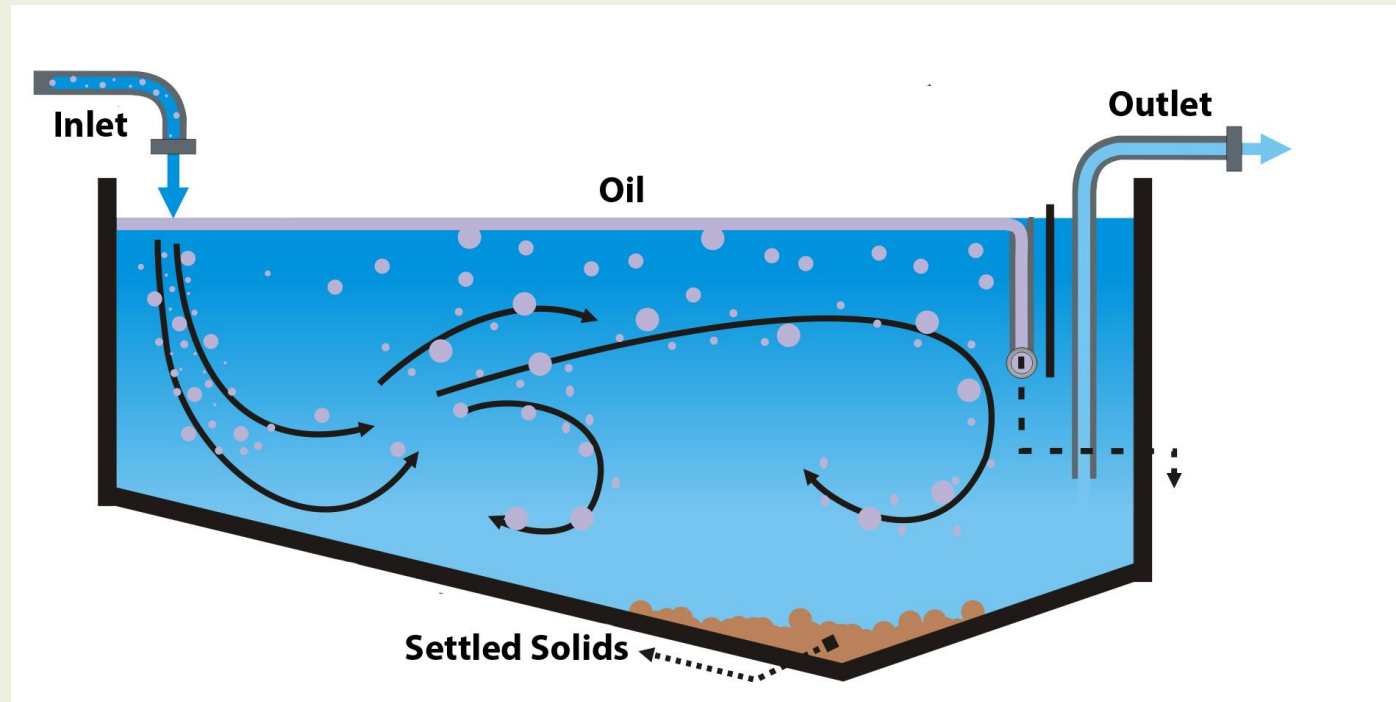


# Case Study: Luke Air Force Base Bioremediation Transition

Jeanette Macias  
Benjamin Frelka  
Wayne Warrington

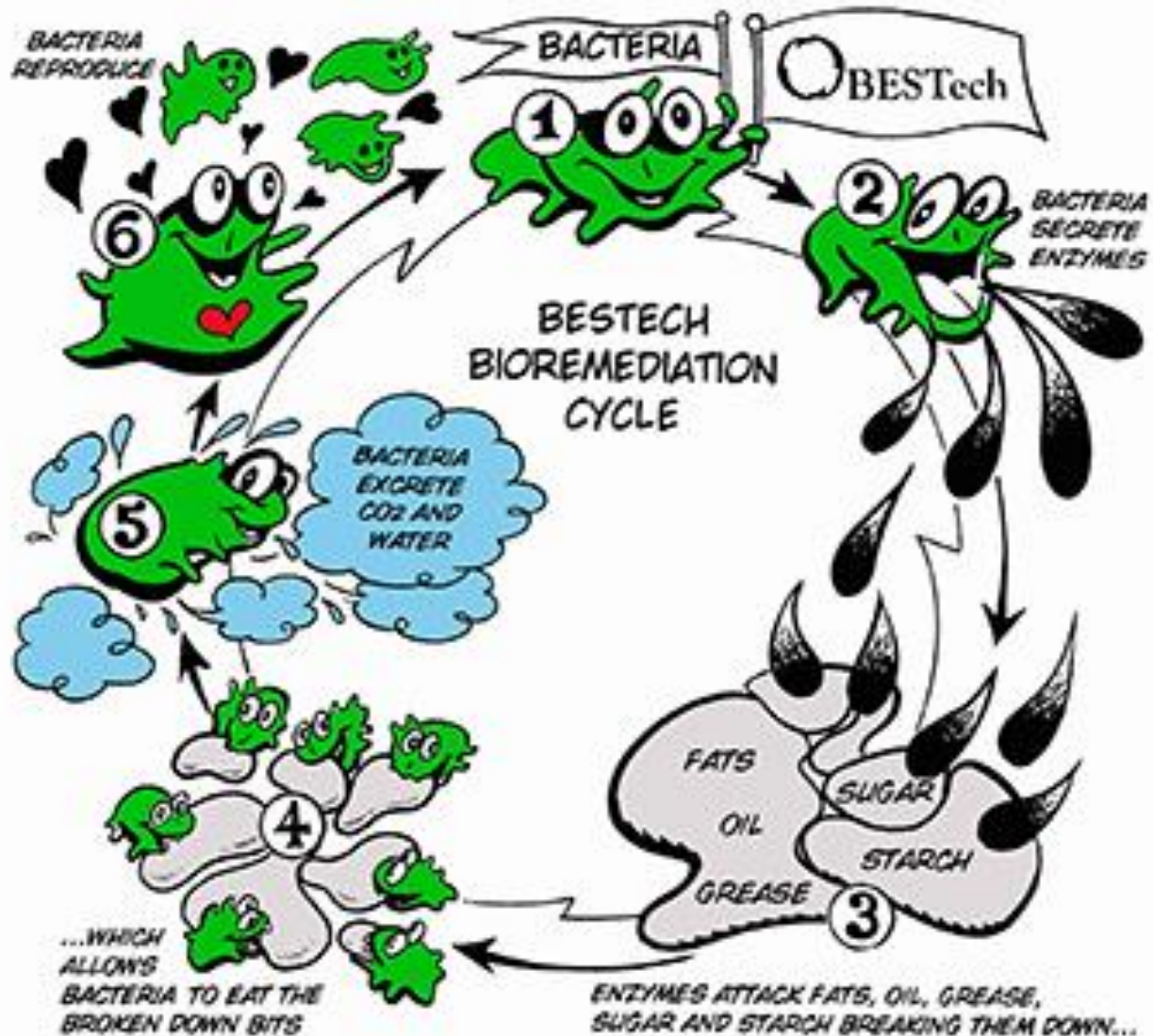
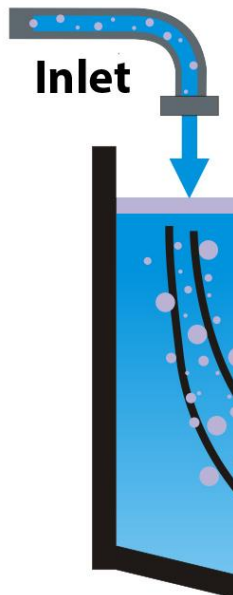
# Conventional Oil and Water Separator

- ❖ Oil and Water separators work on a gravitational system that settles solids at the bottom oils rise to the top and water flows in between.
- ❖ Gravitational oil and water separators are not design for other contaminants aside from oil and petroleum.
- ❖ Water is then pumped and transported to a water treatment facility to be treated.



# Bioremediation

- ❖ The use of microorganisms to break down contaminants
- ❖ Microbes that naturally break down contaminants



# Implementation at Luke Air Force Base

- ❖ Effectively integrated with the existing work processes
- ❖ Grease traps and bacterial buckets at food facilities.
- ❖ Water runs to LAFB water treatment facility and certified to redistribute wherever.





