

Lampasas River Watershed Partnership

Agriculture and Wildlife Work Group Meeting
February 17, 2011

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Watershed Coordinator
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: Livestock Contribution

- ▶ 10% reduction across the entire watershed for agriculture
- ▶ Reduction in livestock contribution to be accomplished through enrollment of 10% of animal units in Water Quality Management Plans (TSSWCB) over a 10 year period
- ▶ Must prioritize subwatersheds for implementation over the next 10 years

Water Quality Management Plans (WQMP)

- ▶ A WQMP is:
 - A site-specific plan for land management developed by soil and water conservation districts for agricultural or silvicultural lands and provides farmers and ranchers a voluntary opportunity to achieve a level of pollution prevention or abatement consistent with Texas Surface Water Quality Standards
 - Includes appropriate and essential land treatment practices, production practices, management measures, or technologies applicable to planned land use

Work Group Recommended Best Management Practices

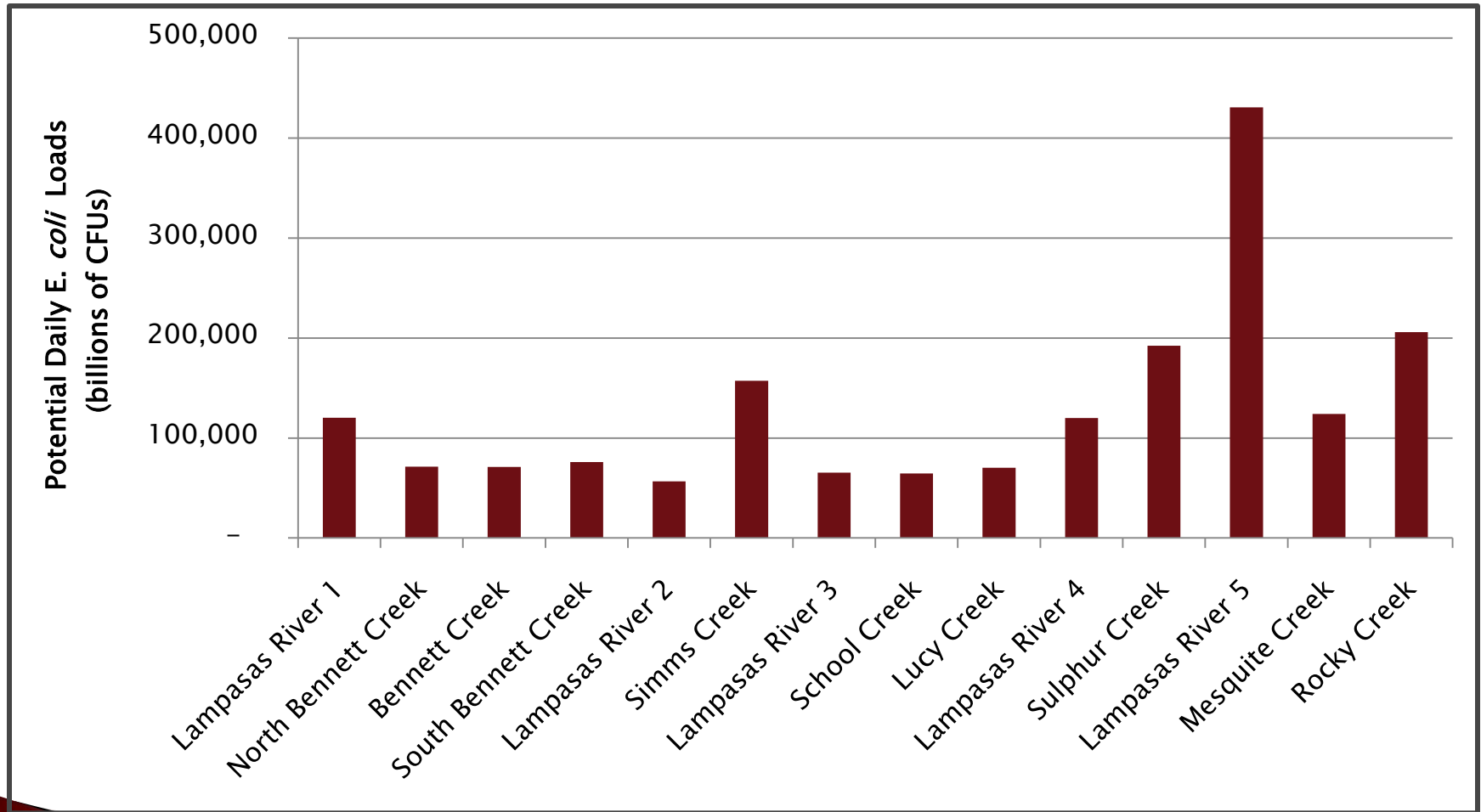
- ▶ Prescribed grazing
- ▶ Conversion to native grasses and forbs
- ▶ Alternative watering facilities
- ▶ Cross-fencing
- ▶ Riparian Forest Buffers
- ▶ Stream crossings
- ▶ Riparian Herbaceous Buffers
- ▶ Brush management on uplands with subsequent herbaceous cover
- ▶ Filter strips (?)
- ▶ Pasture and hayland planting (?)

