

# Big Elm Creek July 2019 Stakeholder Meeting

*Ed Rhodes*

*Allen Berthold*

*Texas Water Resources Institute*



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## Introductions

- ◉ Name
- ◉ Entity/Group – (agency, landowner, citizen, business owner, etc.)

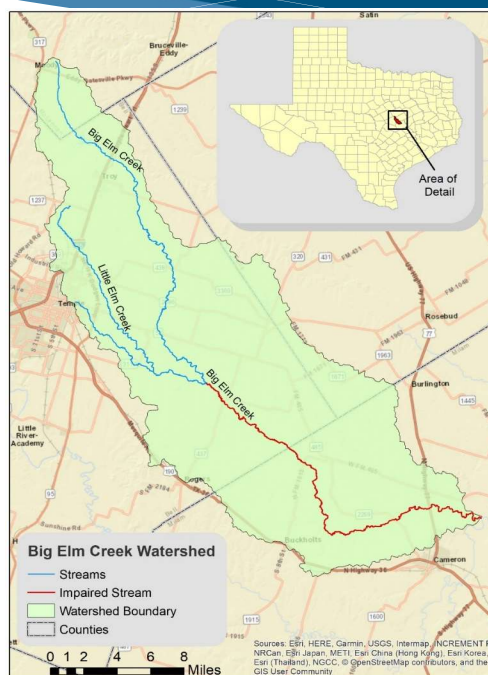


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## Agenda

- ◉ Previous Meeting Recap
  - Management Measures
- ◉ Chapter 6
  - Implementation Resources
- ◉ Chapter 7
  - Measures of Success
- ◉ Discussion



## Review: Possible Management Measures to Address Impairments

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## MM1: Feral Hogs

### 1. Management Measure:

- Voluntary hog removal (~2188 hogs above current levels)
- Hog bounties

### 2. Responsible Parties:

- Extension, TSSWCB, SWCDs, USDA-APHIS, landowners, lessees
- Counties, Extension, TDA (Bounties)

### 3. Feasibility:

- Needed financial resources (minimal at the individual property level)
- Technical resources (generally available from agencies)

## MM1: Feral Hogs

### 1. Management Measure:

- Fencing deer feeders

### 2. (Potential) Responsible Parties:

- Extension, TSSWCB, SWCDs, NRCS, landowners, lessees

### 3. Feasibility:

- Needed financial resources (~ \$200+ per feeder)
- Technical resources (Generally available)

## MM2: WQMPs/Agriculture

### 1. Management Measure:

- Develop and implement WQMPs & Conservation Plans (~30)

### 2. Responsible Parties:

- TSSWCB, SWCDs, NRCS, Landowners, Lessees

### 3. Feasibility:

- Needed Financial Resources (funding for technician, availability of cost-share programs to implement)
- Technical Resources (Local availability?)

## Source: On-Site Sewage Facilities

### 1. Management Measure

- Repair and replace failing OSSF systems (~30 Systems over 10 years?)

### 2. Responsible Parties:

- Extension, county staff/DR, homeowners, contractors

### 3. Feasibility:

- Needed financial resources (~\$8,000-\$10,000 per system)
  - USDA Individual Water & Wastewater Grants  
(<https://www.rd.usda.gov/programs-services/individual-water-wastewater-grants>)
- Technical resources (County staff time, Extension, USDA, service providers)

## MM3: On-Site Sewage Facilities

### 1. Management Measure

- Develop voluntary inspection program

### 2. Responsible Parties:

- Extension, county staff/DR, homeowners, cities/communities

### 3. Feasibility:

- Needed financial resources (relatively inexpensive)
- Technical resources (Extension, service providers)
- Might include incentives to promote proper maintenance

## MM4: Pets

### 1. Management Measure:

- Install and maintain pet waste stations in parks, subdivisions and/or rest stations (~25 stations)

### 2. (Potential) Responsible Parties:

- Extension, local communities/HOAs

### 3. Feasibility:

- Needed financial resources (~ \$500-700 per station)
- Technical resources
- Feasible locations?

