

The meeting will begin shortly



Please mute your microphone until called for questions.



Please disable your video unless you are speaking.



Please enter your name and title in the chat.



Please insert questions in chat or raise hand to speak.



This meeting is being recorded.

Welcome to the third public meeting of the

BRAYS & SIMS BAYOU

WATERSHED PARTNERSHIP

June 22, 2026



MEETING OUTLINE



- Welcome and Introductions
- Project Background
- Bacteria Source Model Discussion
- Implementation Strategies
- Next Steps
- Discussion

INTRODUCTION

WHO WE ARE



Texas Commission on Environmental Quality (TCEQ)

lead state environmental management agency



Houston-Galveston Area Council (H-GAC)

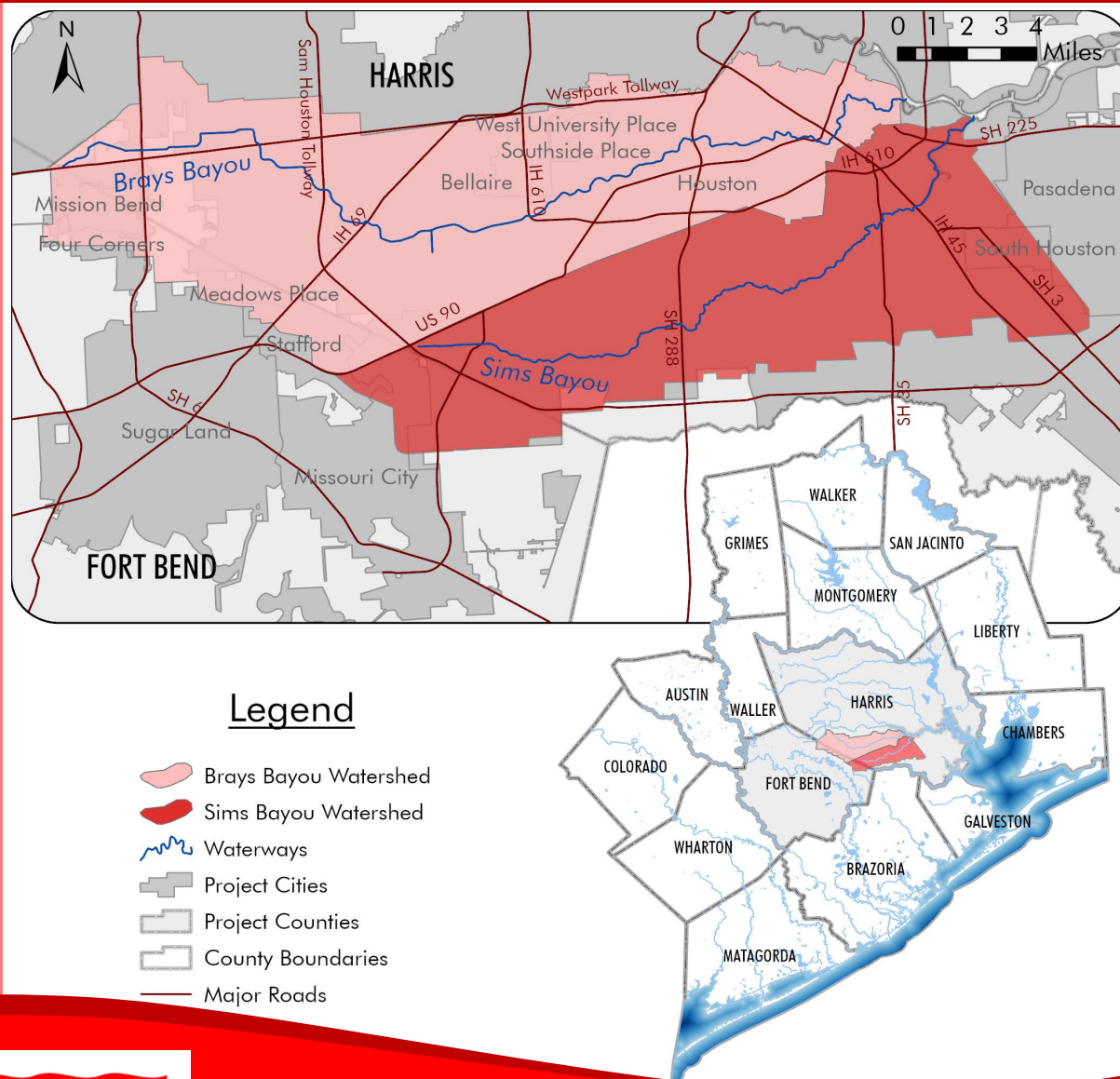
regional council of governments



Watershed Partnership

local stakeholders working to develop and implement a watershed protection plan for the Brays & Sims Bayou watershed

WHERE WE WORK



WHY WE'RE HERE

Surface water quality in Brays & Sims Bayou is impaired due to high levels of fecal indicator bacteria. There are also concerns for aquatic life and general use due to high nutrient levels and depressed oxygen.