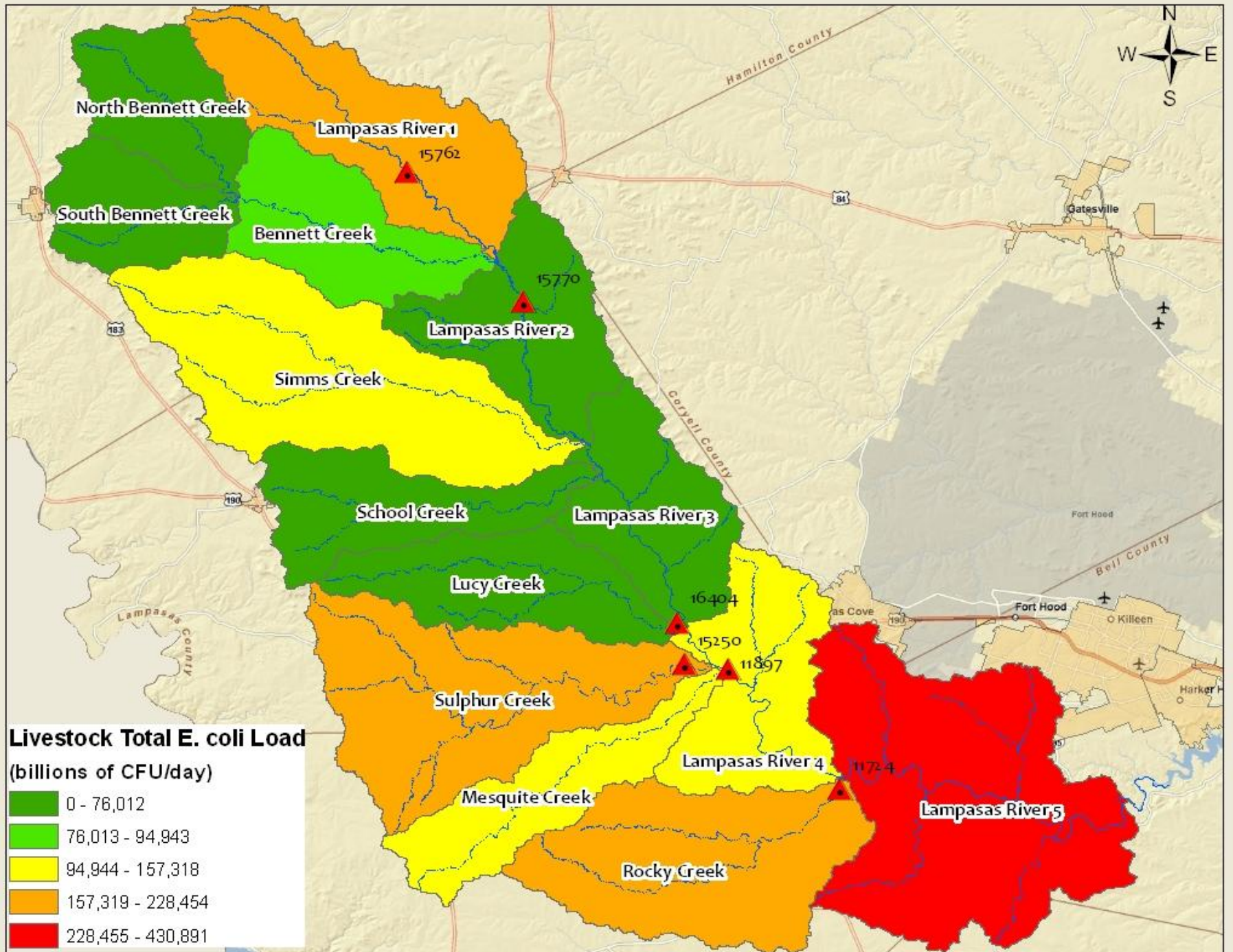
Number of Animal Units and Livestock Operations

