

MONTHLY OPERATIONS REPORT

for the: **City of Lone**

**Castle Oaks and the Wastewater Treatment
Facilities**

Wastewater Services

September 2023

RE: SEPTEMBER 2023 - MONTHLY OPERATIONS REPORT

Dear Mrs. Godney:

WaterStone Services LLC is pleased to present our monthly operations report detailing our operations and maintenance activities at your wastewater treatment facilities during the previous month. Our report addresses the following key areas of concern:

1. Permit Compliance
2. Plant Flows
3. Plant Loads
4. Plant Process and Performances
5. Maintenance and Repair
6. Process Chemicals
7. Solids Disposal
8. Safety

Should you have any questions or concerns regarding this report or any aspect of our operation, please don't hesitate to contact me.

Thank you for your time,

Sincerely,

Kathy Stone- Operations Manager

James Whitaker- Facility Manager

1.0 PERMIT COMPLIANCE

1. Discharge Permit Compliance- Tertiary WWTP

Central Valley Regional Water Quality Control Board permits the discharge from the facility for multiple parameters. All regulatory water quality monitoring requirements were met. The WWTP Facilities achieved compliance with parameters, as documented in **TABLE 1.0** below. All permit required laboratory analysis performed by Alpha Laboratories.

TABLE 1.0 – DISCHARGE COMPLIANCE

PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
Flow	1.2 MGD	Continuous	0.714	0.930	0.488
pH	6.0-9.0 mg/L	Weekly	7.5	7.9	7.3
Total Coliform	23 MPN	Daily	<1.8	4.5	<1.8
Electrical Conductivity	10/mg/l	Monthly	590	590	590
Chlorine	N/A	Daily	5.4	9.8	3.4
Nitrate	10 mg/L	Weekly	0.7	1.4	<0.20
Total Arsenic	mg/l	Monthly	0.02	0.02	0.02
Turbidity	10 NTU	Continuous	1.29	3.61	0.38
Biochemical Oxygen Demand	30 mg/L 45 Day Average	Weekly	<5.0	<5.0	<5.0

GREEN= WITHIN PERMIT LIMITS

YELLOW=WITHIN PERMIT LIMITS NEEDS ATENTION

RED= EXCEEDED PERMIT LIMITS

2. Permit Compliance- Wastewater Treatment Plant Ponds

Central Valley Regional Water Quality Control Board provides a Permit for the Operation of the Pond Treatment System. All regulatory water quality monitoring requirements were met. The WWTP Facilities achieved compliance with parameters, as documented in **TABLE 1.1** on the following page.

TABLE 1.1 – PERMIT COMPLAINE

POND	PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
1	Dissolved Oxygen	>1.0 X 3	Weekly	5.5	6.3	3.5
2	Dissolved Oxygen	>1.0 X 3	Weekly	5.1	5.9	3.2
3	Dissolved Oxygen	>1.0 X 3	Weekly	5.1	8.3	3.0
4	Dissolved Oxygen	>1.0 X 3	Weekly	7.1	10.7	4.0
5	Dissolved Oxygen	>1.0 X 3	Weekly	6.6	12.2	3.0
6&7	EMPTY	>1.0 X 3	Weekly	N/A	N/A	N/A
POND	PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
1	pH	6.0-9.0	Weekly	6.9	7.1	6.5
2	pH	6.0-9.0	Weekly	7.1	7.6	6.7
3	pH	6.0-9.0	Weekly	6.6	7.5	6.1
4	pH	6.0-9.0	Weekly	6.9	7.3	6.4
5	pH	6.0-9.0	Weekly	6.8	7.5	6.0
6&7	EMPTY	6.0-9.0	Weekly	N/A	N/A	N/A
POND	PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
1	Freeboard	2.0	Weekly	2.0	2.0	2.0
2	Freeboard	2.0	Weekly	2.0	2.0	2.0
3	Freeboard	2.0	Weekly	2.0	2.0	2.0
4	Freeboard	2.0	Weekly	2.0	2.0	2.0
5	Freeboard	2.0	Weekly	2.0	2.0	2.0
6&7	EMPTY	2.0	Weekly	N/A	N/A	N/A
POND	PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
1	Berm Condition	Visual	Weekly	OK	OK	OK
2	Berm Condition	Visual	Weekly	OK	OK	OK
3	Berm Condition	Visual	Weekly	OK	OK	OK
4	Berm Condition	Visual	Weekly	OK	OK	OK
5	Berm Condition	Visual	Weekly	OK	OK	OK
6&7	EMPTY	Visual	Weekly	N/A	N/A	N/A
POND	PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
1	Seepage/Odor	Visual	Weekly	OK	OK	OK
2	Seepage/Odor	Visual	Weekly	OK	OK	OK
3	Seepage/Odor	Visual	Weekly	OK	OK	OK
4	Seepage/Odor	Visual	Weekly	OK	OK	OK
5	Seepage/Odor	Visual	Weekly	OK	OK	OK
6&7	EMPTY	Visual	Weekly	N/A	N/A	N/A