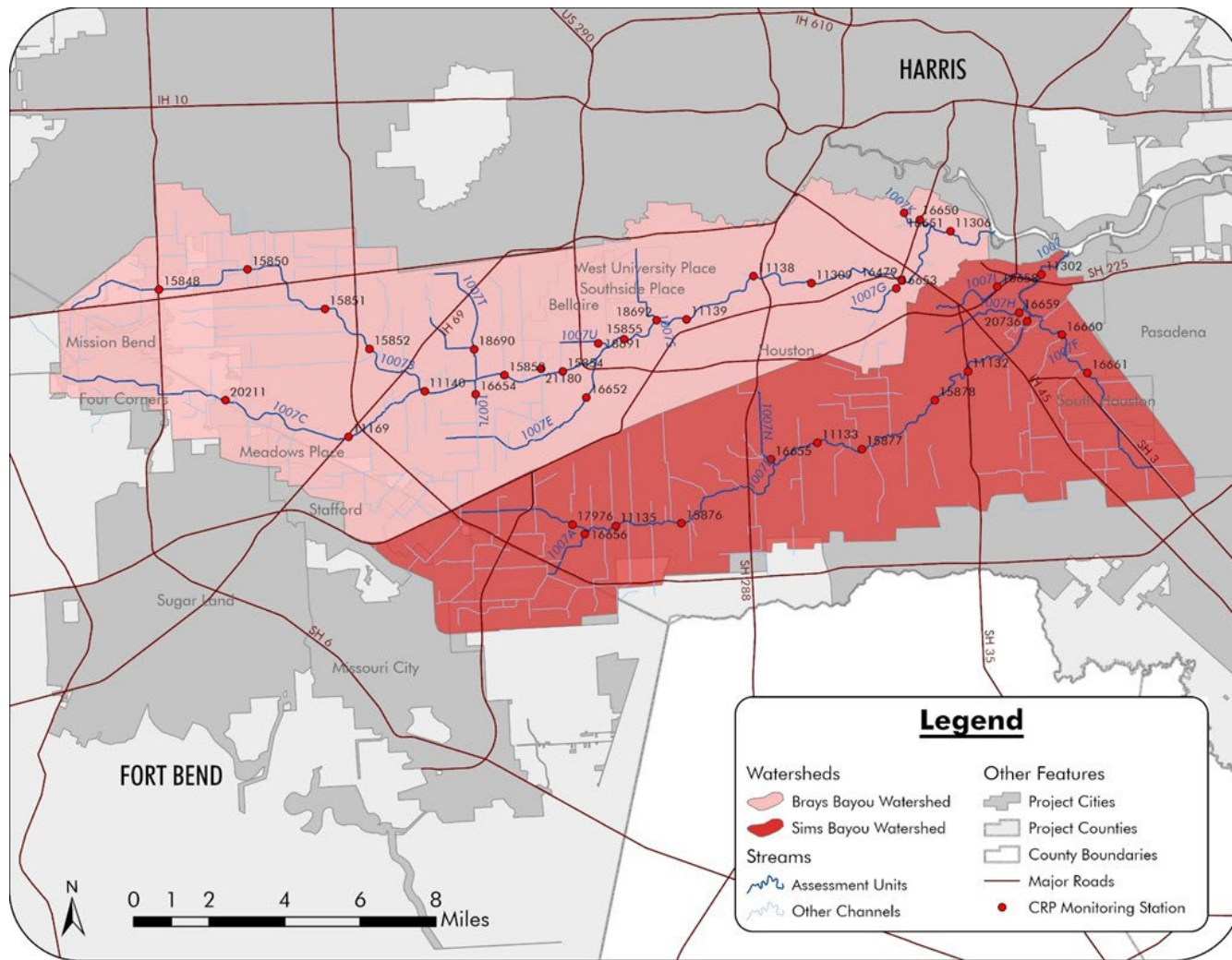
PROJECT BACKGROUND

ASSESSING WATER QUALITY

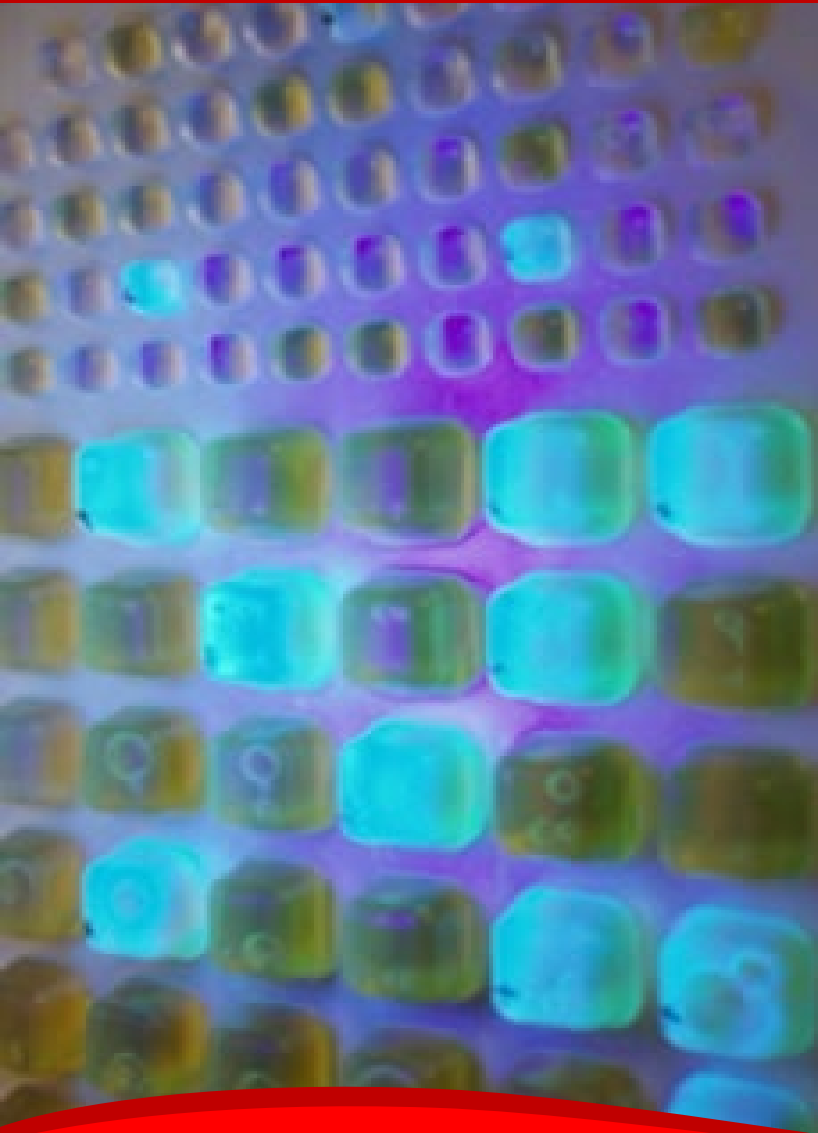


- Statewide monitoring
- TCEQ produces integrated report of results every two years
- Waterways exceeding standards are **impaired**

