# Louisiana's Water Quality Trading Program

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# Presentation Overview

- Background Information
- WQT Basics
- Program Development Drivers
- Program Implementation
- Program Principles
- Administrative Process
- Challenges
- First Certified Credits
- Resources

# Background - EPA

- Water Quality Trading [https://www.epa.gov/npdes/water-quality-trading]
  - 2003 – Policy
  - 2007 – Toolkit for Permit Writers [https://www.epa.gov/npdes/water-quality-trading-toolkit-permit-writers]

  - 2019 – Policy Update

    The Six Market-Based Principles

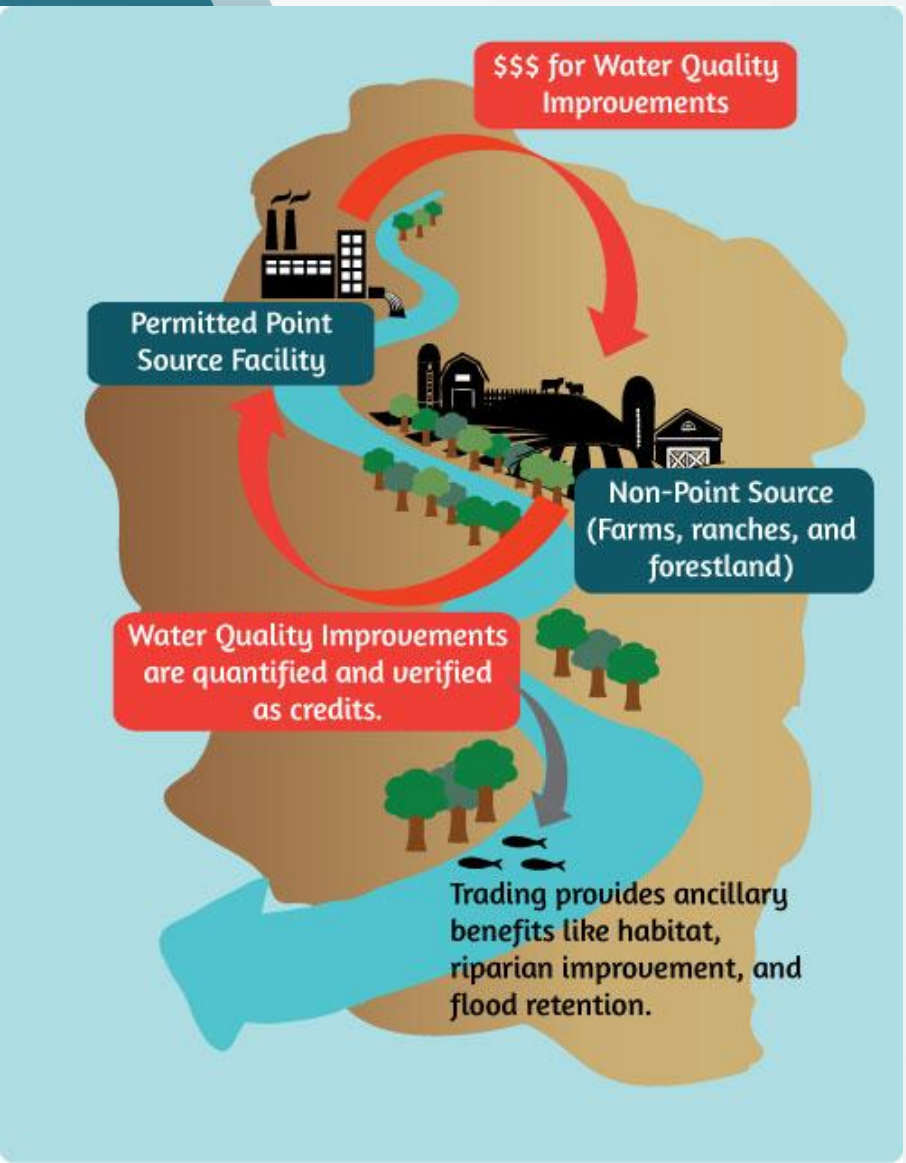
    1. States, tribes, and stakeholders should consider implementing water quality trading and other market-based programs on a watershed scale.
    2. The EPA encourages the use of adaptive management strategies for implementing market-based programs.
    3. Water quality credits and offsets may be banked for future use.
    4. The EPA encourages simplicity and flexibility in implementing baseline concepts.
    5. A single project may generate credits for multiple markets.
    6. Financing opportunities exist to assist with deployment of nonpoint land use practices.

