

# LOUISIANA DEPARTMENT OF ENVIROMENTAL QUALITY

**Chuck Carr Brown, Ph.D. - Secretary**



# How LDEQ is utilizing the technology?

- Well blowouts
- Tank failures
- Landfill inspections
- Landfill mapping and area calculations (for cover estimates)
- Waste tire inspections
- Waste tire mapping and volumetric calculations (for tire material estimates)
- Monitoring condition of wetland assimilation projects
- Natural Resource Damage Assessments from oil spills
- Coastal restoration projects
- Emergency Response

# Inventory

- Machines:

- DJI Matrice M210 RTK

- Yuneec H520



- Software: Pix4D and Drone2Map by ESRI

# Future Capabilities

- Larger area visible light, thermal and multispectral mapping
- Water sampling
- Air sampling
- Small UAS for deployment in tight quarters; could also be flown indoors with propeller cages
- Tethered flight for unlimited duration at a fixed location
- Optical gas imaging
- Radiation detection
- Ground penetrating radar

# 2017-2018 Accomplishments

- 52 missions flown since the program began.
- As of 7/1/2019 there are 4 trained LDEQ pilots.

- Program Timeline

**March 2017** – first UAS purchase (3 Autel Robotics X-Star Premium aircraft)

**October 2017** – UAS Program Manager hired

**February 2018** – LDEQ obtains FAA Certificate of Authorization

**February 2018** – First UAS mission (Used an X-Star to document oil well blowout)

**May 2018** – First UAS mapping mission (Mapped a waste tire facility)

**June 2018** – First Yuneec H520 purchased

**July 2018** – DJI Matrice 210 RTK purchased

**August 2018** – First mapping mission with Matrice 210

**August 2018** – First thermal imaging mission

**Fall 2018** – First group of regional pilots begin FAA Part 107 training

**Winter 2018/2019** – First group of pilots receive FAA sUAS license

**Spring 2019** – First group of pilots begin UAS flight training

**Summer 2019** – First group of pilots complete UAS flight training and begin flying mission for LDEQ

# Path Forward

- **Fall 2019** – LDEQ purchases fixed-wing UAS for mapping
- **Fall 2019** – Second group of regional pilots begin FAA Part 107 training
- **Spring 2020** – LDEQ purchases large multirotor for water sampling
- **Spring 2020** – Second group of pilots complete flight training and begin flying missions for LDEQ



# CONTACT INFORMATION

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