MONITORING



STATUS OF BRAYS & SIMS BAYOU

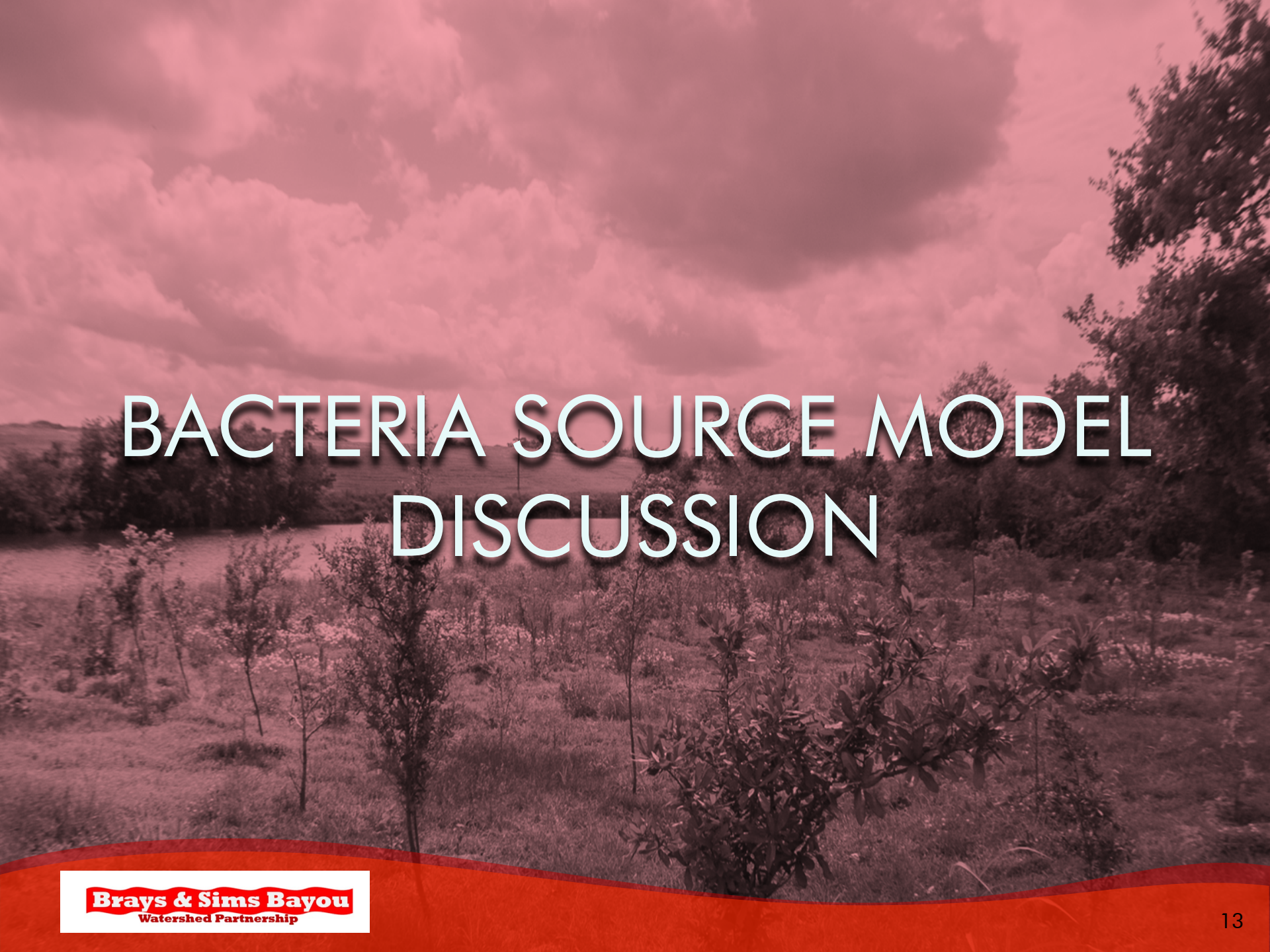


- **Impaired** for contact recreation
- High levels of bacteria *Escherichia coli* (*E. coli*) indicate pollution from fecal waste
- Concerns for aquatic life and general use indicated by depressed oxygen and high levels of nutrients

BACTERIA SOURCES



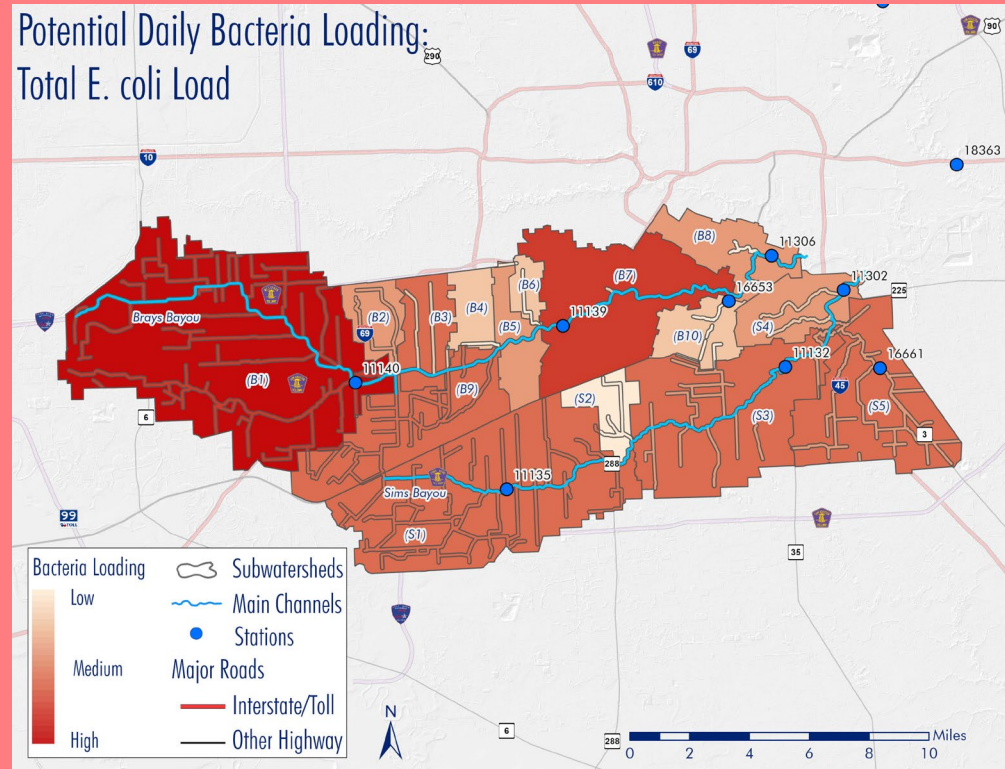
- **Human Waste**
 - Wastewater
 - Septic/Aerobic Systems
 - Illicit Sewage
- **Domestic Animal Waste**
 - Pets
 - Livestock
- **Wildlife and Invasive Species Waste**
 - Deer and Other Wildlife
 - Feral Hogs



