

PREVENTING FLUSHABLE WIPES CLOGS IN SMALLER COLLECTION SYSTEMS

Case Studies: Saginaw, Michigan - Drake Pump Station Schuylkill, Pennsylvania - Seiders Hill WWTP





FAMILY-OWNED BUSINESS FOUNDED IN 1985

- One location with 75,000 sq. ft office and manufacturing facility in Saginaw, MI
- More than 2,000 installations in North America & Internationally

AGENDA

PERON

- Background
- Case Study 1: Saginaw, Michigan, Drake Pump Station
- Case Study 2: Schuylkill County, Pennsylvania, Seiders Hill WWTP
- Conclusions
- Duperon Corporation

"flushable" wipes wreak havoc

in collection systems

WWTP

& wastewater treatment plants

DRAKE PUMP STATION SAGINAW, MI

FLOW: 0.1 MGD

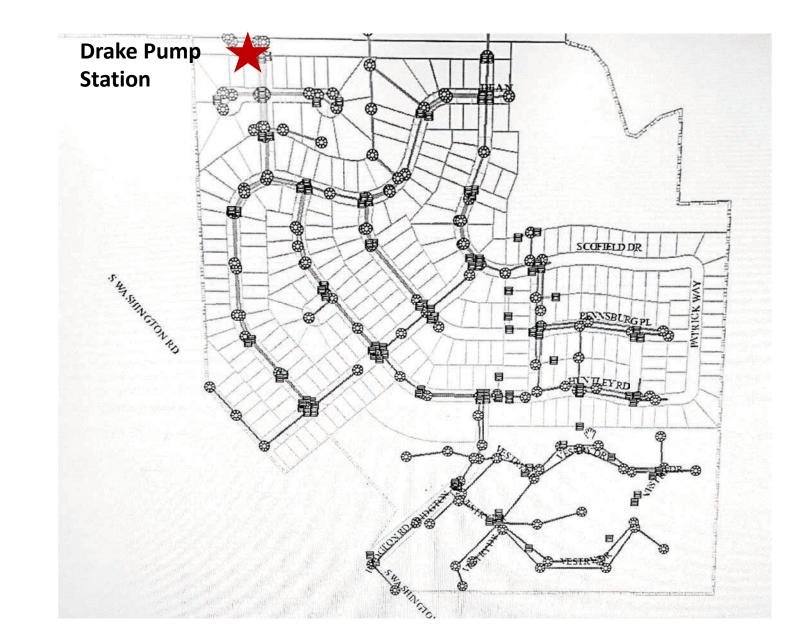
CONFIGURATION:

26 ft vertical discharge chute + 100° elbow

CHALLENGE: Site had chronic pump cleanouts 2-3x a week

200 RESIDENTS

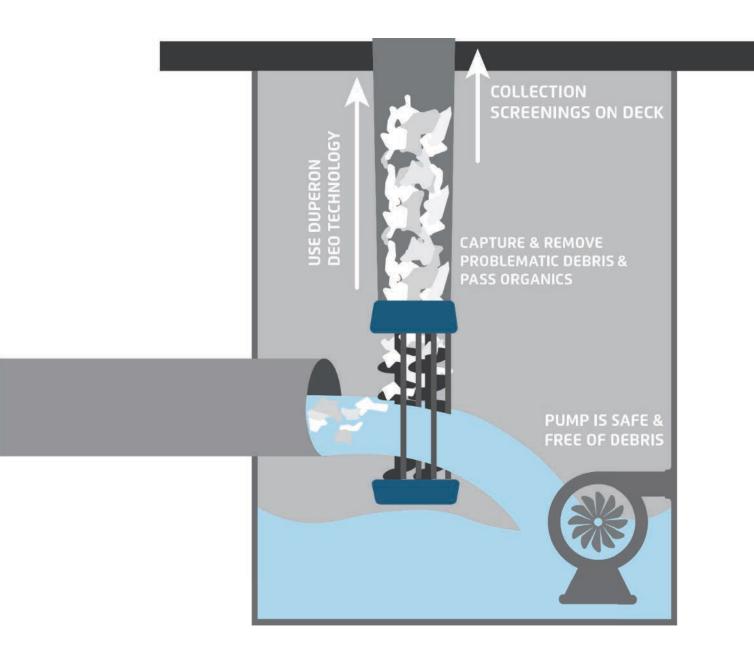
ELEMENTARY SCHOOL





EXISTING STRATEGIES

- Grinders/Chopper Pumps
- Screens/Vertical Augers in large lift stations
- Manual Clean-out