# Background - Louisiana

- Mississippi-Atchafalaya River Basin (MARB)
- Nutrient Criteria
  - LAC 33:IX.1113
    [https://deq.louisiana.gov/resources/category/regulations-lac-title-33]
- TMDLS [https://deq.louisiana.gov/page/tmdl]
  - No Nutrient Allocations
- Voluntary efforts
  [https://deq.louisiana.gov/page/nonpoint-source]
  - Best Management Practices


https://www.epa.gov/ms-htf/mississippiatchafalaya-river-basin-marb

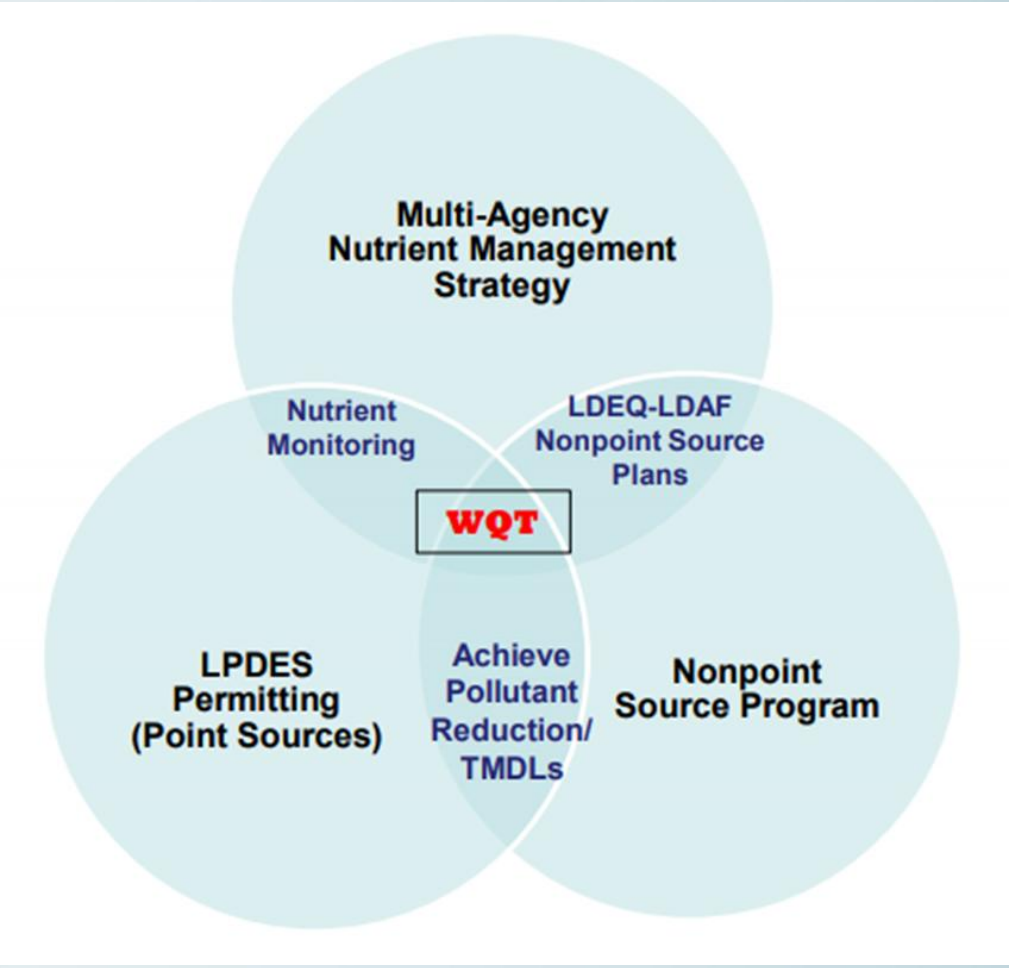
# WQT Basics




- Market-based tool
  - Point Source → higher costs of technology for additional pollutant reduction
  - Nonpoint Source → lower costs of BMPs for pollutant reduction
  - Credit = unit of pollution reduced/unit of time
  - Trade
- Achieve timely water quality improvements
- Prevent future environmental degradation
- Reduce cumulative pollutant loading
- Ancillary environmental benefits
  - Carbon sinks
  - Flood retention
  - Riparian and habitat improvement

# Louisiana Program Drivers

- Statute 30:2074.B.9 (2011)
  - Point source only trading restricted to areas with TMDLs
- 2014 Louisiana Nutrient Management Strategy
- Act 371 (2017)
