Lampasas River Watershed Partnership

Agriculture and Wildlife Work Group Meeting
March 24, 2011

Lisa Prcin
Watershed Coordinator
Texas AgriLife Research at
Blackland Research & Extension Center

Introductions

Past Business

Work Group Report – February 2011

- Identified potential management strategies to mitigate bacteria contribution
  - Livestock:
    - Enroll 10% of all animal units (approximately 193 farms) into WQMPs over a 10 year period
    - Identified BMPs include:
      - 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
      - Terraces*
      - Vegetative waterways*
      - Nutrient Management*

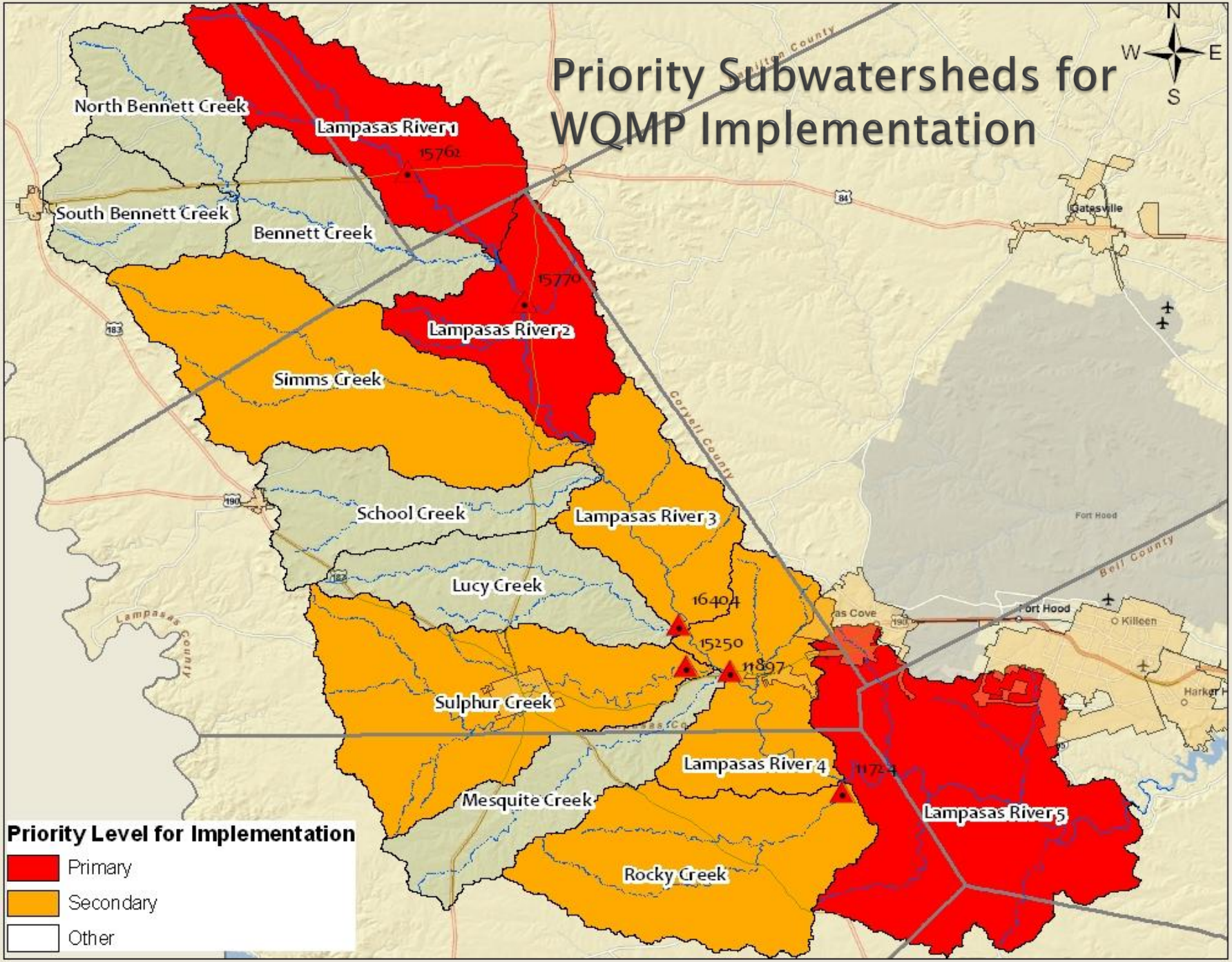
*BMPs added at February Work Group meeting to include cropland production

Work Group Report – February 2011

- Identified potential management strategies to mitigate bacteria contribution
  - Feral Hogs:
    - Reduce feral hog population by 50% over a 10 year period
    - Identified BMPs include: aerial hunts, support county trapping programs, educational programs, bounty program, trap rental
  - Whitetail Deer:
    - Promote educational & technical guidance services available from TPWD, develop a network to connect landowners with MLD permits with interested hunters, encourage participation in WMAs and the acquisition of MLD permits

