

TMDL Implementation Status for Adams Bayou, Cow Bayou, and Their Tributaries

Date of Status Report: 06/08/21

I-Plan Approval Date: 08/05/15

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Abbreviations

NRCS - Natural Resources Conservation Service

OCHD - Orange County Health District

SETRPC - Southeast Texas Regional Planning Commission

SRA - Sabine River Authority

SWCD - Soil and Water Conservation District

TCEQ - Texas Commission on Environmental Quality

TFS - Texas A&M Forest Service

TPWD - Texas Parks and Wildlife Department

TSSWCB - Texas State Soil and Water Conservation Board

WCID - Water Control and Improvement District

WWTFs - Wastewater Treatment Facilities

Management Measures

Management Measure 1: Stormwater

Responsible Party	Implementation Measure	Implementation Milestone	Status
City of Bridge City City of Orange City of Pinehurst City of West Orange Orangefield WSC Orange County WCID #2 (West Orange)	Coordinate and expand efforts to reduce stormwater inflow and infiltration.	<ul style="list-style-type: none"> ▪ Conduct Inflow & Infiltration inspections. ▪ Make needed repairs or replacements of conveyance systems as funding allows. ▪ Distribute educational information through available outlets and participate in local events. ▪ Seek grants as well as funds for local Supplemental Environmental Projects (SEPs). ▪ Individually or collectively meet with local curriculum coordinators to identify appropriate educational material for delivery in the local schools and discuss incorporating watershed stewardship and stormwater management education into school curricula. 	No update provided.

Management Measure 2: Agricultural Operations

Responsible Party	Implementation Measure	Implementation Milestone	Status
TSSWCB Jasper-Newton SWCD #441 Lower Sabine-Neches SWCD #446 NRCS	2.1 Develop and implement Water Quality Management Plans (WQMPs) and other agricultural BMPs in priority areas.	<ul style="list-style-type: none"> ▪ Promote the availability of technical and financial assistance for the development and implementation of WQMPs. ▪ Develop and implement WQMPs as requested by the landowners. 	Since the adoption of the I-Plan, the Lower Sabine Neches Soil & Water Conservation District #446 completed the following in Orange County: <ul style="list-style-type: none"> ▪ 5 Conservation Stewardship Plans (707 Acres in the TMDL Watersheds) ▪ 5 Environmental Water Quality Contracts (384 Acres in the TMDL Watersheds) ▪ 3 Water Quality Management Plans (283.4 Acres in the TMDL Watersheds) There have been no new WQMPs since 2019.
AgriLife Extension Texas Wildlife Services TPWD	2.2 Protect riparian areas by managing land for wildlife	<ul style="list-style-type: none"> ▪ Promote the availability of technical and financial assistance for the development and implementation of wildlife management plans. ▪ Develop and implement land management plans as requested by the landowners. 	No update provided.
AgriLife Extension Texas Wildlife Services	2.3 Reduce feral hog populations	<ul style="list-style-type: none"> ▪ Promote the availability of feral hog control programs. ▪ Implement feral hog control programs as requested by the landowners 	No update provided.

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TSSWCB Jasper-Newton SWCD #441 Lower Sabine-Neches SWCD #446 NRCS AgriLife Extension Texas Wildlife Services TPWD	2.4 Deliver environmental stewardship courses locally	Undertake education and outreach activities to inform landowners about the availability, benefits, and need for conservation plans and good stewardship.	An upcoming Texas Watershed Steward Workshop will be hosted by Texas A&M AgriLife Extension on October 21, 2021 in Orange, TX.
TSSWCB Jasper-Newton SWCD #441 Lower Sabine-Neches SWCD #446 NRCS AgriLife Extension Texas Wildlife Services TPWD	2.5 Promote environmental stewardship	Provide education and outreach to targeted and general audiences	No update provided.

