

# Lampasas River Watershed Partnership

Urban Nonpoint Source Work Group Meeting  
February 18, 2011

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Texas AgriLife Research at  
Blackland Research & Extension Center

# Introductions

# Past Business

# Steering Committee Report

## November 2010

- ▶ Approved replacement of previous SC member Danny Stephens (OMI; WWTF representative) with Lance Carlson (City of Lampasas; WWTF representative)
- ▶ Stakeholder feedback on NRCS Proper Functioning Condition Workshops
- ▶ Update on Bacterial Source Tracking Project
  - Tony Owen (Texas AgriLife Research – Temple) discussed the finalized selection of water quality sampling sites
  - Elizabeth Casarez (Texas AgriLife Research – El Paso) discussed the methodology that will be used to analyze the datasets

# Steering Committee Report

- ▶ Reviewed and approved water quality analysis for 6 sites
  - Loads are generally well below maximum allowable for all sites with several exceptions
    - Exceeds maximum allowable in high flow conditions for all sites
    - Lampasas River at US 84 (15762) – within 17% of maximum allowable in dry conditions
    - Lampasas River at CR 105 (15770) – within 13% of maximum allowable loads during mid-range conditions

# Steering Committee Report

- ▶ Discussed initial management recommendations from each work group
  - BMPs were discussed but not approved

# Review of Management Strategies

# Work Group Recommendations: Wastewater Treatment Facilities

- ▶ Two WWTFs in operation in the watershed
- ▶ Both are operating well below permitted discharge
- ▶ Both test *E. coli* levels daily per permit requirements
- ▶ Recommendations:
  - Make a positive statement about plants operating well below state standards
  - Encourage plants to maintain current housekeeping in regards to operation
- ▶ Financial needs: \$0



# Work Group Recommendations: Wastewater Treatment Facilities

- ▶ Other strategies to consider:
  - Voluntary bacteria monitoring level over and about permit requirements
  - Any needed improvements/upgrades to existing plants? i.e. clarifiers, increases in capacity
    - Scheduled long-term improvements
  - Inspections of lift stations
  - Improvements to SCADA systems

# Work Group Recommendations: Sanitary Sewer Systems

- ▶ Cities will routinely inspect sewer lines to identify problem areas
- ▶ Cities will replace old clay pipe sewer lines
  - Develop target number of miles of pipe that needs replacement
- ▶ Clean & maintain existing sewer lines
- ▶ Individual city ordinances to determine proper size for grease traps, to inspect them and require grease traps be properly cleaned & maintained
- ▶ Stormwater mapping of drainage, detention facilities and storm sewer systems
- ▶ Inlet protection systems

# Work Group Recommendations: Sanitary Sewer Systems

- ▶ Schedule, milestones and cost

- Year 1–3

- Task 1:
    - Task 2:
    - Task 3:

- Year 4–6

- Task 1:
    - Task 2:
    - Task 3:

- Year 7–10

- Task 1:
    - Task 2:
    - Task 3:

# Work Group Recommendations: On-Site Sewer Facilities (OSSF)

- ▶ Develop database of OSSFs in watershed
  - Identify OSSFs within watershed
  - Map permitted and unpermitted septic systems within the watershed
  - Streamline permitting process throughout watershed (?)
- ▶ Repair or replacement of failing septic systems
- ▶ Connections to municipal systems (where applicable) and removal of septic systems
- ▶ Enforcement of noncompliant systems
  - Hire an Watershed Environmental Officer/Septic Inspector (?)
  - Increase number of system inspections (?)
  - County ordinances (?)
- ▶ Owner education for proper maintenance
  - Encourage repair and pump-out logs to be kept by homeowners &/or maintenance providers
- ▶ Public education
  - Coordinate with Texas Real Estate Commission to educate real estate agents, property inspectors, and consumers about identification and consequences of inadequate maintenance and failure of septic systems

