Spring Creek Watershed Partnership Meeting

Virtual Meeting
April 8, 2021

EPA United States Environmental Protection Agency

Texas Commission on Environmental Quality

H-GAC Houston-Galveston Area Council

Spring Creek Watershed Partnership

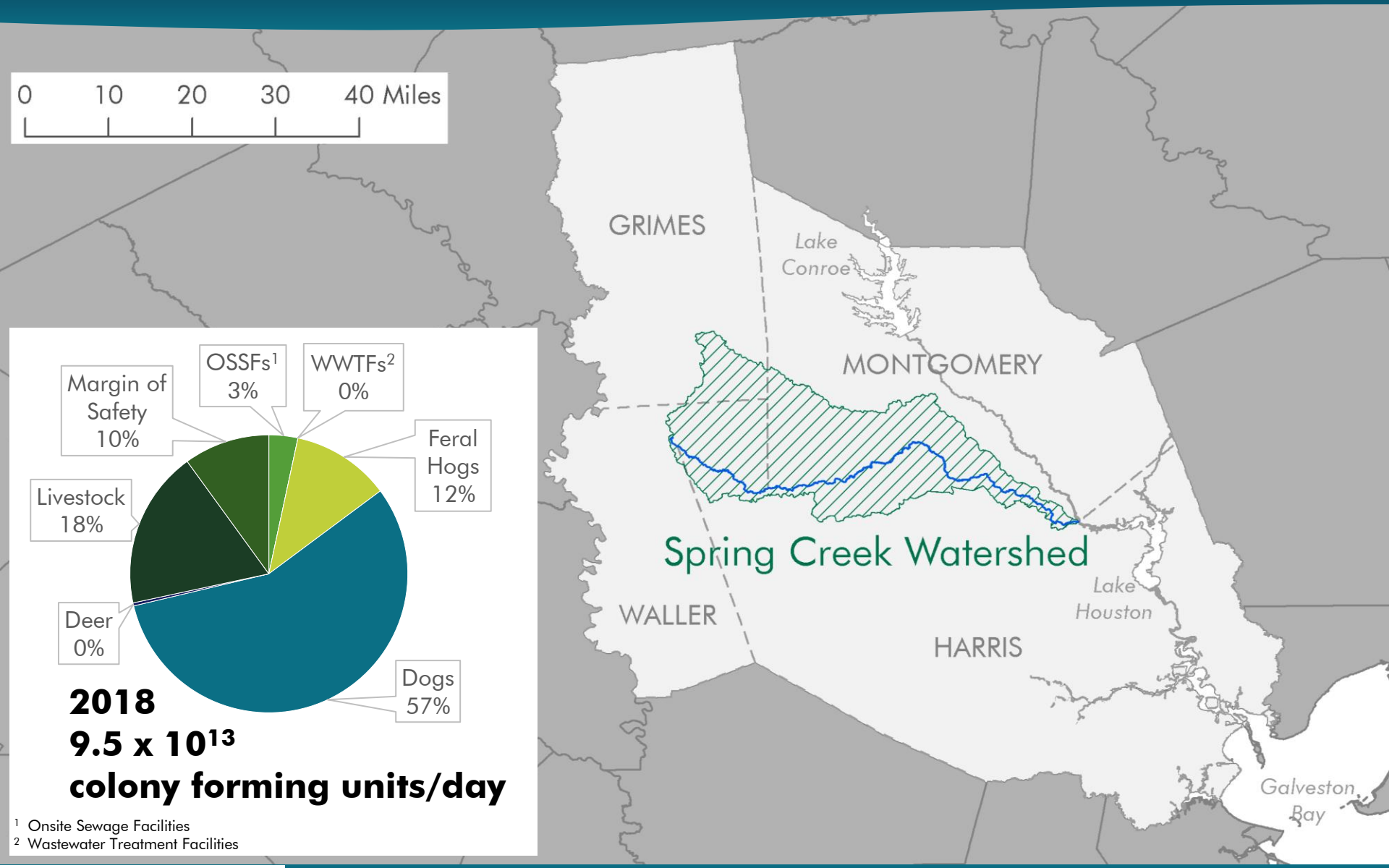
Meeting Outline

- Welcome and Overview
- Timeline and Reduction Targets
- Discussion of Strategies
- Next Steps
- General Discussion

