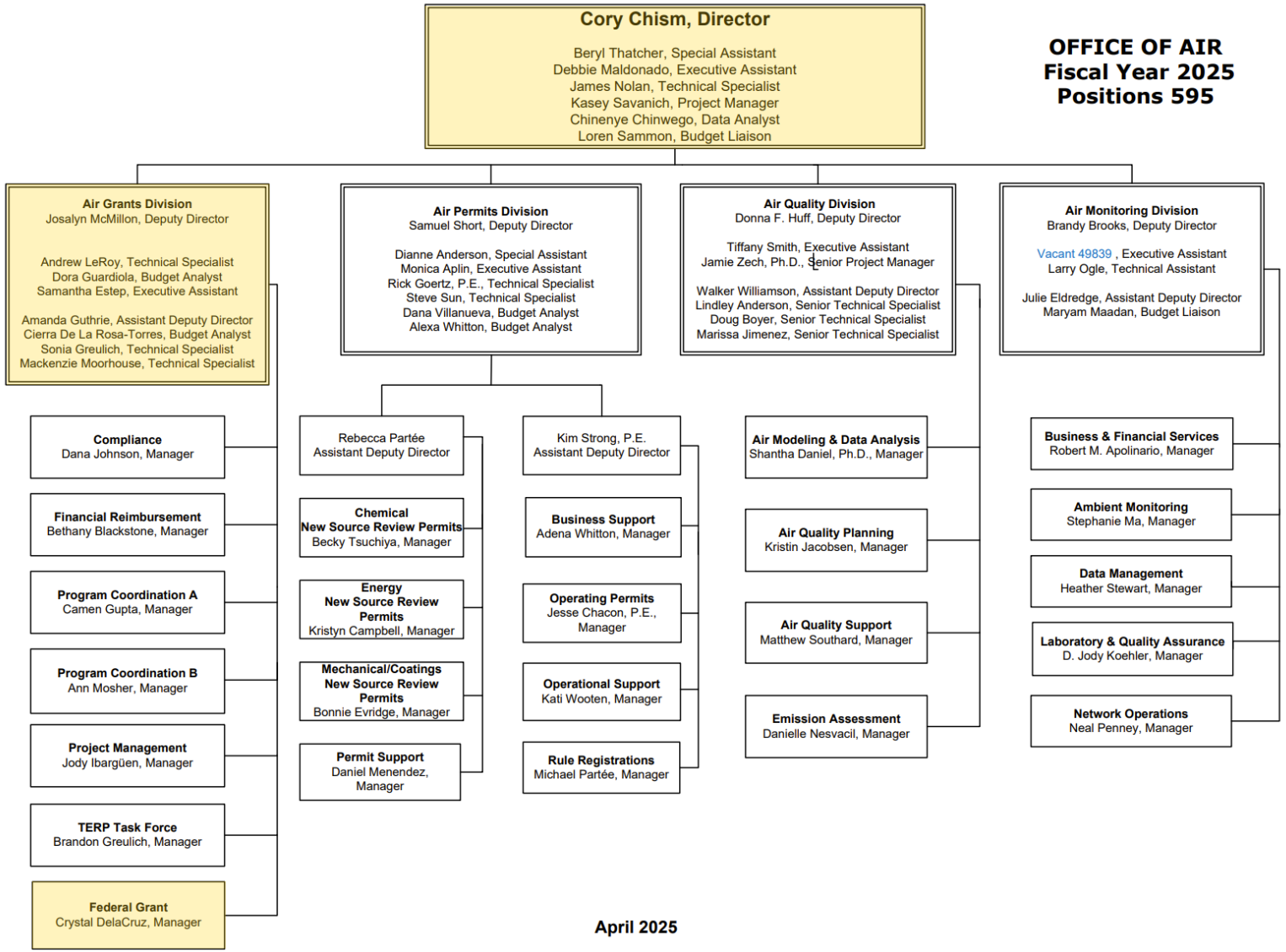
Texas Voluntary Marginal Conventional Well Plugging Program (TxMCW)

