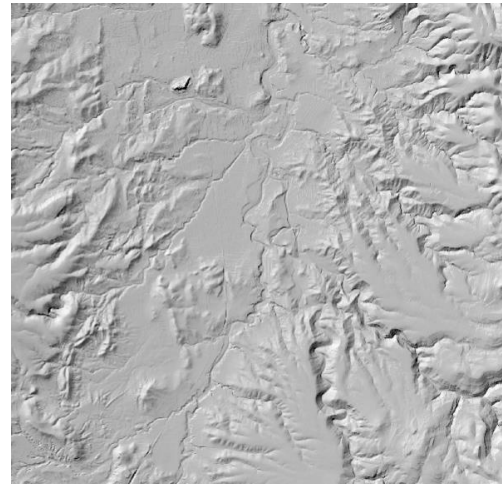




# LiDAR Update



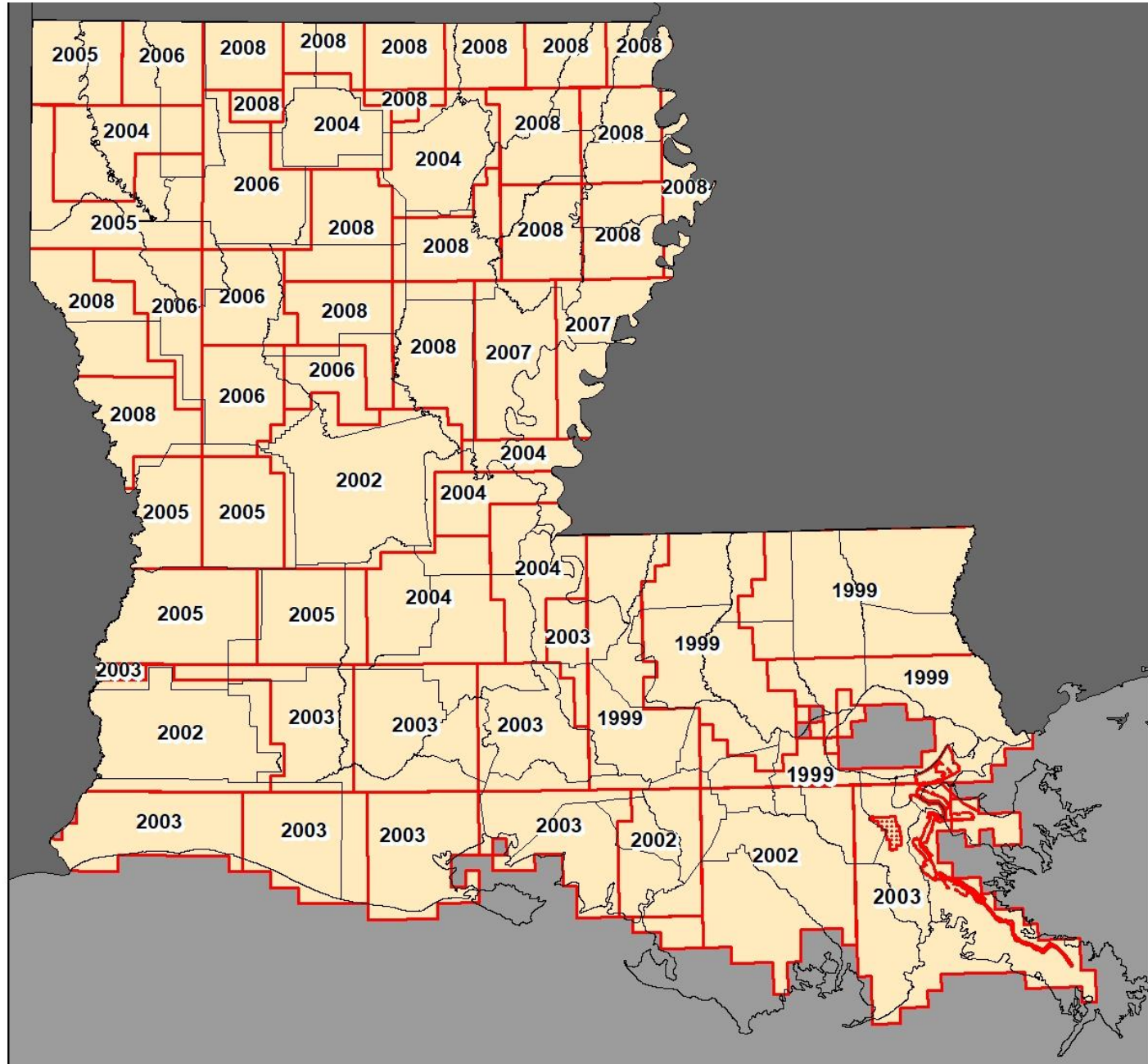
**LFMA Annual Conference**

**April 5, 2019**

**Brandon Samson, P.E.**

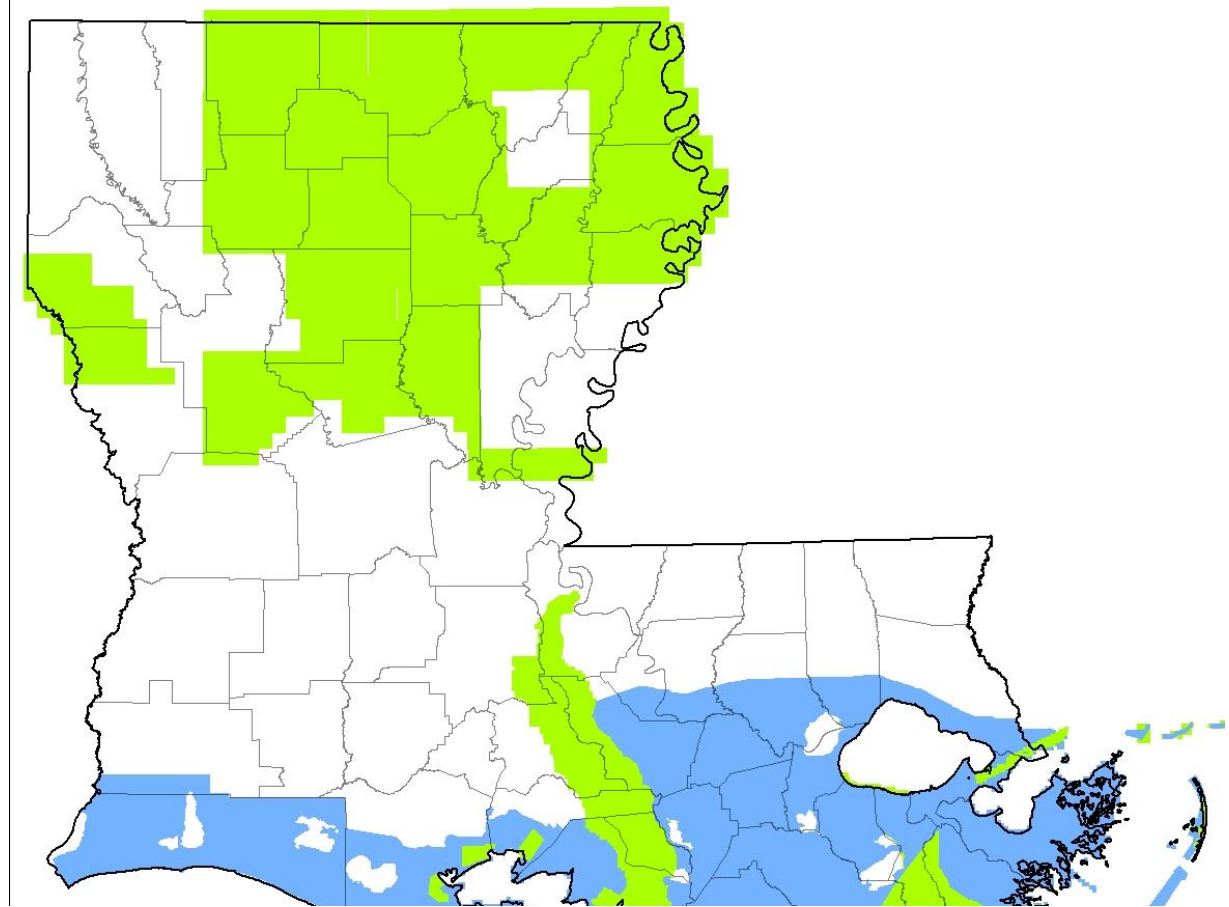
*Soil Water Air  
Plants Animals  
People Soil  
Water Air*

**Helping  
People  
Help the  
Land**



Soil Water Air  
Plants Animals  
People Soil  
Water Air  
Helping  
People  
Help the  
Land





**Table 1.** Predefined topographic data quality levels.

[IFSAR, interferometric synthetic aperture radar; lidar, light detection and ranging]

Elevation QLs <sup>1</sup>	Horizontal resolution terms			Vertical accuracy terms		Principal source <sup>7</sup>
	Nominal point density <sup>2</sup> , in pts/m <sup>2</sup>	Nominal pulse spacing <sup>3</sup> , in meters	DEM post spacing <sup>4</sup> , in meters	Vertical RMSE <sup>5</sup> , in centimeters	Equivalent contour accuracy <sup>6</sup> , in feet	
QL1	8	0.35	~1	9.25	1	Lidar.
QL2	2	0.7	~1	9.25	1	Lidar.
QL3	1–0.25	1–2	~3	≤18.5	2	Lidar.
QL4	0.04	5	~10	46.3–139	5–15	Aerial imagery.
QL5	0.04	5	~10	92.7–185	10–20	IFSAR.