  - Point and nonpoint source participation that is not limited to areas covered by TMDLs



# Program Development

- LDEQ Implementation Guidance released December 2017
  - *Building a Water Quality Trading Program: Options and Considerations* (2015) [https://willamettepartnership.org/building-water-quality-trading-program/]
  - *The Water Quality Trading Toolkit* (2016) [https://www.acwa-us.org/tools/water-quality-trading-toolkit/]
  - Collaboration – LDAF, CPRA, USDA-NRCS, Water Synergy Project
- Stakeholder Meetings throughout 2018
  - Main topics of Concern
    - Trading Area – Hydrologic connection
    - Baseline – TMDL requirements if specified
    - Trading Ratio – Uncertainty, delivery, reserve, and retirement
    - Credit Life – Interim and Long-term credits

# Program Implementation

- LAC 33:IX.Chapter 26 published October 2019
  - July 20, 2021- Amended to allow eligibility to generate credits with public conservation funds unless otherwise prohibited by the terms and conditions of the public funded project

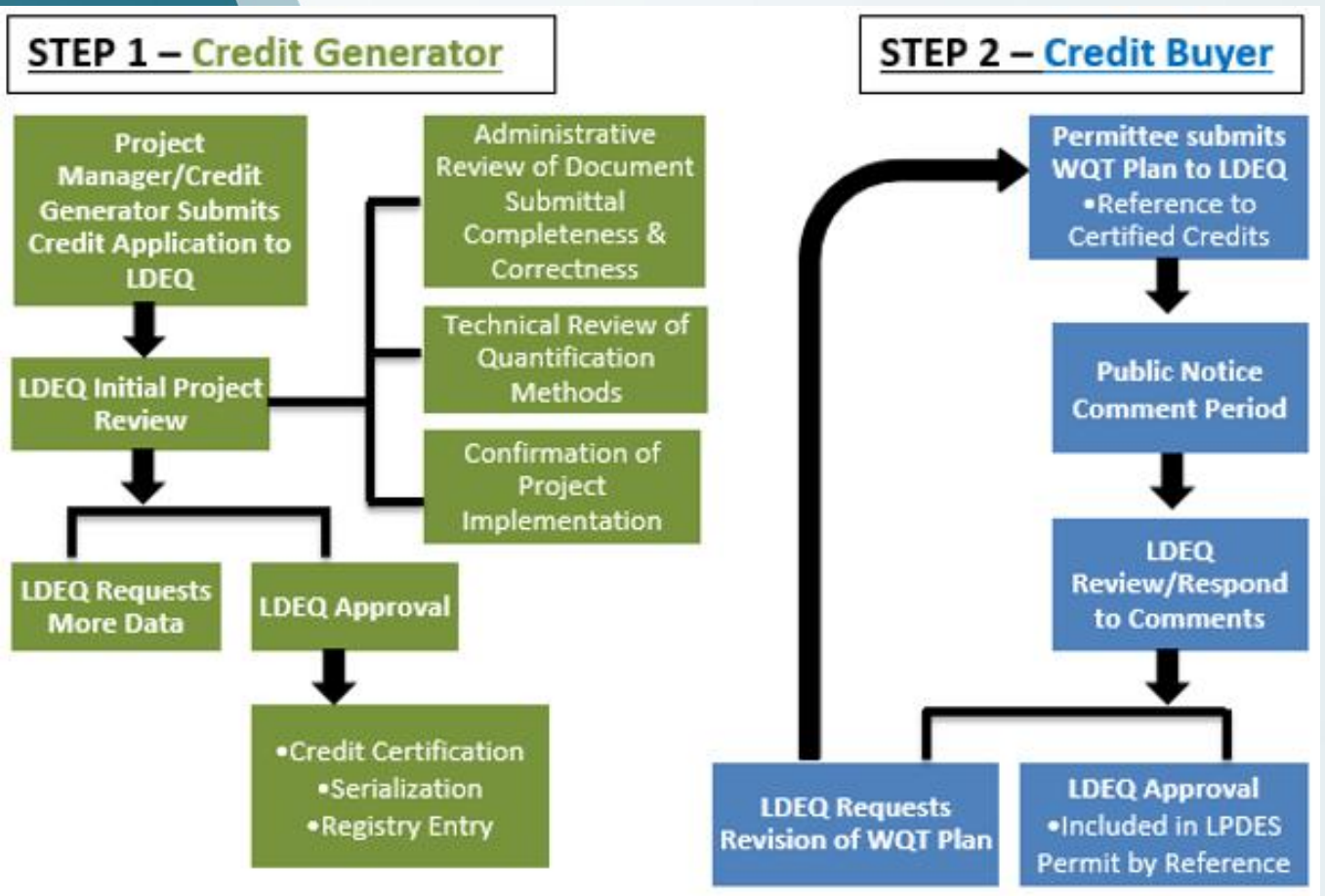
- Appropriate Pollutants for Trading
  - Nutrients (TN, TP)
  - Biochemical oxygen demand (BOD)
  - Sediment (TDS, TSS, Turbidity)

