WASTE WATER

DAF Wastewater Case Study Houston, Texas

*Hydro*FLOW® i150 unit was evaluated on a DAF wastewater system at a Texas packaging facility, reducing polymer and chlorine use by roughly 50% and extending the cleaning cycle from 1 to 6 weeks.

50%	6x	↑	↓
Polymer and Chlorine Reduction	Longer Cleaning Interval	Improved Separation	Odour Reduction

⇄ BEFORE & AFTER

BEFORE

- ✕ Recirculating wastewater had a murky appearance
- ✕ Strong, foul odour
- ✕ Weekly cleaning and water replacement

AFTER

- ✓ Improved TSS separation, cleaner water, drier cake
- ✓ Odour reduced dramatically
- ✓ Cleaning cycle extended to 6 weeks

OVERVIEW

This Houston packaging facility produces plastic products from recycled plastic bags and bottles, converting them into certified post-consumer resins and plastic sheeting. Its wastewater treatment process uses dissolved air flotation, where air bubbles lift suspended oils and solids for removal. Because the site prioritises sustainability and reusable plastics, it evaluated Hydropath treatment as a way to improve DAF performance while reducing chemical use, odour and maintenance.

⚠ CHALLENGE

The DAF system needed cleaner water, lower odour, less chemical dosing and longer intervals between cleaning.

- Recirculating wastewater had a murky appearance
- Microbial contamination caused strong foul odours
- Chlorine and polymer dosing needed reduction
- Cleaning and water replacement were too frequent

SOLUTION

A 14 week evaluation used 1x *Hydro*FLOW® i150 and installed on the 6 inch wastewater circulating pipe entering the DAF tank.

UNIT INSTALLED
1x *Hydro*FLOW® i150

INSTALLATION POINT
6 inch wastewater circulating pipe entering tank

EVALUATION PERIOD
14 weeks

APPLICATION
Dissolved Air Flotation wastewater system

INSTALLATION
HydroFLOW® i150 unit

INSTALLATION
Unit installed on pipe

SITE
DAF tank surface

RESULTS

50% Chemical Reduction
Polymer and chlorine use were reduced by roughly 50% during the evaluation.

Longer Cleaning Cycle
Cleaning and water replacement intervals were extended from 1 week to 6 weeks.

Water Savings
Longer cleaning intervals allowed significant water savings in the DAF system.

Odour Reduced
Foul odour and chlorine smell were reduced dramatically during operation.

Better TSS Removal
More efficient (TSS) separation produced cleaner water and dryer cake

Lower Disposal Cost
Drier cake-like sludge was lighter and less expensive to dispose of.

KEY TAKEAWAY

Summary

A 14 week evaluation at a Houston packaging facility tested Hydropath treatment on a dissolved air flotation wastewater system. *Hydro*FLOW® i150 reduced polymer and chlorine dosing by roughly 50%, extended the cleaning cycle from 1 to 6 weeks and improved suspended solids separation, producing cleaner water. Odour was reduced dramatically, water savings were achieved through less frequent cleaning, and the resulting dryer sludge was easier and cheaper to dispose.

50%
POLYMER AND CHLORINE REDUCTION

6x
LONGER CLEANING INTERVAL

↑
IMPROVED SEPARATION

ADDITIONAL PHOTO EVIDENCE

INSTALLATION

HydroFLOW® unit on DAF pipe

SITE

DAF tank solids at surface

SITE

Recirculating wastewater in DAF

RELATED CASE STUDY

Food Industry WWTP Chemical Reduction Case Study

Hamilton, Canada

Hydropath technology enabled a major food producer to cut ferric chloride use by 50% while maintaining wastewater compliance. The trial delivered strong cBOD and turbidity reductions, lowering costs and environmental impact without compromising DAF performance.

50% Chemical Reduction
Ferric chloride use cut by half while maintaining system performance

91.8% cBOD Reduction
High organic load removal maintained within compliance limits

$47,500 Annual Savings
Reduced chemical usage lowered yearly operating costs significantly

HYDROPATH

Ready to eliminate chemical dosing?

Get a free consultation for your facility.

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