Subwatershed Name	Subwatershed ID	Total AU	10% of Animal Units	Number of Farms*	10% of Farms
Lampasas River 1	1	2,980	298	157	15
North Bennett Creek	2	1,563	156	82	8
Bennett Creek	3	1,873	187	98	9
South Bennett Creek	4	1,372	137	72	7
Lampasas River 2	5	1,546	155	78	8
Simms Creek	6	3,509	351	181	18
Lampasas River 3	7	1,424	142	72	7
School Creek	8	1,352	135	69	7
Lucy Creek	9	1,401	140	71	7
Lampasas River 4	10	2,131	213	108	11
Sulphur Creek	11	3,487	349	177	17
Lampasas River 5	12	8,530	853	427	43
Mesquite Creek	13	2,476	248	125	12
Rocky Creek	14	4,901	490	248	25
Totals		38,546	3,855	1,927	193

*Estimated 20 AU per Farm (based upon NASS and input from local NRCS and AgriLife Extension personnel)

Potential Livestock Operation Contribution from SELECT analysis





How do we prioritize subwatersheds for WQMPs

- ▶ Based off of SELECT results?
 - Priority Subwatersheds (*E. coli* loads in billions of CFU/day)
 - Lampasas River 5 – 430,891
 - Rocky Creek – 206,063
 - Sulphur Creek – 192,434
 - Simms Creek – 157,318
- ▶ Based off of 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 (*E. coli* loads in billions of CFU/day)
 - North Bennett – 71,450
 - South Bennett – 76,012
 - Bennett – 70,943
 - Lampasas River 1 – 120,154
 - Lampasas River 2 – 56,642

Develop and Implement WQMPs

- ▶ Estimated cost for 1 District Technician is \$75,000 per year
- ▶ Maximum financial incentive available per WQMP is \$15,000
- ▶ All practices will be implemented according to USDA–NRCS Field Office Technical Guide
- ▶ Potential reduction across watershed if 10% of all animal units are enrolled into a WQMP is 182,638 billion CFU/day

Develop and Implement WQMPs

- ▶ Possible ways to prioritize for WQMPs
 - Primary Focus (Years 1–3)
 - Subwatersheds: _____
 - Number of WQMPS per Subwatershed: _____
 - Cost = \$15,000 per plan
 - Secondary Focus (Years 4–6)
 - Subwatersheds: _____
 - Number of WQMPS per Subwatershed: _____
 - Cost = \$15,000 per plan
 - Remaining areas (Years 7–10)
 - Subwatersheds: _____
 - Number of WQMPS per Subwatershed: _____
 - Cost = \$15,000 per plan