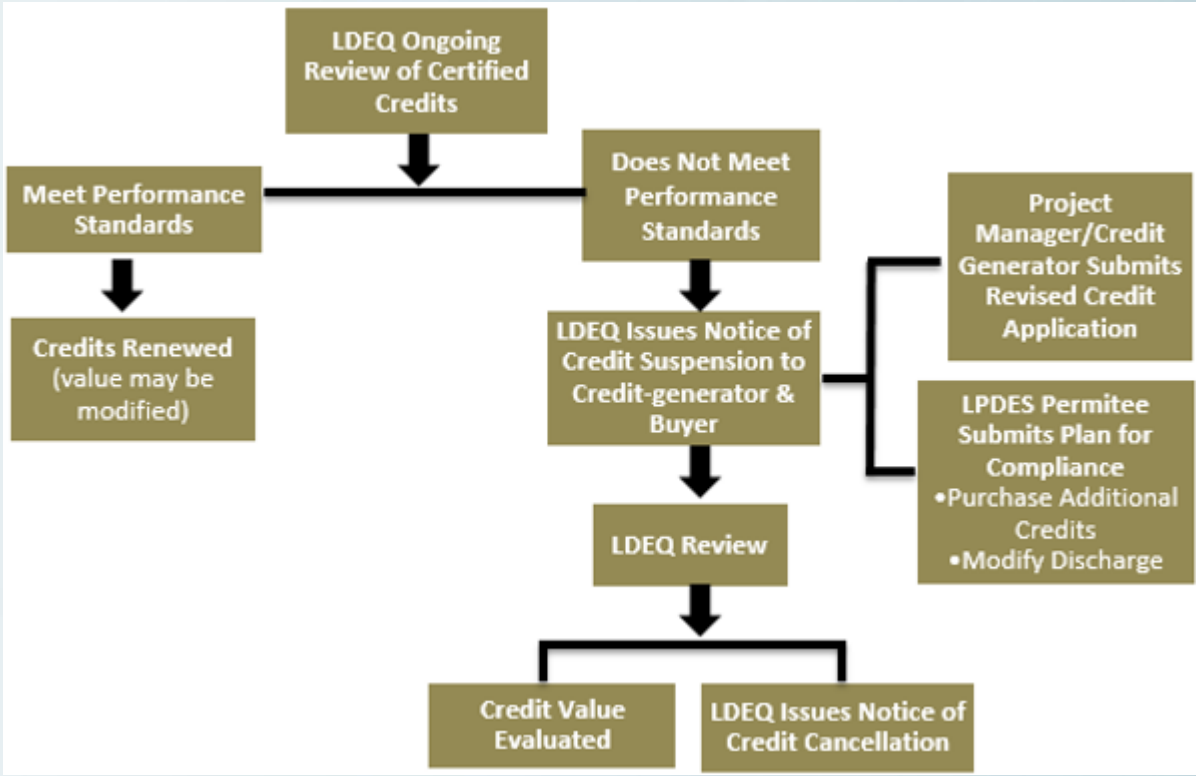
- Inappropriate Pollutants for Trading
  - Persistent bioaccumulative toxics (PBTs)