Work Group Report – February 2011

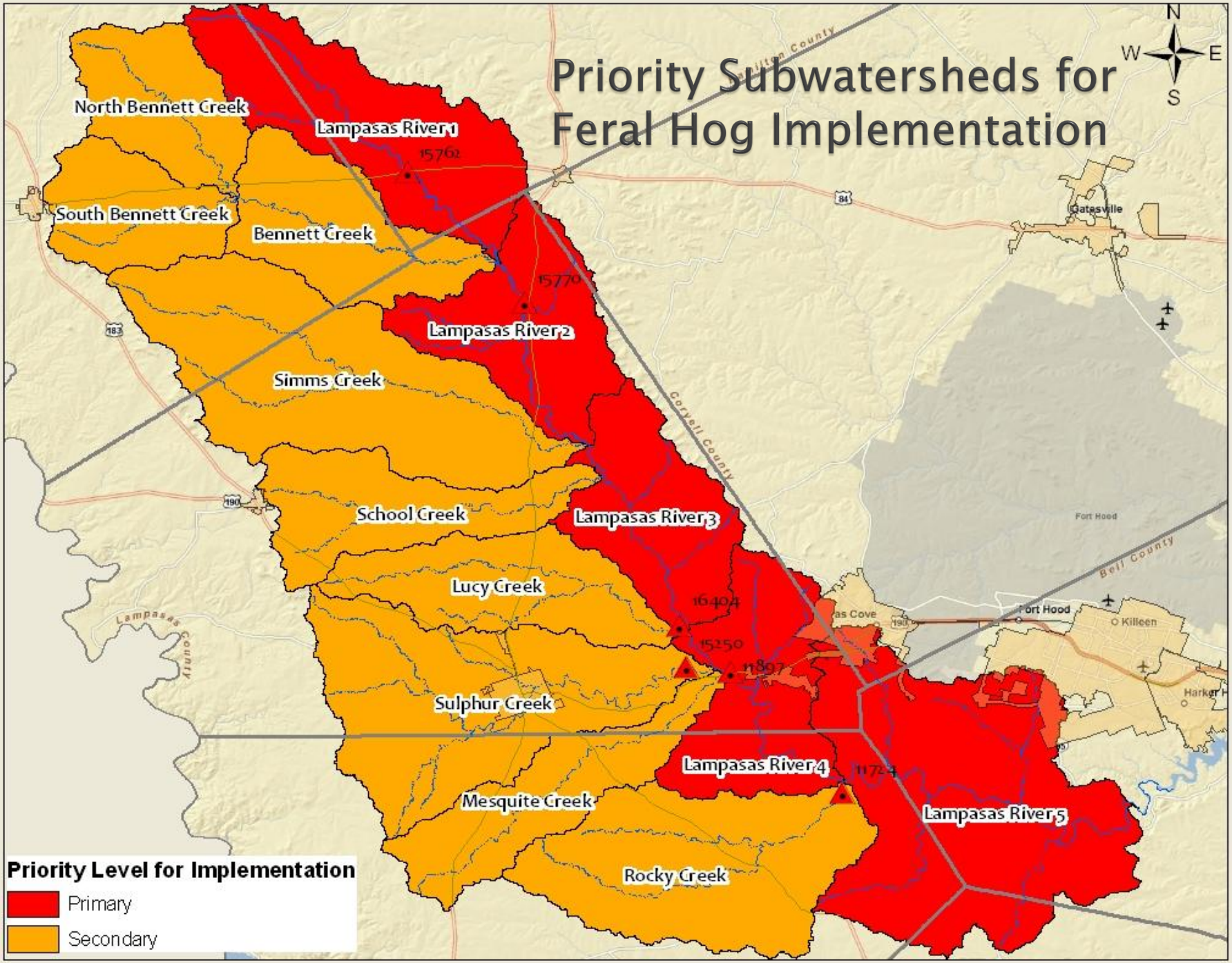
- Identified potential funding sources for implementation of BMPs
- Prioritized subwatersheds for BMP implementation for livestock and feral hog sources


Priority Subwatersheds for WQMP Implementation
N
W
E
S
North Bennett Creek
Lampasas River 1
15762
South Bennett Creek
Bennett Creek
15770
Lampasas River 2
Simms Creek
School Creek
Lampasas River 3
Lucy Creek
16404
15250
11897
Sulphur Creek
Lampasas River 4
11724
Mesquite Creek
Lampasas River 5
Rocky Creek
Gatesville
Fort Hood
Killeen
Coryell County
Bell County
Lampasas County
Priority Level for Implementation
Primary
Secondary
Other

Total Livestock Potential Contribution and Reduction

10% Reduction at each subwatershed regardless of priority level

Subwatershed	Animal Units	Estimated Load BEFORE Management (Billions of CFU/day)	10% Animal Units Managed	Estimated Load **AFTER** 10% Management (Billions of CFU/day)
Lampasas River 1	2980	120,154	298	108,139
Lampasas River 2	1546	56,642	155	50,978
Lampasas River 5	8530	430,891	853	387,802
Focus Area Total	13055	607,687	1306	546,918
Lampasas River 3	1424	65,419	142	58,877
Lampasas River 4	2131	120,077	213	108,070
Simms Creek	3509	157,318	351	141,586
Rocky Creek	4901	206,063	490	185,456
Sulphur Creek	3487	192,434	349	173,190
Focus Area Total	15452	741,311	1545	667,179
North Bennett Creek	1563	71,450	156	64,305
Bennett Creek	1873	70,943	187	63,849
South Bennett Creek	1372	76,012	137	68,410
School Creek	1352	64,649	135	58,184
Lucy Creek	1401	70,309	140	63,278
Mesquite Creek	2476	124,023	248	111,621
Focus Area Total	10038	477,385	1004	429,646
Watershed Total	38,546	1,826,382	3,855	1,643,744


Priority Subwatersheds for Feral Hog Implementation
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Mesquite Creek
Lampasas River 5
Rocky Creek
Priority Level for Implementation
Primary
Secondary
Gatesville
Fort Hood
Killeen
Coryell County
Bell County
Lampasas County

