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Welcome to this public meeting of the

EAST FORK SAN JACINTO RIVER WATERSHED PARTNERSHIP



October 19, 2023



EAST FORK SAN JACINTO RIVER
WATERSHED PARTNERSHIP

MEETING OUTLINE



- Welcome and Introductions
- Background
- Document Overview
- Implementation Discussion
- Next Steps
- Discussion



INTRODUCTION



WHO WE ARE



Texas Commission on Environmental Quality (TCEQ)

lead state environmental management agency



Houston-Galveston Area Council (H-GAC)

regional council of governments



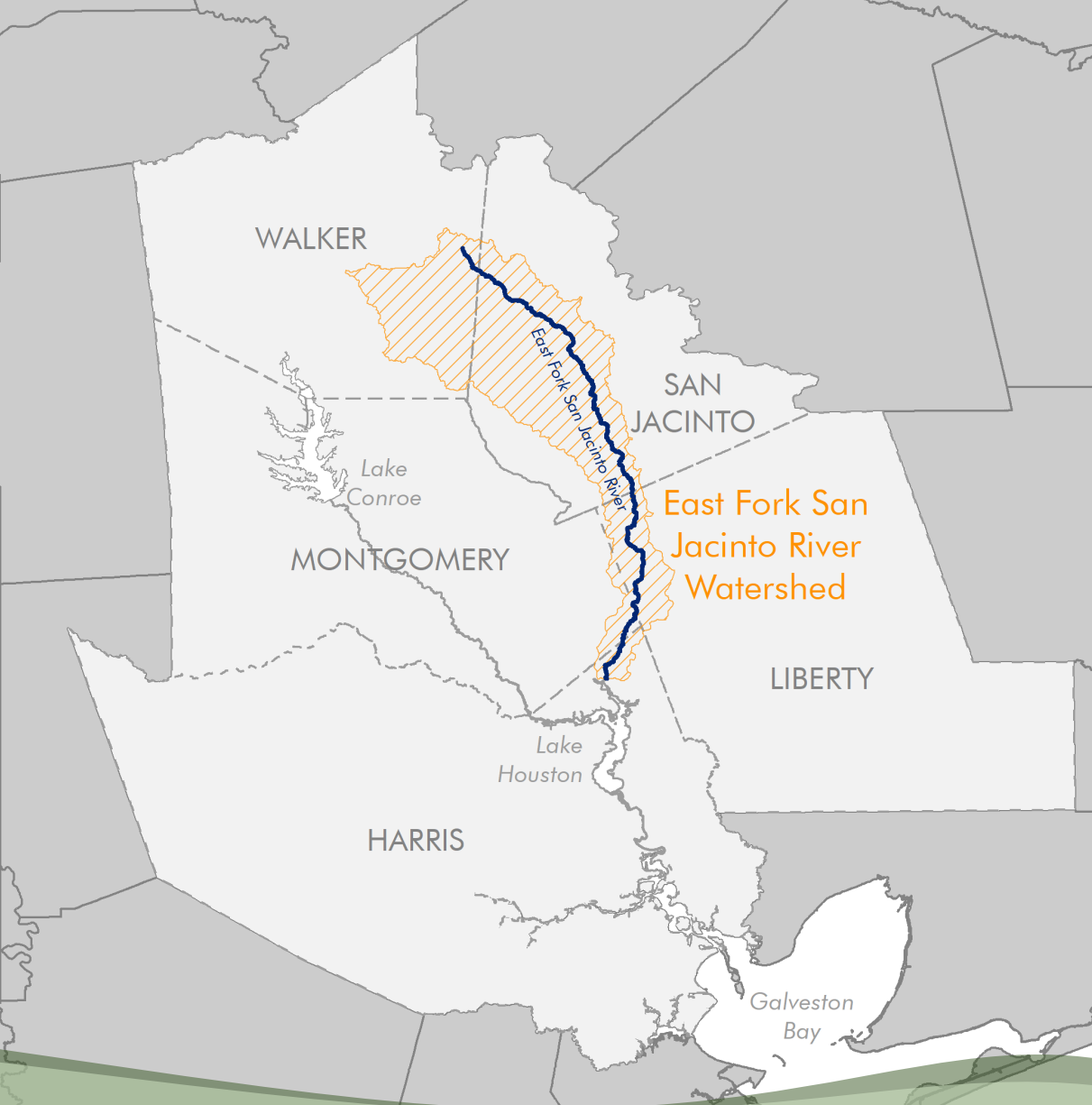
Watershed Partnership

local stakeholders working with TCEQ and H-GAC to develop and implement a watershed protection plan for the East Fork San Jacinto River watershed