Develop and Implement WQMPs

- ▶ Possible ways to prioritize for WQMPs
 - Years 1–10
 - Primary subwatersheds: _____
 - Secondary subwatersheds: _____
 - Remaining subwatersheds: _____

Sources of Funding

- ▶ Water Quality Management Plan Program
 - WQMP program is administered by TSSWCB
 - Also referred to as the 503 program
 - Provides financial incentives to augment participation
 - Burnet, Lampasas and Mills Counties are all currently priority districts

Sources of Funding

- ▶ Federal Clean Water Act Section 319(h)
 - US EPA provides funding to TSSWCB and TCEQ to support nonpoint source pollution projects
 - TSSWCB administers funds to agricultural and sivilcultural issues and TCEQ administers funds to urban and other non-agricultural issues
 - Has been utilized to fund a SWCD District Technician in other WPPs
- ▶ USDA – NRCS Environmental Quality Incentives Program (EQIP):
 - Voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible goals
 - Offers financial and technical help to assist eligible participants to install or implement management practices on eligible agricultural lands

Sources of Funding

- ▶ Farm Services Agency – Conservation Reserve Program (CRP):
 - Voluntary program for agricultural landowners
 - Landowners can receive annual rental payments and cost-share assistance to establish long-term resource conserving covers on eligible farmland
 - Provides up to 50% cost-share assistance of participants cost in establishing approved conservation practices
 - Participants enroll in CRP contracts for 10–15 years
- ▶ USDA–NRCS Agricultural Water Enhancement Program (AWEP):
 - Voluntary conservation initiative that provides financial and technical assistance to agricultural producers to implement agricultural water enhancement activities on agricultural land for the purposes of conserving surface and groundwater and improving water quality

Sources of Funding

- ▶ Texas Farm and Ranch Lands Conservation Program:
 - Established by Senate Bill 1273 in 2005
 - Administered by the Texas General Land Office
 - Provides grants to landowners for the sale of conservation easements that create a voluntary free-market alternative to selling land for development
 - Stems the fragmentation or loss of agricultural lands
- ▶ Water Supply Enhancement Program:
 - Texas Brush Control Program to enhance water supplies through the selective control of water depleting brush
 - Financial incentive program administered by TSSWCB, rate is limited to 80% of the total cost of a practice
 - Program is limited to critical areas designated by TSSWCB and to methods of brush control approved by TSSWCB