Total Feral Hog Potential Contribution and Reduction

50% Reduction at each subwatershed regardless of priority level

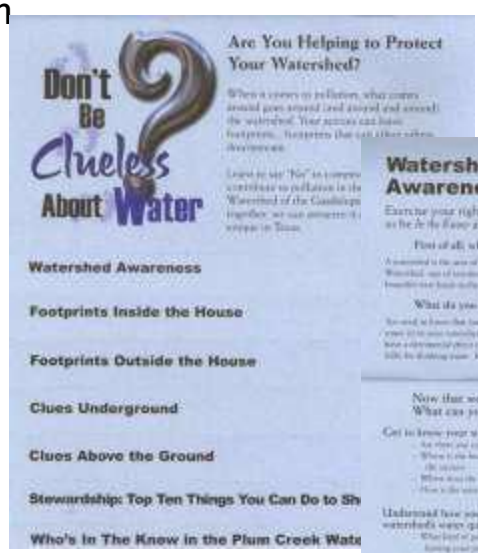
Focus Area	Subwatershed	Total Hogs	Estimated Load BEFORE Management (Billions of CFU/day)	Hogs to be Removed	Estimated Load After 50 % Management (Billions of CFU/day)
Primary	Lampasas River 1	1867	10,268	934	5,134
	Lampasas River 2	1473	8,100	737	4,050
	Lampasas River 3	1667	9,168	834	4,584
	Lampasas River 4	1260	6,929	630	3,464
	Lampasas River 5	3389	18,641	1695	9,320
	Focus Area Total	9656	53,105	4828	26,552
Secondary	North Bennett Creek	930	5,114	465	2,557
	Bennett Creek	1114	6,125	557	3,062
	South Bennett Creek	846	4,651	423	2,326
	Simms Creek	2951	16,232	1476	8,116
	School Creek	965	5,305	483	2,653
	Lucy Creek	1276	7,019	638	3,509
	Sulphur Creek	2561	14,083	1281	7,042
	Mesquite Creek	1266	6,964	633	3,482
	Rocky Creek	2700	14,849	1350	7,425
	Focus Area Total	14609	80,342	7305	40,171
Total		24265	133,446	12133	66,723

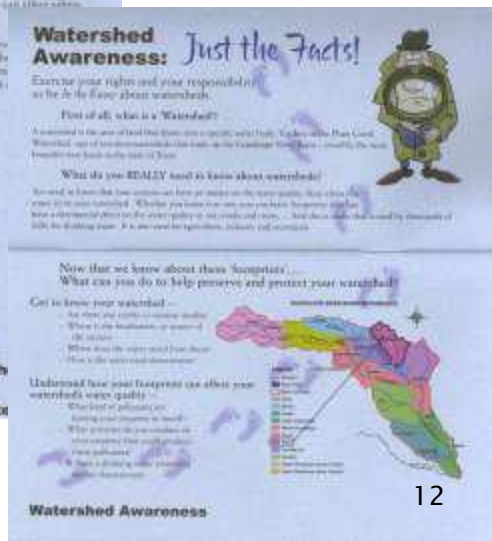
Outreach and Education Strategies

Broad-based Programs

Lampasas River Watershed Partnership Awareness Campaign

- Develop promotional and educational materials that address WPP implementation:
  - Brochures
  - Fact sheets
  - Posters
  - Watershed maps
  - Door hangers
  - Adapt Plum Creeks “Don’t Be Clueless About Water” to the Lampasas River
  - Adapt material from TWDB’s Water IQ Program
- Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- Target Audience:
  - All





Community Outreach

- Disseminate project information through presentations and/or participation in public events
  - Lampasas Spring Ho Festival
  - Celebrate Killeen
  - Copperas Cove Rabbit Fest
  - Bell County Crops and Livestock Conference
  - GIS Day
  - Texas Recycle Day
  - Bloomin' Fest, Lampasas
  - Earth Day
  - Herb and Art Festival, Lampasas – October
- Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- Target Audience:
  - All

Texas Watershed Steward Program

- Science-based watershed education program designed to help citizens identify and address water quality impairments; "Water Quality 101"
- Lead Organization:
  - Texas AgriLife Extension Service
- Target Audience:
  - All
- Frequency:
  - 2012, 2014
  - every 3 years thereafter

Riparian Proper Functioning Condition Workshops

- Program to help develop a common vocabulary and understanding of riparian areas among people who live and work on the land
  - Workshops detail the values and functions associated with riparian areas and streams
- Lead Organization:
  - NRCS
- Target Audience:
  - All
- Frequency:
  - Yearly

Tributary and Roadway Signage

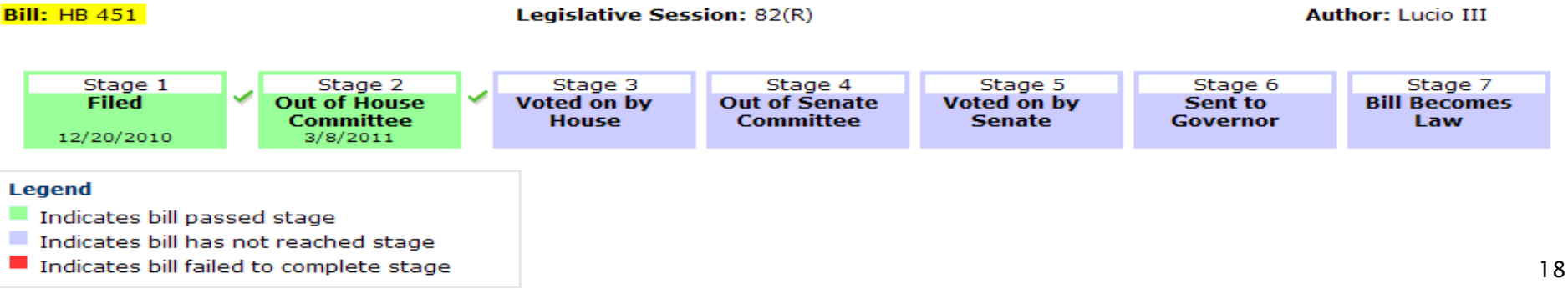
- Develop signs to be posted along major roadways notifying travelers when they are entering the watershed or crossing the Lampasas River or other major tributaries to encourage residents and travelers to play a positive role in protecting water quality
- Lead Organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
- Target Audience:
  - All

Illegal Dumping Campaign

- Develop and post signs at known “dumping points” to dissuade dumping of waste into the streams and river
- Lead Organization:
  - Lampasas River Watershed Partnership
  - TxDOT
- Target Audience:
  - All
- Frequency/ Target Area:
  - List of known “dumps”?