Steering Committee

Name	Organization	Representing
Becky Martinez	Bayou Land Conservancy	Community Organizations
Bobby Martin, Monte Parks	Harris County Precinct 4	Counties
Diana Foss	Texas Parks and Wildlife Department	Environmental
Mac Martin	Texas A&M Forest Service	Other Interests
Paul Nelson	Woodlands GREEN	Residents
Teri MacArthur	The Woodlands Township	Cities/Townships
	For Your Consideration	
Brian Koch	*Texas State Soil and Water Conservation Board*	*Agriculture*
Tom Douglas	*Bayou Preservation Association*	*Community Organizations*

Project Overview



2018
9.5×10^{13}
colony forming units/day

[1] Onsite Sewage Facilities
[2] Wastewater Treatment Facilities

Timeline and Reduction Targets

Tiered Approach

Ongoing

Early	Middle	Late
• Building interest • Initiation • Coordination with existing efforts • Implementation of new practices	• Progress evaluation • Adapt plan if necessary • Continued coordination with existing efforts • Continued implementation	• Progress evaluation • Adapt plan if necessary • Continued coordination with existing efforts • Continued implementation

Implementation Goal

Model Accuracy

	2025	2030	2035	2040	2045
Headwaters Reduction*	2.7×10^{13}	3.4×10^{13}	4.3×10^{13}	5.1×10^{13}	6.0×10^{13}
Downstream Reduction*	5.9×10^{13}	6.9×10^{13}	7.9×10^{13}	8.3×10^{13}	8.7×10^{13}

Time Allowance for Implementation

* colony forming units/day

Poll Question

Momentum and Action

	2030		2035
Headwaters Reduction*	3.4×10^{13}	.....	4.3×10^{13}
Downstream Reduction*	6.9×10^{13}		7.9×10^{13}

Time Allowance for Implementation

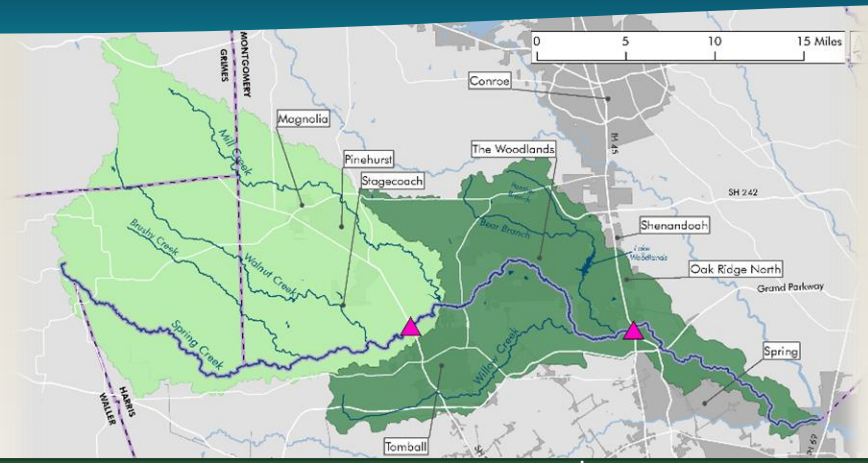
* colony forming units/day

Representative Units

Source	Representative Unit	Daily Load of Representative Unit (colony forming units/day)
WWTFs[1]	1 million gallons of effluent	4.8×10^9
OSSFs[2]	1 failing OSSF[2]	3.7×10^9
Dogs	(waste of) 1 dog	2.5×10^9
Cattle	(waste of) 1 cow	2.7×10^9
Horses	(waste of) 1 horse	2.1×10^8
Sheep/Goats	(waste of) 1 sheep/goat	9.0×10^9
Feral Hogs	1 feral hog	4.5×10^9