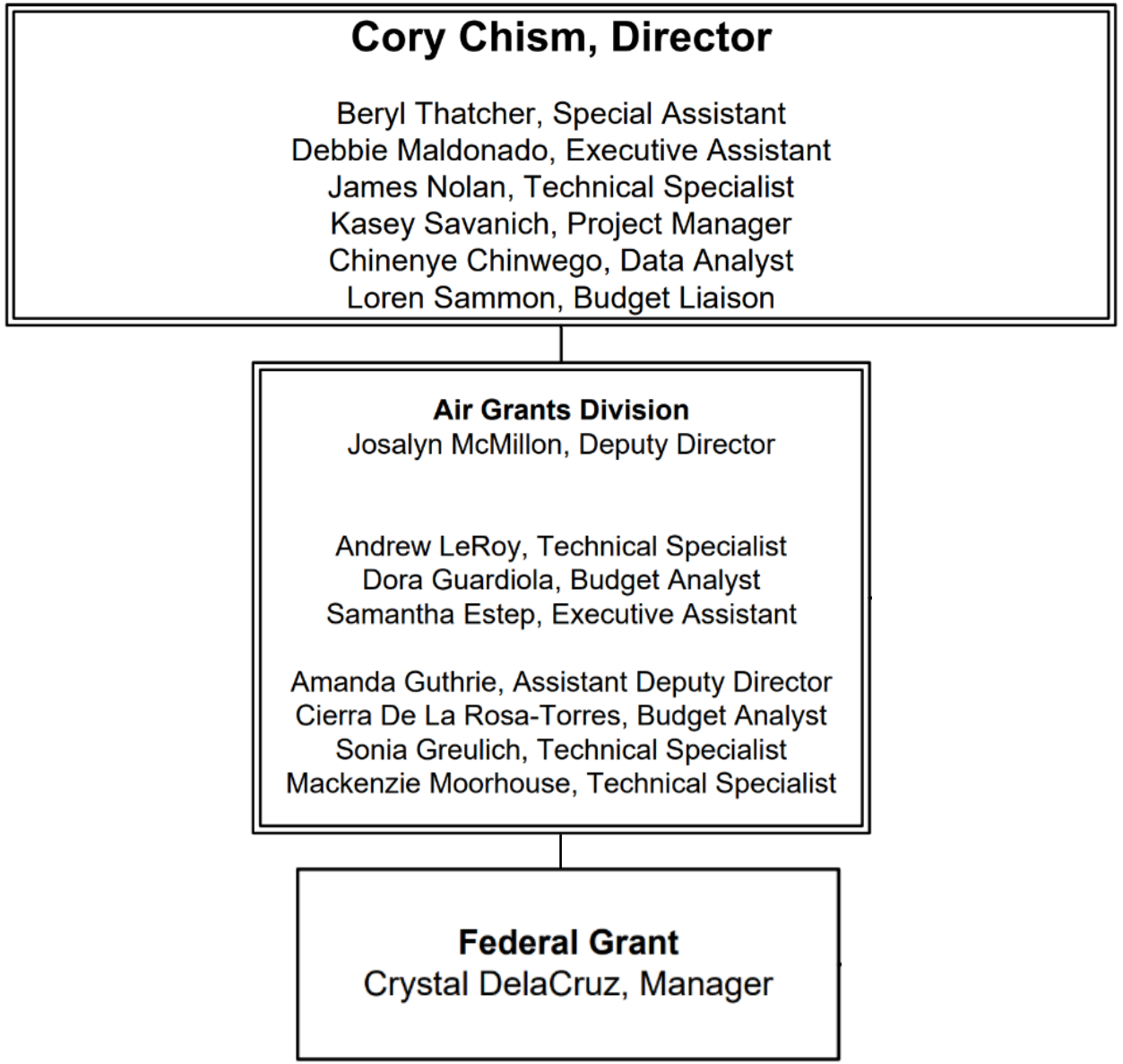
Katy Drake
Air Grants Division
Environmental Trade Fair 2025

Agenda

- Introduction & Program Background
- Definitions & Key Concepts
- TxMCW Overview & Timeline
- Texas Wells & Plugging Process
- Well Prioritization Plan
- Methane Measurement Plan
- Stakeholder Engagement
- Current Status & Next Steps