Management Measure 3: On-Site Sewage Facilities

Responsible Party	Implementation Measure	Implementation Milestone	Status
OCHD TCEQ Region 10 City of Bridge City City of Orange City of Pinehurst City of West Orange OSSF owners	3.1 Identify and map all on-site sewage facilities (OSSFs) in Orange County	<ul style="list-style-type: none"> ▪ Identify and map OSSF locations throughout the watershed. ▪ Coordinate with the GLO coastal zone project as appropriate. 	OCHD continues to work with Texas A&M and has received updates on what A&M has completed on the areas south of the I-10 corridor. OCHD continues to work to internally address the trouble areas north of I-10 to identify the failed OSSFs and areas where there are not public utilities available.
OCHD TCEQ Region 10 City of Bridge City City of Orange City of Pinehurst City of West Orange OSSF owners	3.2 Identify and prioritize problematic systems or system clusters	<ul style="list-style-type: none"> ▪ Prioritize areas for management by conducting OSSF inspections. ▪ Work with system owners to bring deficient systems into compliance. 	Continue to identify and address problematic areas through grants for individual sewer systems as well as pursuing grants for expansion of coverage of sewer utilities to address large areas.
OCHD TCEQ Region 10 City of Bridge City City of Orange City of Pinehurst City of West Orange OSSF owners	3.3 Promote environmental awareness and stewardship	<ul style="list-style-type: none"> ▪ Identify education and outreach needs and audiences to be targeted. ▪ Deliver education and outreach to targeted audiences. 	OCHD continues to promote awareness of these failed systems and water quality through our permitting process (building and OSSF), addressing complaints, stormwater permitting process and promoting grants when available to upgrade failed systems.

Management Measure 4: Forestry Practices

Responsible Party	Implementation Measure	Implementation Milestone	Status
TFS Local Landowners Loggers Logging Contractors Foresters	Continue promoting sustainable forestry practices throughout the watershed	The TFS will continue to deliver outreach and technical assistance to forestry interests in or near the Adams Bayou and Cow Bayou watersheds. Forest owners, managers, and harvesters will apply BMPs as appropriate to mitigate adverse effects on water quality. <ul style="list-style-type: none"> ▪ Delivery of education and outreach in and near the watershed ▪ Documentation of landowner and forestry personnel participation ▪ Documentation of BMP implementation through survey feedback 	TFS completed the following accomplishments between September 2019 and May 2021. <ul style="list-style-type: none"> ▪ TFS developed 210 forest management plans for 9,431 acres, these plans provide a blueprint for accomplishing forest management practices ensuring the sustainability of their forests and related natural resources. ▪ Hosted 7 landowner workshops with 137 landowners receiving education on forest management and forestry BMPs protecting water quality. ▪ Provided 1,298 landowner assists (e.g., reforestation, harvesting, forest health issues, etc.) ▪ 258 loggers participated in the Pro-Logger Core BMP Training or CEU classes to maintain their certification. ▪ Texas Forestry Association maintains the Pro-Logger program with TFS providing all BMP training and continuing education.

Management Measure 5: Stormwater Ordinances

Responsible Party	Implementation Measure	Implementation Milestone	Status
<p>City of Bridge City City of Orange City of Pinehurst City of West Orange</p>	<p>Explore the feasibility of developing and adopting ordinances for improved stormwater runoff management that are consistent across the watershed. If determined feasible, work on developing ordinances.</p>	<p>Responsible parties will convene to discuss the feasibility of developing a uniform stormwater management ordinance framework.</p> <p>If feasible, they will proceed with developing a uniform ordinance framework collectively.</p> <p>Staff of the responsible parties will educate local officials about the importance and benefits of such ordinances.</p> <p>If determined to be feasible in Year 1, responsible parties may begin to develop specific ordinance language to meet their respective stormwater management needs.</p> <p>Staff of the responsible organizations will educate local officials about the benefits of such ordinances.</p> <p>If feasible, ordinances will be drafted and brought before appropriate officials to consider for adoption.</p> <ul style="list-style-type: none"> ▪ Deliver educational materials to target audiences ▪ Develop uniform ordinance framework developed ▪ Develop organization-specific ordinance language and recommend for adoption 	<p>As of December 2014, the following cities have all adopted and implemented a Stormwater Quality Ordinance:</p> <ul style="list-style-type: none"> ▪ City of Bridge City ▪ City of Orange ▪ City of Pinehurst ▪ City of West Orange <p>The ordinances prohibit illicit discharges to the stormwater system.</p>