# How do we prioritize concerns for OSSFs?

- ▶ Based off of SELECT results?
  - Priority Subwatersheds (in billions of CFU/day)
    - Lampasas River 5 – 12374
    - Sulphur Creek – 6780
    - Lampasas River 4 – 5769
    - Mesquite Creek – 2096
- ▶ Based off historical surface water quality data?
  - Subwatersheds above Site 15770; most downstream site that showed a water quality concern in any flow regime other than High Flow (in billions of CFU/day)
    - North Bennett – 324
    - South Bennett – 519
    - Bennett – 721
    - Lampasas River 1 – 570
    - Lampasas River 2 – 803

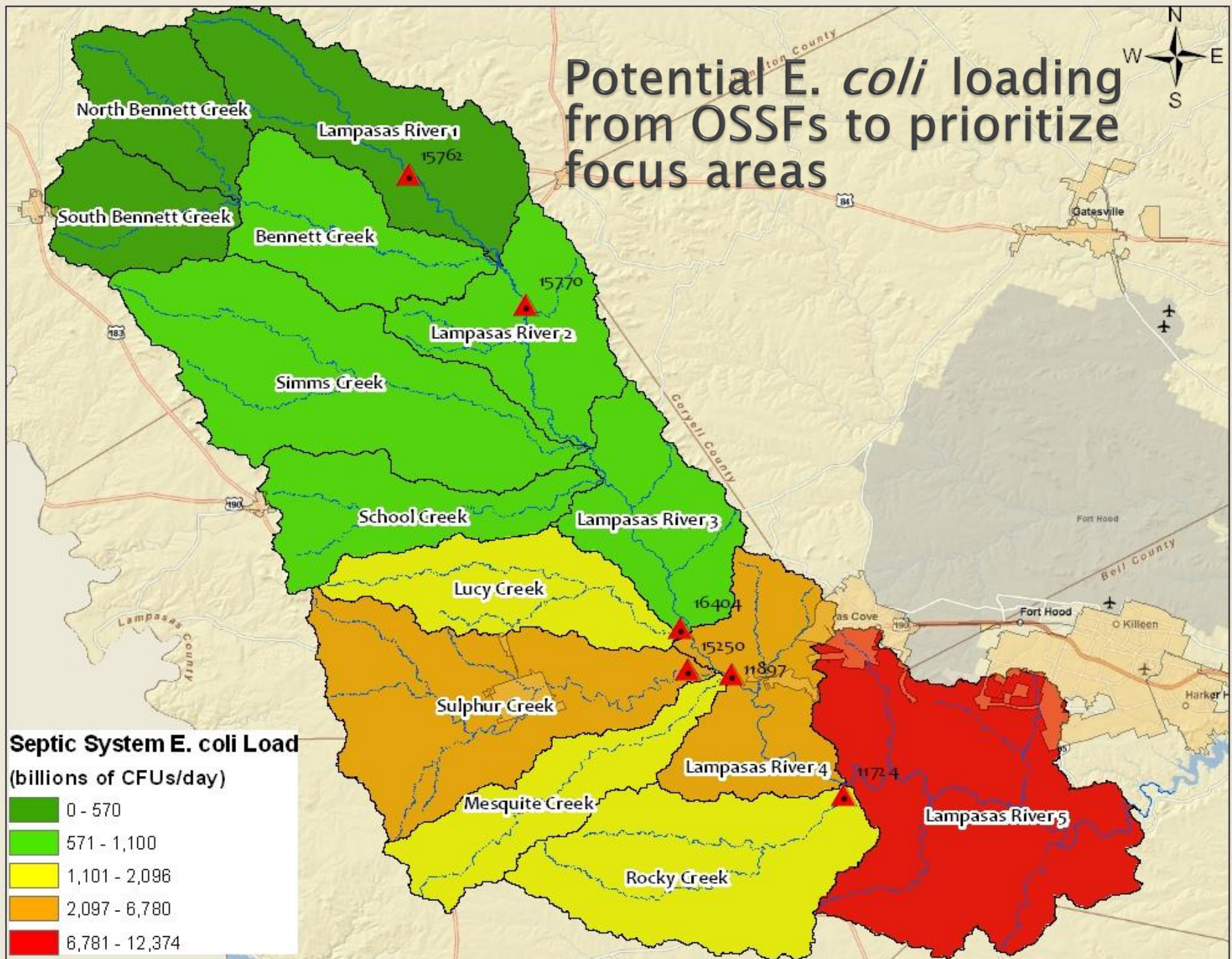
# Number of OSSFs by Subwatershed

Subwatershed	# of OSSFs	Potential Failing Systems*
Lampasas River 1	189	28
North Bennett Creek	91	14
Bennett Creek	154	23
South Bennett Creek	126	19
Lampasas River 2	240	36
Simms Creek	273	41
Lampasas River 3	259	39
School Creek	200	30
Lucy Creek	374	56
Lampasas River 4	1241	186
Sulphur Creek	1436	215
Lampasas River 5	2789	418
Mesquite Creek	473	71
Rocky Creek	399	60

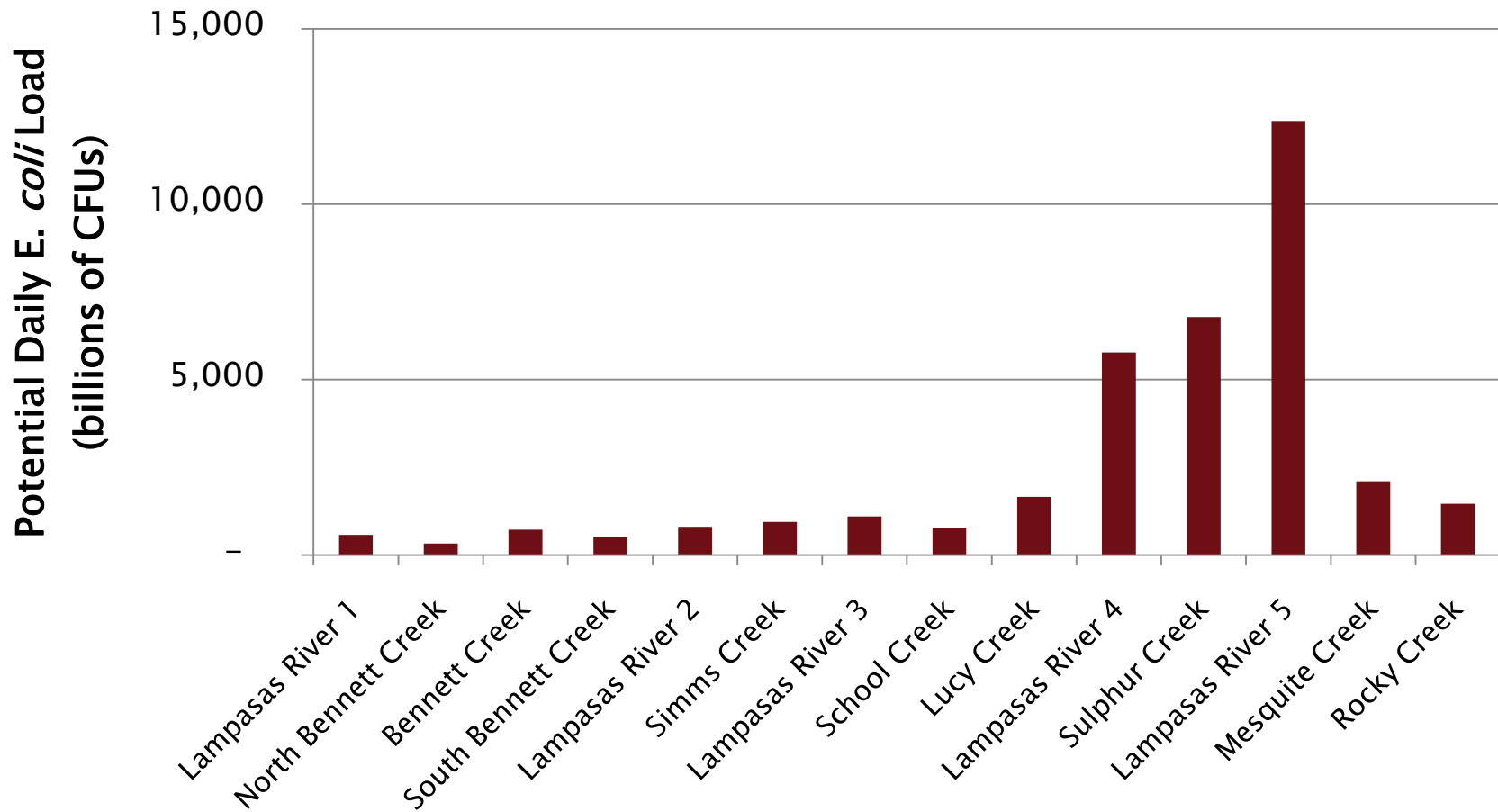
\* Estimated 15% of OSSFs may not be functioning properly based on the Septic Drainfield Limitation Class – SSURGO Soil



