

Reduce Polymer Costs.

Steve Wardell



CLEAN WATERS
INC.

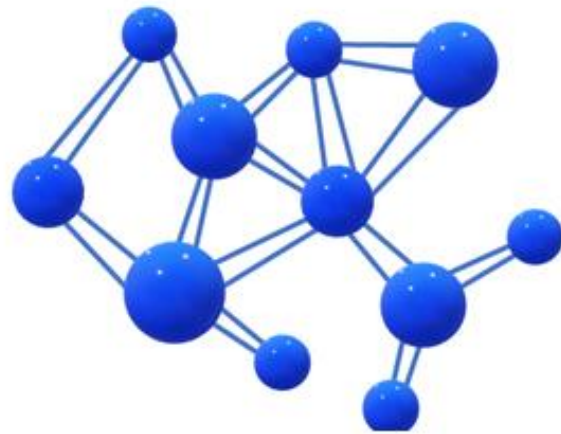
Polymer Blending

Make sure the polymer blending method you use provides maximum activation.

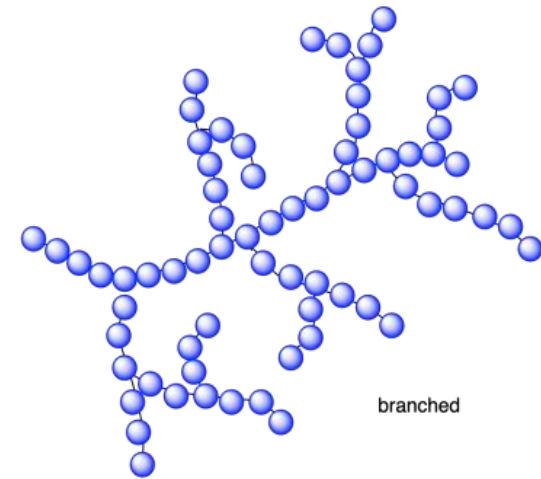


Blending
expands
polymer
chains.

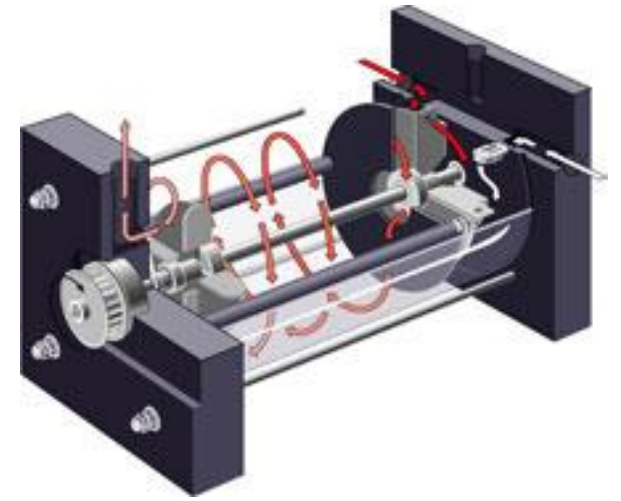
Emulsified poly chain



Expanded poly chain



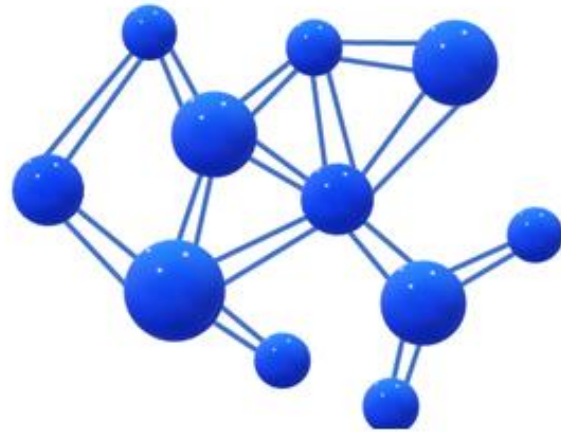
Polymer blending units employ mechanical or static mixing.



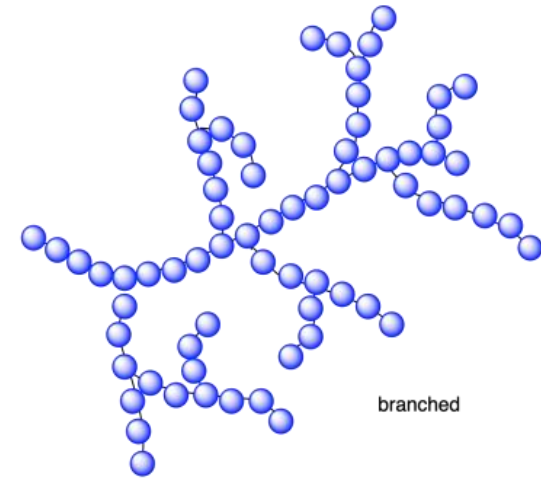


Blending
expands
polymer
chains.