Introduction & Program Background


Cory Chism, Director
Beryl Thatcher, Special Assistant
Debbie Maldonado, Executive Assistant
James Nolan, Technical Specialist
Kasey Savanich, Project Manager
Chinenye Chinwego, Data Analyst
Loren Sammon, Budget Liaison
OFFICE OF AIR
Fiscal Year 2025
Positions 595
Air Grants Division
Josalyn McMillon, Deputy Director
Andrew LeRoy, Technical Specialist
Dora Guardiola, Budget Analyst
Samantha Estep, Executive Assistant
Amanda Guthrie, Assistant Deputy Director
Cierra De La Rosa-Torres, Budget Analyst
Sonia Greulich, Technical Specialist
Mackenzie Moorhouse, Technical Specialist
Air Permits Division
Samuel Short, Deputy Director
Dianne Anderson, Special Assistant
Monica Aplin, Executive Assistant
Rick Goertz, P.E., Technical Specialist
Steve Sun, Technical Specialist
Dana Villanueva, Budget Analyst
Alexa Whitton, Budget Analyst
Air Quality Division
Donna F. Huff, Deputy Director
Tiffany Smith, Executive Assistant
Jamie Zech, Ph.D., Senior Project Manager
Walker Williamson, Assistant Deputy Director
Lindley Anderson, Senior Technical Specialist
Doug Boyer, Senior Technical Specialist
Marissa Jimenez, Senior Technical Specialist
Air Monitoring Division
Brandy Brooks, Deputy Director
Vacant 49839 , Executive Assistant
Larry Ogle, Technical Assistant
Julie Eldredge, Assistant Deputy Director
Maryam Maadan, Budget Liaison
Compliance
Dana Johnson, Manager
Financial Reimbursement
Bethany Blackstone, Manager
Program Coordination A
Camen Gupta, Manager
Program Coordination B
Ann Mosher, Manager
Project Management
Jody Ibargüen, Manager
TERP Task Force
Brandon Greulich, Manager
Federal Grant
Crystal DelaCruz, Manager
Rebecca Partée
Assistant Deputy Director
Chemical
New Source Review Permits
Becky Tsuchiya, Manager
Energy
New Source Review
Permits
Kristyn Campbell, Manager
Mechanical/Coatings
New Source Review
Permits
Bonnie Evridge, Manager
Permit Support
Daniel Menendez,
Manager
Kim Strong, P.E.
Assistant Deputy Director
Business Support
Adena Whitton, Manager
Operating Permits
Jesse Chacon, P.E.,
Manager
Operational Support
Kati Wooten, Manager
Rule Registrations
Michael Partée, Manager
Air Modeling & Data Analysis
Shantha Daniel, Ph.D., Manager
Air Quality Planning
Kristin Jacobsen, Manager
Air Quality Support
Matthew Southard, Manager
Emission Assessment
Danielle Nesvacil, Manager
Business & Financial Services
Robert M. Apolinario, Manager
Ambient Monitoring
Stephanie Ma, Manager
Data Management
Heather Stewart, Manager
Laboratory & Quality Assurance
D. Jody Koehler, Manager
Network Operations
Neal Penney, Manager
April 2025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Mackenzie Moorhouse, Technical Specialist
Federal Grant
Crystal DelaCruz, Manager

Air Grants Division (AGD)

Also administers:

- Texas Emissions Reduction Plan Program (TERP)
- Texas Volkswagen Environmental Mitigation Program (TxVEMP)

Inflation Reduction Act (IRA)
Methane Emission Reduction Program (MERP):
Mitigating Emissions from Marginal Conventional Wells (MCWs)

WHO: EPA, DOE

WHAT: $134.1M in grant funding

WHEN: December 2023 + 5 years

WHERE: Texas

WHY: Reduce methane emissions

HOW: Voluntary MCW closures

Definitions & Key Concepts

Definitions

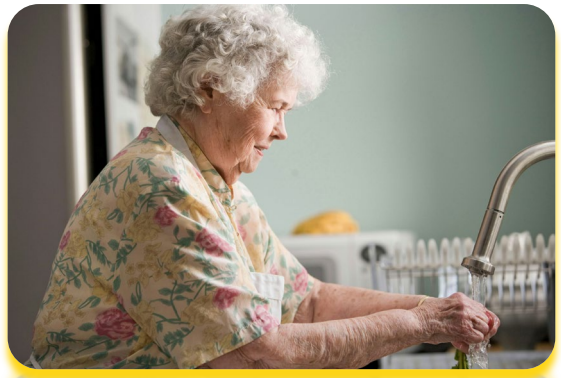
- Conventional Well
  - Vertical oil and gas well
- Marginal Conventional Well (MCW)
  - ≤ 15 barrels of oil equivalent per day (BOED), or
  - ≤ 90 thousand cubic feet (Mcf) of gas per day
    (1 BOE = 6 Mcf)
  - Known owner or operator
  - Can be producing or idle