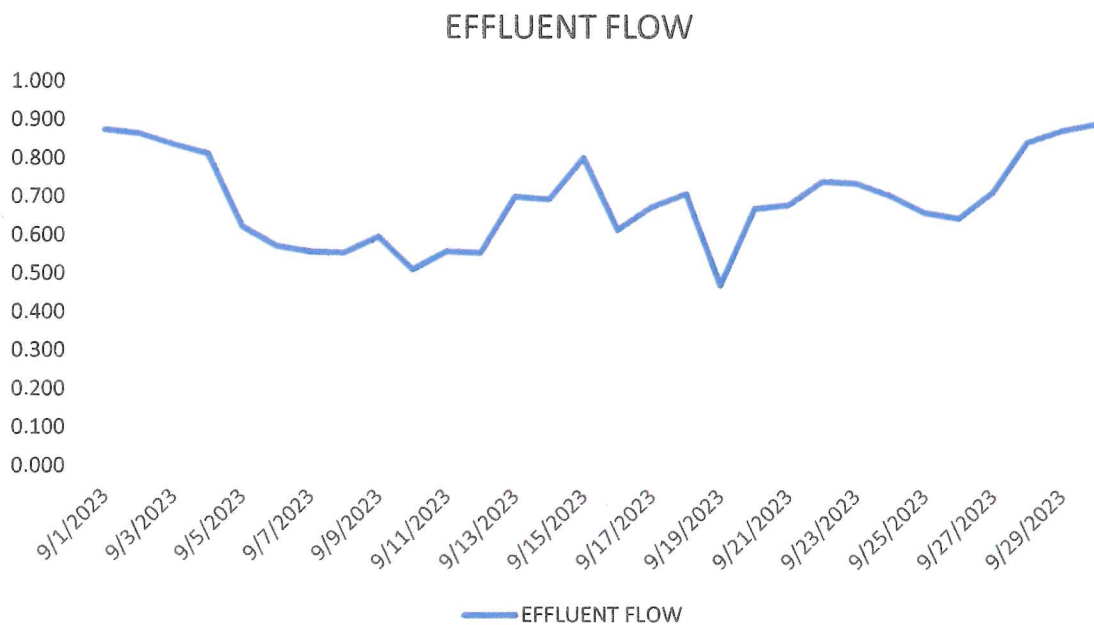
2.0 PLANT FLOWS

Effluent and Influent Flow

The total Influent flow of 25,720,745 GPD of wastewater has been recorded for the month of September. The average daily influent flow for the month was 857,478 GPD. A maximum daily flow of 1,096,467 GPD on September 30th. A minimum daily flow of 586,063 GPD was on September 19TH due to plant shut down.

The total Effluent flow of 24,925,716 GPD of wastewater has been recorded for the month of September. The average daily effluent flow for the month was 831,057 GPD. A maximum daily flow of 1,068,845 GPD on September 30th. A minimum daily flow of 56,647 GPD was on September. 19TH due to plant shut down.

Graph 2.1 below trends the Effluent flow for the month of September



3.0 PLANT LOADS

The plant loading consists of domestic wastewater.

4.0 PLANT PROCESSES AND PERFORMANCE

1. Collection System

September 6th There was a collection system emergency. Hydro jetted from front of 541 Foothill Dr. Hydro jetted upstream from manhole located next to culvert 21 feet. Cleared blockage. Vacuumed liquid (less than 10 gallons) out of the drain ditch and sanitized. Possible break in line.

Recommend repair/replacement of line. Length between manhole 93 feet.