BACKGROUND



PROJECT AREA



REDUCTION GOALS

Source	Unit Reduction Target by 2040		
	Tributaries	Upper East Fork	Lower East Fork
OSSFs ¹	21	41	348
WWTFs ²	<1	<1	<1
Dogs	115	278	2,097
Cattle	1,548	843	207
Horses	145	140	66
Sheep and Goats	177	97	24
Deer	443	407	158
Other Sources	NA	NA	NA
Feral Hogs	654	594	243

¹OSSFs – On-Site Sewage Facilities

²WWTFs – Wastewater Treatment Facilities



DOCUMENT OVERVIEW



WATERSHED PROTECTION PLAN CONTENTS

Section 1. Project Background

Section 2. Watershed Characterization

Section 3. Identifying Pollutant Sources

Section 4. Improving Water Quality

Section 5. Recommended Solutions

Section 6. Education and Outreach

Section 7. Implementation

Section 8. Evaluating Success

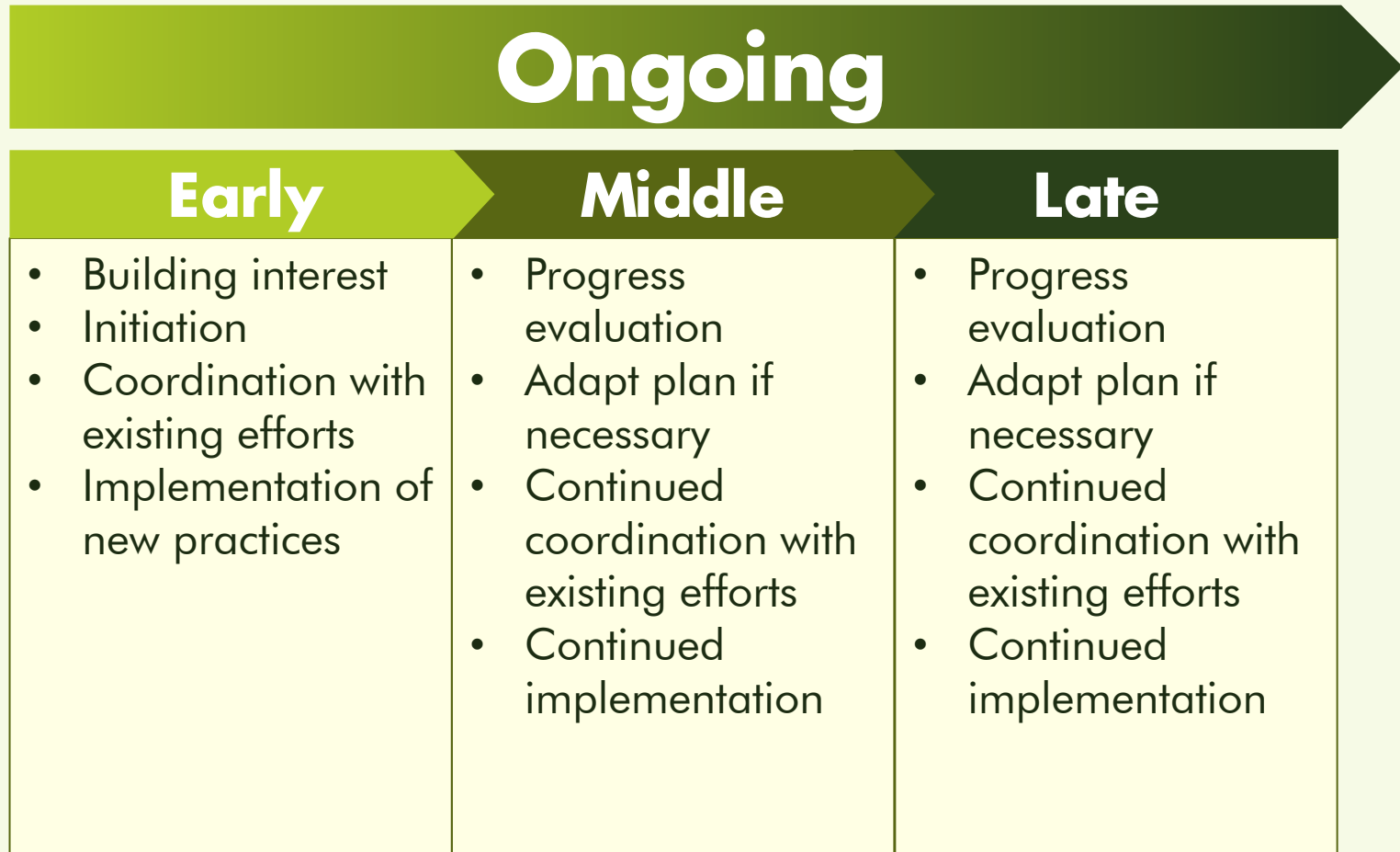
Focus of
today's
meeting



IMPLEMENTATION DISCUSSION



TIERED APPROACH



RECOMMENDED SOLUTIONS



Actions

- Amplification of existing efforts
- Coordination with partners
- New implementation strategies

Logistics

- Responsible parties
- Focus areas
- Resources needed
- Specific timeline goals



EDUCATION AND OUTREACH

Partnership

- Maintain regular meetings
- Share information on WPP activities
- Maintain relationships with stakeholders

Branding

- Maintain presence at local events and meetings
- Maintain project website

Coordination

- Collaborate with partner efforts
- Identify funding sources
- Provide additional data resources



WASTEWATER AND SSOs

