



The City of San Diego's Approach to Reduction of Highest-Risk Human Sources

**State Water Board & CASQA Bacteria Summit
September 15, 2022**

Agenda



- **Introduction**
- **Science Based Approach to Water Quality Protection**
- **Adaptive Management – Effective and Efficient Processes**
- **Challenges**



City of San Diego Stormwater Department

- Innovative solutions
- Protect our communities
- Funding Strategy
- WIFIA Loans/Grants



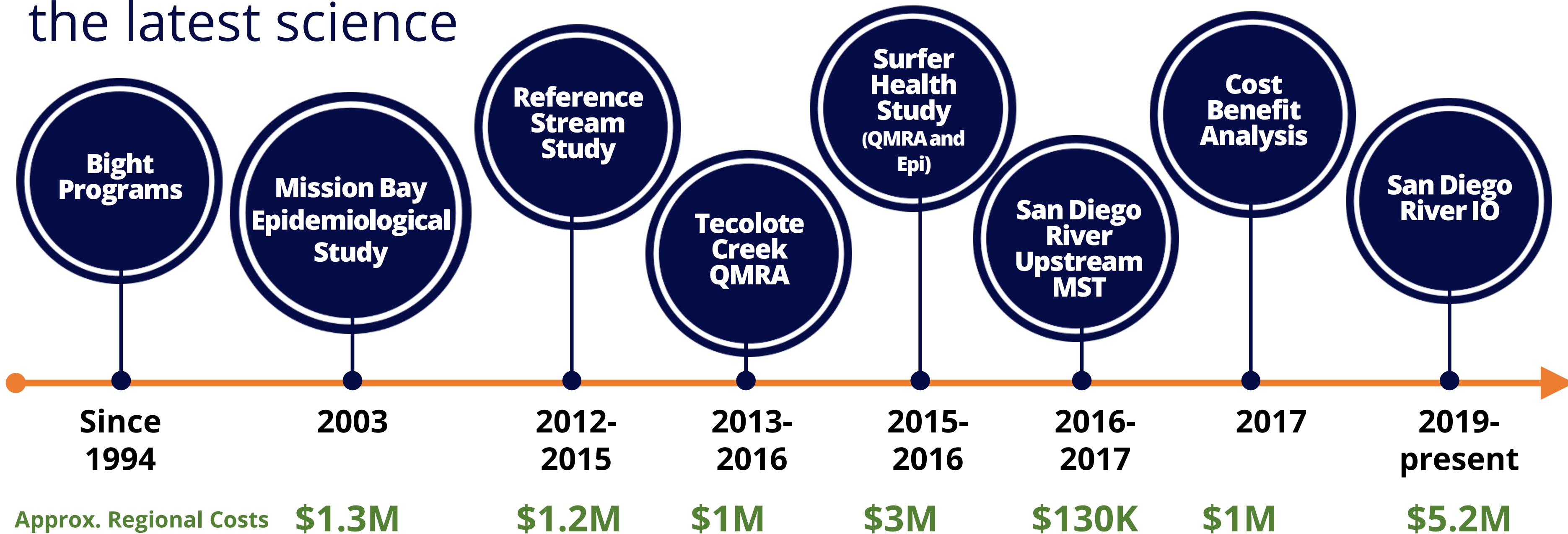


Science Based Approach to Water Quality



City of SD's Science-based Approach

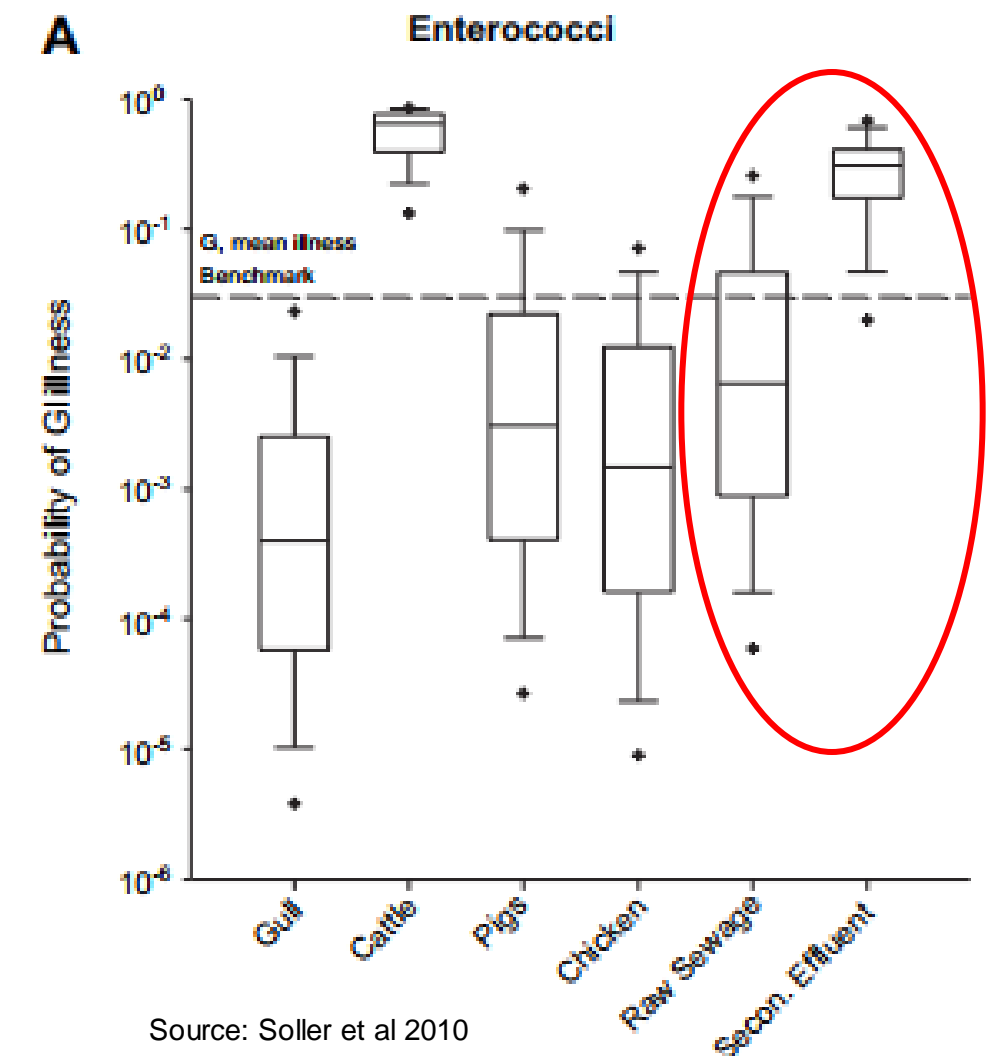
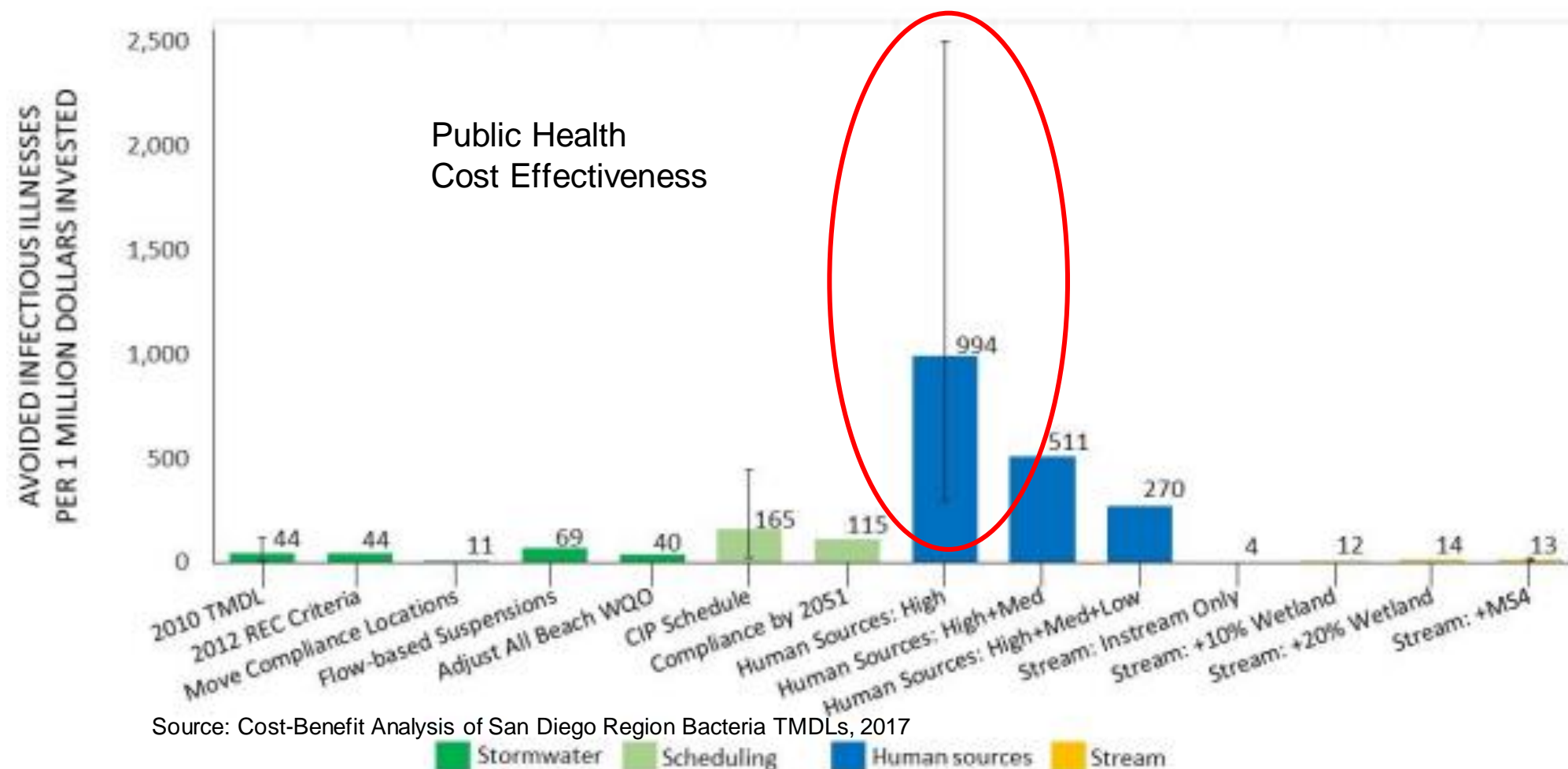
Active regional partners over the 20+ years in applying the latest science





