NPDES PERMIT NO. TX0127582
FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

Alabama-Coushatta Tribe of Texas Westside WWTP
571 State Park Rd 56
Livingston, TX 77351

ISSUING OFFICE

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Region 6
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PREPARED BY

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DATE PREPARED

June 5, 2018

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued March 25, 2013, with an effective date of June 1, 2013, and an expiration date of May 31, 2018.

RECEIVING WATER – BASIN

Big Sandy Creek – Neches River Basin

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publically owned treatment works
RP	Reasonable potential
SS	Settleable solids
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TCEQ	Texas Commission on Environmental Quality
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WWTP	Wastewater treatment plant

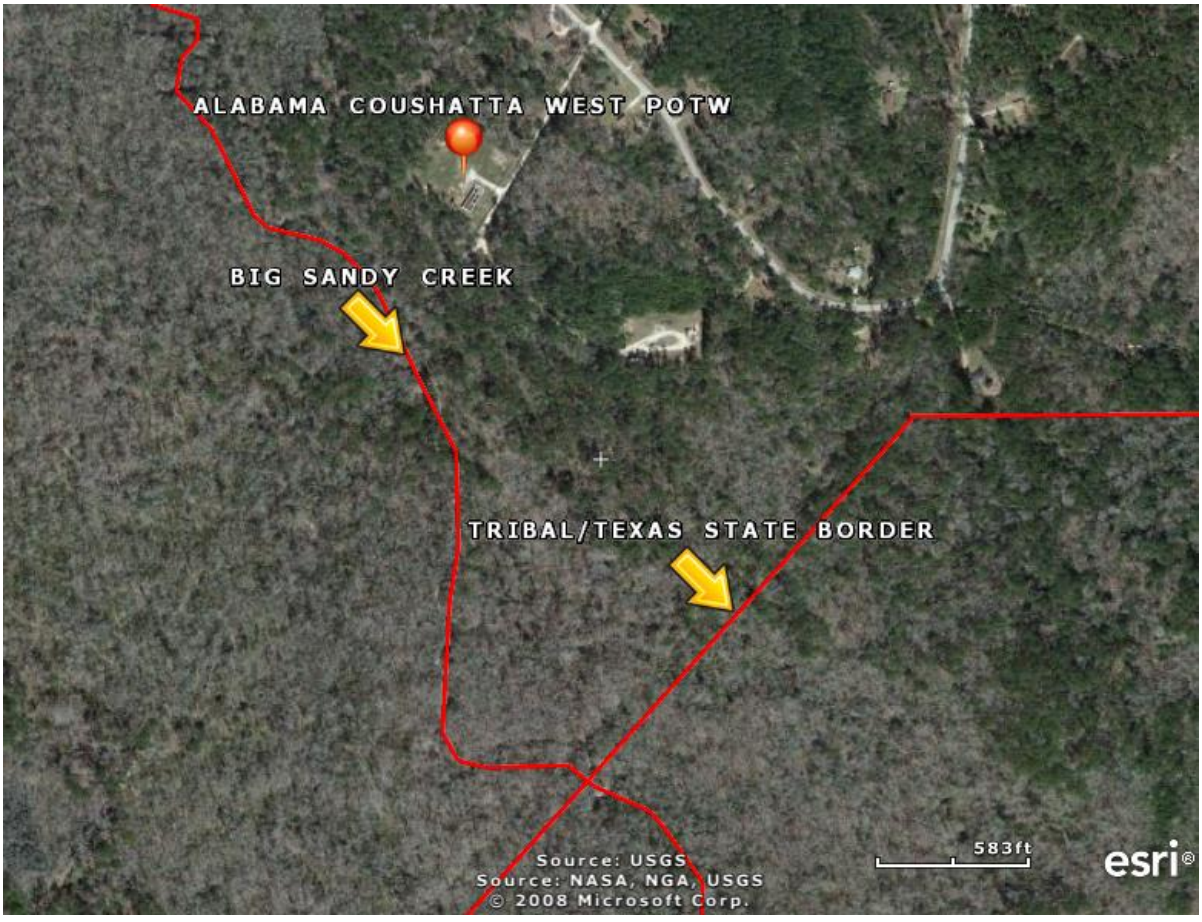
I. PROPOSED CHANGES FROM PREVIOUS PERMIT

