

TIDE FORCE™ POWER COAGULANTS

More Throughput On Demand

When clarification limits your plant, increasing capacity doesn't have to mean expanding infrastructure.

- ⚙️ Increase throughput & improve effluent reliability
- ⚙️ Maintain process stability and compliance under stress
- ⚙️ Bridges gap between current & future upgrades

Faster Settling Behavior

Improved Floc Formation

Lower Effluent Suspended Solids & Turbidity

 **Why Use Settling Aids?** Don't let your clarifier limit your treatment train. Apply settling aids to temporarily or conditionally increase clarification capacity by improving solids separation efficiency without requiring immediate capital investment.

Overcome the Following :

Biological & Process Limitations

Settling efficiency can be affected by changes in flow characteristics including filamentous bulking, dispersed growth (pin floc), low F/M or nutrient imbalances, and influence variability or toxicity.

Hydraulic & Infrastructure Constraints

Clarifier capacity can be pushed by peak wet weather flows (I/I events), clarifier surface overflow rate (SOR) limitations, solids flux limitations, and aging infrastructure or undersized clarifiers.

Capital & Operational Considerations

Physical systems may not meet demand because of deferred or high-cost capital upgrades, footprint constraints, and seasonal flow variability.

Improve Capacity & Wet Weather Management :

An effective settling aid can function as a chemical capacity multiplier for combined sewer systems (CSS) by:

- Increasing effective settling velocity, allowing clarifiers to handle higher hydraulic loads
- Reducing effluent solids carryover during peak flow events
- Supporting maintenance of target solids retention time (SRT) by minimizing biomass loss

This is particularly relevant during wet weather events, where short-term flow spikes can exceed clarifier design limits even when biological treatment remains stable.

Experience the benefits of TideForce® at your facility today.

TideForce® reliably cleans more water with less chemistry - making it safer, more efficient, reducing wear on machinery, and minimizing risk for human handlers.



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Results: Evaluations using Mixed Liquor Suspended Solids (MLSS) in Washington State demonstrate TideForce settling aids significantly improve settling performance in real plant conditions.



Sample	Settling Aid	Dose	Settling Volume (mL)			Avg Final Turbidity (NTU) – 3 replicates
			5 min	10 min	15 min	
NW USA WWTP MLSS (Coastal) (~2000 mg/L) collected 8am 4/22/26 from splitter box	None (Control)	0 ppm	700	475	450	9.91
	TF316	25 ppm	600	450	425	6.4
	TF316	50 ppm	650	500	425	5.56
	TF316	75 ppm	475	425	400	5.35
	TF316	100 ppm	500	450	400	5.7
	TF316	125 ppm	500	400	375	4.44
NW USA WWTP MLSS (Inland) (~5000 mg/L) collected 8:30am 4/23/26 from aeration paddle basin	None (Control)	0 ppm	1900	1800	1750	3.33
	TF316	25 ppm	1900	1800	1750	2.08
	TF316	50 ppm	1900	1700	1550	2.48
	TF316	75 ppm	1900	1675	1500	1.59
	TF316	100 ppm	1750	1500	1400	2.21
	TF316	125 ppm	1725	1450	1350	1.87
	TF316	150 ppm	1650	1400	1300	2.29
	TF316	175 ppm	1600	1400	1300	1.6
	TF316	200 ppm	1500	1275	1200	1.59
	TF316	225 ppm	1450	1275	1200	1.61
	TF316	250 ppm	1400	1200	1175	2.25
	TF316	275 ppm	1375	1200	1175	2.26



TideForce for System-Wide Improvements

Compatible with Biological Treatment

- Operates within typical activated sludge pH and alkalinity ranges
- Does not inhibit microbial activity at standard use concentrations
- Breaks down into biodegradable intermediates that can be assimilated within the process

No Increase in Inorganic Solids

- Does not generate additional chemical sludge (unlike alum or ferric)
- Avoids added load on thickening, dewatering, and hauling
- Helps maintain existing solids handling capacity

Readily Biodegradable (Fig. 1)

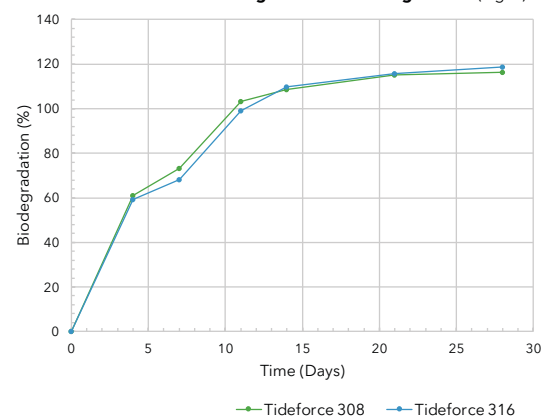
- Degrades in approximately 15 days
- Minimizes persistence in biosolids
- Reduces long-term accumulation compared to synthetic polymers

How it Works : TideForce is a cationic biopolymer settling aid that enhances solids separation

- Charge neutralization of negatively charged sludge particles
- Polymer bridging to form larger, settleable aggregates
- Improved settling with clearer substrate (lower TSS, NTU) and improved feet of clear

These mechanisms directly target the constraints of dispersed sludge systems, improving both settling rate and increasing percent solids at the base of the clarifier.

Biodegradation Percentages 301F (Fig. 1)



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