Work Group Recommendations: Feral Hog Contribution

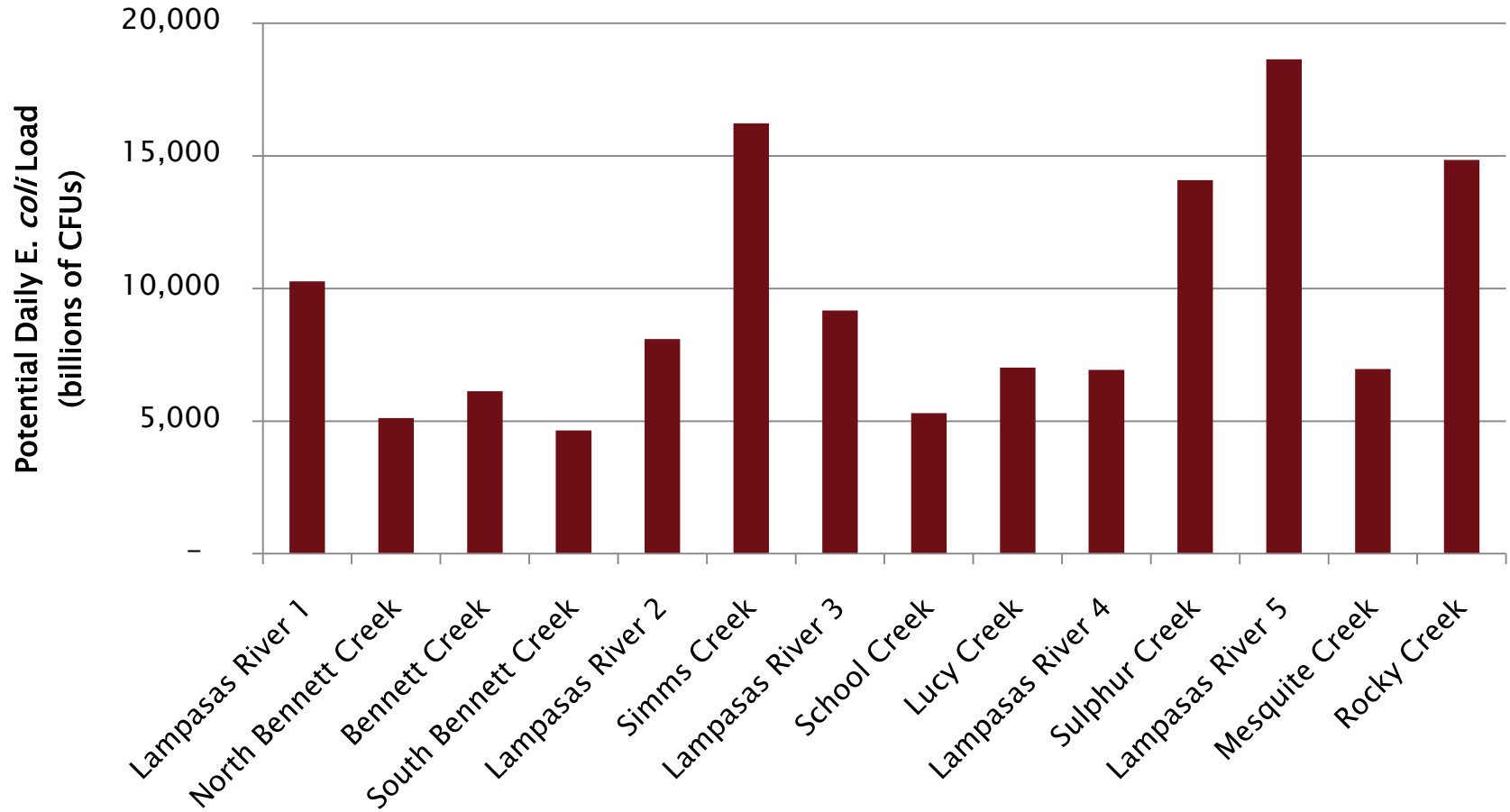
- ▶ 10% reduction across the watershed for feral hog contribution was previously agreed on by Work Group
 - However literature says that is not a sustainable rate...
 - “For a control method to be successful 70 percent of the population must be removed annually in order to exceed recruitment within the herd and affect control within 9 years; 70 percent must be removed twice a year to affect control in three years (USFWS 1996).

U.S. Fish and Wildlife Service. 1996. Environmental Assessment for the Hakalau Forest National Wildlife Refuge Feral Ungulate Management Plan Island of Hawaii. Unpublished Report. U.S. Department of the Interior. Honolulu, Hawaii. On file at Havasu NWR Needles, CA.