Don't Mess With Texas Water

- Proposed H.B. 451 creates the Don't Mess with Texas Water program, administered by the Texas Commission on Environmental Quality
  - Program will place signs on major highway water crossings that display a toll-free hotline to report illegal dumping
  - Program will be optional for local governments and will be a method for combating the rising incidence of illegal dumping in Texas
  - Partnership may evaluate and support if bill is passed
- Lead Organization:
  - TCEQ
  - TxDOT
- Target Audience:
  - All



Texas Waterway Cleanup Program

- Coordinate with Keep Texas Beautiful to organize roadway cleanups at bridge and stream crossings
- Lead Organization:
  - Lampasas River Watershed Partnership
  - Keep Texas Beautiful
- Target Audience:
  - All
- Frequency:
  - Yearly
  - Locations TBD by LRWP Steering Committee

Water Quality in the Classroom

- Promote and/or adapt modules designed for school-aged children
  - Curriculum to involve educate children about watersheds, nonpoint source pollution and the Lampasas River Watershed Partnership
- Lead Organization:
  - Texas AgriLife Research
- Target Audience:
  - Elementary, middle or high school teachers and students
  - Parrie Haynes Ranch

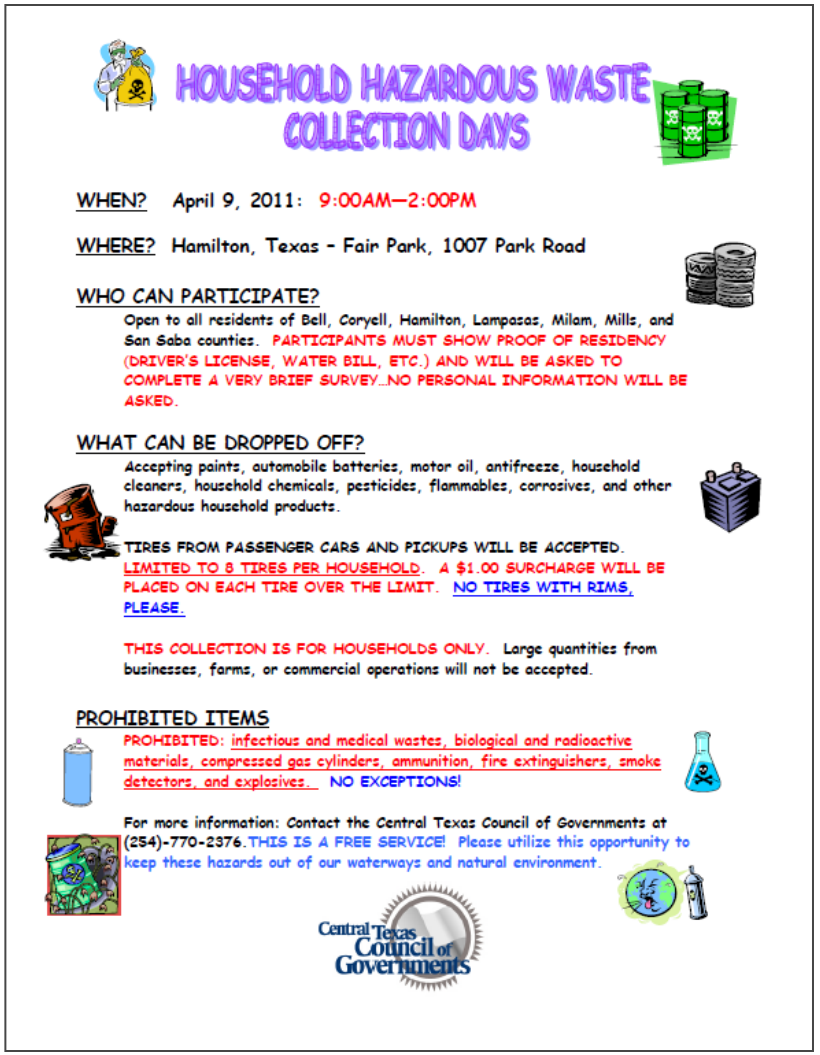
Texas Stream Team

- Provide opportunities for volunteer water quality monitoring and to provide educational resources to stakeholders
- Lead Organization:
  - Texas Stream Team
  - Texas AgriLife Research
- Target Audience:
  - All

Texas Stream Team
Caring for Our Waters

Household Hazardous Waste Collection Days

- Support the Central Texas Council of Governments by providing publicity for annual or biannual hazardous waste collection events to increase public participation within the watershed
- Lead Organization:
  - Texas AgriLife Research
- Target Audience:
  - All



HOUSEHOLD HAZARDOUS WASTE COLLECTION DAYS

WHEN? April 9, 2011: 9:00AM–2:00PM

WHERE? Hamilton, Texas - Fair Park, 1007 Park Road

WHO CAN PARTICIPATE?

Open to all residents of Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba counties. PARTICIPANTS MUST SHOW PROOF OF RESIDENCY (DRIVER'S LICENSE, WATER BILL, ETC.) AND WILL BE ASKED TO COMPLETE A VERY BRIEF SURVEY…NO PERSONAL INFORMATION WILL BE ASKED.

WHAT CAN BE DROPPED OFF?

Accepting paints, automobile batteries, motor oil, antifreeze, household cleaners, household chemicals, pesticides, flammables, corrosives, and other hazardous household products.

TIRES FROM PASSENGER CARS AND PICKUPS WILL BE ACCEPTED. LIMITED TO 8 TIRES PER HOUSEHOLD. A $1.00 SURCHARGE WILL BE PLACED ON EACH TIRE OVER THE LIMIT. NO TIRES WITH RIMS, PLEASE.

THIS COLLECTION IS FOR HOUSEHOLDS ONLY. Large quantities from businesses, farms, or commercial operations will not be accepted.

PROHIBITED ITEMS

PROHIBITED: infectious and medical wastes, biological and radioactive materials, compressed gas cylinders, ammunition, fire extinguishers, smoke detectors, and explosives. NO EXCEPTIONS!

For more information: Contact the Central Texas Council of Governments at (254)-770-2376. THIS IS A FREE SERVICE! Please utilize this opportunity to keep these hazards out of our waterways and natural environment.

