

# Water and Wastewater Treatment

The growing trend towards conserving and reusing our natural resources has resulted in stricter wastewater discharge standards and drinking water quality. For example, treated wastewater is now a resource we commonly reuse to irrigate freeway vegetation, public parks, and golf courses. Biosolids recovered from wastewater that used to be disposed of in landfills has now found new, multiple uses, such as compost, soil amendments and animal feed supplements.

Water and wastewater treatment polymers play a large role in meeting and maintaining water and wastewater treatment guidelines. But to get the most effective treatment results, each facility needs a water or wastewater system solution that combines both optimizing polymer selection and application and water and wastewater equipment design and operation. Water and wastewater management improvements seen in recent years are due to the integration of chemistry, more efficiently designed coagulants and flocculants, and to new innovations in water and wastewater equipment design. Today, it's not just polymers, anymore!

Garratt-Callahan has developed a broad line of coagulants and flocculants to address today's wide range of treatment applications. Our engineers work with your facility to identify treatment programs and water or wastewater treatment system improvements that restore or increase process efficiency resulting in lower process costs for our clients. Garratt-Callahan enables you to use a single source for coagulants, flocculants, chemical feed equipment, storage and monitoring equipment and water and wastewater treatment systems and upgrades.

Working with water and wastewater equipment design engineers, Garratt-Callahan Company provides cost-effective systems solutions for liquid/solids separation processes.

Garratt-Callahan operates an in-house analytical laboratory certified by the State of California as an Environmental Laboratory in accordance with state regulations and federal EPA standards. With this certification, Garratt-Callahan can provide certified analyses of raw, partially treated or fully treated water or wastewater process stream samples.

[www.garrattcallahan.com](http://www.garrattcallahan.com)





## Coagulants: Liquid

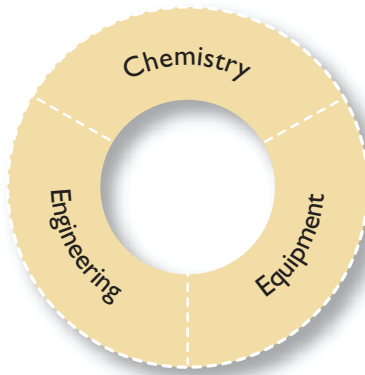
Garratt-Callahan offers a broad line of inorganic, organic and inorganic/organic blended coagulants. These products are very effective substitutes for the traditional inorganic salts of aluminum and iron. Being more effective and performing at lower doses, Garratt-Callahan coagulants produce significantly less sludge compared to iron and aluminum based coagulants. Garratt-Callahan coagulants:

- Accelerate and improve oil and grease removal
- Efficiently aggregate and enhance removal of fine suspended particles
- Work over a broader pH range than traditional inorganic coagulants
- Reduce or eliminate the need for make up caustic or alkalinity
- Contain high activity to allow for lower feed rates

## Flocculants: Dry Powders, Liquid, and Emulsions

Garratt-Callahan offers a broad range of flocculants in all three products forms: emulsion, liquid and dry. A complete matrix of flocculants is maintained in order to enable the best performing flocculant selection. A large flocculant matrix allows a precise product selection. It also enables the substitution of a very close or even very far away flocculant when a substrate change dictates the need for a flocculant change. Garratt-Callahan flocculants:

- Increase dryness in dewatering operations resulting in savings in disposal costs
- Increase throughput or flow rates in thickening, clarifying and dewatering operations
- Reduce or eliminate process upsets
- Improve clarification during upsets in biological processes
- Capture insoluble matter in wastewater that would otherwise be discharged with plant effluent.



*Effective wastewater treatment results from the successful integration of chemistry, equipment and engineering.*

## Design/Build Engineering

Industry today and into the future must address more stringent waste solids management and stricter drinking water standards and wastewater discharge permit standards. Garratt-Callahan brings custom design engineering capabilities and services to our customers. Our customized solutions offer you the opportunity to:

- Lower or eliminate sewer surcharges
- Recover valuable by-products
- Achieve wastewater permit compliance
- Obtain water reuse compliance
- Reduce operational cost

Discover more at [www.garrattcallahan.com](http://www.garrattcallahan.com)



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