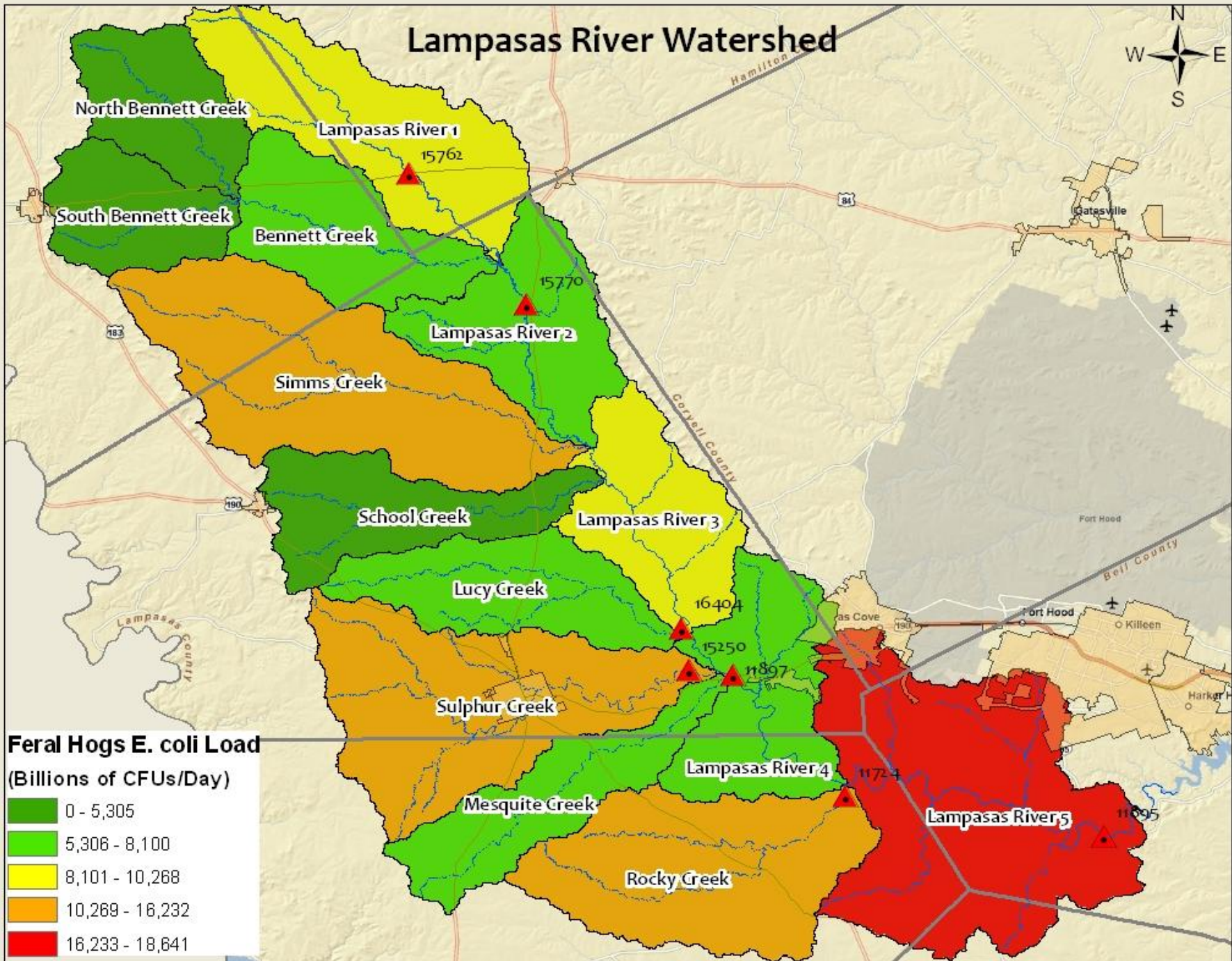
Work Group Recommendations: Feral Hog Contribution

- ▶ Potential Implementation Strategies
 - Removal of feral hogs through hunting and trapping
 - Support county-wide trapping programs
 - Do counties need additional personnel?
 - Aerial hunting
 - Educational programs
 - Texas AgriLife Extension Service
 - Hunters for the Hungry
 - Only accepts venison due to state regulations
 - Purchase hog-control equipment
 - Develop a hog trap rental program
 - Modify existing online feral hog damage tracking tool for use within the Lampasas River Watershed
 - Enforce Texas Animal Health Commission regulations on trap and transport of live feral hogs
 - Bounty program (?)

