

Cibolo Creek Watershed: *Potential Source Estimate Updates*

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Population Estimates

- ⦿ Used to estimate bacteria contributions
- ⦿ Animal estimates strongly tied to specific land uses or covers
- ⦿ Used to identify priority loading areas in the watershed
- ⦿ Helps to plan future management
- ⦿ Highest Values:
 - ⦿ Cattle
 - ⦿ Feral Hogs
 - ⦿ Dogs/Cats (Urban Workgroup)
 - ⦿ Deer
- ⦿ Secondary/Low Estimates
 - ⦿ Hogs, sheep, horses, goats, poultry
- ⦿ Limited/No Data
 - ⦿ Waterfowl/birds, bats
- ⦿ **Did we miss any?**

Where Do They Come From?

⦿ Available Data

- ⦿ Local, regional, state and national data sets
- ⦿ Councils of Government, AgriLife Extension, IRNR, NRCS, TCEQ, TPWD, TWRI, USDA
 - ⦿ Address data
 - ⦿ Methodologies
 - ⦿ Population estimates
 - ⦿ Stocking rates

⦿ Input from You

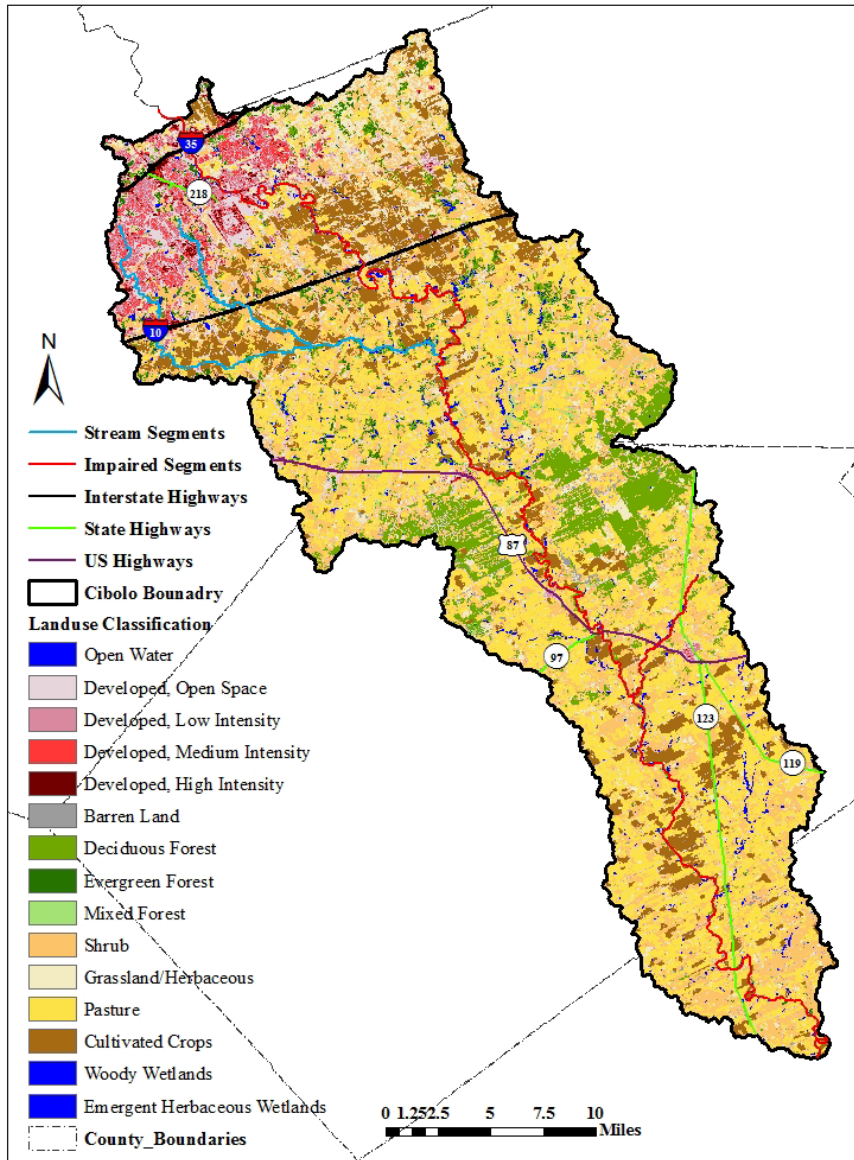
- ⦿ No one knows the watershed like you do
- ⦿ We want your opinions on what numbers of each population are appropriate