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Address Problem Plants and Consider Regionalization	Utilities, Cities, Municipal Utility District Operators	Improve treatment of sewage	Ongoing	At least 1 WWTF ¹ makes operational/ structural changes resulting in effluent improvement	At least 1 additional WWTF ¹ makes operational/ structural changes resulting in effluent improvement	At least 1 additional WWTF ¹ makes operational/ structural changes resulting in effluent improvement
Recommend Increased Testing	Utilities, Partnership	Enhance monitoring to better characterize effluent	Ongoing	Partnership worked with at least 1 plant to identify capacity for increased testing	Partnership worked with at least 1 additional plant to identify capacity for increased testing	Partnership worked with at least 1 additional plant to identify capacity for increased testing
Remediate Infrastructure	Utilities	Reduce contamination from human fecal waste by reducing overflows from WWTF collection systems	Ongoing	1 fewer SSO ² occurred than average since 2025	1 fewer SSO ² occurred than average since 2030	1 fewer SSO ² occurred than average since 2035
Promote FOG ³ Awareness	H-GAC, Partnership	Reduce SSOs ² by affecting utility customer behavior regarding FOG ³	Early, Ongoing	2024 – Model materials identified and added to website	Consistent promotion with partners throughout implementation period	
Work with Partners to Increase Public SSO ² Reporting	H-GAC, Partnership	Enhance reporting by increasing public visibility and community knowledge	Ongoing	Partnership has worked with local utilities to develop and disseminate materials to customers/ community members		

*Note: need translation services for all outreach materials for all sources

¹ Wastewater Treatment Facilities
² Sanitary Sewer Overflow
³ Fats, Oils, and Grease