BACTERIA SOURCE MODEL DISCUSSION

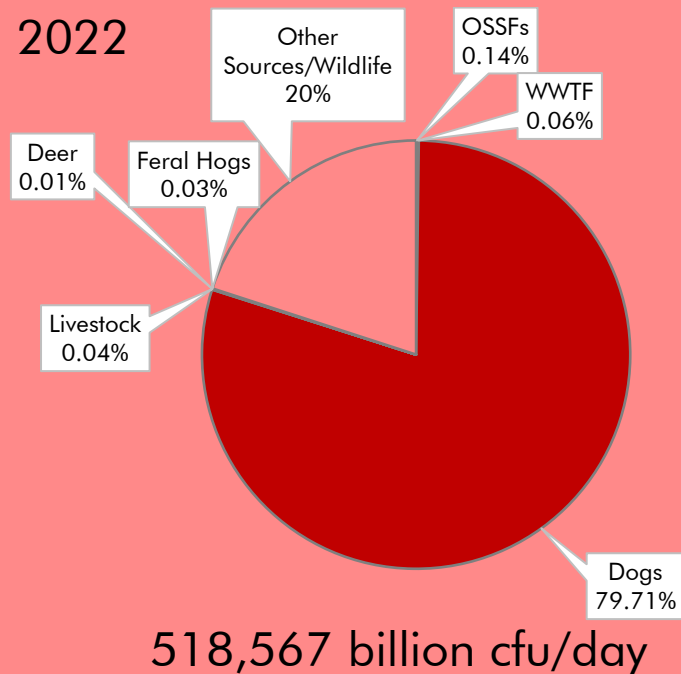
BACTERIA MODELING

- Provides defensible support for watershed protection plan development
- Visualizes pollutant dynamics throughout the watershed over time
- Balances complexity and efficiency



APRIL MEETING OVERVIEW

Sources 2022



- Source pressures vary spatially
 - Highest potential loading in the Headwaters of Brays Bayou Above Tidal subwatershed influenced by pressures related to development
- Source pressures will fluctuate over time due to changes in land use and land cover
- Total daily load will increase 26% by 2050 if no action is taken
- Stakeholder feedback will refine these results

¹OSSFs – On-Site Sewage Facilities

²WWTf – Wastewater Treatment Facilities

WASTEWATER TREATMENT FACILITIES

Methods:

- Based on outfall data (within buffer zone) from 42 facilities
- Load estimated by size (<0.1 to 10 MGD)

Findings:

- Highest relative loads occur in the Middle Brays Above Tidal and Middle Sims Above Tidal subwatersheds
- Expected to increase over time
- Significant human health risk but minor contribution to total load

Discussion:

- Only 5.3% reported exceedance of geomean or single sample over 5 years—adding a failure rate to the estimation would not significantly change the current model.



ON-SITE SEWAGE FACILITIES

Methods:

- Used permit data and assumption of unpermitted units based on occupied parcels outside service areas
- Estimated 10% failing

Findings:

- Highest relative loads occur in the Headwaters of Brays Bayou Above Tidal and Sims Bayou Above Tidal
- Expected to increase over time
- Significant human health risk but minor contribution to total load

Discussion:

- Adjust estimated failure rate?
- Use different rates for permitted vs. unpermitted systems?



DOG WASTE

Methods:

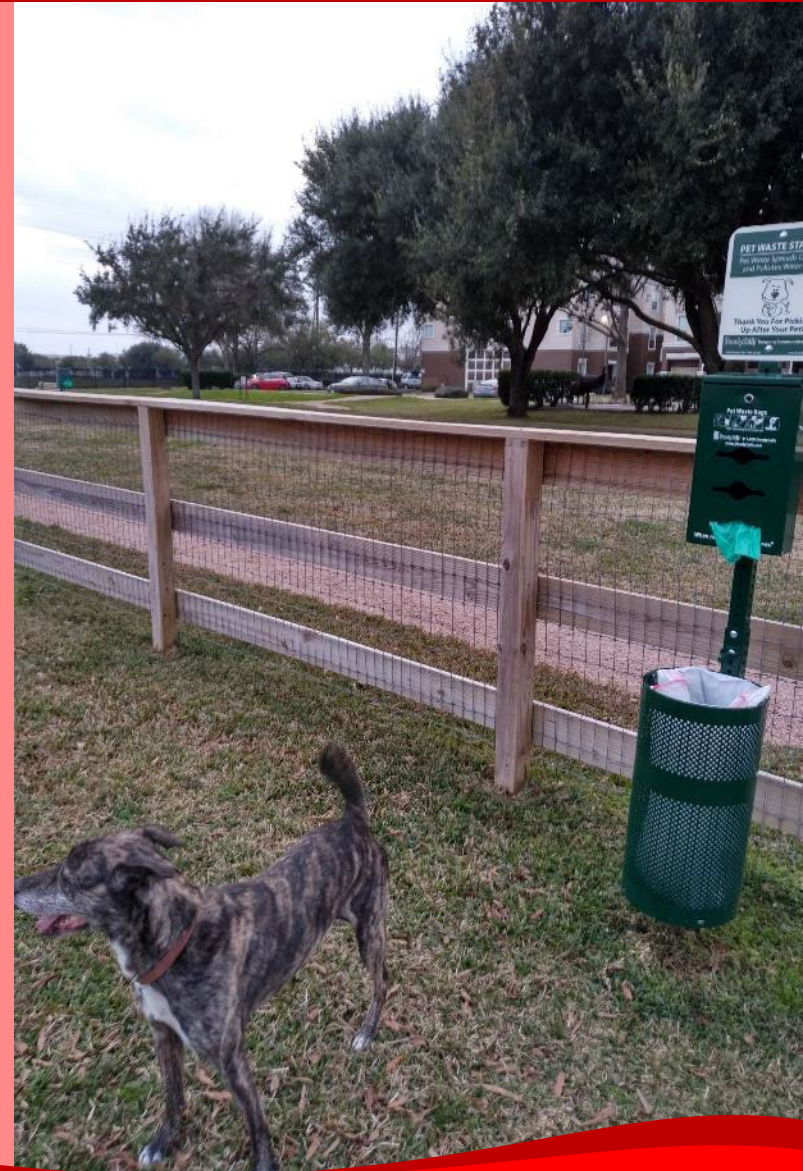
- Literature value applied to household data
- Includes 20% reduction of estimated load based on pet waste management