Central Texas Council of Governments

Outreach and Education Strategies

Targeted Programs

Management Measure: Achieve Implementation of WQMPs

- Promote the enrollment of agricultural producers in the WQMP Program through workshops and promotional material
- Lead organization:
  - TSSWCB
  - SWCDs
  - NRCS
- Target Audience
  - Farmers and Ranchers
  - Landowners
- Frequency:
  - Continuous

Management Measure: Achieve Implementation of WQMPs

- Encourage the beneficial use of soil test prior to adding soil amendments (organic and inorganic)
- Lead organization:
  - Texas AgriLife Extension Service
- Target Audience
  - Farmers and Ranchers
  - Landowners
- Frequency:
  - Annual

Management Measure: Achieve Implementation of WQMPs

- Host field days promoting and demonstrating BMPs for proper grazing management, nutrient management, etc
- Lead organization:
  - Lampasas River Watershed Partnership
  - Texas AgriLife Research
  - Texas AgriLife Extension Service
  - NRCS
- Target Audience
  - Farmers and Ranchers
  - Landowners
- Frequency:
  - Annual

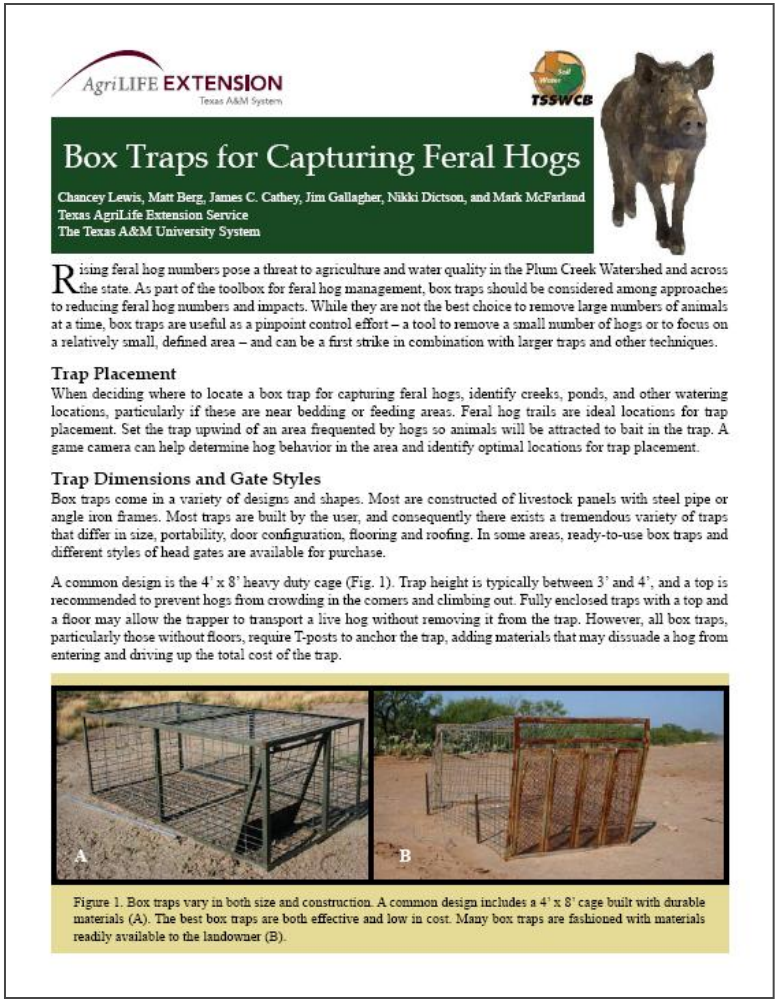
Management Measure: Achieve Implementation of WQMPs

- Lone Star Healthy Streams Program (LSHS)
  - Focuses on educating farmers, ranchers and landowners about mitigating bacteria runoff through management practices for **beef cattle**, dairy cattle, horses, poultry and **feral hogs**
- Lead Organization:
  - TWRI
  - Texas AgriLife Extension Service
  - TSSWCB
- Target Audience:
  - Farmers
  - Ranchers
  - Landowners
- Frequency :
  - Continuous

http://lshs.tamu.edu/

Management Measure: Feral Hog Management

- Develop and/or adapt existing materials about the management of feral hog populations to the Lampasas River Watershed
- Lead organization:
  - Texas AgriLife Research
  - Texas AgriLife Extension Service
- Target Audience
  - Farmers/ ranchers
  - Landowners



AgriLIFE EXTENSION
Texas A&M System

TSSWCB

Box Traps for Capturing Feral Hogs

Chancey Lewis, Matt Berg, James C. Cathey, Jim Gallagher, Nikki Dictson, and Mark McFarland
Texas AgriLife Extension Service
The Texas A&M University System

Rising feral hog numbers pose a threat to agriculture and water quality in the Plum Creek Watershed and across the state. As part of the toolbox for feral hog management, box traps should be considered among approaches to reducing feral hog numbers and impacts. While they are not the best choice to remove large numbers of animals at a time, box traps are useful as a pinpoint control effort – a tool to remove a small number of hogs or to focus on a relatively small, defined area – and can be a first strike in combination with larger traps and other techniques.

Trap Placement

When deciding where to locate a box trap for capturing feral hogs, identify creeks, ponds, and other watering locations, particularly if these are near bedding or feeding areas. Feral hog trails are ideal locations for trap placement. Set the trap upwind of an area frequented by hogs so animals will be attracted to bait in the trap. A game camera can help determine hog behavior in the area and identify optimal locations for trap placement.

Trap Dimensions and Gate Styles

Box traps come in a variety of designs and shapes. Most are constructed of livestock panels with steel pipe or angle iron frames. Most traps are built by the user, and consequently there exists a tremendous variety of traps that differ in size, portability, door configuration, flooring and roofing. In some areas, ready-to-use box traps and different styles of head gates are available for purchase.

A common design is the 4' x 8' heavy duty cage (Fig. 1). Trap height is typically between 3' and 4', and a top is recommended to prevent hogs from crowding in the corners and climbing out. Fully enclosed traps with a top and a floor may allow the trapper to transport a live hog without removing it from the trap. However, all box traps, particularly those without floors, require T-posts to anchor the trap, adding materials that may dissuade a hog from entering and driving up the total cost of the trap.

