
CITY OF IONE

WASTEWATER MASTER PLAN



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SUBMITTED TO CITY OF IONE
SUBMITTED BY

 LEE & RO, Inc.



AND

PMC

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ABBREVIATIONS

ADWF	average dry weather flow
ASCE	American Society of Civil Engineers
ARSA	Amador Regional Sanitation Authority
AWA	Amador Water Agency
BWF	base wastewater flow
CEQA	California Environmental Quality Act
CIP	capital improvement program
City	City of Ione
cfs	cubic feet per second
County	Amador County
COWRP	Castle Oaks Water Reclamation Plant
DOF	Department of Finance
EIR	Environmental Impact Report
ENR CCI	Engineering News Records Construction Cost Index
fps	feet per second
gpda	gallons per day per acre
gpdpc	gallons per day per capita
gpm/GPM	gallons per minute
GWI	groundwater infiltration
I/I	infiltration/inflow
LF	linear feet
MDWWF	maximum day wet weather flow
mgd/MGD	million gallons per day
PDWF	peak dry weather flow
PGA	peak ground acceleration

PWWF	peak wet weather flow
RDI/I	rainfall dependent infiltration & inflow
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
R-Value	percentage of rainfall volume
SOI	sphere of influence
WEF	Water Environment Federation
WDRs	Waste Discharge Requirements
WWTF/WWTP	Secondary Wastewater Treatment Plant

TERMS

Backwash Water. May be produced when raw water is used to wash filters and components of a water treatment plant.

Castle Oaks Water Reclamation Plant (COWRP). The City's tertiary WWTP.

City of Lone Wastewater Treatment Plant. The City's secondary wastewater treatment plant.

Disinfection. Can occur after final treatment but is not always required. Normally disinfection is accomplished with chlorine gas or a chlorine compound. Use of chlorine presents worker safety issues and chlorination of water may result in increased concentrations of trihalomethanes in the effluent. Trihalomethanes are believed to be a health risk to humans if ingested high enough concentrations and over a long period of time. Alternatively, disinfection can be accomplished using ultraviolet light. This method of disinfection eliminates the concern of trihalomethanes but does not provide a residual disinfection chemical concentration and regrowth of bacteria can potentially occur.

Preliminary Treatment. Consists of screening and grit removal for the protection of downstream piping, valves, and pumping equipment.

Primary Treatment. Consists of removal of suspended solids (SS) and reduction of Biological Oxygen Demand (BOD5) by sedimentation. Typically 60 percent of SS and 30 percent of the BOD5 can be removed through this process.

Secondary Treatment. Consists of biological treatment. This treatment method relies on bacteria to consume the organic material in the waste. This treatment removes 80-95 percent of remaining SS and BOD5. Secondary treatment can also include the removal of nitrogen compounds. Secondary treatment does not have to be preceded by primary treatment.

Secondary Wastewater Treatment Plant. In Lone, also known as the City of Lone Wastewater Treatment Plant.

Tertiary Treatment. Consists of chemical precipitation and filtration. This process removes 80-95 percent the remaining contaminates. Tertiary treatment only occurs after secondary treatment.

Tertiary Wastewater Treatment Plant. In lone, also known as the Castle Oaks Water Reclamation Plant (COWRP).