Findings:

- Highest relative loads occur in the Headwaters and Middle Brays Bayou Above Tidal subwatersheds
- Expected to increase over time
- Major contribution to total load

Discussion:

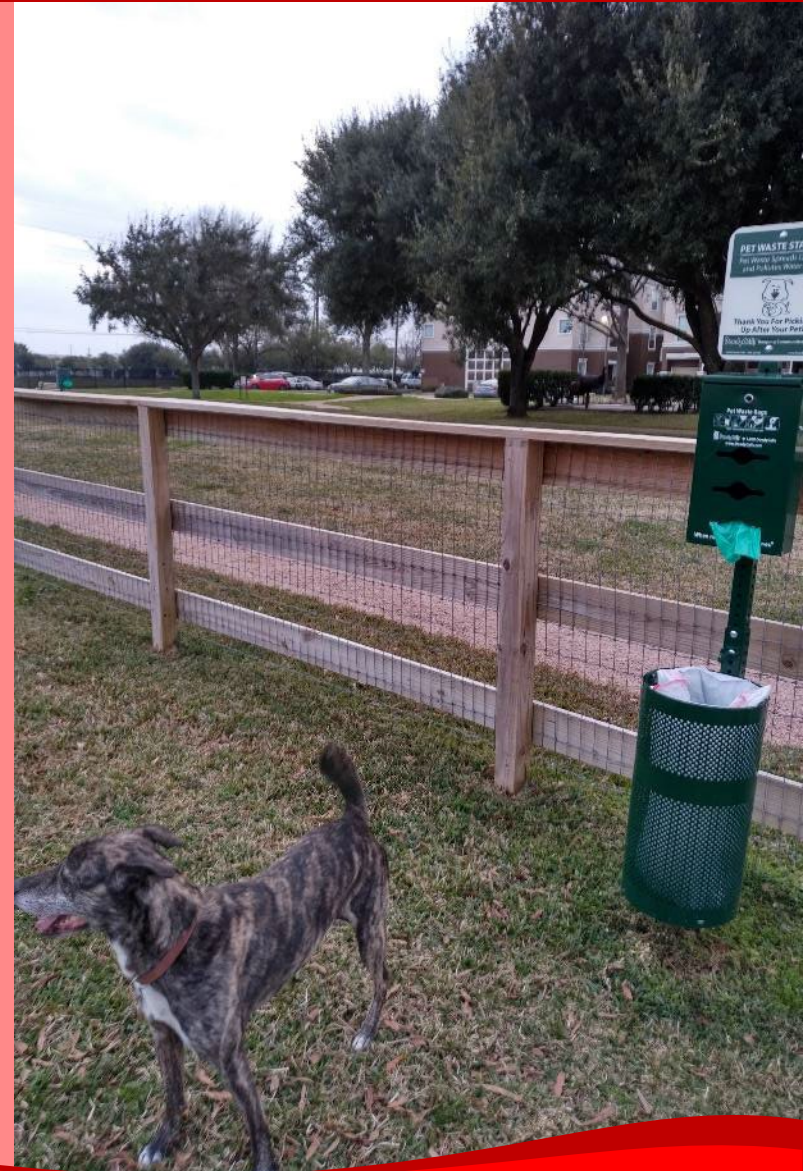
Based on feedback from workgroup members, apply AVMA (2025) estimation of 1.0 dogs per household? OR apply new, proposed method from H-GAC?