[1] Wastewater Treatment Facilities
[2] Onsite Sewage Facilities

Reduction Targets



Source	Headwaters			Downstream		
	Total Load (%)	Implementation Effort (%)	Units	Total Load (%)	Implementation Effort (%)	Units
WWTFs[1]	0%	0%	1	0%	0%	21
OSSFs[2]	3%	3%	302	4%	40%	7,352
Dogs	26%	41%	5,685	76%	50%	13,724
Cattle	27%	13%	1,700	3%	3%	841
Horses	0%	0%	157	0%	0%	78
Sheep/Goats	12%	6%	233	2%	2%	115
Deer	1%	0%	--	0%	0%	--
Feral Hogs	21%	37%	2,761	5%	5%	811
Safety Margin	10%	0%	--	10%	0%	--
Total	**100%**	**100%**		**100%**	**100%**	

[1] Wastewater Treatment Facilities
[2] Onsite Sewage Facilities

Discussion of Strategies

WPP[1] Development

- Where coordination is possible, the WPP[1] will describe solutions that **enhance, support** and **fill gaps** in existing efforts

- Descriptions of new proposals included in the WPP[1] will identify:
  - Responsible parties
  - Resource needs
  - Timelines
  - Measures of success

[1] Watershed Protection Plan

Wastewater Treatment Facilities

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Assist in identifying resources to improve operations	Partnership	Downstream	List funding sources, feedback from partnership	Early, ongoing
Consider regionalization	Utilities, Cities, (Outreach help from NGOs), include new facilities as they come online	Downstream	Coordination, messaging including facility tours/outreach/PSA videos	Ongoing
Recommend increased testing	Utilities, Partnership	Downstream, nutrients in Willow Creek	Identify funding for staff/supplies, Stream Team volunteers	Early, Ongoing

[1] Non-governmental Organizations

Sanitary Sewer Overflow

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Join the SSO[1] Initiative	Utilities	Downstream	Outreach to facilities	Ongoing
Evaluate lift station generator backup capacity	Utilities	Downstream	Identify funding for staffing/remediation	Early, Ongoing
Identify areas affected by floods	Utilities	Downstream	Currently maintained in SSO reports	Ongoing

[1] Sanitary Sewer Overflow

Onsite Sewage Facilities

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Provide financial support for remediating low income OSSFs[1]	H-GAC[2]	Whole Watershed, special consideration for Tomball area	Staff time to manage remediation	Ongoing
Improve spatial data, help identify priority areas	H-GAC[2]	Whole Watershed	Currently maintained under CWA 604(b) contract, staff time	Ongoing
Convert to sanitary service where appropriate	Utilities, Residents	Whole Watershed, special consideration for Tomball area	Promote conversions (outreach), contract skilled professionals, permits for conversion	Ongoing
Hold residential OSSF[1] workshops	H-GAC[2]	Whole Watershed	Staff time	Ongoing

[1] Onsite Sewage Facilities [2] Houston-Galveston Area Council

Pet Waste

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Install pet waste stations in high traffic public areas	Local Government, Homeowners Associations, Apartment Complexes	Downstream, New Development	Identify funding, HOA sponsors	Early, ongoing
Increase dog parks/capacity	Local Government	Downstream, New Development	May need staff to clean park, outreach in parks, special attention for water features	Ongoing
Sponsor spay/neuter events	Local Government, Homeowners Associations, Local Businesses, Residents	Downstream	Work with vet clinics to distribute info	Ongoing
Consider increased enforcement	Homeowners Associations, Apartment Complexes	Downstream, New Development	Seek political buy-in	Ongoing

Stormwater

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Install drain markers	Local Government, Homeowners Associations	Downstream	Community organization volunteer training, staff time, funding	Early, Ongoing
Identify illicit connections in waterways and channels	Local Government	Downstream	Identify funding for staff time	Early, Ongoing
Promote low impact development; promote water quality features in detention	Local Government, Developers	Downstream, New Development	Promote LID (outreach), distribute H-GAC materials	Ongoing

[1] Non-governmental Organizations

Agriculture

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Promote and engage in existing agricultural programs	Agencies, Landowners, SWCDs, Extension Agents	Headwaters	Outreach/education	Ongoing
TSSWCB[1] WQMPs[2], USDA-NRCS[3] Conservation Plans/Farm Bill programs	Landowners	Headwaters	Continued outreach/education, grazing BMPs	Ongoing
Develop manure composting program	Local Government, Stabling Facilities, Commercial Facilities	Headwaters	Raising awareness, coordination, identify contractor?	Ongoing