DESIGN CRITERIA

- 30 feet deep, 19 inch manhole
- 50 gpm average flow
- Pumps clogging 2-3 times a week

INSTALLATION



IMPACT OF THE DUAL AUGER SYSTEM

TOTAL RUN TIME 68 days:

- Approx. 4.8 MG (usually operates at 50 gpm)
- Lifted 16 linear feet (roughly 4.9 ft^3) of <u>compacted</u>* debris
- Estimating compaction to be 4:1, raw screenings: 19.6 ft^3 => 4.2 ft^3/MG





POTENTIAL COST SAVINGS

\$40,772 ANNUAL LABOR SAVINGS

\$32.67* x 2 people x 4 hours each x 3x/week x 52 weeks/year

\$842 ANNUAL TRANSPORTATION SAVINGS

10 miles r/t to site 3x per week x \$0.54 x 52 weeks

\$41,614 TOTAL ANNUAL MAINTENANCE SAVINGS

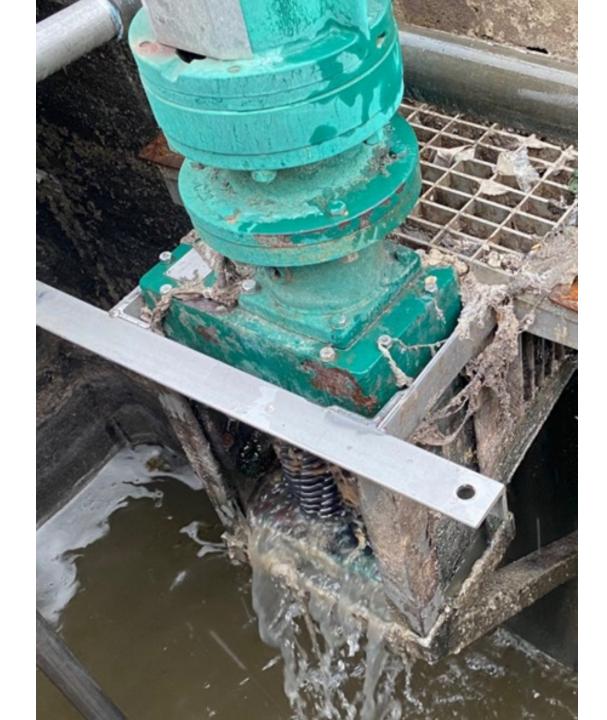
Added value: Giving back 1,248 productive hours annually

*Median Fully-loaded Wastewater Operator Rate for MI Great Lakes Bay Region

SEIDERS HILL Schuylkill County, PA

Nearby convalescent home contributes much of the troublesome debris which clogged equipment and resulted in downtime and manual intervention