Changes from the previous permit issued March 25, 2013, with an effective date of June 1, 2013, and an expiration date of May 31, 2018 are:

A. Total Residual Chlorine limit changed to protect WQS per 40 CFR 122.44(d).

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located on Alabama-Coushatta Tribal land at 571 State Park Road 56, Livingston, in Polk County, Texas. Under the SIC Code 4952, the applicant operates a publicly owned wastewater treatment plant with a design flow of 0.13 MGD. The operation described in the application consists of an extended aeration plant using two aeration vessels, an aerated sludge holding tank, a clarifier and a chlorine contact chamber. The discharge is into waters that are on Tribal land, and downstream State of Texas waters are approximately 0.7 miles downstream from the point of discharge.



The discharge from Outfall 001 is located at Outfall 001 - Latitude 30° 42' 42.55" North, Longitude 94° 42' 21.90" West.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received March 28, 2018, are presented below:

POLLUTANT TABLE - 1

Parameter	Max	Avg.
	(mg/l unless noted)	
Flow, million gallons/day (MGD)	0.02	0.02
Temperature, winter, °F	62.4	58.1
Temperature, summer, °F	84.1	82.2
pH, minimum, standard units (su)	6.8	-
pH, maximum, standard units (su)	7.2	-
Biochemical Oxygen Demand, 5-day (BOD_5)	9	5
Fecal Coliform (#bacteria/100 ml)	19	6
Total Suspended Solids (TSS)	23	19
Ammonia (NH_3)	0.1	0.1
Total Residual Chlorine (TRC)	2.3	2.1
Dissolved Oxygen (DO)	11.8	9.5
Total Kjeldahl Nitrogen	0.7	0.5
Nitrate plus Nitrite Nitrogen	28	27.3
Oil and Grease	5.4	5.3
Phosphorus	3.89	3.79
Total Dissolved Solids (TDS)	603	590

A review of the last 36-months of DMR's reflects that all pollutants were in compliance with the current permit.

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water"; more commonly known as the "swimmable, fishable" goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

A complete permit application was received on March 28, 2018. It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS, BOD_5 and percent removal from each. Water quality-based effluent limitations are established in the proposed draft permit for E. coli bacteria, TRC and pH.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

2. Effluent Limitation Guidelines

The facility is a POTWs that has technology-based ELGs established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELGs established in this Chapter are BOD, TSS, percent removal for each and pH. BOD limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). ELGs for pH are between 6-9 s.u. and

are found at 40 CFR §133.102(c). Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day. When determining mass limits for POTWs, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

Loading in lbs/day = pollutant concentration in mg/l * 8.345 lbs/gal * design flow in MGD
30-day average BOD/TSS loading = 30 mg/l * 8.345 lbs/gal * 0.13 MGD
30-day average BOD/TSS loading = 33 lbs
7-day average BOD/TSS loading = 45 mg/l * 8.345 lbs/gal * 0.13 MGD
7-day average BOD/TSS loading = 49 lbs

A summary of the technology-based limits for the facility is:

Final Effluent Limits – 0.13 MGD design flow

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			
	lbs/Day		mg/l (unless noted)	
Parameter	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.
Flow	N/A	N/A	Measure MGD	Measure MGD
BOD_5	33	49	30	45
BOD, % removal, minimum (*1)	85%	---	---	---
TSS	33	49	30	45
TSS, % removal, minimum (*1)	85%	---	---	---

FOOTNOTE:
*1 Percent removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ×100] ÷ average monthly influent concentration.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used

in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The Clean Water Act in Section 301(b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant. Previously it was stated that the Tribe has no EPA approved WQS so the permit conditions must be able to meet the Texas WQS administered by the TCEQ. The general criteria and numerical criteria which make up the stream standards are provided in the Texas Administrative Code (TAC), 30 TAC Sections 307.1 - 307.10, amended to be effective September 23, 2014. The State's WQS are also applied to be protective of the quality of waters within the jurisdiction of the Alabama-Coushatta Tribe of Texas.