Emulsified poly chain



Expanded poly chain



Dynablend



Velodyne



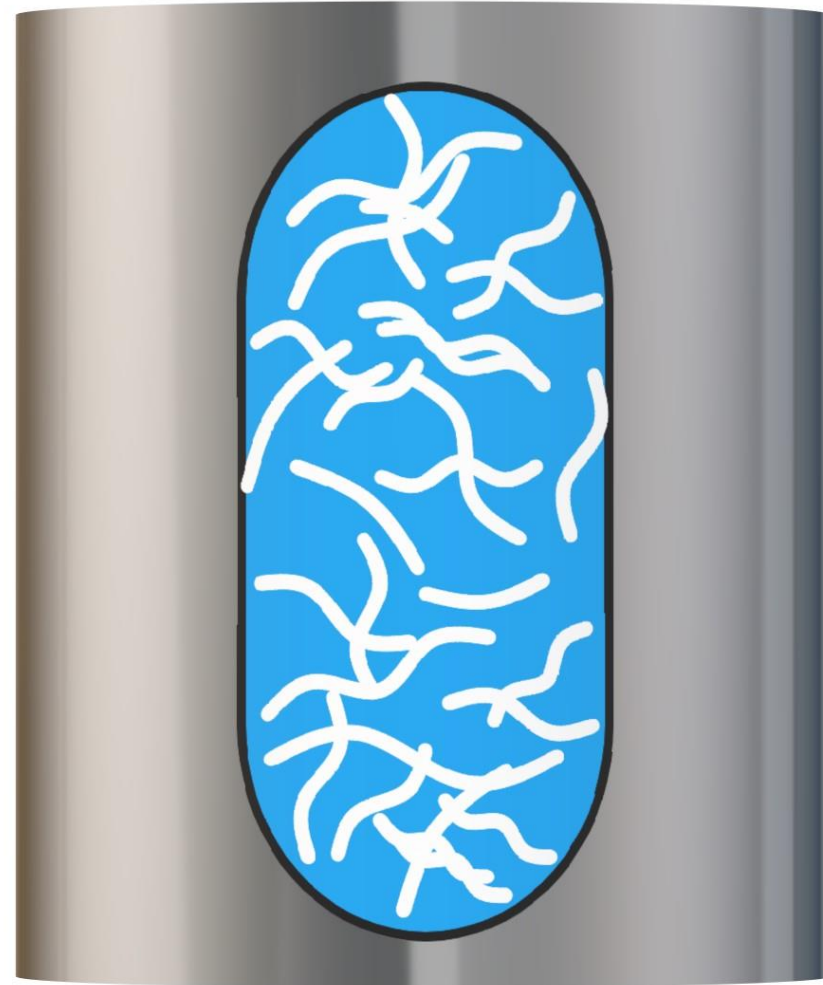
UGSI M-Series



How do we
achieve 100%
polymer
activation?



Magnetic
reaction in a
day tank.



What if you don't have room for a day tank?