ON-SITE SEWAGE FACILITIES

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Remediate Failing OSSFs or Convert to Sanitary Sewer	H-GAC, Utilities, Residents	Address failing OSSFs ¹ , raise awareness by posting signage at remediation sites, connect residents and AAs with Homeowner Wastewater Assistance program	Ongoing	First third of OSSFs ¹ addressed, or failures prevented	Second third of OSSFs ¹ addressed, or failures prevented	Final third of OSSFs ¹ addressed, or failures prevented
Improve Spatial Data – include San Jacinto County	H-GAC	Improve OSSF ¹ location spatial data to guide remediation efforts	Ongoing	Authorized Agents continue to provide new data regularly		
Hold Residential OSSF Workshop – investigate pump-out incentives for attendees	H-GAC, Extension	Empower homeowners and real estate inspectors to identify the signs of failing/failed OSSFs ¹ and promote proper OSSF ¹ management to avoid failures	Ongoing	5 workshops held	5 additional workshops held	5 additional workshops held
Participate in County-wide OSSF ¹ Workshop for Practitioners	Partnership	Harris and Montgomery County's annual OSSF ¹ workshop provides a point of coordination with practitioners	Ongoing	Partnership participates in annual meetings		
Provide Model Educational Materials Online and distribute materials with QR codes in bill inserts & when permits are received	H-GAC, Extension, Utilities	Provide model educational materials online to facilitate education by other organizations	Early, Ongoing	Create any materials not already covered and host materials online		
Texas Well Owner Network Events	Partnership, TWON ² , Groundwater Conservation Districts	Educate well owners about potential risks from OSSFs ¹ and potential contamination of drinking water wells	Ongoing	First TWON ² event held	Second TWON ² event held	Third TWON ² event held

¹ On-site Sewage Facilities
² Texas Well Owners Network



STORMWATER

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Install Stormwater Inlet Markers	Local Governments, Municipal Utility Districts , HOAs ¹	Raise awareness and shift behavior of residents served by stormwater systems to reduce pollutants entering drains/waterways	Ongoing	At least 1 neighborhood has markers added	At least 1 additional neighborhood has markers added	At least 1 additional neighborhood has markers added
Investigate Drainage Channels	H-GAC, Non Profits , Local Governments	Locate potential sources of pollutants in drainage channels	Early, Ongoing	Priority areas identified; at least 1 field reconnaissance project completed	At least 1 additional field reconnaissance project completed	At least 1 additional field reconnaissance project completed
Low Impact Development	Local Governments, Developers	To reduce pollutants in stormwater flows through promoting and implementing infrastructure that mimics or improves on natural hydrology	Ongoing	2024 – LID ² materials developed and hosted on website	At least 1 LID ² demonstration project installed	
Expand Texas Stream Team Participation	Partnership, Meadows Center	<i>Supplement existing monitoring data with volunteer sites and empower volunteers to acts as water quality ambassadors</i>	Ongoing	<i>1 volunteer added</i>	<i>2 additional volunteers added</i>	<i>2 additional volunteers added</i>

¹ Homeowners Associations

² Low Impact Development



PET WASTE

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Install Pet Waste Stations	Local Government, HOAs ¹ , Apartment Complexes	Reduce waste by facilitating use of bags in public areas	Ongoing	At least 20 pet waste stations installed	At least 20 additional stations installed; all stations maintained throughout the implementation period	At least 20 additional stations installed; all stations maintained throughout the implementation period
Expand Dog Parks	Developers, Apartment Complexes, Local Government – interest could increase with installation	Increase availability of controlled dog recreation areas to sequester waste in public areas	Middle		1 new dog park area developed	
Promote Spay and Neuter Events	Local Government, HOAs ¹ , Local Businesses, Residents, SPCAs/Shelters	Reduce pollutants from feral populations through voluntary population control	Ongoing	1 spay/neuter event held	1 spay /neuter event held	1 spay /neuter event held
Consider Additional Enforcement	HOAs ¹ , Apartment Complexes	Reduce dog waste by promoting enforcement	Ongoing	Partnership will have worked with at least 1 local partner to promote enforcement	Partnership will have worked with at least 1 more local partner to promote enforcement	Partnership will have worked with at least 1 more local partner to promote enforcement
Handheld Pet Waste Bag Dispensers at Local Events	H-GAC, Partnership	Educate residents about impacts of dog waste and reduce waste in stormwater	Ongoing	Distribution of 500 dispensers at 10 local events	Distribution of 500 dispensers at 10 local events	Distribution of 500 dispensers at 10 local events
Elementary School Visits	H-GAC	Educate children on pet waste and other water quality issues	Ongoing	5 visits held	5 additional visits held	5 additional visits held
Promote Model Educational Materials Online and in Print	H-GAC, SPCAs, Feed Stores, Apartments, HOAs	Provide model materials to facilitate other organizations' education efforts	Early, Ongoing	Identify needs beyond existing materials; develop and host model materials		