# Potential *E. coli* loading from OSSFs to prioritize focus areas



# Potential OSSF Contribution from SELECT Analysis





# Work Group Recommendations: OSSFs

## ► Schedule, milestones and cost

- Year 1–3
  - Task 1:
  - Task 2:
  - Task 3:
  
- Year 4–6
  - Task 1:
  - Task 2:
  - Task 3:
  
- Year 7–10
  - Task 1:
  - Task 2:
  - Task 3:

# Work Group Recommendations: Dogs

- ▶ Pet waste stations in parks and popular walking trails
  - Estimated \$620 per station for installation; \$85 annual maintenance/station
  - Appropriate Parks or trails for stations?
- ▶ Public education

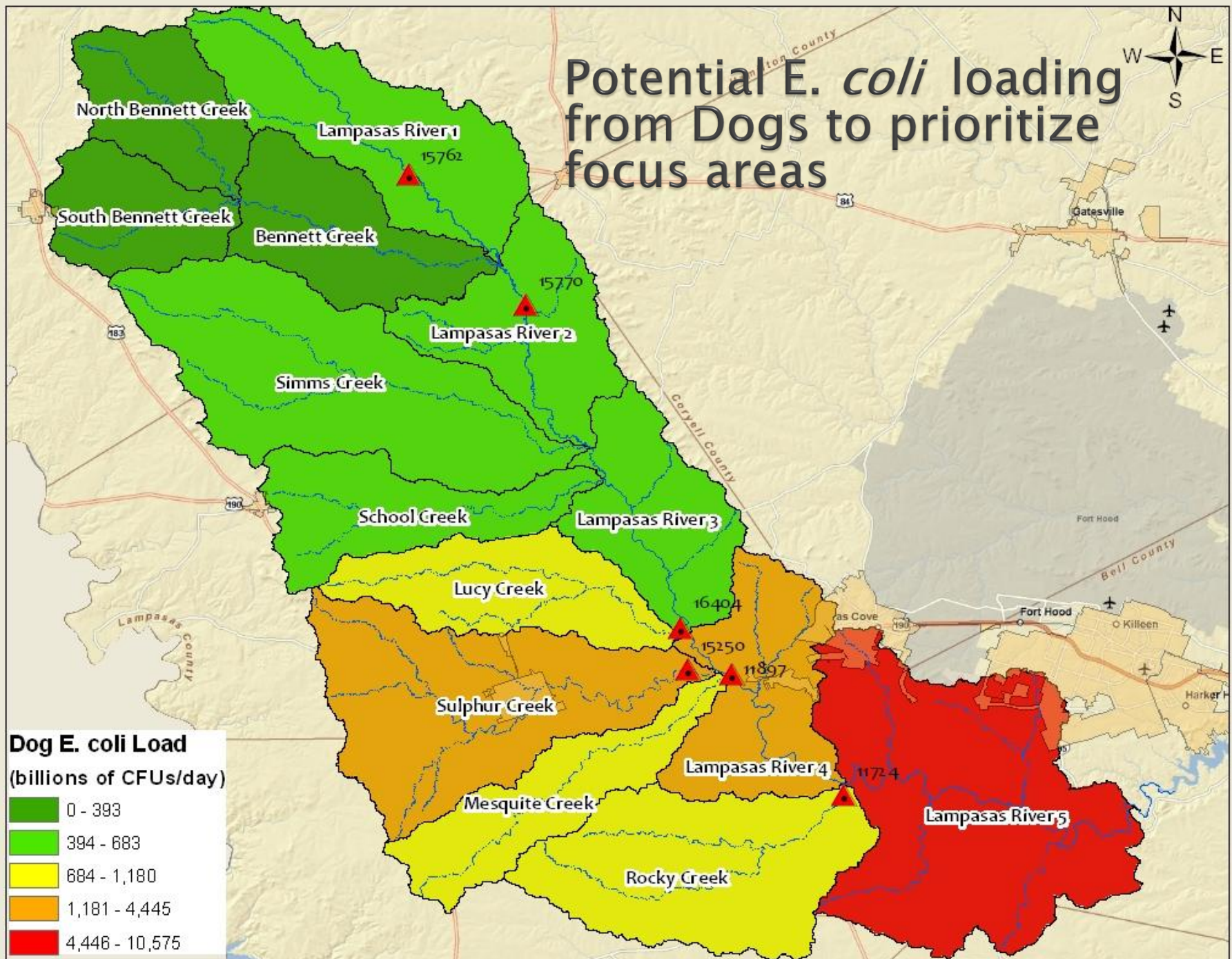


# How do we prioritize concerns for Dogs?

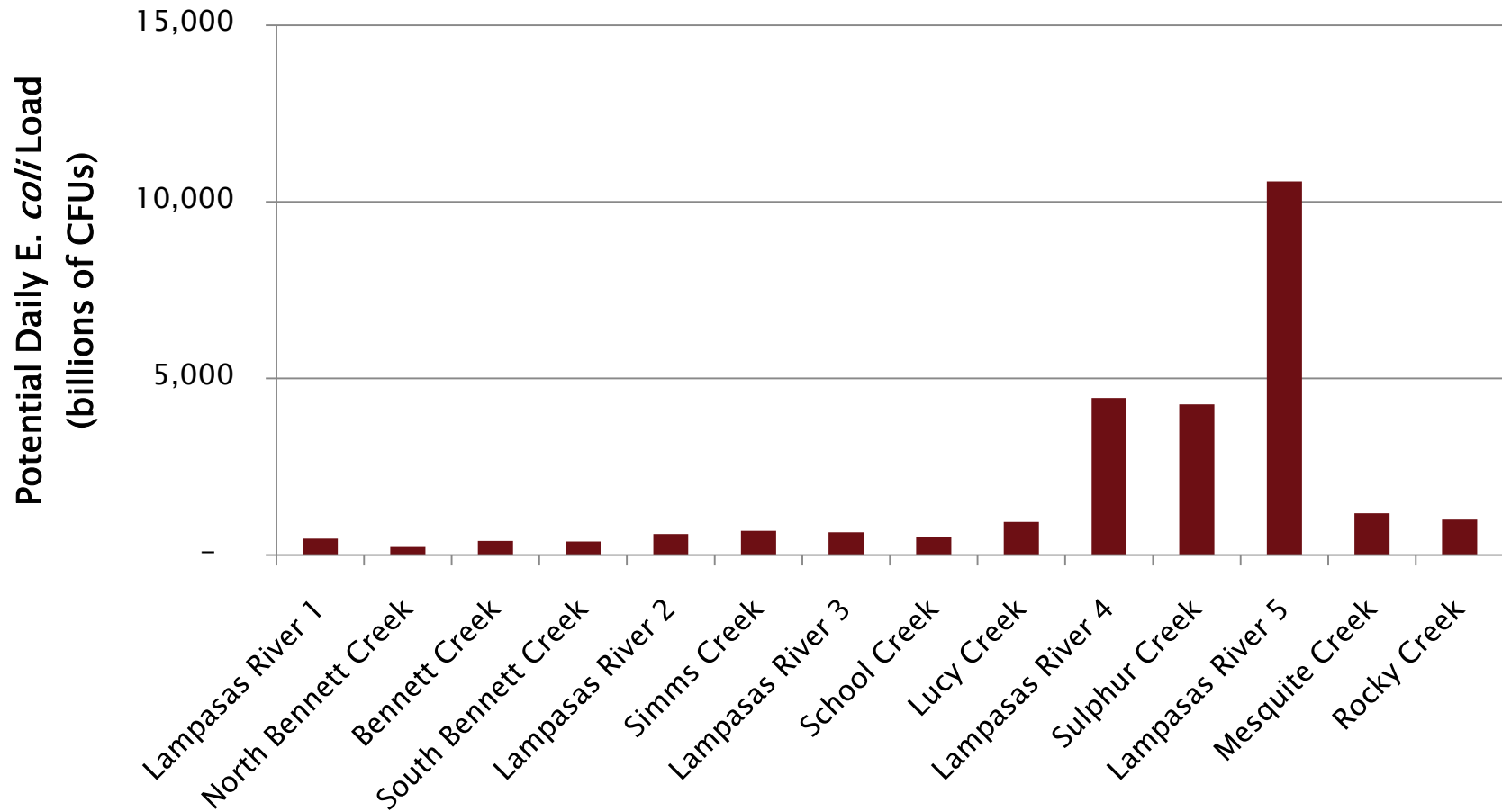