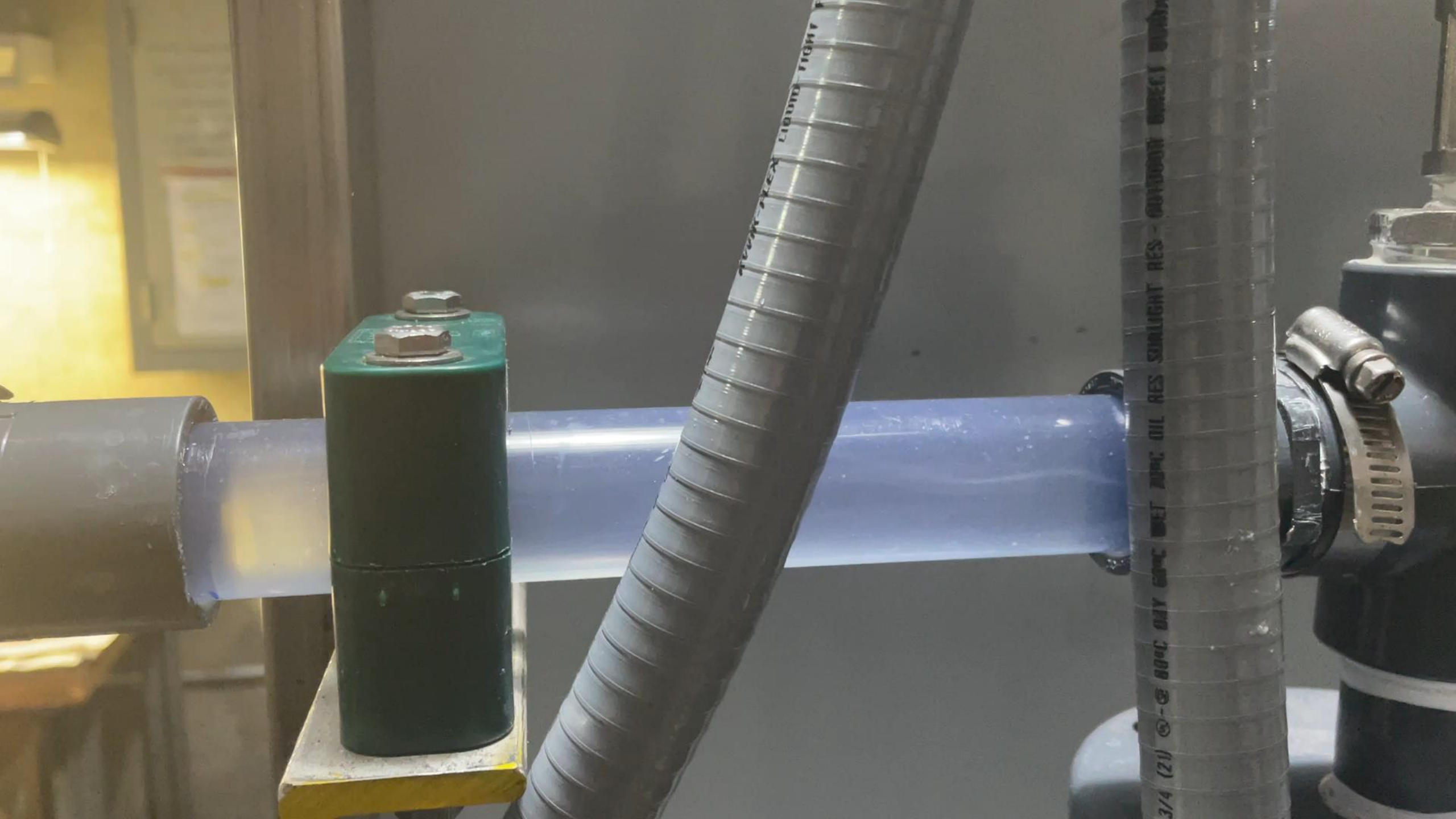
Dry polymer.



Keep blending units clean.







TRON-TEX LIQUID TIGHT

3/4 (21) © - © 800C DAY 600C WET 200C OIL RES SUNLIGHT RES - GARDON DIRECT BUNDA

Section summary.

- 1.) Buy the best quality blending unit that you can afford.
- 2.) Keep your polymer blending unit clean.
- 3.) Add an aging tank if you can.
- 4.) Add additional mixing.

Polymer Concentration

Using polymer concentration to save money.

Thinner is better.



Polymer Concentration Guide

Emulsion Polymer

Dry Polymer

Belt Filter Press:

0.5%

0.25%

Gravity Belt Thickener:

0.25%

0.1%

Screw Press:

0.5 – 0.75%

0.25%

Centrifuge:

0.75 – 1.0%

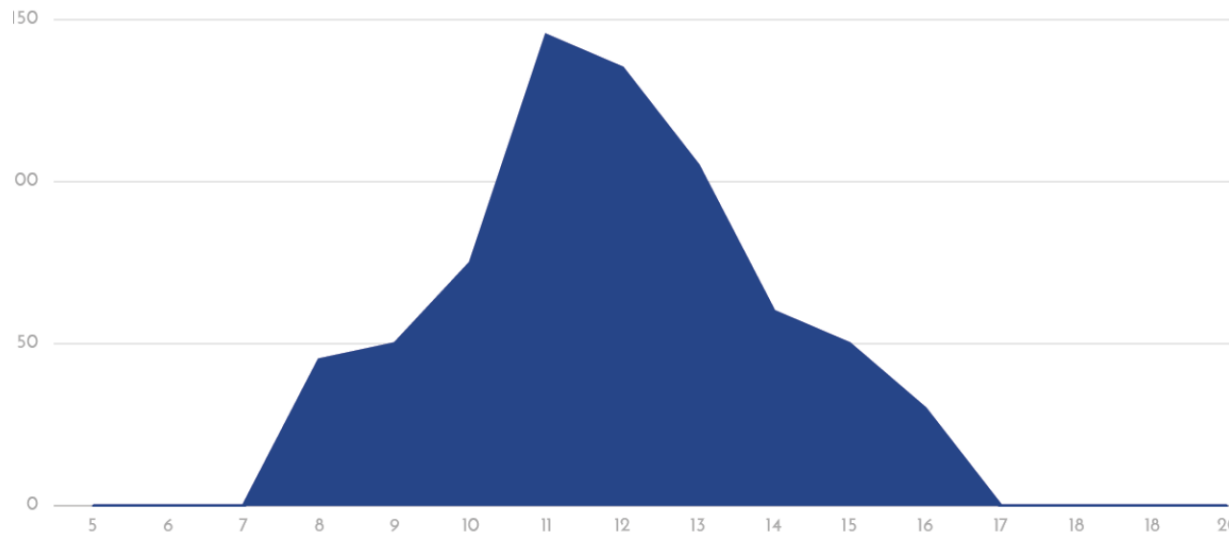
0.5 – 0.75%

Don't exceed:

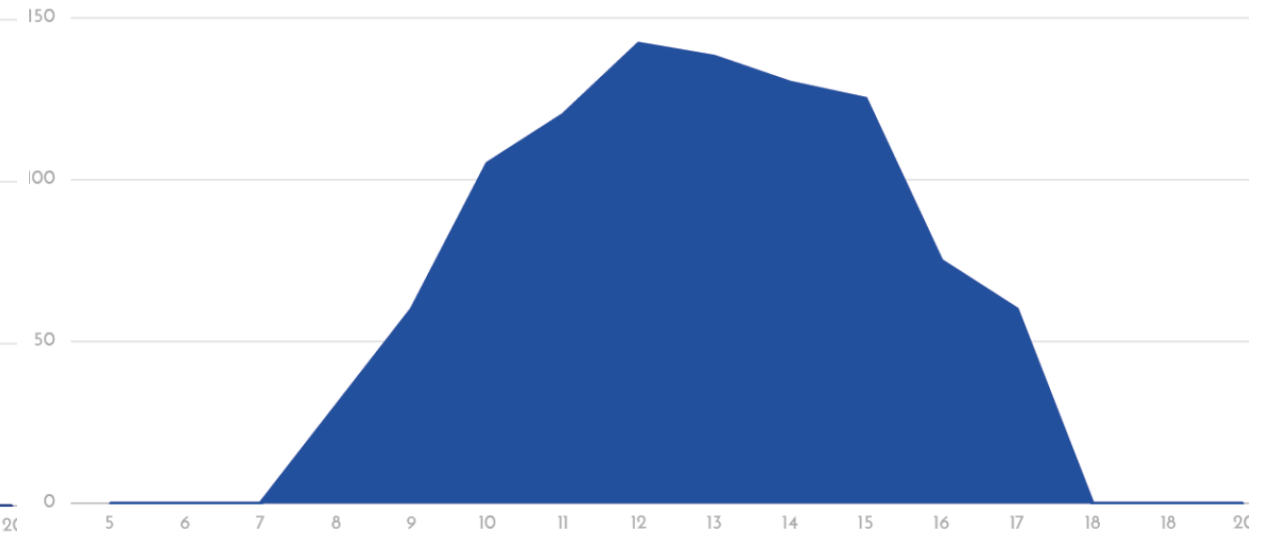
1.5%

1.0%

DRAINAGE CURVE .75% SOLUTION



DRAINAGE CURVE .50% SOLUTION





CAKE=18.7%



CAKE = 20.2%



How to figure out polymer concentration.

- Convert GPM dilution water to ml:
- $30 \times 3,785 = 11,355 \text{ ml}$
- Divide ml polymer per minute/ml water:
- $565 / 11,355 =$
- $.49\%$



Summary

- 1.) Choose the best polymer for your bio-solids.
- 2.) Buy the best polymer blending unit you can afford, and keep it clean.
- 3.) Run a thin polymer solution.

Thank you!!!

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