

PUBLIC NOTICE

April 11, 2022

REQUEST FOR PUBLIC COMMENT ON A PROPOSED MODIFICATION TO OKLAHOMA'S WATER QUALITY MANAGEMENT PLAN FOR WYNNEWOOD REFINERY

Public Comment Period Begins: April 11, 2022

Public Comment Period Ends: May 26, 2022

Permittee: Wynnewood Refining Co., P.O. Box 305, Wynnewood, OK 73098. [Facility Legal Description: NW¼, NE¼, NE¼, Section 28, Township 2 North, Range 1 East, I.M.]

Receiving waters and location: Washita River (OK310810010010_00) (Latitude: 34° 37' 21.19" North; Longitude: 97° 11' 57.21" West).



The Wynnewood Refinery has requested to increase effluent flow to 1.7 MGD without increasing waste load allocation (WLA) for dissolved oxygen (DO) constituents (e.g. BOD₅ and NH₃). To keep the current WLA for DO constituents, Wynnewood Refinery will reduce their concentration limits by approximately 40% (Table 1). This 208 Plan focuses only on DO demanding substances. Other technology-based limits in this 208 Plan will be addressed during the permitting process.

Table 1. BOD₅ and Ammonia limits

Parameter	WLA		Concentration Limit	
	Current Limit	Proposed Limit	Current Limit	Proposed Limit
Design Flow	0.987 MGD	1.7 MGD	0.987 MGD	1.7 MGD
Ammonia N	288.6 lb/d	288.6 lb/d	35 mg/L	20 mg/L
BOD ₅	594.6 lb/d	594.6 lb/d	72 mg/L	42 mg/L

The Wynnewood Refinery discharges their wastewater into the Washita River (OK310810010010_00) near U.S. Highway 17A bridge. The Washita River (OK310810010010_00) is listed in Appendix A of the Oklahoma Water Quality Standards (OAC 785:45) and its beneficial uses are listed as Aesthetics, Agriculture, Fish and Wildlife Propagation - Warm Water Aquatic Community (WWAC), Fish Consumption (FC), Primary Body Contact Recreation (PBCR), and Public and Private Water Supply (PPWS). For this Washita River segment, Agriculture, WWAC, and PPWS beneficial uses were assessed as insufficient information.

If 0.2 mg/L of ammonia and 2 mg/L of BOD₅ are assumed upstream of the facility, those concentrations in the receiving stream will be reduced as indicated in Table 2. This increased flow will have a negligible impact on the receiving stream.

Table 2. Concentration Comparison after Mixing

Parameter	Headwater	Receiving stream with current limits	Receiving stream with proposed limits
Flow	65 MGD	66 MGD	66.7 MGD
Ammonia N	0.2 mg/L	0.72 mg/L	0.71 mg/L
BOD ₅	2.0 mg/L	3.05 mg/L	3.02 mg/L

Wynnewood Refinery

Proposed Design Flow: 1.7 MGD
 Year-round: 594.6 lb/d BOD₅, 288.6 lb/d NH₃-N

These limitations are minimum requirements. If a Total Maximum Daily Load (TMDL) is approved for the stream, any more stringent limitations contained in the TMDL will apply. The comment period will be open for 45 days. If you have any concerns regarding these proposed limits, please submit your comments in writing by the end of the workday on **May 26, 2022**, to:

Soojung Lim
 Water Quality Division
 Oklahoma Department of Environmental Quality
 P.O. Box 1677
 Oklahoma City, OK 73101-1677
 (405) 702-8195
 E-mail: Water.Comments@deq.ok.gov

You may also request a public meeting in writing. If there is a significant degree of public interest, DEQ will schedule a public meeting. After evaluating comments received and making any necessary changes, the WLA will be submitted to the U.S. Environmental Protection Agency (EPA) for final approval.

