

CASE STUDY # 65

FAT, OIL AND GREASE CONTROL IN MUNICIPAL LIFT STATIONS

SUBJECT: Fat, oil and grease (FOG) control in a four lift stations in the sewer collection system of a northwest U.S. City.

PRODUCT APPLIED: MICROCAT®-DNT Drain and Trap Bioformula



LIFT STATION: Flow: **Lift Station #1 = 635 m³/day**
Lift Station #2 = 189 m³/day
Lift Station #3 = 109 m³/day
Lift Station #4 = 189 m³/day

The collection system consists of 4 lift stations, force mains, gravity-fed mains and lateral lines, leading to a municipal wastewater treatment plant. Over a period of 11 years, the Lead Wastewater Treatment Plant Operator and The Wastewater Collections Division had tried many different products (liquid and solid forms) to deal with the fat, oil and grease buildup and odors in the wet wells, pumps and main lines, with little to no success.

OBJECTIVE:

The treatment objective was to reduce the fat, oil and grease (FOG) buildup in the lift stations and the collection system. The buildups caused blockages requiring manual pump out of the lift station and operation problems with the floats and pumps and quarterly cleanout of the sewer mains.

PROGRAM:

Application programs with **MICROCAT-DNT** for the 4 lift stations are shown in Table I. Application rates were based on flow rates, size, hydraulic detention time and other conditions. **MICROCAT-DNT** addition was made to a manhole in the sewer approximately 300 to 1000 metres above the wet well.

	Maintenance Dosage
Lift Station #1	2.7 kg per week
Lift Station #2	1.35 kg per week
Lift Station #3	1.35 kg per week
Lift Station #4	1.35 kg per week

RESULTS:

Since using **MICROCAT-DNT** at the 4 lift stations, the following benefits have been observed:

1. The grease in all the lift stations is maintained at a manageable level and consistency.
2. FOG does not accumulate at the headworks of the wastewater treatment plant.
3. The pumps operate freely and the grease is visibly reduced in the pump lines.
4. Sewer mains no longer need to be cleaned out on a quarterly basis.
5. Labor and maintenance requirements are significantly reduced.
6. Safety concerns are minimized.
7. Fat, oil and grease is no longer present on the surface of the wastewater treatment plant lagoon, and the rocks surrounding the lagoon.

MICROCAT-DNT is regularly added at maintenance dosages to maintain lift station operation and performance.