- ▶ Based off of SELECT results?
  - Priority Subwatersheds (in billions of CFU/day)
    - Lampasas River 5 – 10575
    - Lampasas River 4 – 4445
    - Sulphur Creek – 4265
    - Mesquite Creek – 1180
- ▶ Based off historical surface water quality data?
  - Subwatersheds above Site 15770; most downstream site that showed a water quality concern in any flow regime other than High Flow (in billions of CFU/day)
    - North Bennett – 225
    - South Bennett – 383
    - Bennett – 393
    - Lampasas River 1 – 465
    - Lampasas River 2 – 595
- ▶ Focus on urban areas with areas of high concentration of dogs; i.e. parks?



# Potential *E. coli* loading from Dogs to prioritize focus areas



# Potential Dog Contribution from SELECT Analysis



# Work Group Recommendations: Dogs

## ► Schedule, milestones and cost

- Year 1–3
  - Task 1:
  - Task 2:
  - Task 3:
- Year 4–6
  - Task 1:
  - Task 2:
  - Task 3:
- Year 7–10
  - Task 1:
  - Task 2:
  - Task 3:

# Other Urban NPS Pollutant Source Concerns

- ▶ Residential lawn care
  - Proper application rate and usage of fertilizers and pesticides
- ▶ Management of resident waterfowl
  - Periodic relocation of resident waterfowl to prevent overpopulation and concentration in parks
- ▶ Illegal dumping
  - Signage or other deterrents
  - Illegal dumping tip line
  - Partnership cleanup events
  - Household hazardous waste collection events
- ▶ Other?