Figure 1. Box traps vary in both size and construction. A common design includes a 4' x 8' cage built with durable materials (A). The best box traps are both effective and low in cost. Many box traps are fashioned with materials readily available to the landowner (B).

AgriLIFE RESEARCH
Texas A&M System

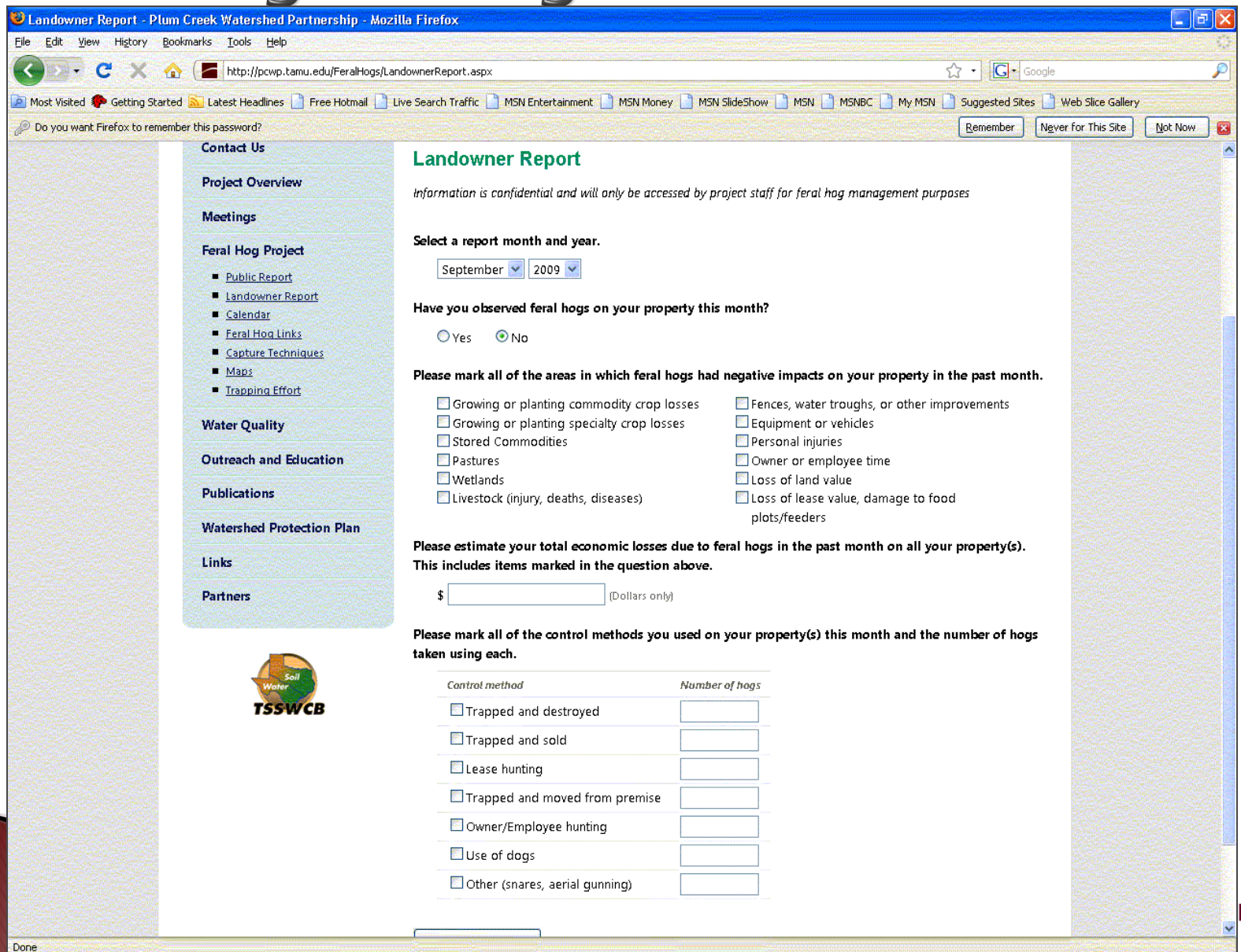
Management Measure: Feral Hog Management

- Feral Hog Management Workshops
  - Workshops will educate landowners about the negative impacts of feral hogs and the most effective methods for their control
- Lead organization:
  - Texas AgriLife Extension Service
- Target Audience
  - Farmers/ ranchers
  - Landowners
- Frequency:
  - Annual

Management Measure: Feral Hog Management

- Online Damage Tracking System
  - Adapt Plum Creek Feral Hog Damage Tracking program to the Lampasas River Watershed to better estimate the density and location of feral hogs within the watershed, as well as to help direct future implementation
- Lead organization:
  - Texas AgriLife Extension Service
- Target Audience
  - Farmers/ ranchers
  - Landowners
- Frequency/Target Area:
  - Watershed-wide

Management Measure: Feral Hog Management



Management Measure: Whitetail Deer Management

- Participation in TPWD Wildlife Programs
  - Campaign to promote landowner involvement in the preparation of Wildlife Management Plans, Wildlife Management Associations and acquire Managed Land Deer Permits if necessary
  - Support TPWD in the development and hosting of Landowner Field Days and workshops
- Lead organization:
  - TPWD
  - Texas AgriLife Research
  - Lampasas River Watershed Partnership
- Target Audience:
  - Landowners
  - Hunters

Management Measure: Whitetail Deer Management

- Promote and encourage landowner enrollment into Wildlife Habitat Incentive Program (WHIP) to establish and improve fish and wildlife habitat
- Lead organization:
  - NRCS
  - Texas AgriLife Research
  - Lampasas River Watershed Partnership
- Target Audience:
  - Landowners