Soil Water Air  
Plants Animals  
People Soil  
Water Air  
Helping  
People  
Help the  
Land

# NRCS/USGS/DOTD

- MOU signed 9/2017 – 9/2019
  - Currently extending another 2 years
  - Leaf off and flooding has delayed initial efforts
- NRCS ~ \$3.95m / USGS administers contract
- Obtain QL1 LiDAR for entire state
- 3DEP compliant

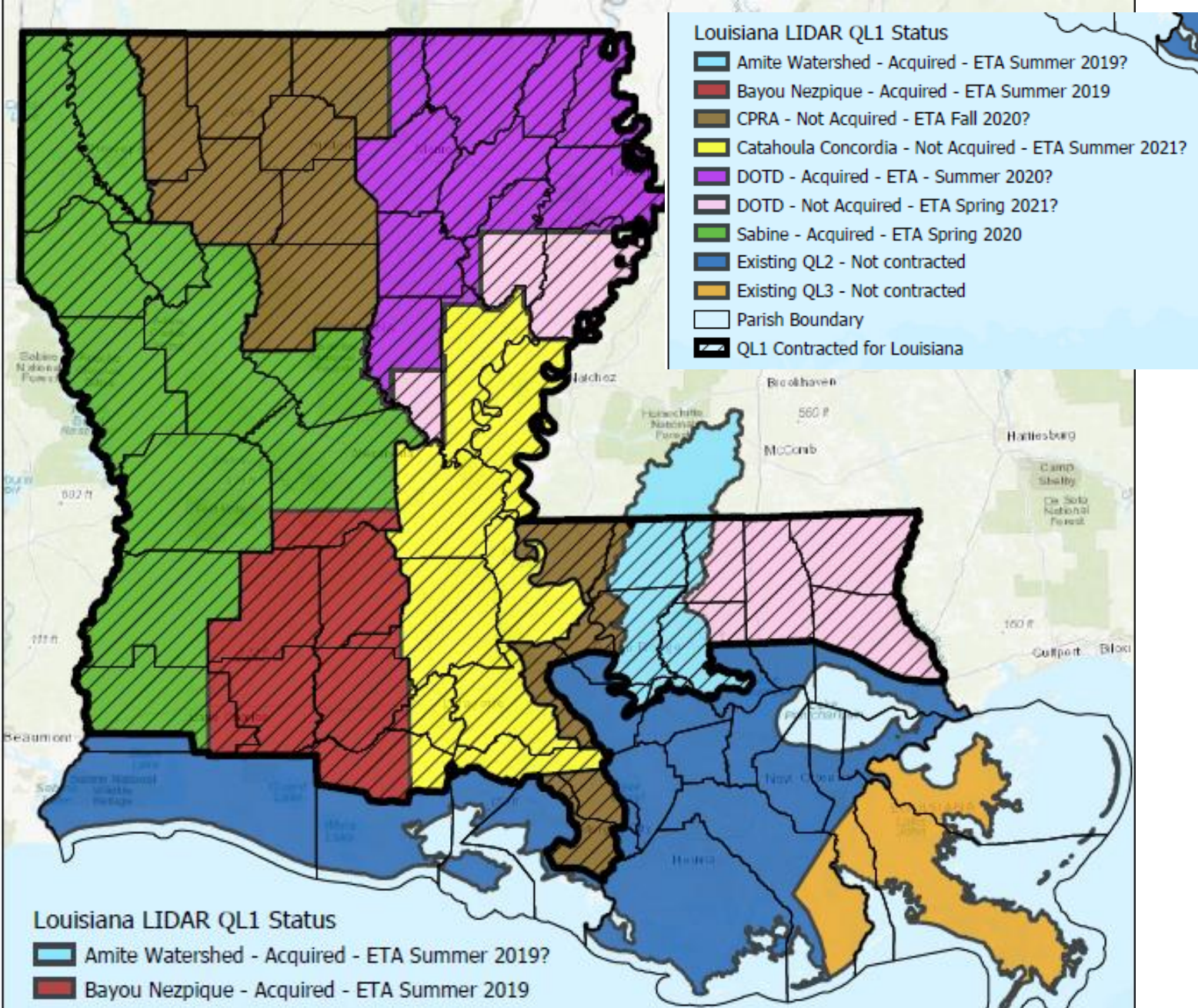
*Soil Water Air  
Plants Animals  
People Soil  
Water Air*

**Helping  
People  
Help the  
Land**



Soil Water Air  
Plants Animals  
People Soil  
Water Air

Helping  
People  
Help the  
Land





**USGS** science for a changing world **The National Map**

USGS Home  
Contact USGS  
Search USGS

Help Data Download Services

Find address or place

Scale: 1:36,978,595  
Zoom Level: 4  
600mi  
-95.591 34.488 Degrees

ATLANTIC OCEAN  
Gulf of Mexico  
MEXICO  
United States  
Washington D.C.  
New York  
Boston  
Detroit  
Chicago  
Minneapolis  
Denver  
San Francisco  
Los Angeles  
Phoenix  
Dallas  
Atlanta  
Houston  
Miami

esri

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geograp...

Soil Water Air  
Plants Animals  
People Soil  
Water Air  
Plants Animals  
People Soil  
Water Air  
Plants Animals  
People Soil  
Water Air

**Helping  
People  
Help the  
Land**





**United States Department of Agriculture**  
Natural Resources Conservation Service

**Brandon Samson, P.E.**

**brandon.samson@usda.gov**

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program (not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD).

USDA is an equal opportunity provider and employer.



*Soil Water Air*  
*Plants Animals*  
*People Soil*  
*Water Air*  
**Helping**  
**People**  
**Help the**  
**Land**