MCWs vs. Orphaned Wells

- Known vs. unknown owner or operator
- Railroad Commission (RRC) tracks and plugs orphaned wells
  - Funding from Infrastructure Investment and Jobs Act (IIJA)
  - Only wells on state-owned or privately-owned land in Texas

Methane

- Gas comprised of carbon and hydrogen
- Greenhouse gas that traps heat
- Can worsen health conditions
- Matters on a personal level



Volatile Organic Compounds (VOCs)

- Chemicals with:
  - High vapor pressure
  - Low water solubility
- Precursors to ground-level ozone
- Can contaminate groundwater
- Can cause short- and long-term health effects

Hazardous Air Pollutants (HAPs)

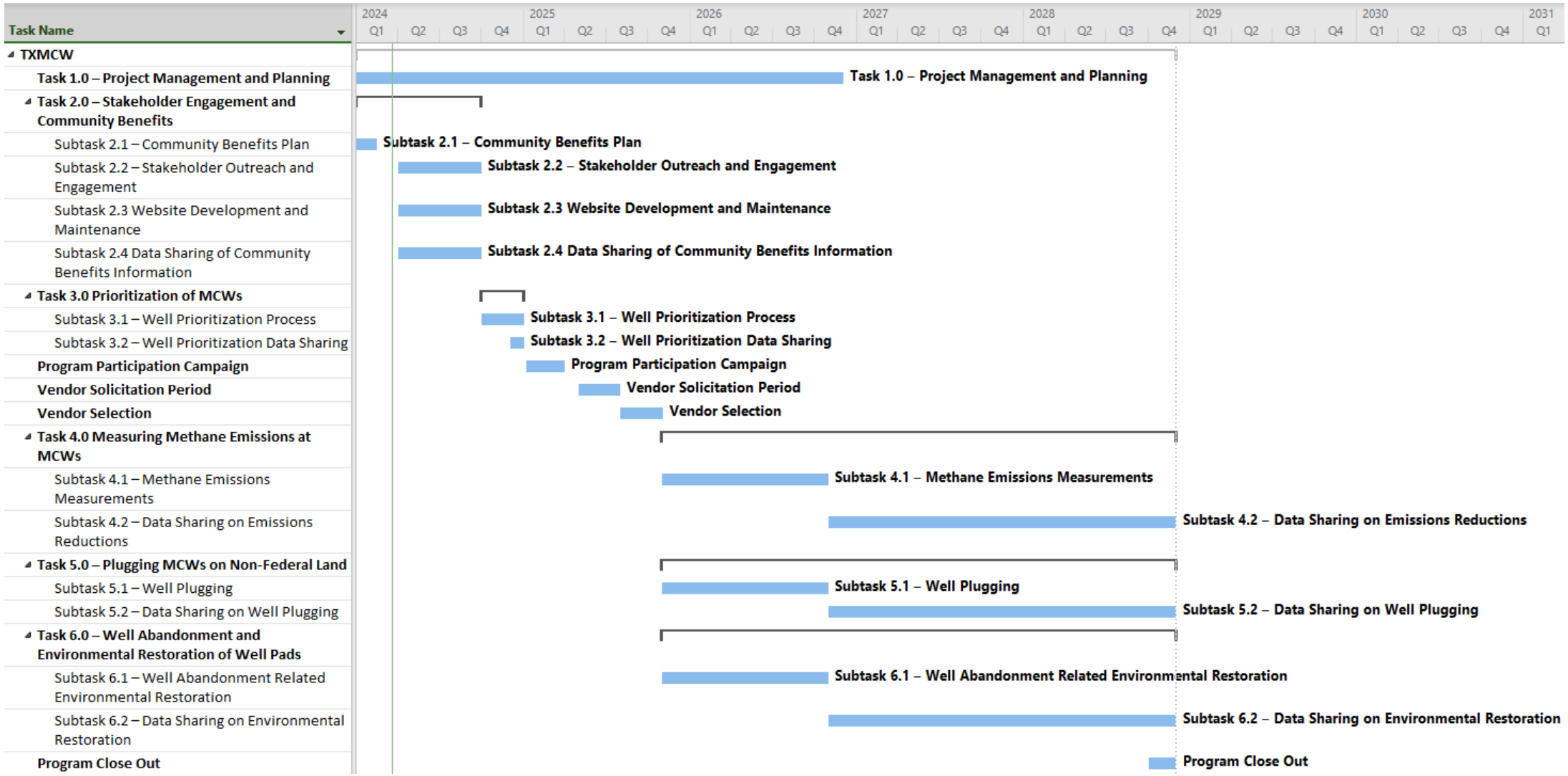
- Known or suspected to cause:
  - Cancer
  - Reproductive effects
  - Birth defects
  - Immune system damage
  - Adverse environmental effects
- Benzene, toluene, ethylbenzene, and xylene (BTEX)
- Hydrogen sulfide (H2S)

