinfected and returned to service within days. GSE geomembranes are resistant to microbiological attack and growth. The surface cleans easily and thoroughly to give you a better control over your operations.



GSE Aqua Tank.

**CROP QUALITY**

With more consistent, better quality water, your aquaculture product grows more quickly, is healthier and tastes better. By using GSE geomembrane on your project, your overall operation is more efficient and produces a higher quality product.

**THE LINER SYSTEM**

Made from the highest quality resins, GSE geomembranes boast exceptional tensile strength, puncture resistance, durability and longevity. They have outstanding thermal and dimensional stability and are highly resistant to UV exposure, extreme temperatures and water absorption.

Each liner system installed by GSE uses state-of-the-art welding technology to ensure a long-term containment system for your aquaculture project.

**A SAMPLE OF GSE AQUACULTURE PRODUCTS**

GSE polyethylene products offer the widest range of thicknesses, and technologies designed to meet the most demanding aquaculture requirements:

- Polyethylene Liners
- Tanks
- Net Pens
- HDPE Drains
- Hatchery Trays
- Custom Fabrications
- Liner Ponds
- Fry & Brood Tanks
- Buoys
- Raceways
- Drainage Nets & Composite

GSE products are being used at aquaculture facilities around the world to help increase revenue, reduce risks, and control operating costs.



GSE Raceway.

**ENGINEERING SUPPORT**

The GSE Engineering Support Staff is comprised of multidisciplinary product professionals to support you across a range of project requirements. This includes knowledge in geomembrane, geosynthetic clay liners, geonet, geocomposite, nonwoven geotextile and concrete protection products and application solutions. Rely on our technical staff to help you solve your project issues.



GSE Engineering Support Staff.

**CUSTOM FABRICATION**

The GSE Custom Fabrication Group builds products to your exact specifications. We have extensive experience in prefabricated polyethylene products and components. A few examples of our custom fabricated products are Aqua Tanks, Quick Containment, concrete protection liners, boots, sumps, pads, pipes, daily covers, temporary containment, containment boom and other products to fulfill your fabrication needs.

**INSTALLER NETWORK**

The GSE Installer Network leads the industry with the most experienced, large, and flexible crews available around the world to meet your installation requirements. Each installer is equipped with state-of-the-art welding and testing equipment to ensure a successful installation. Selecting a qualified installer with the right product knowledge is critical to your success. Let GSE connect you to the right installer to handle your installation project of any size from start to finish.