# Program Principles

- Results in a net improvement of water quality;
- Contributes to meeting water quality standards;
- Does not cause or contribute to violation of water quality standards, or impairment of designated uses;
- Does not create localized adverse impacts on water quality;
- Is consistent with the antidegradation policy in LAC 33:IX.1109.A;
- Is consistent with local, state, and federal water quality requirements;
- Results in long term improvement in water quality;
- Increases the pace and scale of restoration and attainment of water quality standards; and
- Assists in implementing TMDLs.

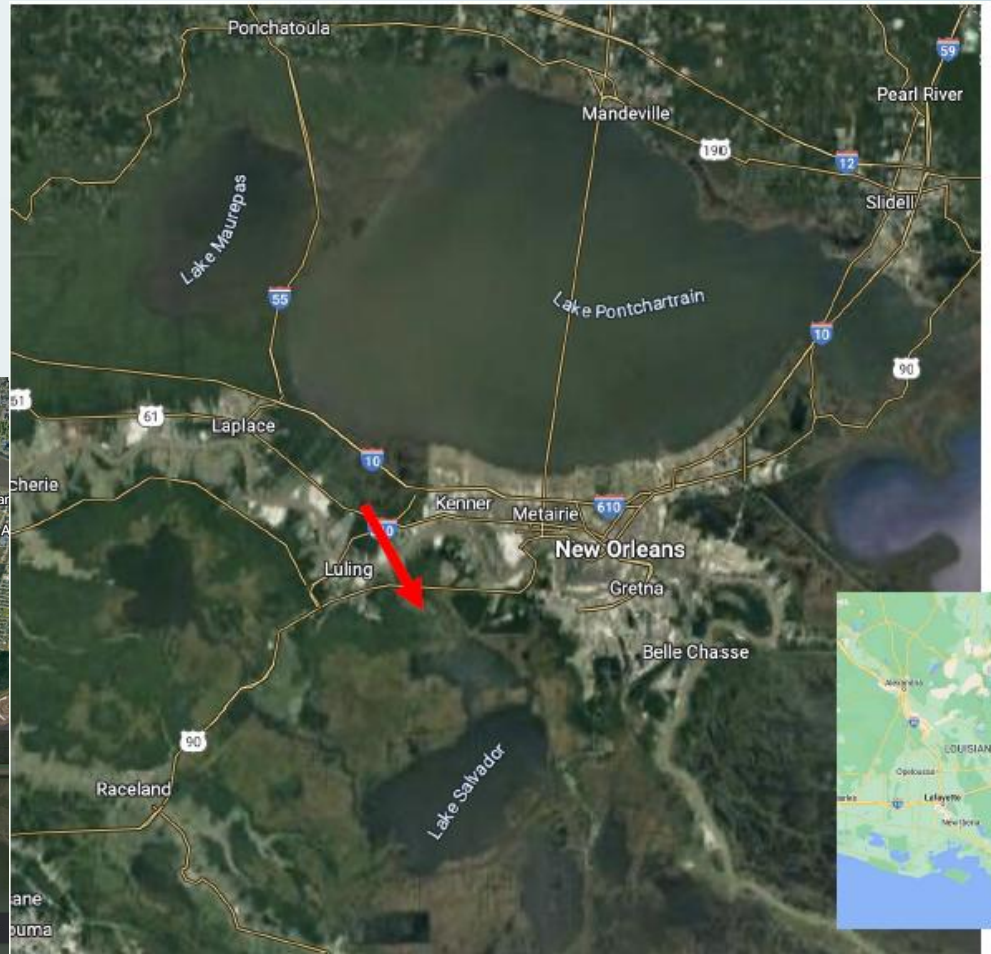
# Administrative Process

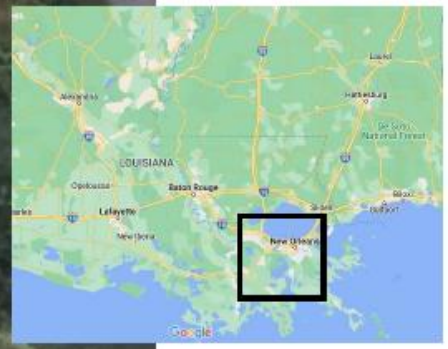


# First Certified Credits

- Restore the Earth Foundation – coastal restoration of forested cypress wetlands
  - Salvador Wildlife Management Area - owned and managed by Louisiana Department of Wildlife and Fisheries
    - 1,706.6 acres planted downstream of Davis Pond Freshwater Diversion
    - Implementation verification - LDWF land manager


The WMA is located about 12 miles southwest of New Orleans, and just east of Luling.