Management Measure: General Recreational Outreach

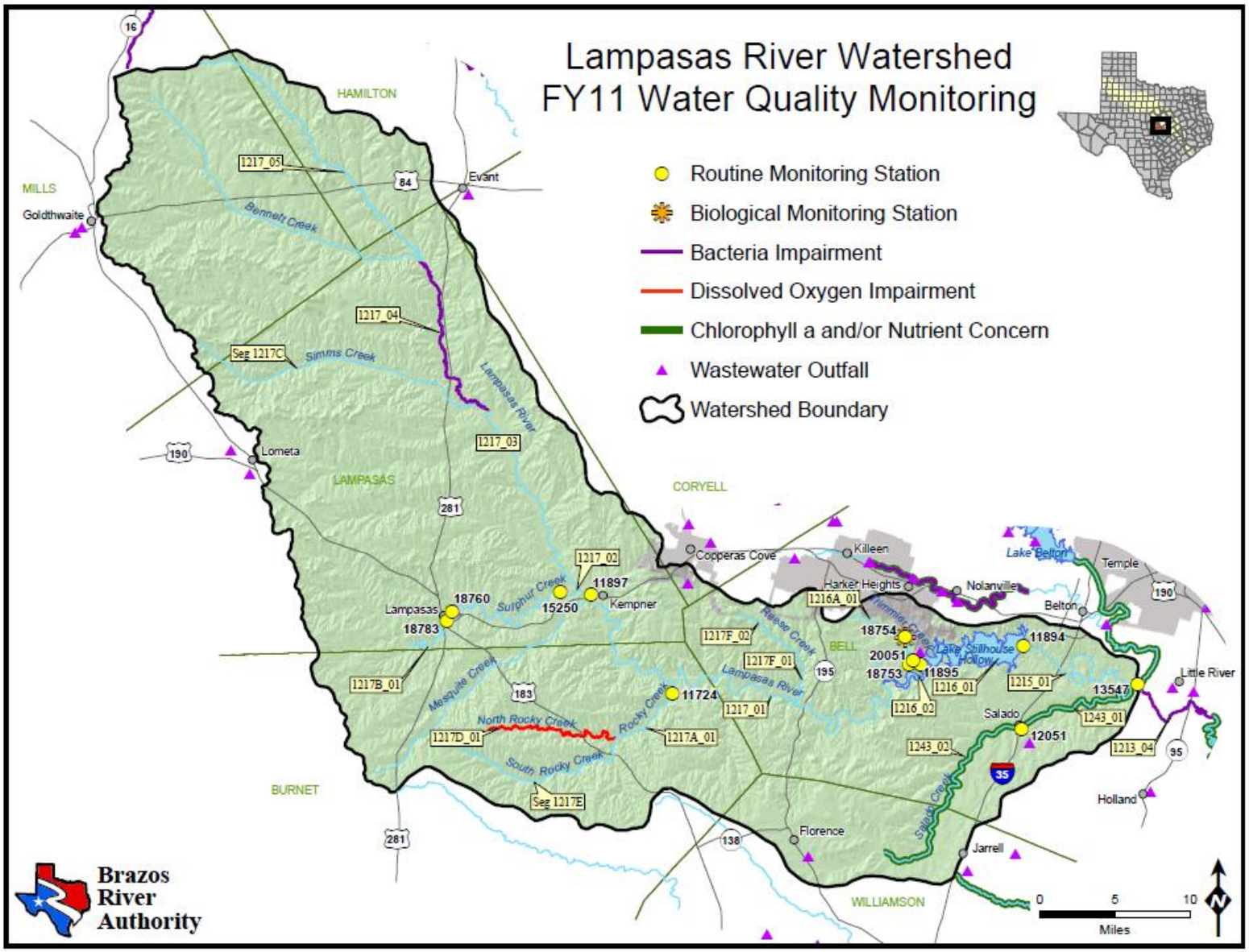
- Educate hunters and recreationalist about proper disposal of waste effluent
- Lead Organization:
  - Texas AgriLife Extension Service
  - TPWD
- Target Audience:
  - Landowners who lease hunting lands
  - Hunters
  - Recreationalist