Potential Feral Hog Contribution from SELECT analysis



Lamparas River Watershed



Feral Hogs E. coli Load
(Billions of CFUs/Day)

- 0 - 5,305
- 5,306 - 8,100
- 8,101 - 10,268
- 10,269 - 16,232
- 16,233 - 18,641

Prioritize Subwatersheds for Feral Hog Management

- ▶ Based off of SELECT results?
 - Priority Subwatersheds (*E. coli* in billions of CFU/day)
 - Lampasas River 5 – 18,641
 - Simms Creek – 16,232
 - Rocky Creek – 14,849
 - Sulphur Creek – 14,083
- ▶ Based of historical surface water quality data?
 - Subwatersheds above Site 15770; most downstream site that showed a WQ concern in any flow regime other than High Flow) (*E. coli* in billions of CFU/day)
 - North Bennett Creek – 5,114
 - South Bennett Creek – 4,651
 - Bennett Creek – 6,125
 - Lampasas River 1 – 10,268
 - Lampasas River 2 – 8,100

Estimated Costs and Reduction

- ▶ Estimated cost
 - 1 Feral Hog Specialist is \$90,000 per year
 - 1 Full time county trapper \$60,000 to \$70,000
 - Additional hog control equipment for a rental program
 - \$350–\$600 per trap
 - Aerial hunting \$2500/day

- ▶ Potential reduction across watershed is 13,345 billion CFU/day (based upon a 10% reduction)

Feral Hog Control

- ▶ Primary Focus (Years 1–3)
 - Aerial hunts:
 - \$2500/day
 - How often?
 - Focus areas?
 - Full time Feral Hog Specialist:
 - Cost per year ~ \$90,000
 - Purchase additional trapping equipment
 - Modify and maintain online tracking tool
 - Feral Hog workshops
- ▶ Secondary Focus (Years 4–6)*
- ▶ Remaining areas (Years 7–10)*

*Milestones can apply across all years of implementation

Sources of Funding

- ▶ Federal Clean Water Act Section 319(h)
 - US EPA provides funding to TSSWCB and TCEQ to support nonpoint source pollution projects
 - TSSWCB administers funds to agricultural and sivilcultural issues and TCEQ administers funds to urban and other non-agricultural issues
 - Has been utilized in Plum Creek to fund an educational program for feral hog management
 - Hired a Feral Hog Specialist to provide technical guidance to landowners
 - Develop and distribute educational materials
 - Hold feral hog workshops
 - Develop and maintain and online reporting system for feral hog damage

Sources of Funding

- ▶ Feral Hog Abatement Grant Program:
 - Administered by Texas Department of Agriculture
 - Provides funding for practical, effective projects aimed at controlling the feral hog population across the state

Work Group Recommendations: Whitetail Deer Contribution

- ▶ Deer populations are not managed for water quality purposes
- ▶ Encourage landowner participation in Wildlife Management Associations
- ▶ Encourage landowner to acquire Managed Land Deer Permits from Texas Parks and Wildlife
- ▶ Encourage hunters to harvest animals at sustainable levels

Sources of Assistance

- ▶ Texas Parks and Wildlife Department Programs (for Private Landowners)
 - TPWD regional Wildlife Biologist
- ▶ USDA– NRCS Wildlife Habitat Incentive Program (WHIP)
 - Voluntary program for conservation-minded landowners who want to develop and improve wildlife habitat on agricultural land, nonindustrial private forestland and Indian land
 - Provides both technical assistance and up to 75% cost-share assistance to establish and improve fish and wildlife habitat.
 - Key objectives include restoration of declining or important native fish and wildlife habitats; reduction of the impacts of invasive species on fish and wildlife habitats and restore, develop or enhance declining or important aquatic wildlife species habitats

Next Steps

Riparian Proper Functioning Condition Workshop

- ▶ Hosted by NRCS
- ▶ Spring 2011
- ▶ Tuesday, April 26th
 - Need landowner volunteer for field site venue
- ▶ Wednesday, April 27th
 - 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 period
 - Public Comment meeting
- ▶ Fall 2011
 - TSSWCB and EPA Consistency Review Period
- ▶ Winter 2011
 - Print WPP & begin implementation