Scale Down County Level Data

- ⦿ Several data sets are reported on the county level
- ⦿ Entire county not in the watershed
- ⦿ County level data multiplied by respective percent of each county in the watershed

	Area of Total County (acres)	Area of watershed within the county (acres)	Percent of the total county within the watershed (%)	Percent of the watershed within each county (%)
Bexar	804,048	86,244	10.7	23.2
Wilson	516,500	156,336	30.3	42.1
Guadalupe	458,112	98,624	21.5	26.5
Karnes	480,499	28,970	6.0	7.8
Comal	367,819	1,330	0.4	0.4
Entire Watershed		371,504		

Land Use and Land Cover



- Hay/Pasture: 29.2%
- Shrub/Scrub: 25.6%
- Developed Land: 13.9%
- Cropland: 11.2%
- Forest: 10.2%
- Herbaceous: 7.1%
- Wetlands: 1.9%
- Barren Land: 0.6 %
- Open Water 0.2%

National Ag Statistics Survey (NASS)

- ⦿ USDA effort to measure agricultural production across the nation (cattle, sheep, goats, horses, hogs, poultry)
- ⦿ Conducts the Census of Agriculture every 5 years
 - ⦿ 2012 most recent published
- ⦿ Conduct interim surveys to illustrate annual numbers (less extensive survey, but still good idea of what is in the area)

Recommended Stocking Rates / Densities

- ◎ TPWD estimates deer densities for various areas of the state
 - ◎ # of acres per deer for various RMUs
- ◎ Texas A&M wildlife department estimated feral hog density
 - ◎ # of acres per hog

Cattle

◎ 2012 NASS Data

- ◎ Bexar – 3,988
- ◎ Wilson – 23,242
- ◎ Guadalupe – 8,673
- ◎ Karnes – 2,641
- ◎ Comal – 37

◎ Total – 38,581

◎ NRCS Stocking Rates

- ◎ Bexar – 5,536
- ◎ Wilson – 16,202
- ◎ Guadalupe – 6,267
- ◎ Karnes – 3,300
- ◎ Comal – 34

◎ Total – 31,339

Improved:
Managed
Hay
Pasture
Only

County	Improved Pasture Rate		Unimproved Pasture Rate	
	irrigation	dryland	dryland	Thick brush
Bexar	5 ac/AU		12 - 14 ac/AU	
Wilson	2~3 ac/AU	5~7 ac/AU	15 ac/AU	30 ac/AU
Guadalupe	5~7 ac/AU		12~15 ac/AU	
Karnes	2~3 ac/AU	5~7 ac/AU	15 ac/AU	30 ac/AU
Comal	5~7 ac/AU		12~15 ac/AU	

Unimproved:
shrub/scrub
and
herbaceous

Other Livestock

© 2012 NASS Data

County	Hogs	Horses	Goats	Sheep	Poultry
Bexar	199	482	684	459	558
Wilson	192	676	955	430	1128
Guadalupe	352	564	1,351	559	8,395
Karnes	10	63	54	19	41
Comal	1	3	27	11	32
Total	754	1,788	3,071	1,478	10,154