TxMCW Overview & Timeline

TxMCW Overview

- Voluntary plugging and abandonment of marginal conventional wells (MCWs)
- Goals
  - Plug MCWs to mitigate environmental pollutants
  - Measure methane emissions
  - Support environmental restoration
- Public website: www.txmcw.org

TxMCW Program Timeline



Tasks 1 and 2

- **Task 1:** Project Management and Planning
- **Task 2:** Community Benefits Plan
  - **Subtask 2.1:** Community Benefits Plan
  - **Subtask 2.2:** Stakeholder Outreach & Engagement
  - **Subtask 2.3:** Website Development and Maintenance
  - **Subtask 2.4:** Data Sharing of Community Benefits Information

Task 3: Prioritization of MCWs

- **Subtask 3.1:** Well Prioritization Process
- **Subtask 3.2:** Well Prioritization Data Sharing

Program Participation, and Vendor Solicitation and Selection

- Program Participation Campaign
- Vendor Solicitation Period
- Vendor Selection Period

Task 4: Measuring Methane Emissions at MCWs

- **Subtask 4.1:** Methane Emissions Measurements
- **Subtask 4.2:** Data Sharing on Emissions Reductions

Task 5: Plugging MCWs on Non-Federal Land

- **Subtask 5.1:** Well Plugging
- **Subtask 5.2:** Data Sharing on Well Plugging

Task 6: Well Abandonment and Environmental Restoration of Well Pads

- **Subtask 6.1:** Well Abandonment Related Environmental Restoration
- **Subtask 6.2:** Data Sharing on Environmental Restoration

Program Close Out Phase

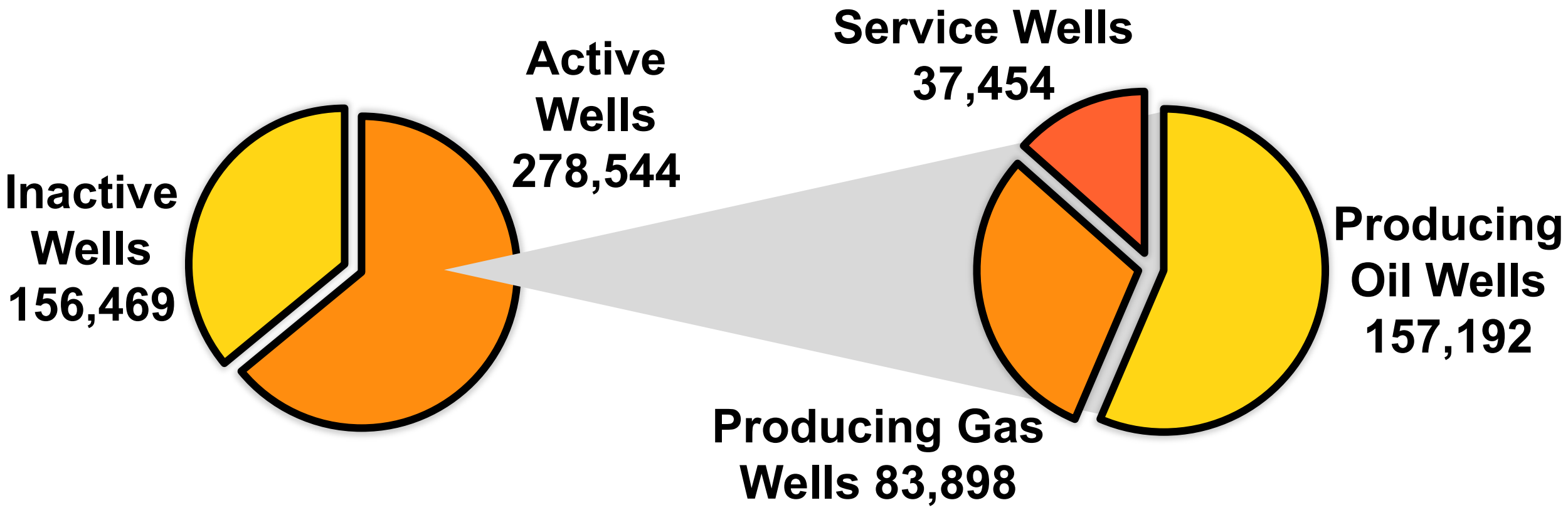
- Wrap up any remaining activities
- Share final data