¹ Homeowners Associations



AGRICULTURE AND LIVESTOCK

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
WQMPs ¹ and Conservation Plans	Landowners, Agencies	Address waste livestock units through WQMPs ¹ /Conservation Plans	Ongoing	First third of plans (or plans representing one third of the reduction load) addressed by the solution	Second third of plans (or plans representing one third of the reduction load) addressed by the solution	Last third of plans (or plans representing one third of the reduction load) addressed by the solution
Maintain or Restore Riparian Buffers (include littoral zone)	Landowners, NGOs ²	Install or maintain riparian buffers in agricultural areas to reduce transmission of pollutants; piggyback outreach with Stream Team (Meadows Center riparian assessment)	Ongoing	At least 1 rural property has a riparian project	At least 1 additional rural property has a riparian project	At least 1 additional rural property has a riparian project
<i>Develop and Implement Education Measures and Materials for Livestock Operations</i>	<i>Agencies, SWCDs, Extension Agents, Partnership</i>	<i>Develop specific recommendations for stabling and other livestock operations to reduce contributions from these sources</i>	<i>Early, Ongoing</i>	<i>Identify needs and potential local partners</i>	<i>Materials developed and reviewed locally; hosted and disseminated</i>	
<i>Hold Agricultural Resources Workshops</i>	<i>Agencies, SWCDs, Extension Agents, Partnership</i>	<i>Promote agricultural programs by facilitating one on one meetings with landowners</i>	<i>Ongoing</i>	<i>First workshop held</i>	<i>Second workshop held</i>	<i>Third workshop held</i>
<i>Support Local Agricultural Conservation</i>	<i>Landowners, Partnership</i>	<i>Increase conservation efforts by lending support and coordination to local partners pursuing opportunities</i>	<i>Ongoing</i>	<i>Collaborate with at least 1 local partner on a project proposal</i>	<i>Collaborate with at least 1 additional partner on a project proposal</i>	<i>Collaborate with at least 1 additional partner on a project proposal</i>

¹ Water Quality Management Plans
² Non-governmental Organizations

DEER AND OTHER WILDLIFE

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Restore Upland Habitat	Landowners, NGOs ¹ , Local Government	Restore upland habitat to provide wildlife alternative areas and reduce concentration in riparian zones	Middle		Develop at least 1 acre or greater restoration project	
Homeowner Education Materials and Mailing	Extension Agents, HOAs ² , Partnership	Work with AgriLife Extension, HOAs ² and Local Partners to distribute of exclusionary device materials for homeowners	Ongoing	Distribute materials locally and host materials online		

¹ Non-governmental Organizations

² Homeowners Association



FERAL HOGS

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Remove Feral Hogs	Landowners, Local Government, NGOs ¹ , Development, Forest Service	Implement trapping or other removal programs to remove feral hogs from the watershed to reduce pollutants and ancillary damages	Early, Ongoing	Develop or augment trapping program with local partners	Expand program to additional properties	
Lone Star Healthy Streams – Workshops and Feral Hog Resource Manual – Investigate smart trap demos	Extension Agents	Educate local stakeholders to promote feral hog reduction	Ongoing	First workshop has been held	Second workshop has been held	Third workshop has been held
Host resources on project website	Partnership	Educate local stakeholders to promote feral hog reduction	Ongoing	Distribute materials locally and host materials online		