# Voluntary MS4 Minimum Measures

- ▶ Cities with 50,000+ residents (Killeen) must operate under a Municipal Separate Storm Sewer System (MS4) permit
- ▶ Smaller cities may voluntarily implement the same measures
  - Public education and outreach
  - Public involvement or participation
  - Detection and elimination of illicit discharges
  - Controls for storm water runoff from construction sites
  - Post-construction storm water management in areas of new development and redevelopment
  - Pollution prevention and “good housekeeping” measures for municipal operations



# Sources of Funding

- ▶ Clean Water State Revolving Fund:
  - Administered by Texas Water Development Board
  - Provides low-interest loans with flexible terms and significant funding for wastewater treatment infrastructure improvements and nonpoint source pollution controls
- ▶ USDA Rural Development Program:
  - Offers grants and supports low-interest loans to rural communities for water and wastewater development projects

# Sources of Funding

- ▶ Clean Water Act 319 Nonpoint Source Grant Program:
  - Provides grant funding through TSSWCB and TCEQ from USEPA to implement specific projects that control and abate nonpoint source pollution. TCEQ administers grants that target all sources of NPS other than agricultural and silvicultural
- ▶ Supplemental Environmental Project Program:
  - Administered by Texas Commission on Environmental Quality
  - Directing funds from fines, fees and penalties for environmental violations toward environmental beneficial projects, such as Cleanup of Unauthorized Trash Dumps, plugging abandoned water wells and repair/replacement of failing OSSFs

# Sources of Funding

- ▶ **Texas Capital Funds:**
  - Administered by Texas Department of Agriculture
  - Part of the Community Development Block Grant; provides more than \$10 million in competitive awards each year to small Texas cities and counties. Provides funding for infrastructure projects that include water and sewer lines and drainage improvements.
- ▶ **Economically Distressed Area Program:**
  - Administered by Texas Water Development Board
  - Funding in the form of a grant or a combination grant/loan available for qualified communities for water and wastewater infrastructure improvements. Includes measures to prevent future substandard development. The county where the project is located must adopt rules for the regulation of subdivisions prior to application for financial assistance.

# Sources of Funding

- ▶ Environmental Education Grants:
  - Sponsored by USEPA's Environmental Education Division, Office of Children's Health Protection and Environmental Education. The program supports environmental education projects that enhance the public's awareness, knowledge and skills to help people make informed decisions that affect environmental quality. USEPA awards grants each year based on funding appropriated by Congress. Annual funding for the program ranges between \$2 and \$3 million. Most grants are in the \$15,000 to \$25,000 range.

# Sources of Funding

## ▶ Outdoor Recreation Grants

- Program provides 50% matching grant funds to municipalities, counties, municipal utility districts (MUDs) and other local units of government with a population less than 500,000 to acquire and develop parkland or to renovate existing public recreation areas.
- Two funding cycles per year with a maximum award of \$500,000.
- The Texas Recreation and Parks Account (TRPA) is funded through a portion of Texas sales tax received on select sporting good items. TRPA is administered by TPWD's Recreation Grants Branch.

# Next Steps

# Riparian Proper Functioning Condition Workshop

- ▶ Hosted by NRCS
- ▶ Spring 2011
- ▶ Tuesday, April 26<sup>th</sup>
  - Need landowner volunteer for field site venue
- ▶ Wednesday, April 27<sup>th</sup>
  - Classroom and Field at Parrie Haynes Equestrian Center
  - Lunch provided by City of Killeen





# March Work Group Meetings

- ▶ Develop outreach and education strategies specific to recommended management practices
- ▶ Outline long-term water quality monitoring concerns

## ***Agriculture and Wildlife***

Thursday, March 24, 2011

6:00 – 9:00 p.m.

Lampasas County Farm Bureau  
1793 U.S. 281  
Lampasas, TX 76550

## ***Urban Nonpoint Source***

Friday, March 25, 2011

9:00 a.m. – 12:00 p.m.

City of Killeen Solid Wastes  
2003 Little Nolan Road  
Killeen, TX 76542



# Remaining Activities

- ▶ April 2011
  - Steering Committee Meeting
    - Present final work group recommendations, finalize priorities and long-term monitoring
- ▶ Summer 2011
  - Distribute WPP for 45 day public comment
  - Public Comment meeting
- ▶ Fall 2011
  - TSSWCB and EPA Consistency Review Period
- ▶ Winter 2011
  - Print WPP & begin implementation