DOG WASTE

Methods:

- Original rate of 1.5 applied to #of Households yielded number of 7,960.5 dogs estimated for Headwaters of Sims Bayou Above Tidal subwatershed (S1) within the buffer (closest to waterway)
- Suggested new rate of 1.0 from workgroup members in early June yielded estimate of 5,307 dogs after applying to calculations
- New method devised by H-GAC staff- yield estimate of 3,617.3 dogs in Sims Headwaters within buffer after new calculations



LIVESTOCK WASTE

Methods:

- County agricultural census data and suitable land cover adjusted by watershed area ratio
- Includes cattle, horses, sheep and goats

Findings:

- Highest relative loads occur in the Headwaters and Middle Sims Bayou Above Tidal subwatersheds
- Expected to decrease over time
- Minor contribution to total load

Discussion:

- Workgroup members proposed revised method that applies more natural land cover categories
- Apply good-faith reduction (similar to dog waste method) based on BMPs in use by landowners?



DEER WASTE

Methods:

- Used Texas Parks and Wildlife population density data based on ecoregion
- Density assumptions adjusted for land cover type

Findings:

- Highest relative loads occur in the Headwaters of Brays and Sims Bayou Above Tidal subwatersheds
- Expected to decrease over time
- Minor contribution to total load

Discussion:

- Based on discussions with TPWD and other stakeholders, recommended to not be a focus for these watersheds



FERAL HOGS

Methods:

- Used AgriLife population density literature values
- Density assumptions adjusted for land cover type

Findings:

- Highest relative loads occur in the Middle Brays Bayou Above Tidal and Headwaters of Sims Bayou Above Tidal subwatersheds
- Expected to decrease over time
- Minor contribution to total load

Discussion:

- Based on communication with TPWD, feral hogs are going to be negligible in these watersheds



OTHER WILDLIFE

Methods:

- Accounts for potential wildlife impacts on the instream load
- As no population data are available for many wildlife species, method assumes additional 20% of total calculated load can be attributed to wildlife

Findings:

- This method is not spatially specific, applied to total watershed area

Discussion:

- TPWD does not object to 20% as a general number for urban watersheds such as these. Low percentage, not much habitat for avian wildlife for example, but they still have appreciable presence



SOURCES NOT INCLUDED IN ANALYSIS

Birds

- Short-term migratory birds vs. colonial birds
- Relatively small human health risk



Sanitary Sewer Overflows

- Episodic, localized events
- Malfunctions cause highest volumes and frequencies
- Significant risk to human health, address directly in management strategies



What other considerations should be made?



IMPLEMENTATION STRATEGIES

IDENTIFYING SOLUTIONS



Goals

- Primary: compliance with water quality standards
- Secondary: multiple benefits, coordination with ongoing efforts, cost effectiveness, phased approach

Hierarchy of Solutions

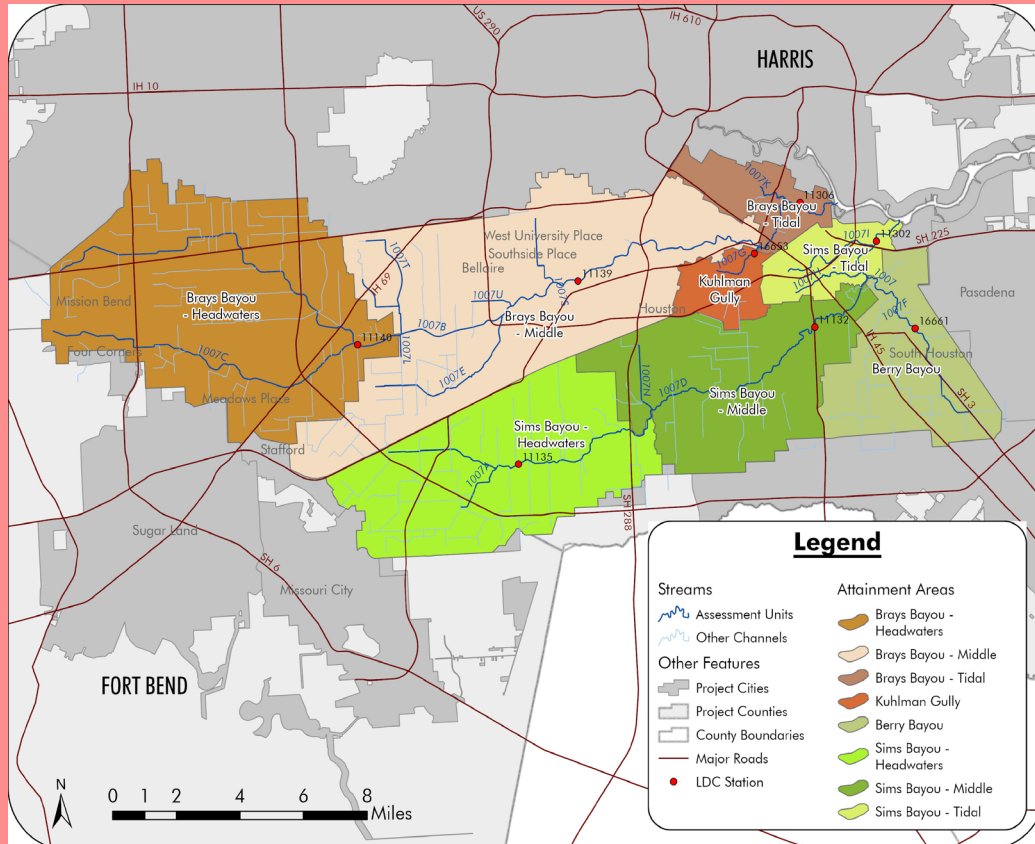
- Existing Projects
- Planned Projects
- Projects Awaiting Resources
- New Projects