The treated effluent is discharged to Big Sandy Creek, thence to Village Creek in Segment 0608 of the Neches River Basin. The designated uses for Segment 0608 are high aquatic life, contact recreation and public water supply.

4. Permit Action – Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. pH

Segment specific standards for Segment 0608 require pH to be between 6.0 – 8.5 su. The permit will require that the instream criteria be meet at the end-of-pipe, same as the current permit.

b. Bacteria

Segment specific standards for Segment 0608 require E. coli bacteria of 126 cfu/100 ml monthly geometric mean and 394 cfu/100 ml daily maximum. The limits for bacteria will be maintained in this draft permit.

c. Dissolved Oxygen

The initial receiving water, Big Sandy Creek, is an unclassified receiving water. It must maintain a minimum DO of 2.0 mg/l. Village Creek, the first classified receiving water, has a minimum DO requirement of 5.0 mg/l. In the previous permit, the Water Quality Assessment section at TCEQ using a desktop model verified that the 30/45 mg/l technology-based BOD limits proposed above are sufficient to meet both of those requirements. The draft permit will

maintain the previous minimum DO limits of 2.0 mg/l, which the model also showed maintained Big Sandy Creek instream criteria.

d. Toxics

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs, but also to facilities that are similar to POTWs, but which do not meet the regulatory definition of "publicly owned treatment works" (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

The facility is designated as a minor, and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for TRC described below.

e. TRC

19µg/L is EPA's acute chlorine criteria and 11µg/L is EPA's chronic chlorine criteria. Limits must be protective of WQS per 40 CFR 122.4(d) and 122.44(d). Since the acute conditions do not allow dilution; the limit must be met at end-of-pipe but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit.

The critical dilution is 8%. The in-stream TRC concentration after allowing for dilution is: 11µg/L ÷ 0.08 = 137.5 µg/L. Since this value is more than the19 µg/L end-of-pipe acute standard, the19 µg/L is more stringent and will be more protective. The draft permit shall establish the 19µg/L limit. However, TRC is toxic at measurable amounts, so in addition to the 19 µg/L chemical specific limitation, the narrative limit for TRC shall be "No Measurable." Hence, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no quantifiable level of TRC as determined by any approved method established in 40 CFR 136 that is greater than the established MQL. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. Current values on previous DMR's shows that the WWTP can comply with this new limit.

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). Sample frequency is based on the previous permit. BOD_5, TSS, pH and DO are proposed to be monitored once per week. Flow is proposed to be monitored daily using instantaneous readings. Sample type for BOD_5 and TSS are 24-hour composite which is consistent with the previous permit. TRC, DO and pH shall be sampled using instantaneous grab. Regulations at 40 CFR §136 define instantaneous grab as being analyzed within 15-minutes of collection. E. coli shall be monitored once per week by grab sample.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Whole effluent toxicity (WET) testing, also known as biomonitoring, is required in permits where the potential exists for the effluent to cause toxicity in the receiving water (30 TAC §307.6(e)(2)(A) and 40 CFR 122.44(d)(1)(v)). The State requires WET testing for domestic wastewater facilities under certain conditions. Those conditions are either a final phase of their permit with a design flow of 1 MGD or greater, an approved pretreatment program with significant industrial users or the potential to cause toxicity in the receiving water. The permittee does not have any of these conditions; therefore, WET testing is not required in the draft permit.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge." The specific requirements in the permit apply as a result of the design flow of the facility, the type of waste discharged to the collection system, and the sewage sludge disposal or reuse practice utilized by the treatment works. Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a sludge-only permit has been issued. Part IV of the draft permit contains sewage sludge permit requirements.