FACILITY 208:	WYNNEWOOD REFINING COMPANY		CITY/TOWN:	WYNNEWOOD	
FACILITY LEGAL LOCATION:	S 28 T2N R1E I.M. NW/NE/NE		COUNTY:	GARVIN	
NPDES #:	OK0000825		SIC CODE:	2911	
STATE FACILITY NUMBER:	I-25000220		OPERATIONS DESCRIPTION:	Petroleum refinery	
OUTFALL NUMBER:	001				
WASTE WATER DESCRIPTION:	Treated effluent from the refinery's wastewater treatment system. This receives general process & wash water from crude desalting, cooling tower & boiler blow down, laboratory wash water, commingled process & storm water, sour water stripper & other refinery process units, treated groundwater from an on-site groundwater remediation project, and storm water from a small ammonium thiosulfate plant.				
TREATMENT PROCESS:	3-cell polishing lagoons; activated sludge				
EVALUATION TYPE:	Wasteload allocation study				
CRITICAL EFFLUENT FLOW(MGD): (Highest 30 day average flow, enter the value or NA)	0.987 1.7	PROJECTED MAXIMUM FLOW (MGD):	1.16 2.4		
POINT OF DISCHARGE:	S28 T02N R01E I.M. NW/NE/NE	LATITUDE:	34° 37' 21.19"	LONGITUDE:	97° 11' 57.21"
RECEIVING STREAM:	Washita River (upper Red River basin)		SEGMENT:	310810	
7-day 2-year low flow in MGD (7Q2):	76.91 (2011)		STREAM CLASS:	Perennial	
WASTELOAD ALLOCATION: For Dissolved Oxygen Demanding Substances (Final Discharge only, no internal monitoring points)	<p style="color: red;">pH: 6.5 - 9.0 s.u.</p> <p><u>MONTHLY AVERAGE</u> Ammonia: 288.58 lb/day BOD₅: 594.62 lb/day COD: 4140.80 lb/day Chromium: 5.06 lb/day Phenols: 3.88 lb/day Sulfide: 2.79 lb/day Hexavalent Chromium: 0.44 lb/day Total Suspended Solids (TSS): 476.89 lb/day Oil and Grease: 173.87 lb/day</p> <p><u>DAILY MAXIMUM</u> Ammonia: 634.87 lb/day BOD₅: 1071.51 lb/day COD: 8012.26 lb/day Chromium: 14.52 lb/day Phenols: 7.98 lb/day Sulfide: 6.25 lb/day</p>				
THESE ARE TECHNOLOGY-BASED LIMITS					

	Hexavalent Chromium: 0.99 lb/day		
	Total Suspended Solids (TSS): 747.17 lb/day		
	Oil and Grease: 327.32 lb/day		
OUTFALL NUMBER:	002		
WASTE WATER DESCRIPTION:	Stormwater runoff from non-process areas of the refinery		
TREATMENT PROCESS:	Sedimentation lagoon		
RECEIVING STREAM:	Unnamed tributary of Turkey Sandy Creek, which is a tributary of Kickapoo Sandy Creek, which is a tributary of the Washita River		
STREAM CLASS:	Intermittent	SEGMENT:	310810
7 DAY 2 YEAR LOW FLOW (MGD):	0.6463	POINT OF DISCHARGE:	S23 T2N R1E I.M. NW/SW/SE
LATITUDE:	34° 37' 30.26"	LONGITUDE:	97° 10' 6.45"
WASTELOAD ALLOCATION: For Dissolved Oxygen Demanding Substances (Final Discharge only, no internal monitoring points)	pH: 6.5-9.0 s.u. <u>DAILY MAXIMUM</u> COD: 120 mg/l Oil and Grease: 15 mg/l		
		EPA APPROVAL DATE:	3/19/2012
		RECORD LAST UPDATED:	3/31/2022

You are receiving this notice because you are either on DEQ's list to receive all public notices about proposed Waste Load Allocations or you are located downstream in an affected watershed. If you are receiving this notice in error, are getting multiple notices, or do not want to receive future notices, please let us know. In addition to notices about new or changes in 208 Plans for facilities, DEQ's Modeling, TMDL, 208 & 303(d) Section sends out public notices about proposed changes in the Integrated Report, proposed TMDLs, 404 projects, 401 Certification requests, and proposed changes in the CPP.

If you would like to receive any or all of these public notices via e-mail, please send your e-mail address to Water.Comments@deq.ok.gov. Also, please let us know if you want to receive notices for the entire State or just for your [watershed](#). **By receiving PDF public notices via e-mail, you will help save money and the environment by reducing the amount of paper we use to mail them.** In addition to helping the environment, you will be able to click on helpful FYI hyperlinks.



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