Offset or break in line located at 21' from manhole and culvert upstream 21'

September 18th Hydro jetted irrigation and pumped and cleaned lift station South 3.

September 23rd-Called out for emergency service. Location 10 Castle Oaks Dr., Lone CA

Called out due to overflowing sewer, it was determined a water leak and not a sewer spill.

2. *Influent Headworks*

The influent flow meter needs repair. Filter screen cleaned daily. The high-level alarm is tested daily.

3. *Aeration*

Pond Four aerator was serviced and is working properly. All other aerators working continuously for the month of September.

4. *Castle Oaks Golf Course*

The spray fields were operated 30 out of 30 days of the month of September. Zone 2 and Zone 4 were utilized on the days the spray field was operated. The effluent is applied evenly.

5. *Farmer's Irrigation*

The irrigation spray fields were operated 9 out of 30 days of the month of September.

5.0 MAINTENANCE AND REPAIR

Maintenance and repair is a critical component of the overall operations of the wastewater treatment facilities. Waterstone Services is working closely with the City of Lone maintenance staff to assure that critical tasks are identified and corrected in a timely manner.

The following critical tasks completed this month:

- ADDED OIL AND GREASE TO ALL BLOWERS
- CHECKED EYE WASH STATIONS
- PAINTED STAIRS WITH SAFETY PAINT
- POSTED 22 SAFETY SIGNS THROUGH OUT THE PLANT
- ORDERED CHLORINE ANALYZER
- REPAIRED POLY PUMP
- GROUND MAINTENANCE
- REPAIRING EYEWASH STATIONS
- TEL-STAR WORKED ON WETWELL SENSOR
- NEW CHLORINE TANK INSTALLED
- CHECKED FIRE EXTINGUISHERS
- SANITARY SEWER BACKUP CLEANING BY ABC PLUMBING 9/6/2023
- INFLUENT PUMP AT WASTEWATER FACILITY SERVICED
- AERATOR IN POND 4 SERVICED
- SENT SLUDGE TO DRYING BED
- ALL MONTHLY SAMPLES COMPLETED
- CALIBRATION OF METERS AND PROBES, AND OTHER QA/QC TASKS
- CREATED, IMPLEMENTED AND UPDATED SOP MANUALS- LOCK OUT TAG OUT/LAGOON SAFETY PROCEDURES

ITEMS REQUIRING CLIENT APPROVAL

ITEM	CRITICALITY	STATUS	COMPLETION DATE
EFFLUENT PUMPS	HIGH	APPROVED	N/A
TURBIDITY METER/PROBE	HIGH	APPROVED	9/5/2023
CAM LOCKS	MEDIUM	RESEARCHING	N/A
SOLIDS HANDLING	HIGH	RESEARCHING OPTIONS	N/A

6.0 PROCESS CHEMICALS

The process chemical inventory (chlorine, polymer) are the bulk of chemicals used at the plant. We are utilizing tracking sheets for daily operator use to assure that dosage rates for all process chemicals are optimized. All chemicals used are being tracked on a daily basis.

7.0 SOLIDS HANDLING

Sludge is separated from water and deposited in the solids sludge drying bed.

8.0 SAFETY

Safety of the Waterstone Services staff, and the facility itself is a critical concern. Safety meetings topics for the month of September included: Heat Illness Prevention and Ladder Safety. We are pleased to report that there were no workplace accidents or injuries in the past month

MONTHLY OPERATIONS REPORT

for the: **City of Lone**

**Castle Oaks and the Wastewater Treatment
Facilities**

Wastewater Services

October 2023

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Thank you for your time,

Sincerely,

Kathy Stone- Operations Manager

James Whitaker- Facility Manager

1. PERMIT COMPLIANCE

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Agenda Item #F6 (B)

Central Valley Regional Water Quality Control Board permits the discharge from the facility for multiple parameters. All regulatory water quality monitoring requirements were met. The WWTP Facilities achieved compliance with parameters, as documented in **TABLE 1.0** below. All permit required laboratory analysis performed by Alpha Laboratories.