Texas Wells & Plugging Process

Oil and Gas Wells in Texas

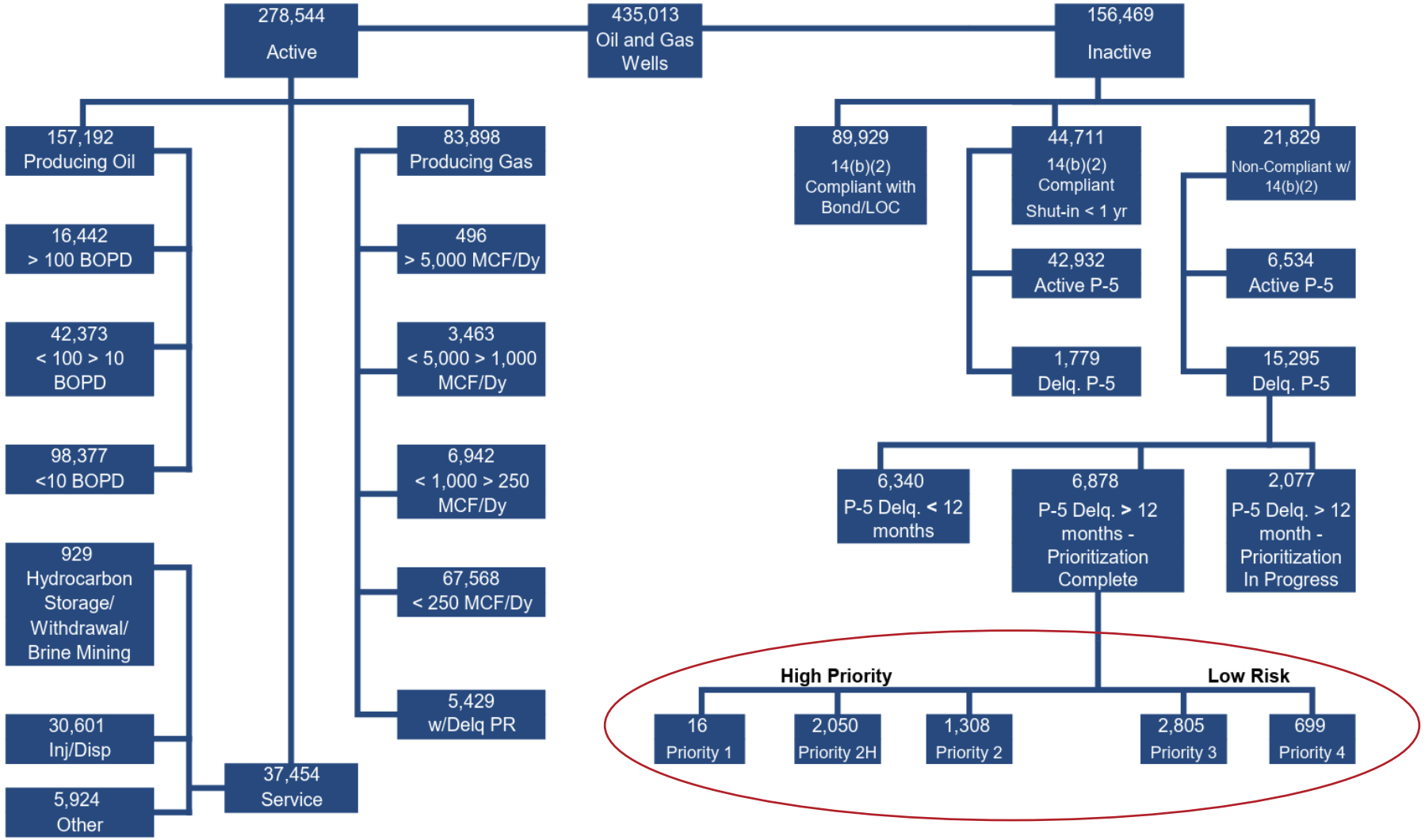
As of March 31, 2025

435,013 Oil and Gas Wells

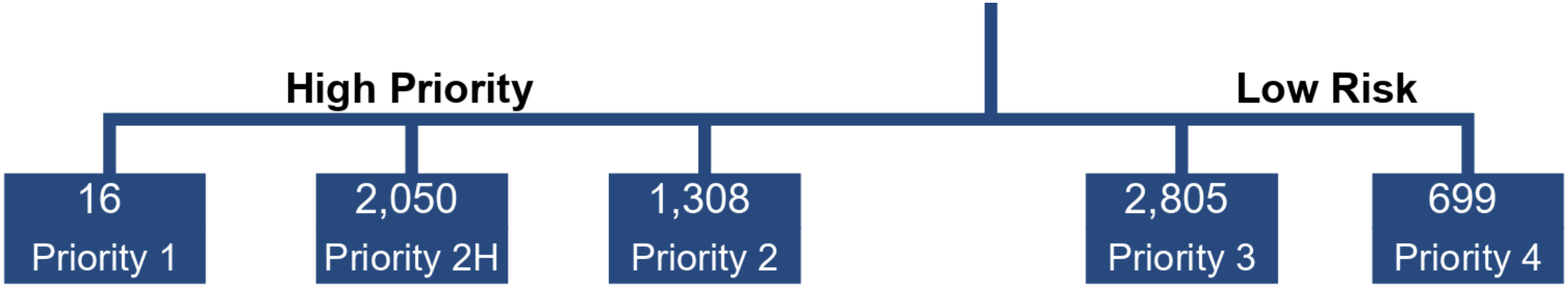


Wells Monitored by the Railroad Commission

As of March 31, 2025



High Priority & Low Risk Wells



Well Plugging and Abandonment

- Railroad Commission requirements:
  - Notice and Supervision
  - Review and Approval
  - Cementing
  - Methods
  - Additional Requirements
  - Post-Plugging

TxMCW Plugging & Abandonment Activities

- Preparation of well pad
- Removal of well bore casing
- Placement of cement plugs
- Excavation around well head and well capping before surface restoration
- Support of activities necessary for plugging

Well Prioritization Plan

Well Prioritization Plan

- Goal
  - Minimize methane and other environmental pollutants
- Criteria
  - Prioritize wells with higher methane emissions
  - Production rates
  - Number of wells by owner
  - Human health impacts
  - Water quality and flood resilience
- Weighted criteria imported into PRIMO tool

What is PRIMO?

- Free and open-source software
- Decision-support tool
- Developed by DOE's National Energy Technology Laboratory (NETL)
- Designed to support MERP

PRIMO Modular Capabilities

1. identifying **high-priority** marginal conventional wells (MCWs)
2. designing **efficient** and **impactful** plugging and abandonment (P&A) projects
3. comparing competing P&A projects **quantitatively**

How PRIMO Works

- Users provide well data, site characteristics, and program provisions
- Users specify ranking priorities and “ideal” projects
- PRIMO returns specific recommendations for candidates

Methane Measurement Plan

Methane Measurement Plan

- Measurement of methane emissions prior to plugging
- Approaches
  - Qualitative
    - *Must use established survey*
  - Quantitative
    - *Minimum detection limit (MDL) of less than 100 grams/hour (g/h)*
- Verify plugged wells are no longer emitting methane

Qualitative Methane Measurement

Stakeholder Engagement

Stakeholder Engagement

- Texas has a multitude of marginal conventional wells
- TCEQ participates with stakeholders
- Air Grants Division hosts in-person and online events
- TxMCW staff engages with MCW stakeholders
- The program is conducting outreach efforts

Grant Development & Award Team

- Team Leader
- Work Leader
- Grant Manager
- 2 Grant Specialists
- 2 Contract Specialists
- 2 Financial Analysts
- Program Specialist