Management Measure 6: Future WWTFs

Responsible Party	Implementation Measure	Implementation Milestone	Status
Cow and Adams Bayou TMDL Stakeholder Advisory Group	6.1 Relocate outfalls of existing facilities.	WWTF outfalls relocated to the Sabine River.	In 2016, the small (0.003 MGD) WWTF operated by SRA (TPDES No. WQ0012134-001) was closed. The waste stream is now being sent to the Orangefield WSC WWTF system (TPDES No. WQ0014772-001).
Cow and Adams Bayou TMDL Stakeholder Advisory Group	6.2 Plan for regionalizing wastewater treatment.	Apply for grants and/or loans for regional planning. Secure funding for regional wastewater collection and treatment system.	In 2009, the Sabine River Authority completed Regional Wastewater Plan for dischargers in Orange County. In 2019, Orange County submitted SRA's Regional Wastewater Plan for a second round of funding possibilities (under RESTORE Bucket 2).

Control Actions

Control Action 1: Existing WWTFs

Responsible Party	Control Action	Implementation Milestone	Status
TCEQ	1.1 Issue or renew municipal and industrial permits consistent with the TMDLs	Regulated WWTF permits issued or renewed with revised permit limits	WWTF permits in the TMDL watersheds are currently being reviewed for consistency with the recently revised TMDLs.

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TCEQ	1.2 Enforce permit compliance	Regulated WWTFs monitoring and reporting within permit limits	<p>According to the EPA Enforcement and Compliance History Online (ECHO), Between January 2019 and August 2021, exceedances of permit limits by WWTFs in the TMDL watersheds occurred as follows:</p> <table border="1"> <thead> <tr> <th>TPDES Permit No.</th> <th>No. of Exceedances</th> </tr> </thead> <tbody> <tr><td>WQ0010597-001</td><td>3</td></tr> <tr><td>WQ0010240-001</td><td>5</td></tr> <tr><td>WQ0010626-001</td><td>16</td></tr> <tr><td>WQ0001167-000</td><td>0</td></tr> <tr><td>WQ0000670-000</td><td>0</td></tr> <tr><td>WQ0000454-000</td><td>18</td></tr> <tr><td>WQ0000359-000</td><td>0</td></tr> <tr><td>WQ0002858-000*</td><td>15</td></tr> <tr><td>WQ0010051-001</td><td>48</td></tr> <tr><td>WQ0014772-001</td><td>3</td></tr> <tr><td>WQ0013488-001</td><td>1</td></tr> <tr><td>WQ0011916-001</td><td>2</td></tr> <tr><td>WQ0002835-000</td><td>16</td></tr> <tr><td>WQ0010808-001</td><td>6</td></tr> </tbody> </table> <p>*Permit exceedances only reported for the time period between January 2019 and October 2019 for TPDES Permit No. WQ0002858-000. This permit has since been cancelled.</p>	TPDES Permit No.	No. of Exceedances	WQ0010597-001	3	WQ0010240-001	5	WQ0010626-001	16	WQ0001167-000	0	WQ0000670-000	0	WQ0000454-000	18	WQ0000359-000	0	WQ0002858-000*	15	WQ0010051-001	48	WQ0014772-001	3	WQ0013488-001	1	WQ0011916-001	2	WQ0002835-000	16	WQ0010808-001	6
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WWTF Owners	1.3 Reduce or Eliminate Wastewater Collection System Overflows	WWTFs report all sanitary sewer overflows (SSOs) to the TCEQ	Between January 2019 and August 2021, there were approximately 36 SSOs totaling 0.78 MG reported by permitted WWTFs.																														