TABLE 1.0 – DISCHARGE COMPLIANCE

PARAMETER	PERMIT LIMIT	FREQUENCY	AVERAGE	MONTHLY HIGH	MONTHLY LOW
Flow	1.2 MGD	Continuous	0.595	0.853	0.462
pH	6.0-9.0 SU	Weekly	7.2	7.3	7.1
Total Coliform	23/240mpn	Daily	2.0	7.8	<1.8
Electrical Conductivity	mg/l	Monthly	390	390	390
Chlorine	mg/l	Daily	5.1	4.9	8.0
Nitrate	mg/L	Weekly	7.7	10.0	2.5
Total Arsenic	mg/l	Monthly	<10	<10	<10
Turbidity	10 NTU	Continuous	0.45	1.82	0.16
Biochemical Oxygen Demand	30 mg/L 45 Day Average	Weekly	<5.0	<5.0	<5.0

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TABLE 1.1 – PERMIT COMPLIANCE

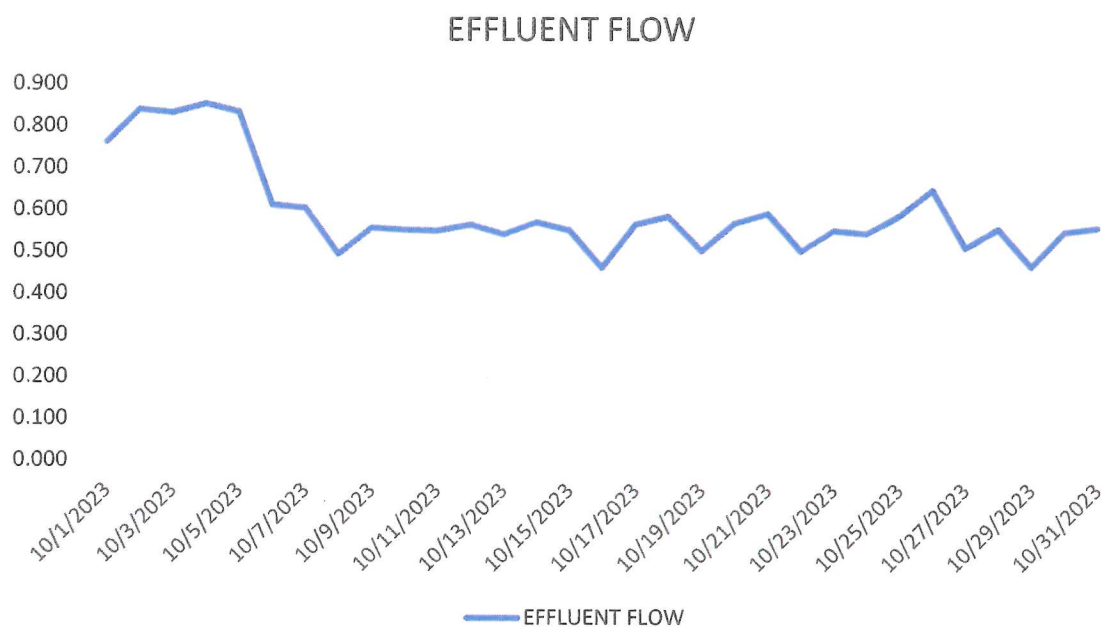
2. PLANT FLOWS

1. Effluent and Influent Flow

The total Influent flow of 19,300,000 GPD of wastewater has been recorded for the month of October. The average daily Influent flow for the month was 619,000 GPD. A maximum daily flow of 878,000 GPD on October 4TH. A minimum daily flow of 484,000 GPD on October 29TH.

The total Effluent flow of 18,450,000 GPD of wastewater has been discharged for the month of October. The average daily Effluent flow for the month 595,000 GPD. A maximum daily flow of 853,000 GPD on October 4TH. A minimum daily flow of 462,000 GPD on October 16TH.

Graph 2.0 Below trends the Effluent flow for the month.



3. PLANT LOADS

The plant loading consists of domestic wastewater.

4. PLANT PROCESSES AND PERFORMANCE

A. Collection System

10/26/2023, 19:00 Transfer switch failed at Edgebrook lift station. Jim Whitaker and ABC Plumbing responded to stop flow. All perinate agencies were notified.

10/6/2023 Hydro415 Shakeley & 427 Shakeley

Hydro jetted and camera inspected. Found broken check valve located at sidewalk manhole. Removed gate from line that was obstructing flow.

Hydro jetted and re-camera inspected to ensure line was cleared.