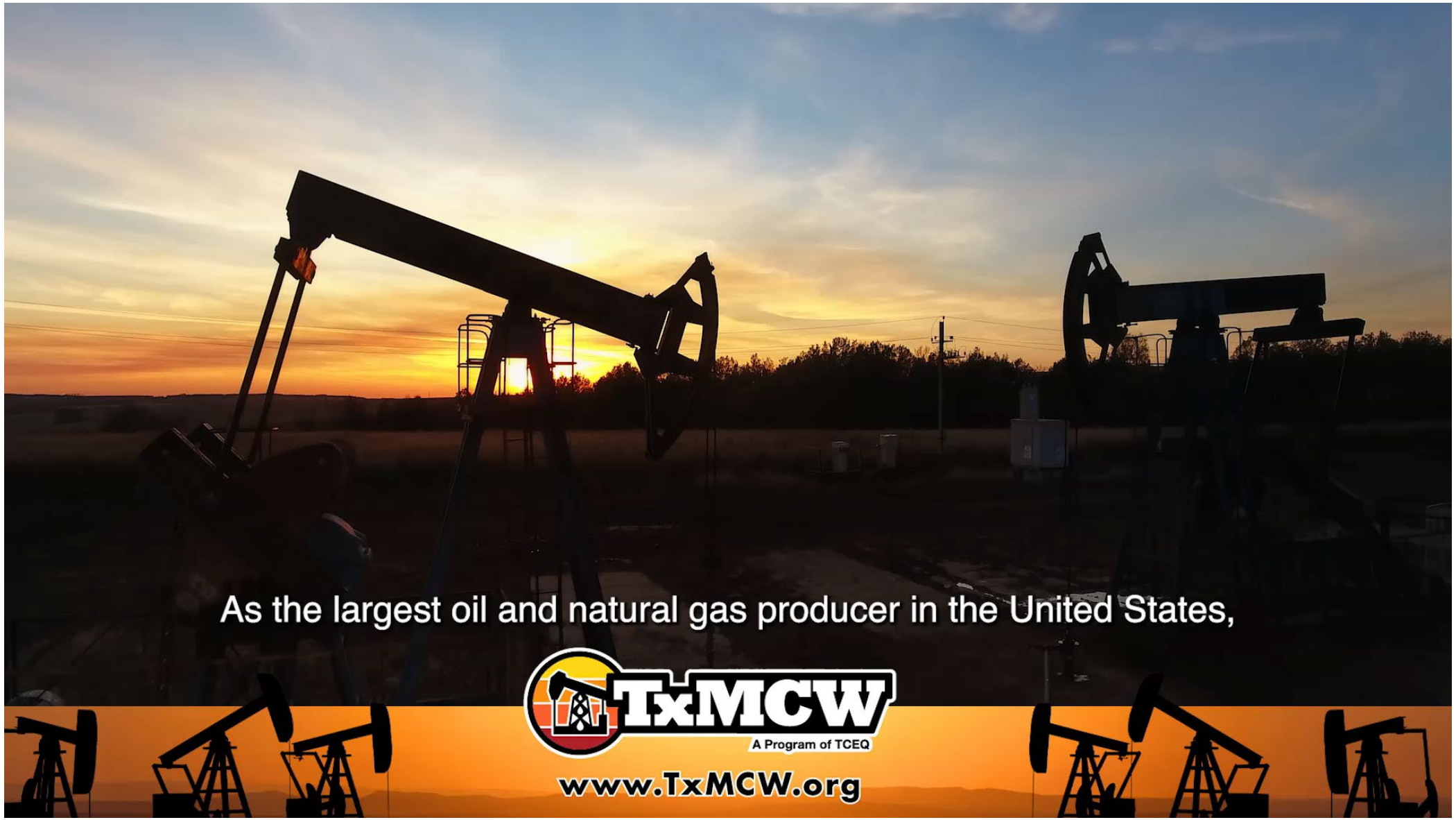
Federal Grant Section

- Section Manager
- Budget Analyst
- Systems Analyst
- Web Administrator
- Engineer

Current Status & Next Steps

Current Status

- Program Launch
- Outreach Efforts
- What's Next


As the largest oil and natural gas producer in the United States,
TxMCW
A Program of TCEQ
www.TxMCW.org

Stay in Touch

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