Access only by boat, primarily via Bayou Segnette from Westwego into Lake Cataouatche, then west to the planting areas

# First Certified Credits

- Credit Quantification
  - Nitrogen and Phosphorus availability estimates from nearby monitoring stations
  - Nitrogen uptake formula adapted from the 2009 Jenkins paper “Valuing Ecosystem Services from Wetlands Restoration in the Mississippi Alluvial Valley.”
    - Average retention capacity of bald cypress reforested land is 37.94 lbs/ac/yr
  - Phosphorus retention calculated based on “Effects of Forest Management on Biogeochemical Functions in Southern Forested Wetlands,” (Walbridge and Lockaby, 1994)
    - Low range of retention is 1.23 lbs/ac/yr

- Credit Certification

| | | |
|---|---|---|
| Applicant quantification methodology estimates:<br>Nitrogen reduction = 31,408 lbs first year<br>Phosphorous reduction = 418 lbs first year | Uncertainty Ratio 10% | LDEQ Certified Credits:<br>Nitrogen Credit = 28,267 lbs 2024-2025<br>Phosphorous Credit = 376 lbs 2024-2025 |

# Challenges

- Voluntary Participation
- TMDLs do not have nutrient load allocations
- Translating narrative nutrient criteria
- Trading Ratios
- Quantification Tools