[1] Texas State Soil and Water Conservation Board [2] Water Quality Management Plans [3] United States Department of Agriculture-Natural Resources Conservation Service

Deer and Other Wildlife Sources

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Restore habitat away from riparian areas	Landowners, NGOs[1], Local Government	Headwaters	Landowner contributions, staff time for management	Early, Ongoing
Manage feeding	Residents, Local Government, Homeowners Associations	Whole Watershed	Exclusionary devices around deer feeders, work with HOAs to explore possibility of feeding ordinances (deer and waterfowl)	Ongoing
Address deer and other wildlife impacts indirectly by compensating with additional response to other sources (*e.g.*, OSSFs[2])	See other strategies	See other strategies	See other strategies	See other strategies

[1] Non-governmental Organizations [2] Onsite Sewage Facilities

Feral Hogs

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
AgriLife education, technical services	AgriLife	Whole Watershed	Outreach, coordination with AgriLife	Ongoing
Promote and engage in existing agency programs	Residents, Agencies	Whole Watershed	Outreach, coordination with partners	Ongoing
Increase trapping and hunting of hogs	Landowners, Local Government, NGOs[1], Development, Homeowners Associations (trapping)	Whole Watershed	Identifying funding	Ongoing
Manage feeding	Residents, Local Government, Homeowners Associations	Whole Watershed	Exclusionary devices around deer feeders, work with HOAs to explore possibility of feeding ordinances, education materials (flyer, brochure, web materials)	Ongoing

[1] Non-governmental Organizations

Conservation and Restoration

Strategy	Responsible Parties and Contacts	Focus Area	Needs	Timeline
Promote and engage in existing conservation programs	Agencies, Landowners, NGOs[1]	Whole Watershed	Outreach, coordination with partners	Early, Ongoing
Conserve, restore and maintain riparian buffers	Landowners, Local Government, NGOs[1]	Whole Watershed, Riparian Areas	Landowner contributions, staff time for management	Early, Ongoing
Increase tree canopy	Agencies, Landowners, NGOs[1]	Downstream	iTree Hydro modeling, staff time for management, identify funding	Early, Ongoing

[1] Non-governmental Organizations

Education and Outreach

Topic	Partners/Programs/Events
Pet Waste	H-GAC Pitch the Poop; Kennel Club; Canine Good Citizen; Woodlands Township Envi. Services; Woodlands GREEN; Scouts/Youth Programs; Woodlands Water Agency (MUDs)
Onsite Sewage Facilities	H-GAC Homeowner Education Workshops; Promote SEP
Sanitary Sewer Overflows	Distribute materials promoting floodwater contact awareness and public reporting through Community Organizations/Utilities
Conservation & Restoration	Bayou Land Conservancy Ambassador Program; Native Plant Society; Texas Master Naturalists; Woodlands Township Envi. Services; Woodlands GREEN
Trash Reduction	Trash Bash; Trash Free Texas Adopt-A-Spot

Topic	Partners/Programs/Events
Lawn Maintenance/ Yards	Healthy Lawns, Healthy Watersheds; Native Plant Society; Woodlands Water Agency (MUDs); Woodlands Township Envi. Services (overwatering); Woodlands GREEN; Scouts/Youth Programs; Extension
Agriculture	SWCD Leadership Development Workshops; County Extension/Extension Programs, TSSWCB, NRCS
Stormwater	Drain Markers; TCEQ Water Quality/Stormwater Seminars
Fats, Oils and Grease	City of Houston Protect Our Pipes; Woodlands Township Envi. Services; Woodlands GREEN; Woodlands Water Agency (MUDs); Woodlands Township Envi. Services; Woodlands GREEN; Scouts/Youth Programs; GBF (partner?); H-GAC; SJRA