# Before and After Bioremediation

Before

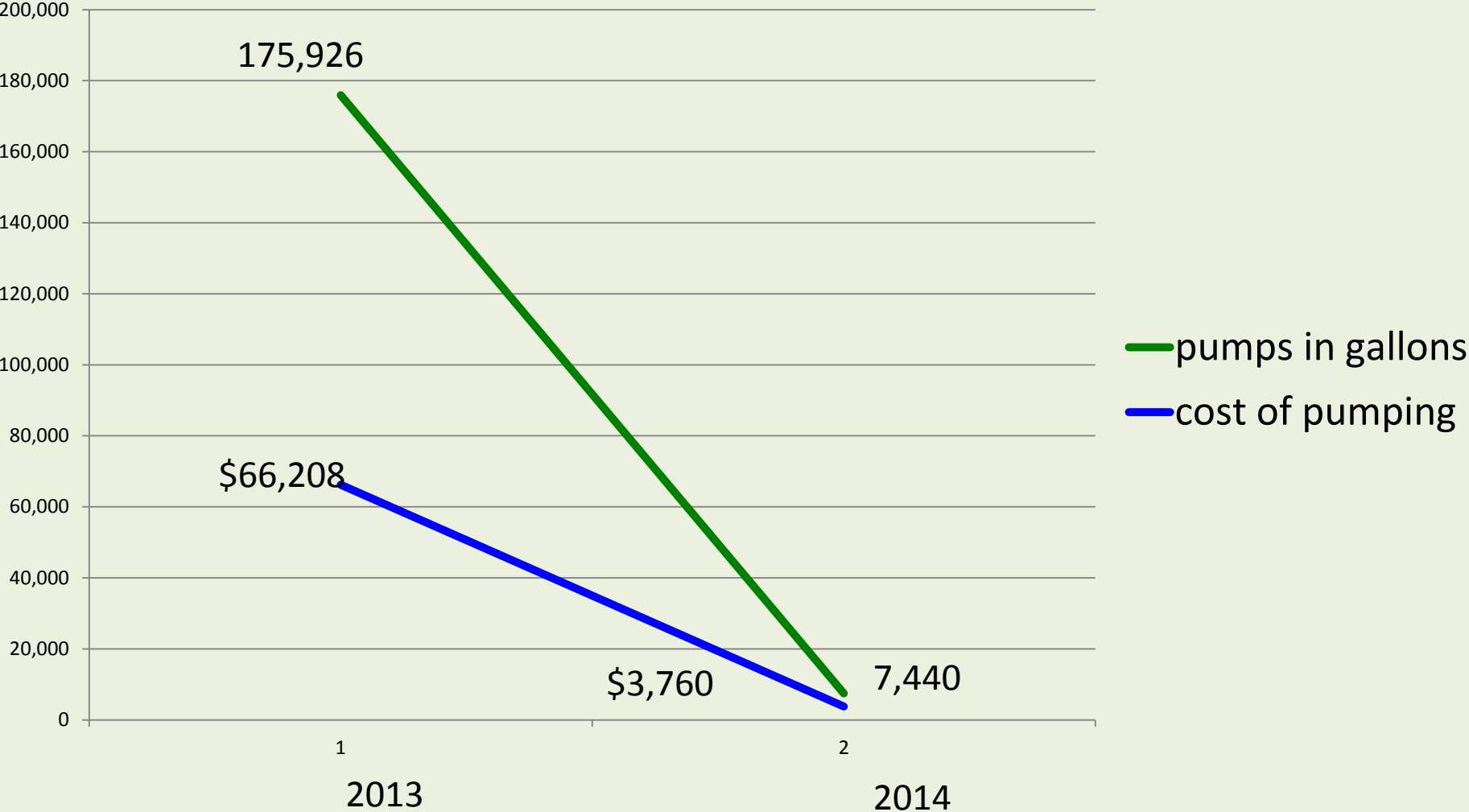


After



# Data Analysis

96% Reduction in Gallons Pumped  
94% Cost Savings



# Potential Converts