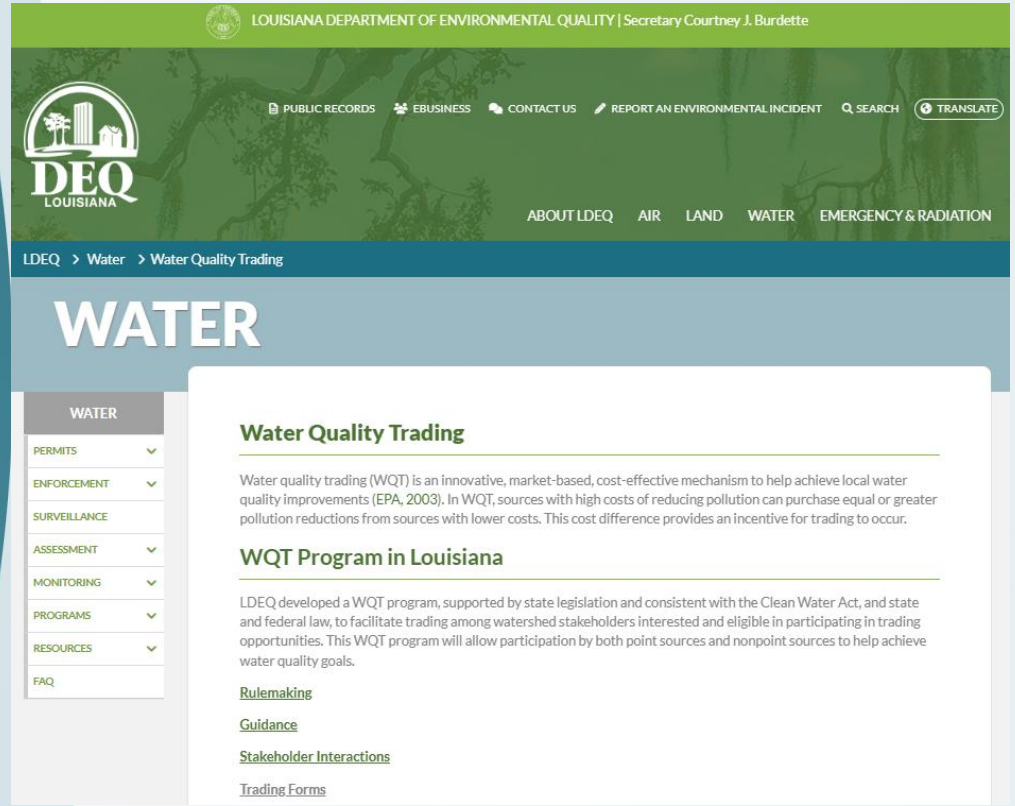
- Participation Deterrents
  - Point Source
    - Transaction Costs
    - Risk
  - Nonpoint Source
    - Regulatory overstep
    - Uncertainty of pollutant reduction quantification

# Next Steps

- Incentivize participation
  - Point Source Permittee
    - Reserve pool of applicable credits
  - Nonpoint Source
    - Conservation/restoration projects are eligible to participate
  - Public Outreach
    - Community involvement can encourage other stakeholders to participate
- Credit Renewal

# WQT Resources

- LDEQ Water Quality Trading Webpage: http://deq.louisiana.gov/page/water-quality-trading
  - Rulemaking
  - Guidance
  - Stakeholder Meetings




- WQT Forms

All forms and supporting documentation are to be submitted to wq.trading@la.gov.

**Credit Generator**

LAC 33:IX. Chapter 26 requires that a credit-generating project/activity go through project review, be in place, and be producing water quality benefits prior to participating in WQT.

- Water Quality Trading Credit Application

**Credit Buyer**

LAC 33:IX. Chapter 26 requires that any entity wishing to purchase credits must submit a WQT Plan.

- Water Quality Trading Plan

**Credit Renewal/Monitoring**

LAC 33:IX. Chapter 26 requires periodic monitoring and reporting on a credit-generating project/activity.

- Water Quality Trading Credit Renewal/Monitoring Report

- WQT Registry

LDEQ Certified Pollutant Reduction Credits

| Project Documents | Applicant | Project Serialization Number | Project Type and Location | Pollutant Reduced | Certification Date | Credit Expiration/ Renewal Date | Total Certified Credits[1] | Status |
|---|---|---|---|---|---|---|---|---|
| 14463940<br>14506703 | EcoMetrics on behalf of Restore the Earth Foundation | 20230726_REF | Reforestation Project in LDEQ subsegment LA020303_00 Lake Cataouatche and Tributaries | Total Phosphorous (TP) (lb./year) | 09/10/2024 | 09/10/2025 | 376 TP (lb./year) | Available |
| | | | | Total Nitrogen (TN) (lb./year) | 09/10/2024 | 09/10/2025 | 28,267 TN (lb./year) | Available |

# Questions?

## Louisiana's Water Quality Trading Program
**WQ.TRADING@la.gov**

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