¹ Non-governmental Organizations



CONSERVATION AND RESTORATION

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Riparian Buffers	Landowners, NGOs ¹	Promote riparian buffers in all land uses to reduce transmission of pollutants (in conjunction with Land Management – Voluntary Conservation)	Ongoing	At least 1 property has a riparian project	At least 1 additional property has a riparian project	At least 1 additional property has a riparian project
Voluntary Conservation	Landowners, NGOs ¹	Promote voluntary conservation to reduce pollutants from developed areas	Ongoing	At least one 1+ acre property has a conservation project	At least 1 additional property has a conservation project	At least 1 additional property has a conservation project
Promote Riparian Buffers (Tools and Workshops)	Agencies, Landowners, NGOs ¹	Reduce pollutant loads by promoting riparian buffer areas – <i>crossover with LID education</i>	Ongoing	First workshop has been held	Second workshop has been held	Third workshop has been held
<i>Host resources on project website</i>	<i>Partnership</i>	<i>Educate local stakeholders to promote feral hog reduction</i>	<i>Ongoing</i>	<i>Distribute materials locally and host materials online</i>		
Texas Watershed Stewards	Extension Agents	Educate stakeholders on water quality/watershed issues	Ongoing	First workshop has been held	Second workshop has been held	Third workshop has been held
Conservation Coordination	Agencies, Landowners, NGOs ¹	Promote and help coordinate conservation efforts in the watershed	Ongoing	Partnership has been active in all appropriate conservation initiatives in the watershed		

¹ Non-governmental Organizations



OTHER CONCERNS

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Solutions	Responsible Parties and Contacts	Overall Implementation Goal	Timeline	2030 Milestone	2035 Milestone	2040 Milestone
Report Chronic Dump Sites and Consider Increased Efficiency	Residents, Landowners, Local Governments	Promote enforcement efforts to reduce chronic dumping sites	Early, Ongoing	Identify dumping sites and enforcement priorities with local partners	Address at least 1 chronic site	Address at least 1 additional chronic site
<i>Trash Bash Site or Trash Free Texas Volunteer Program</i>	<i>H-GAC, Trash Free Texas</i>	<i>Reduce trash and educate participants on water quality issues</i>	<i>Ongoing</i>	<i>Establish at least 1 Trash Bash site</i>	<i>Host annual events</i>	
Coordinate with Ongoing Flood Mitigation Efforts	Partnership	Promote water quality features as supplementary elements in flood mitigation studies and projects	Ongoing	Identify flood mitigation priority projects for water quality enhancements; Partnership maintains a standing presence in flood mitigation projects through public processes, comments, etc.		



EDUCATION AND OUTREACH

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Topic	Partners/Programs/Events
Pet Waste	H-GAC Pitch the Poop; Scouts/Youth Programs
On-site Sewage Facilities	H-GAC Homeowner Education Workshops; AgriLife Research OSSF Group ; Promote SEP ¹
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; Texas Water Resources Institute (Urban Riparian), AgriLife-Texas Watershed Stewards
Trash Reduction	Trash Bash; Trash Free Texas Adopt-A-Spot

Topic	Partners/Programs/Events
Lawn Maintenance/ Yards	Healthy Lawns, Healthy Watersheds; Native Plant Society; Extension; Master Gardeners, Texas Water Resources Institute
Agriculture	SWCD ² Leadership Development Workshops; County Extension/Extension Programs, TSSWCB ³ , NRCS ⁴
Stormwater	Drain Markers; TCEQ Water Quality/Stormwater Seminars; Groundwater Conservation Districts
Fats, Oils and Grease	City of Houston Protect Our Pipes; H-GAC

¹ Supplemental Environmental Program
² Soil and Water Conservation Districts
³ Texas State Soil and Water Conservation Board
⁴ Natural Resources Conservation Service



OTHER CONCERNS

Source Identification

- DNA-Based Source Tracking
 - Instream genetic identification of species-specific *E. coli* strains
 - Or, narrow focus to host 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



OTHER CONCERNS



Continue Partnership

- Keep partnership active throughout implementation of WPP¹
- Consider seeking watershed coordinator
 - Clean Water Act 319(h) grant proposal
 - Long-term coordination between local governments, SWCDs² and other stakeholder groups
 - Guide implementation and outreach efforts

¹ Watershed Protection Plan

² Soil and Water Conservation Districts



NEXT STEPS



TIMELINE



SHORT TERM GOALS



- H-GAC will send draft WPP to stakeholders for review in November
- Stakeholders will have 30 days to provide comment
- Next public meeting will be in December to review edits before WPP is submitted to TCEQ
- One-on-one meetings with stakeholders



DISCUSSION & QUESTIONS

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