Sludge testing information will be retained by the permittee for a minimum of five (5) years as required in the record keeping requirements section of Part IV.

B. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has no non-categorical Significant Industrial User’s (SIU) and no Categorical Industrial User’s (CIU). The EPA has tentatively determined that the permittee will

not be required to develop a full pretreatment program. However, general pretreatment provisions have been required. The facility is required to report to EPA, in terms of character and volume of pollutants any significant indirect dischargers into the POTW subject to pretreatment standards under §307(b) of the CWA and 40 CFR Part 403.

D. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

VII. 303(d) LIST

Big Sandy Creek, Waterbody Segment Code No. 0608B, is on the 2014 Texas 303(d) List. Big Sandy Creek (0608B) (unclassified water body) from the confluence of Village Creek northwest of Kountze in Hardin County to the upstream perennial portion of the stream northeast of Livingston in Polk County does not meet applicable WQS for bacteria. Big Sandy Creek is designated as a Category 5b stream, meaning data indicates the designated use is not being supported and necessary TMDLs are underway or scheduled. Village Creek, from the confluence with the Neches River in Hardin County to Lake Kimble Dam in Hardin County, does not meet applicable WQS for low pH. The stream has been designated a Category 5b, meaning that a further review of WQS for this waterbody will be conducted before a total maximum daily load (TMDL) is scheduled. At this time, TMDLs have not been scheduled and permit limits have been included for pH and bacteria that meet applicable WQS. No additional permit limits are proposed based on these listings and the permit has a reopener clause that would allow the permit to be changed if at a later date the segment had a revised TMDL completed.

VIII. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://ifw2es.fws.gov/EndangeredSpecies/lists/, two species in Polk County are listed as endangered or threatened. The red-cockaded woodpecker (*Picoides borealis*) and the Texas trailing phlox (*Phlox nivalis ssp. texensis*) are both listed as endangered.

Red-cockaded woodpeckers live in mature pine forests, specifically those with longleaf pines averaging 80 to 120 years old. From the late 1800s to the mid-1900s, red-cockaded woodpeckers declined rapidly as their mature pine forest habitat was altered for a variety of uses, primarily timber harvest and agriculture. Working with conservation partners, the U.S. Fish and Wildlife Service created the red-cockaded woodpecker recovery plan featuring the participation of other Federal and State agencies and private landowners.

Texas trailing phlox is presently known from only two sites, one each in Tyler and Hardin counties, Texas. It is restricted to sandy soils of open pine woodlands. Texas trailing phlox is primarily threatened by habitat loss due to canopy closure, encroachment of hardwood trees, and soil and vegetation disturbances associated with human activities.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, EPA has determined that the reissuance of this permit will have "*no effect*" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. In the previous permits issued March 25, 2013, EPA made a "no effect" determination for federally listed species. EPA has received no additional information since then which would lead to a revision of that "no effect" determination. EPA determines that this reissuance will not change the environmental baseline established by the previous permit, and therefore, EPA concludes that reissuance of this permit will have "no effect" on the listed species and designated critical habitat.

2. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.

3. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.

4. The draft permit is no less restrictive from the previous permit.

5. EPA determines that Items 1, thru 4 results in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

IX. ANTIDEGRADATION

The TCEQ WQS, Section 307.5 "Antidegradation" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water.

X. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains the mass loading requirements of the previous permit for BOD and TSS. The remaining pollutants concentration limits are as restrictive or more restrictive as the previous permit.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State and/or Tribal Water Quality Standards are promulgated or revised. In addition, if the State and/or Tribe amends a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. CERTIFICATION

EPA will certify the permit after the 30-day public notice period, taking into consideration any comment made during the public notice period. The draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XIV. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XV. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(S)

EPA Application Form 2A received by EPA March 18, 2018.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of June 14, 2018.
Sections 122, 124, 125, 133, 136

C. STATE REFERENCES

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10 (21 TexReg 9765, 2014).