## MM5: Urban Stormwater

### 1. Management Measure:

- Organize and educate about stormwater
- Stormwater BMPs

### 2. (Potential) Responsible Parties:

- Cities, property owners, contractors
- Extension- education

### 3. Feasibility:

- Technical/financial resources

## MM6: Wastewater

### 1. Management Measure:

- Inspect and maintain WWTF
- Educational Resources

### 2. (Potential) Responsible Parties:

- WWTF Entities/Cities

### 3. Feasibility:

- Needed financial resources (3,000-10,000 per site)
- Technical resources

## MM7: Illicit Dumping

### 1. Management Measure:

- Reduce illicit dumping in the watershed
- Provide educational events/outreach

### 2. (Potential) Responsible Parties:

- Local communities, City/County

### 3. Feasibility:

- Technical resources
- Local government enforcement

## MM8: Urban/Agriculture Soil Testing

### 1. Management Measure:

- Soil testing campaigns to ensure proper fertilization of landscape and reduce nutrient runoff

### 2. (Potential) Responsible Parties:

- Extension, TSSWCB, SWCDs, NRCS, landowners, lessees

### 3. Feasibility:

- Needed financial resources (uncertain who would fund this)
- Technical resources (local availability?)

## MM9: Additional Monitoring

### 1. Management Measure:

- Collect additional water quality data on Big Elm Creek

### 2. (Potential) Responsible Parties:

- TWRI, Brazos River Authority, TCEQ

### 3. Feasibility:

- Needed financial resources
- Technical resources
- Feasible locations?

## MM10: New landowner education

### 1. Management Measure:

- Provide educational workshops/materials for new or absentee landowners

### 2. (Potential) Responsible Parties:

- AgriLife Extension, TWRI, Counties

### 3. Feasibility:

- Needed financial resources
- Technical expertise

## Total Loading Reduction Estimates

Management Measure	Expected <i>E. coli</i> Load Reduction
Agricultural Management Measures	
Water Quality Management Plans (TSSWCB/Local SWCDs)	3.71E+14 cfu/year
Conservation Plans (NRCS)	
Livestock Management Education and Outreach	
Feral Hog Management	
Feral Hog Removal	1.38E+14 cfu/year
Supplemental Feeding Enclosures	
Feral Hog Education and Outreach Programming	
OSSF Management	
OSSF Repair and Replacement	2.42E+14 cfu/year
OSSF Owner Education and Outreach	
OSSF Installer and Service Provider Education and Outreach	
Dog Management	
Dispose of Dog Waste into trash receptacles	9.45E+15 cfu/year
Total Reduction	1.020x 10 <sup>16</sup> cfu/year

Total Est Required  
 $9.34 \times 10^{14}$  cfu/year

## Technical and Financial Resources

### Chapter 6

## Financial Resources

- ⊙ Promote and implement Water Quality Management Plans or conservation plans
- ⊙ Clean Water Act § 319(h) Nonpoint Source Grant Program,
  - ⊙ NRCS Conservation Stewardship Program (CSP)
  - ⊙ NRCS Environmental Quality Incentives Program (EQIP)
  - ⊙ NRCS Regional Conservation Partnership Program (RCPP)
  - ⊙ TSSWCB WQMP Program

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## Financial Resources

- ⊙ Increase soil testing on agricultural lands
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## Educational Timeline

Education and Outreach Activity	Responsible Party	Number Implemented			Cost
		Time Frame (year)			
		1-3	4-6	7-10	
General Resource Management Programming and Resources					
Texas Watershed Steward Trainings	Texas A&M AgriLife Extension	---	1	1	N/A*
Texas Well Owner Network Training		1	1	---	N/A*
Texas Riparian Ecosystem Trainings		1	1	---	N/A*
Watershed Newsletter	Watershed Coordinator	3	3	4	\$5000
Cattle and Other Livestock					
Lone Star Healthy Streams Training	Texas A&M AgriLife Extension	1	1	1	N/A*
Forage Management Seminars (Nutrients,		3	3	4	

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# Measures of Success

## Chapter 7

Texas Water  
Resources Institute  
*make every drop count*

TEXAS A&M  
**AGRI**LIFE  
RESEARCH/EXTENSION

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## Water Quality Target

Segment	Station	Samples	Geomean MPN/100	Goal
1213A	13535	22	179.93	126
	14016	26	244.31	126
	<u>16385</u>	<u>27</u>	<u>144.09</u>	<u>126</u>

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## Data Review

- ⦿ Rolling 7-year geometric mean
- ⦿ 2-year lag between assessment and final TCEQ report

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## Adaptive Management

- ⦿ Natural systems are dynamic, change is inevitable and solutions have to be adaptable.
- ⦿ Strategies may be re-assessed over time to respond to changing conditions

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## Sept 10, 2019 Meeting

- Overview of entire draft plan
- Final Review for Submission
- Submit final stakeholder comments by Sept 30
- Submission to TCEQ by Oct 15
- Next Steps
  - Email/Website updates

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## Contact Us

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