ROLE OF A WATERSHED PROTECTION PLAN



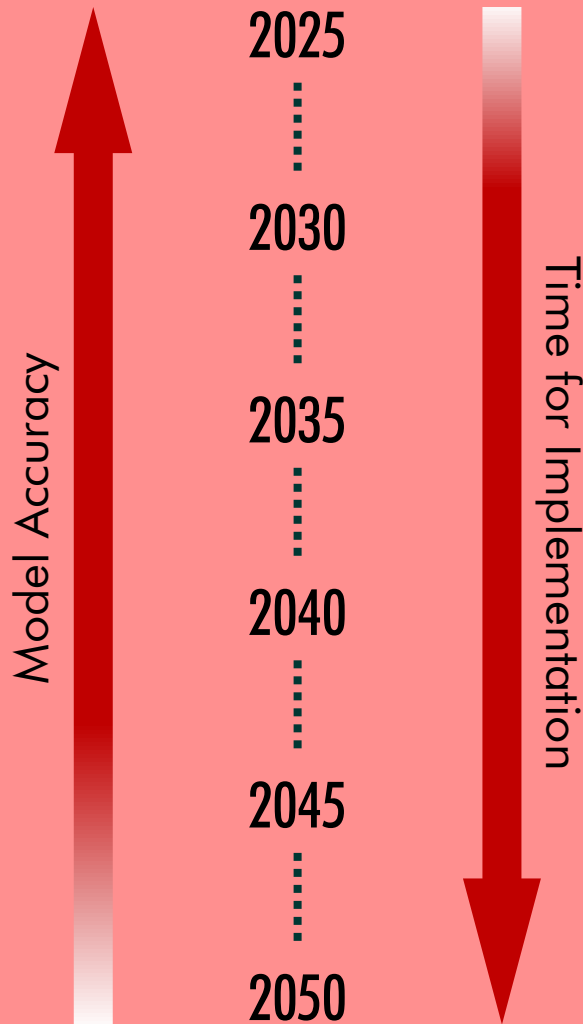
- Where coordination is possible, the WPP will describe solutions that **enhance, support** and **fill gaps** in existing efforts
- Descriptions of new proposals included in the WPP will identify:
 - Responsible parties
 - Resource needs
 - Timelines
 - Measures of success
- WPP development can attract funding/technical resources

SETTING GOALS



- Different pressures affect different parts of the watershed
- Implementation measures can be customized in different areas for more effective results

WHERE TO FOCUS



- Select focus areas based on modeling results and stakeholder recommendations
- Effort is not required to be proportional to model results
- Decide on target date for implementation goals
- Milestones used to establish timeline

NEXT STEPS

TIMELINE



SHORT TERM GOALS



- Meet with workgroups to discuss implementation strategies in July and August
- Next Partnership meeting tentatively set for September to share workgroup recommendations and finalize implementation strategy selection
- One-on-one meetings with stakeholders

Discussion QUESTION:

Do you or anyone you know use the tidal/lower portion of Brays and/or Sims for recreational purposes? (Waterside parks, kayaking, fishing, etc.) Have you seen anyone use them for recreation?

HOW CAN WE HELP?



- Tell us about your projects and organizations!
- Tell us how we can:
 - Amplify
 - Collaborate
 - Coordinate

Brays & Sims WPP Website



FWC26 Houston Sustainability
Committee Volunteer
Opportunities



The Medallion

WIPES
CLOG PIPES



**ONLY
FLUSH
THE
3 P's**

PEE

is easily
processed

POOP

breaks down

PAPER

dissolves in
water

 **HOUSTON**
PUBLIC WORKS

ProtectOurPipes.org

H-GAC Educational Exhibits Training – Interest Survey



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Brays & Sims Bayou
Watershed Partnership