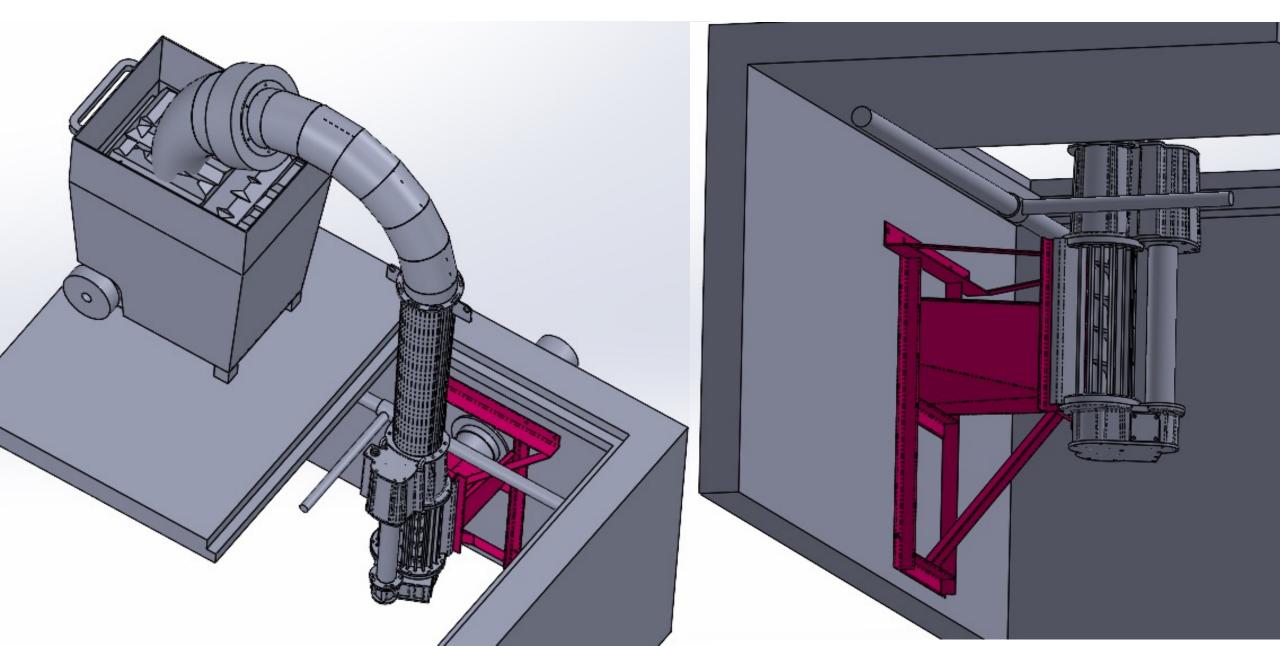


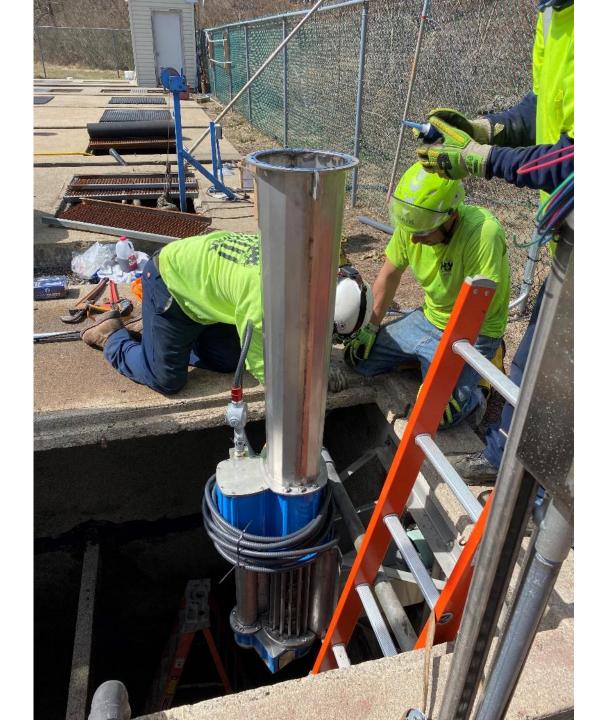


EXISTING STRATEGIES

- A grinder (Muffin Monster) was causing issues by grinding solids into particles which were reforming and collecting in digesters.
- High maintenance







INSTALLATION

- Wet well, rectangular 50 gpm
- Non-residential location
- Above deck discharge
- Freeze potential
- Single VFD control

IMPACT OF THE DUAL AUGER SYSTEM



CONCLUSION:

- A proven new tool for wipes removal
- Small footprint
- Screen with high reliability
- Eliminates unplanned maintenance throughout the system

QUESTIONS

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