

**Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT**

Inspection Date(s):	08/13/2018		
Media:	Water		
Regulatory Program(s)	CWA		
Company Name:	City of Carlsbad		
Facility Name:	Carlsbad Wastewater Treatment plant		
Facility Physical Location:	45 Blackfoot Road		
(city, state, zip code)	Carlsbad, New Mexico		
Mailing address:	Post Office Box 1569		
(city, state, zip code)	Carlsbad, New Mexico 88221-1569		
County/Parish:	Eddy		
Facility Contact:	Joe Harvey	Wastewater Superintendent	
	wastewater@cityofcarlsbadnm.com		
FRS Number:	110014410262		
Identification/Permit Number:	NM00226395		
Media Number:	N/A		
NAICS:	221320		
SIC:	4952		
Personnel participating in inspection:			
Joe Harvey	City of Carlsbad	Wastewater Superintendent	575-887-5412
Joshua Lawson	City of Carlsbad	Wastewater Collection Supervisor	575-499-9791
David Esparza	USEPA	Environmental Engineer	505-366-8402
EPA Lead Inspector Signature/Date			
	David Esparza		Date
Supervisor Signature/Date			
	Carol Peters		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors David Esparza, PE, arrived at the City of Carlsbad Wastewater Treatment Plant (WWTP) (hereinafter referred to as WWTP) at approximately 1:00 PM on August 13, 2018 for an unannounced inspection. I met with Joe Harvey, Wastewater Superintendent, presented my credentials and informed him that this was an EPA inspection to determine the WWTP's compliance under the Clean Water Act (CWA). This compliance evaluation inspection (CEI) was conducted under the authority of the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the CWA. The generation of this report is based on information supplied by Carlsbad representatives, observations made by the United States Environmental Protection Agency (US EPA) inspector, and records and reports maintained by the permittee (Carlsbad), and the US EPA. Before leaving the facility, an exit briefing was held at 3:00 PM with Mr. Harvey and Mr. Joshua Lawson to explain areas of concern noted at the time of the inspection and request representative photograph copies of the WWTPs records.

FACILITY DESCRIPTION

The WWTP is a major discharger with a design flow of 5.0 million gallons per day (MGD), with an average daily flow of 2.5 MGD. The facility is located at 45 Blackfoot Road, Carlsbad, Eddy County New Mexico (depicted in Aerial Image #1 below). The WWTP facility serves a population of approximately 29,000 (2016 US Census) residents. The WWTP is operated by staff within the Public Works Department and consists of 8 full-time equivalent (FTE) positions, inclusive of administrative support during the hours of 6:00 AM to 3:00 PM seven (7) days a week. On-call staff is available on an as needed basis.



Aerial Image #1: Overall view of the City of Carlsbad's Wastewater Treatment Plant. Aerial from Google Earth maps.

The City of Carlsbad maintains approximately 21 lift stations within the entire collection system, inclusive of 9 onsite within the WWTP, of which 6 are operational and 3 are on stand-by. All influent flows from the City is lifted by a primary lift station situated on the west side of the Pecos River, thence to the WWTP on the east side of the Pecos River. The City's former WWTP is utilized as a primary lift station and is comprised of two (2) lift pumps and automatic backup power, an alarm and callout system. The City previously rehabilitated numerous manholes, the lift station and is awaiting an additional funding request pertaining to proposed upgrades. The previous upgrades have significantly cut down on backups and inflow in the collection system. Upgrades to the WWTP were completed a couple of years ago, inclusive of an expansion of the reuse storage system (totaling approximately 2-million gallons of storage). The WWTP headworks are comprised of an automatic bar screen, fine screen compactor and aerated grit chamber (Appendix 1 Photograph #1 and #2). To prevent overflows an automatic bypass is incorporated too. The flow traverses from the headworks to a splitter box, thence to either of two primary clarifiers which operate in parallel. Residual grit and screenings are transported to the regional landfill. The flow is divided between the two primary clarifiers, then re-combines and is treated in four (4) aeration basins, operating in parallel. The basins have both anoxic and aeration zones for nitrogen removal. From the aeration basin, the wastewater flows into two secondary clarifiers (Appendix 1 Photograph #3 and #4). After solids are separated out in the secondary clarifiers, effluent flows through a dual bank UV system for final disinfection. These two (2) UV banks were reworked in approximately 2014. A portion (approximately 1-million gallons) of the disinfected effluent flow is stored for reuse on the city golf course and other facilities (Appendix 1 Photograph #5 and #6). The effluent flow is measured using an 18-inch Parshall flume with a secondary Drexelbrook flow totalizing meter (Appendix 1 Photograph #7). The final effluent is discharged to the Pecos River through an effluent pipeline above the river.

Septage and domestic wastewater (typically greywater) are received at a WWTP structure situated next to the sludge beds. This facility is equipped with a bar screen and large solids removal. The domestic water sources (primarily shower water, etc.) from oil and gas maintenance facilities in the geographical area is dumped into a converted sludge bed, and then gradually piped into the WWTP. The facility staff monitors incoming registered septage haulers for pH and grease to determine compatibility with the WWTP for acceptance or rejection (Appendix 5: Septage Manifest).

Section II – OBSERVATIONS

I observed the following and the following information was provided and/or stated:

- The WWTP has completed or is in the process of completing scheduled maintenance and/or upgrades/rehabilitation with respect to existing infrastructure i.e. retrofitting the aeration basins and holding basin for the reuse water.
- In response to my inquiry regarding how the WWTP addresses sanitary sewer overflow (SSO) events, I was provided the following documentation in response to an event the WWTP had experienced at the on-site septage receiving facility (Appendix 4: July 9, 2018 Septage Spill and SSO Protocol).
- The WWTP had secure perimeter fencing; thus, limiting access. The overall WWTP's operations and maintenance (O&M), and general facility housekeeping appeared to be in good order
- It was suggested a visual observation of the WWTP's effluent flow at Out 001 into the Pecos River not occur due to the typical infestation of venomous vermin now.
- The WWTP on-site laboratory maintains and updates its written SOP's as necessary, inclusive of appropriate annual equipment certifications and/or calibrations.

Section III – AREAS OF CONCERN

After the on-site inspection, the EPA inspector met with WWTP and City of Carlsbad representatives for a closing conference at 3:05 PM. During this conference, the inspectors discussed observations noted during the inspection. These observations included:

- In response to my inquiry regarding how the WWTP addresses sanitary sewer overflow (SSO) events, I was provided the following documentation in response to an event the WWTP had experienced at the on-site septage receiving facility (Appendix 4: July 9, 2018 Septage Spill and SSO Protocol).
- It was suggested a visual observation of the WWTP's effluent flow at Out 001 into the Pecos River not occur due to the typical infestation of venomous vermin now.

Section IV – FOLLOW UP

None required now.

Section V – LIST OF APPENDICES

- Appendix 1 – Photo Log – 7 photos taken 08/13/2018
- Appendix 2 – Opening conference sign-in sheet
- Appendix 3 – Current Wastewater Treatment Plant Site Plan
- Appendix 4 – City of Carlsbad: July 9, 2018 Septage Spill Response and SSO Protocol
- Appendix 5- City of Carlsbad Liquid Waste Disposal Permit (Septage Manifest)
- Appendix 6 – City of Carlsbad May, June and July DMR's and Summary
- Appendix 7 – City of Carlsbad Industrial Users List
- Appendix 8 – City of Carlsbad Process Control Reuse Water
- Appendix 9 – City of Carlsbad Wastewater Treatment Plant Operator Certifications