Deer

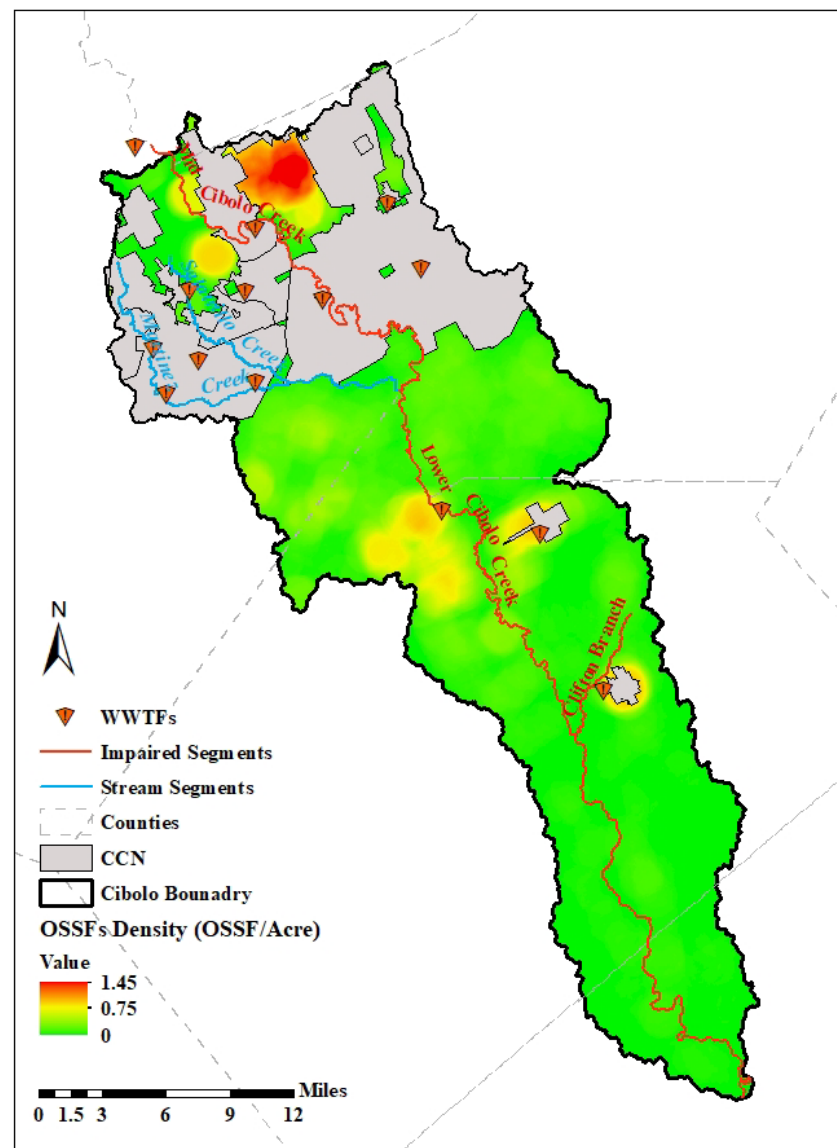
- ◉ Deer – RMU density estimates survey density: variation for different counties
 - ◉ Bexar – 8,499 (7.16 ac/deer)
 - ◉ Wilson – 7,200 (20 ac/deer)
 - ◉ Guadalupe – 4,921 (19.4 ac/deer)
 - ◉ Karnes – 1,197 (23 ac/deer)
 - ◉ Comal – 140 (7.16 ac/deer)
- ◉ **Total – 21,957** (~15% increase from previous estimate)

Feral Hogs

- ◉ Feral Hogs – Texas A&M Survey + Landowner Feedback 16 – 33.3 ac/hog
 - ◉ Bexar – 1,827
 - ◉ Wilson – 4,324
 - ◉ Guadalupe – 2,512
 - ◉ Karnes – 826
 - ◉ Comal – 30
- ◉ **Total – 9,517** (doubled from previous estimate)

Septic Systems - OSSFs

- Estimated using
 - 2010 Census block housing units
 - 911 address points
 - Aerial imagery
 - Removed areas serviced by WWTF
- 16,949 OSSFs estimated in watershed**
- Corrected CCN's yielded 718 more OSSFs**
- Estimated failure rate ~13% based on age/soil



Questions?

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