Long Term Monitoring

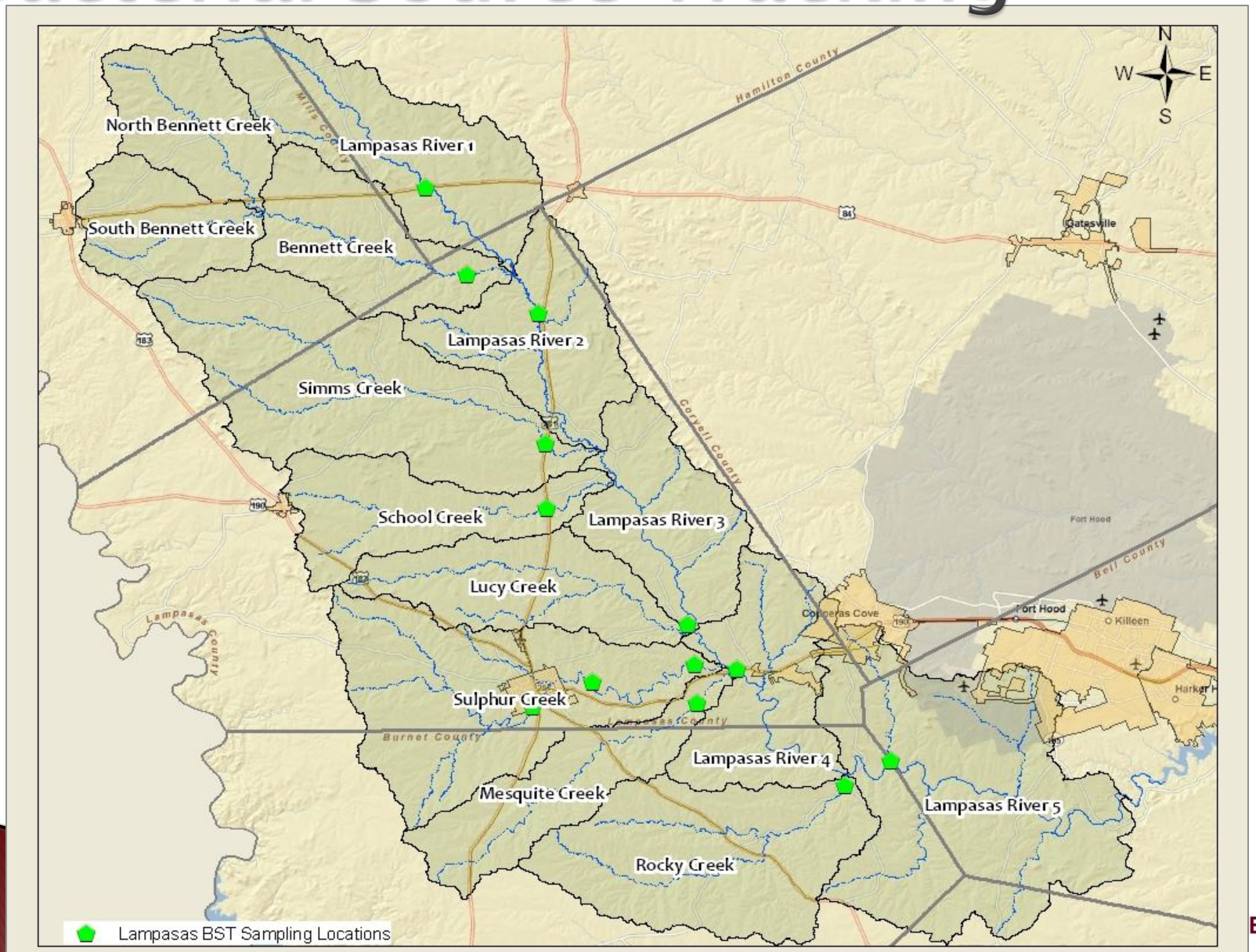
Texas Clean Rivers Program

- In 1991, The Texas Legislature passed the Texas Clean Rivers Act [Senate Bill 818]. The act established the ***Texas Clean Rivers Program*** (CRP)
- The principal aim of the CRP is to ensure safe, clean water supplies for the future of Texans' drinking water needs, industry, agriculture, healthy ecosystems, and recreation and for all other uses of this valuable state resource
- CRP is used to provide the baseline data needed by TCEQ for a variety of processes, including: monitoring, standards development, permitting, enforcement, public outreach, field investigations and research in water quality
- Funded by fees assessed on wastewater discharge permittees and water rights holders as well as through TCEQ's own state appropriations
- Brazos River Authority is the lead CRP partner for the Lampasas River Watershed

FY 11CRP Monitoring Locations



Bacterial Source Tracking



Water Quality Monitoring Locations within the Lampasas River Watershed

Current as of March 24, 2011

TCEQ ID	Location	County	Bacterial Source Tracking**		Clean Rivers Program		TCEQ Special Study****	TCEQ Field Office
			FY11	FY12	FY11	FY12***	FY11	
15762	Lampasas River at Hwy 84	Hamilton	R; M	R; M				
*99901	Bennett Creek at CR 2901	Lampasas	R; M	R; M				
15770	Lampasas River at CR 2925	Lampasas	R; M	R; M			R; M	
15763	Simms Creek at Hwy 281	Lampasas	R; M	R; M				
*99903	School Creek at Hwy 281	Lampasas	R; M	R; M				
18783	Sulphur Creek at Hwy 281	Lampasas			R; Q	R; Q		
18782	Sulphur Creek at Naruna Road	Lampasas	R; M	R; M				
18760	Sulphur Creek, upstream of WWTP outfall	Lampasas			R; Q	R; Q		
18781	Sulphur Creek at CR 3010	Lampasas	R; M	R; M				
*99902	Mesquite Creek at CR 4390	Lampasas	R; M	R; M				
15250	Sulphur Creek at CR 3050	Lampasas	R; M	R; M	R; Q	R; Q		
11897	Lampasas River at Hwy 190 ##	Lampasas	R; M	R; M	R; Q	R; Q		
16404	Lampasas River at FM 2313	Lampasas	R; M	R; M				
11724	Rocky Creek at FM 963	Burnett	R; M	R; M	R; Q	R; Q		R; 10/yr
*99904	Clear Creek at Oakalla Road	Bell	R; M	R; M				R; 10/yr
11896	Lampasas River at Hwy 195	Bell	R; M	R; M				
18759	Reese Creek at FM 2670	Bell	R; M	R; M				
18761	Lampasas River at FM 2484 (BR 986)	Bell		Bio				

Monitoring Type and Frequency

Routine Quarterly = R; Q

Routine Monthly = R; M

Yearly Bioassessment = Bio

Notes

Denotes USGS Gage Location

*TCEQ ID indicates tentative ID number

**Bacterial Source Tracking collection period runs 02/01/11 - 1/31/12

***FY12 CRP Scheduled monitoring is tentative

****TCEQ Special Study ends 08/31/11

Long Term Monitoring Needs

- Continued intensive monitoring on subwatershed level on a monthly basis?
  - Intensive monitoring is very short term and expensive
    - BST sampling ends 1/31/12
    - TCEQ Special Study sampling ends 8/31/11
- Rely upon CRP quarterly monitoring?
  - Recent CRP monitoring sites have been in the mid to lower portion of the watershed
- Mix between the two programs?
  - Quarterly monitoring at subwatershed level?
- Request additional biological assessments within watershed?

Next Steps

Riparian Proper Functioning Condition Workshop

- Hosted by NRCS, free of charge
  - Workshops detail the values and functions associated with riparian areas and streams
- Sign-in begins at 8:00 am
- Tuesday, April 26th
  - Classroom location: Lampasas County Farm Bureau Building
  - Field location:

    Mr. Ed Lilley's in Lampasas
- Wednesday, April 27th
  - Classroom and Field at Parrie Haynes Equestrian Center
- Please register by April 21st

  lprcin@brc.tamus.edu

  254.774.6008

Upcoming Meeting

- The next meeting date will be announced in the April Newsletter