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## Water Usage Reduction at Food Processing Facility

Client: Burke Corporation, Nevada, IA

### Problem Statement

- Burke Corporation in Nevada, Iowa uses 25% of the city's fresh water supply
- The company spends \$875,000/yr and uses 65,385,000 gal of water
- Burke corporation wants to reduce these costs and in turn be more environmentally friendly

### Objectives

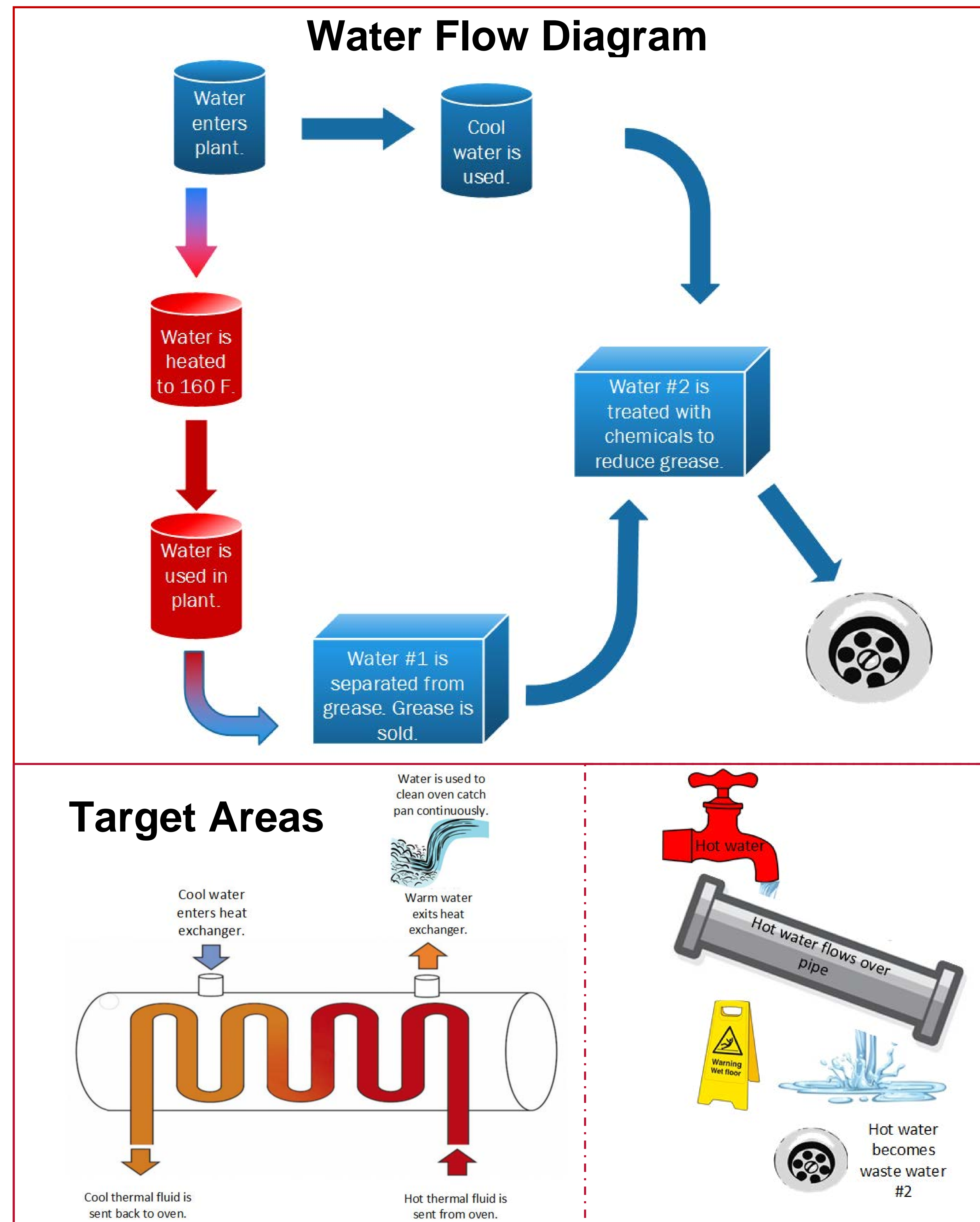
- Reduce overall water usage
- Reduce/remove water used to heat 4" sanitary piping
- Reduce costs associated with water consumption

### Constraints

- Operating cost of solution must be less than current condition
- 3 year payback or less
- Reliable solution that will not cause downtime
- Solution must not have a negative effect on production capacity
- Contaminants must be nonexistent for the food industry
- Temperature control is essential for pipes running process food

### Scope

- Hot water being used to heat 4" sanitary pipe
- Water used to cool and clean oven



### Methods

- Eliminate water usage by heating pipes up via electricity
- Cost analysis of solutions to fit into 3 years payback
- Design custom solutions

### Target Areas

- Pipe is being heated up via water being dumped onto the pipe.
- Ovens use water to heat up and cool down and also use grease
- Attempting to reroute water for other uses as opposed to recycling

### Major Outcomes

- Max. product throughput before and after (capacity increase if any)
- Estimated annual maintenance cost for solution
- Annual savings with solution(s)
- Sustainability analysis of solution
- LOTO write-up on any equipment
- Recommended spare parts list
- SOP
- Preventative maintenance tasks/frequency

### Benefit to Client

- Burke Corporation becomes more environmentally friendly
- Reduce freshwater burden on city of Nevada
- Reduced cost in water, gas and chemical usage
- Increased ergonomics of target area