



Learn more at:
www.aub.ie/floc

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THE ELECTRIC FLOCCULANT GENERATOR

Portable, Chemical-Free Stormwater Treatment Solution



Fagan Consulting, in collaboration with Auburn University, is developing the Electric Flocculant Generator, with support from a Small Business Innovation Research contract awarded by the U.S. Department of Transportation, alongside supplemental grant funding from Innovate Alabama. Note that all performance results presented are preliminary. Patent pending.

Floc Generator

enhances BMP performance
by up to 97%

Product Features

- Highly Effective** – removes a range of stormwater pollutants and contaminants
- Chemical-Free** – utilizes electricity instead of chemical additives for pollutant removal
- Compact & Scalable** – compact, lightweight, and scalable for higher flow rates
- Versatile** – adapts to various installation parameters, flow rates, and applications
- Portable or Permanent** – designed for both temporary and long-term installations
- Safe** – designed to be safe for humans, aquatic organisms, and the environment
- Energy-Efficient** – operates on low power for cost-effective performance
- Automated Controls** – built-in controls minimize the need for manual operation
- Low Maintenance** – durable, long-lasting electrode plates reduce upkeep
- Eco-Friendly** – constructed from recyclable materials and compatible with solar power

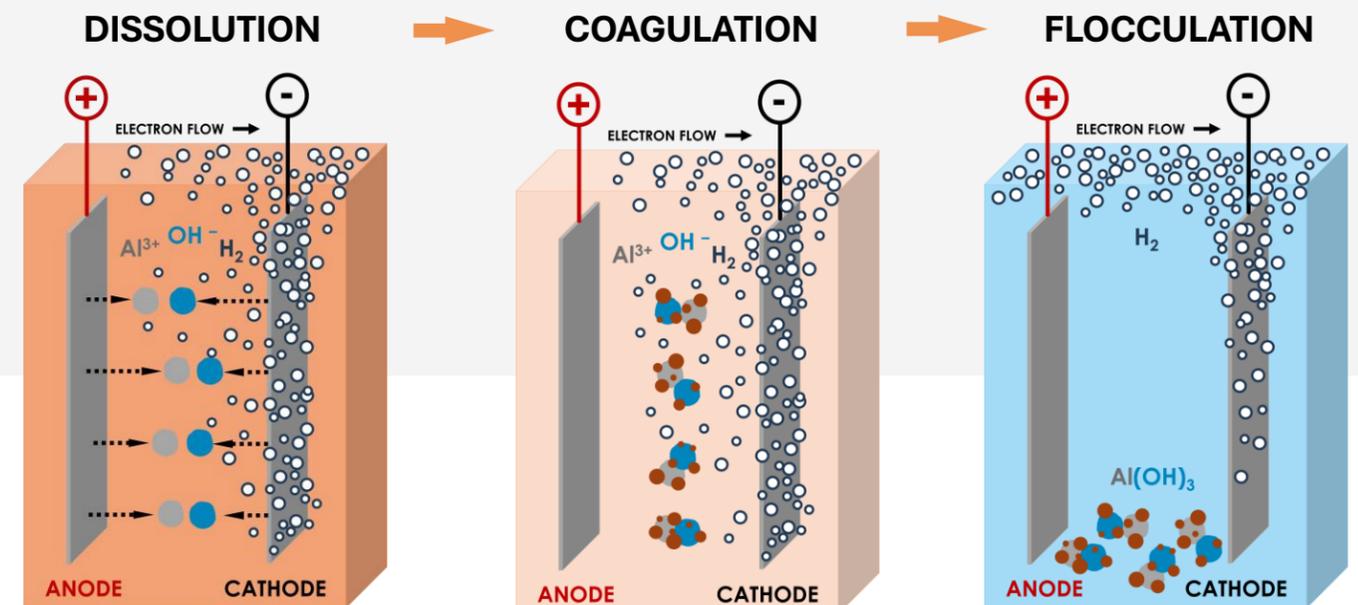
Applications

Engineered to integrate seamlessly with existing stormwater management systems, enhancing their efficiency and effectiveness.

- Construction Stormwater**
 - Sediment basin surface skimmers
 - Dewatering systems
- Urban Stormwater**
 - Catch basin inserts
 - Detention ponds
 - Bioswales & bioretention
 - Underground detention
 - Pond fountains
 - Floating islands
 - Hydrodynamic separators
 - Gutter downspouts
- Agricultural Stormwater**
 - Edge-of-field practices
 - Tile drainage & farm ponds
- Mining**
 - Dewatering treatment
 - Acid mine drainage treatment

What is Electrical Flocculation?

Electrical flocculation is a water treatment process that leverages electric current to destabilize and aggregate suspended contaminants. As current passes through metal electrodes, electrolysis induces the dissolution of metal ions into the solution. These ions undergo hydrolysis, forming coagulant species that facilitate the adsorption and entrapment of pollutants such as suspended solids, oils, and heavy metals. The resulting flocs settle gravitationally, allowing for efficient separation and removal.



The Electric Floc Generator efficiently removes a wide variety of pollutants.