Hydro line and found no obstruction, flow running good.

415 Shakeley

No one home. No property line cleanouts. No signs of blockage.

Spoke to homeowner's son who informed us that problem was corrected over the weekend by others who suggested replacing lateral up to street connection.

10/20 541 Foothill

Camera inspected 6" sewer line upstream. Offset located at 9' & 11'. Root intrusion at 18' & 21.6'. Offset located at 40.6'. Total length of line 85'.

Picture shows broken line at East Main & El Dorado, 60.2' from downstream manhole location.

29 E. Plymouth HWY Inspected upstream and located root intrusion at 4' and

60.5' in line from lateral. Removed tree root intrusion at 4'. Unable to remove the lateral tree roots. Length of line 97.4' at Raymond manhole.

Maintenance clean from school out to HWY. Hydro jetted various locations. Maintenance to be continued. Map with details will be provided after completion of maintenance.

Hydro jetting 13.75 275.00 3,781.25 Camera Inspection

10/26/2023 313 W. Marlette

Located the City connection. Ran transmitter from under house due to no cleanout on site. Transmitter ran out to lawn area. Marked with green paint. Located the tap location in street and marked with green paint by sidewalk. Located at 27' West of property line.

B. Influent Headworks

The influent flow meter needs repair. Filter screen cleaned daily. The high-level alarm is tested daily.

C. AERATION

All pond aerators working for the month of October.

D. Castle Oaks Golf Course

The spray fields were operated 24 out of 31 days of the month of October. Zone 2 and Zone 4 were utilized on the days the spray field was operated. The effluent is applied evenly.

E. Farmer's Irrigation – No spraying in October

5. MAINTENANCE AND REPAIR

Maintenance and Repair is a critical component of the overall operations of the wastewater treatment facilities. Waterstone Services is working closely with the City of Ione maintenance staff to assure that critical tasks are identified and corrected in a timely manner.

The following critical tasks were completed this month:

- ADDED OIL AND GREASE TO ALL BLOWERS
- CHECKED EYE WASH STATIONS, REPAIRED
- CHECKED FIRE EXTINGUISHERS MONTHLY
- SEWER LINE CLEANING AS REQUIRED
- ROAD BERM COMPLETED
- CHLORINE TANK ARRIVED, NEEDS PLUMBING
- REVIEWING SSMP
- CREATING JSA FOR THE FACILITIES
- SHAPE INSTALLED PUMP RUNNING WELL
- LEVEL SENSOR ON ORDER METER AND SPEED DIAL RECEIVED
- INFLUENT PUMP AT WASTEWATER FACILITY SERVICED
- STAIRS PAINTED AND LABELED WITH CAUTION SIGNS
- SAFETY SIGNAGE POSTED AT BOTH FACILITIES
- SENT SLUDGE TO DRYING BED
- CLEANED UP ANY SLUDGE OVERFLOW
- ALL MONTHLY SAMPLES COMPLETED
- CALIBRATION OF METERS AND PROBES, AND OTHER QA/QC TASKS
- CREATED, IMPLEMENTED AND UPDATED SOP MANUALS
- MET WITH REGULATORS AND ENGINEERS ON SITE IMPROVEMENTS
- ALL EQUIPMENT CHECKED DAILY

ITEMS REQUIRING CLIENT APPROVAL

ITEM	CRITICALITY	STATUS	COMPLETION DATE
Chlorine Analyzer	HIGH	APPROVED	N/A
CO Level sensor	MEDIUM	APPROVED	N/A
Poly Pump Speed Dial	HIGH	APPROVED	N/A
Chlorine Tank Plumbing	MEDIUM	APPROVED	N/A

6. PROCESS CHEMICALS

The process chemical inventory (chlorine, polymer) are the bulk of chemicals used at the plant. We are utilizing tracking sheets for daily operator use to assure that dosage rates for all process chemicals are optimized. All chemicals used are being tracked on a daily basis.

7. SOLIDS DISPOSAL

Sludge is separated from water and deposited in the solids sludge drying bed.

8. SAFETY

Agenda Item #F6 (B)

Safety of the Waterstone Services staff, and the facility itself is a critical concern. Safety meetings topics for the month of October included: Hands on generator training with Hometown Generator's. We are pleased to report that there were no workplace accidents or injuries in the past month.