Supportive Research

Source Identification

- DNA-Based Source Tracking
  - Instream genetic identification of species-specific *E. coli* strains
  - Or, narrow focus on human DNA
- Useful for detecting illicit discharge, characterizing localized spikes

Hydrologic Impacts on Water Quality

- Coordinate with flood management efforts and projects modeling environmental effects and costs of management decisions

Continue Partnership

Continue Partnership

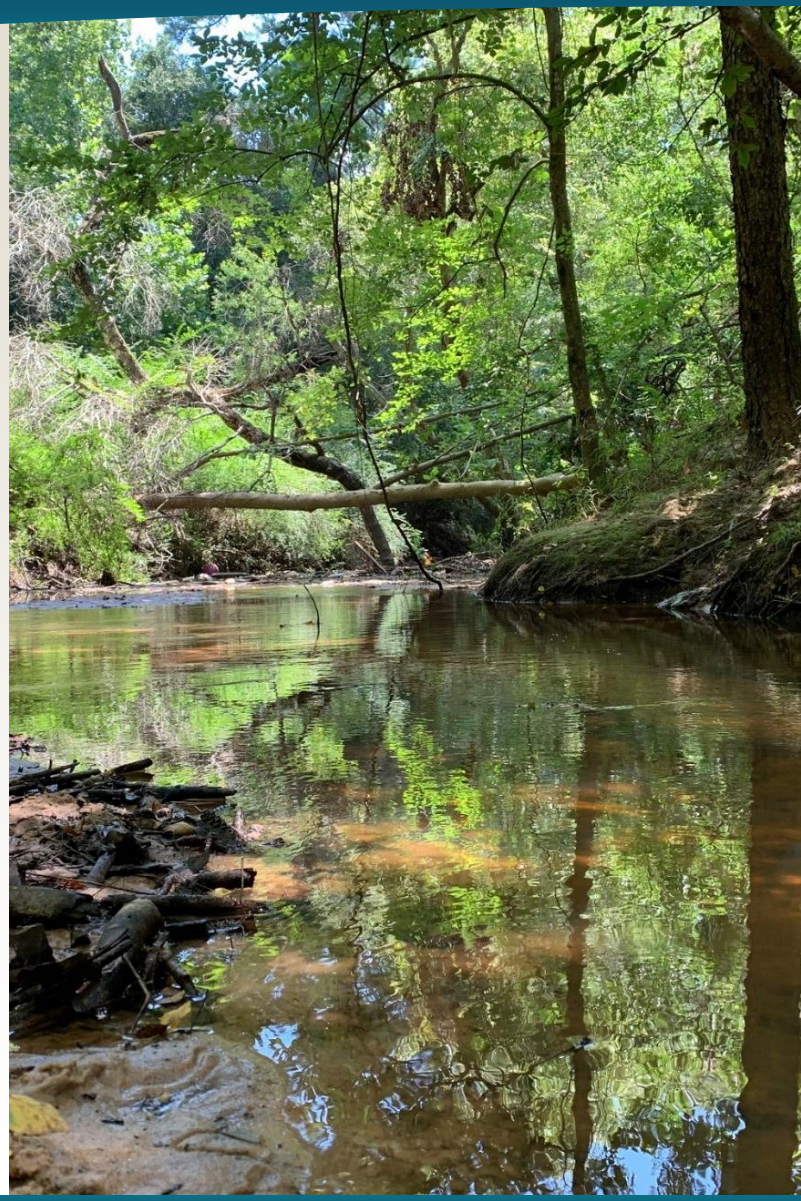
- Keep partnership active throughout implementation of WPP[1]
- Consider seeking watershed coordinator
  - Clean Water Act 319(h) grant proposal
  - Long-term coordination between local governments, SWCDs[2] and other stakeholder groups
  - Guide implementation and outreach efforts

[1] Watershed Protection Plan
[2] Soil and Water Conservation Districts

Next Steps

Near Term Goals

- Begin drafting WPP
- Follow up with stakeholders for WPP draft input
- Coordinate with local efforts
- Next meeting in June 2021



Discussion, News & Questions

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This project is funded by a Clean Water Act 319(h) grant from the US Environmental Protection Agency, administered by the Texas Commission on Environmental Quality.