

# CITY OF MANTECA WASTEWATER QUALITY CONTROL FACILITIES CURRENT TREATMENT PROCESS FLOW DIAGRAM

## BAR SCREEN

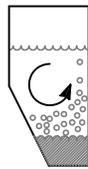
Removes large rags, paper & plastic.



Rag to landfill

## AERATED GRIT CHAMBER

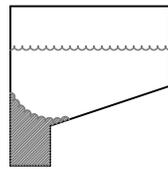
Removes heavier inorganics, sand, etc.



Grit to landfill

## PRIMARY SEDIMENTATION TANKS

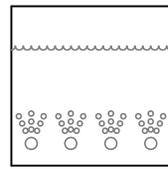
Removes settleable floating organics & grease.



Primary sludge & grease to anaerobic digesters

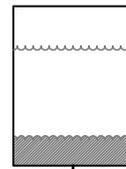
## AERATION BASINS

Activated sludge process (bacteria). Bacteria convert remaining dissolved organics to settleable matter.



## SECONDARY SEDIMENTATION TANKS

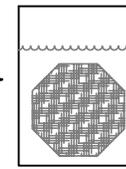
Settles & removes activated sludge - some bacteria are returned to aeration basins for more work.



Excess bacteria to anaerobic digesters

## TERTIARY FILTER TANKS

Removes remaining suspended solids particles to comply with Title 22 unrestricted reuse requirements.

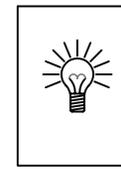


Treated wastewater to agricultural irrigation during summer months

Filtered matter returned to bar screen.

## UV DISINFECTION CHANNELS

Disinfects wastewater using ultraviolet (UV) light by killing disease causing organisms.



Treated wastewater to San Joaquin River.

OR

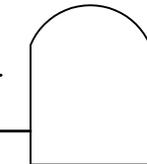
To purple pipe for construction purposes.

## ANAEROBIC DIGESTERS

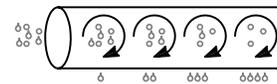
Methane gas is used to heat digesters, excess gas is flared off



Anerobic bacteria have about 30 days to break down and stabilize organic solids. Methane gas is produced as a bi-product



## CENTRIFUGE



Water is separated from stabilized solids.

Stabilized solids to landfill

Water to bar screen

Raw wastewater