City of SD's Science-based Approach

- Human sources matter the most from a risk perspective
- Control of human sources is the most cost-effective way to address risk

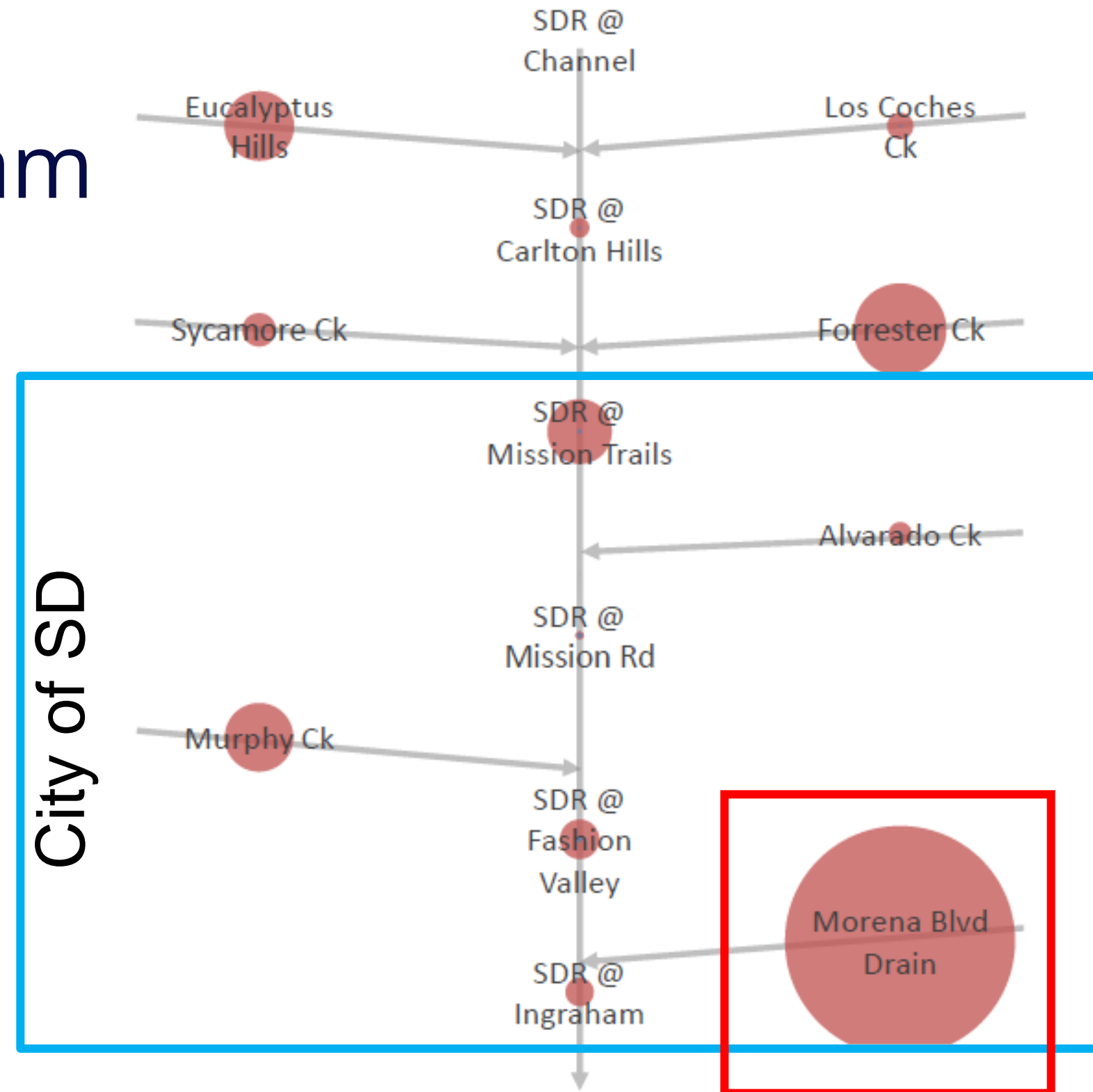




City of SD's Science-based Approach

San Diego River Upstream Source Tracking Study

Concentrations of HF183 during 2016 storm event



Driver for adaptive management

Adaptive Management Approach to Human Source Control



Traditional methods for human source control and their limitations

- Inspections and Code Enforcement
- Monitoring
- Drain cleaning
- Street Sweeping
- Structural BMPs



Adaptive Management Approach to Human Source Control

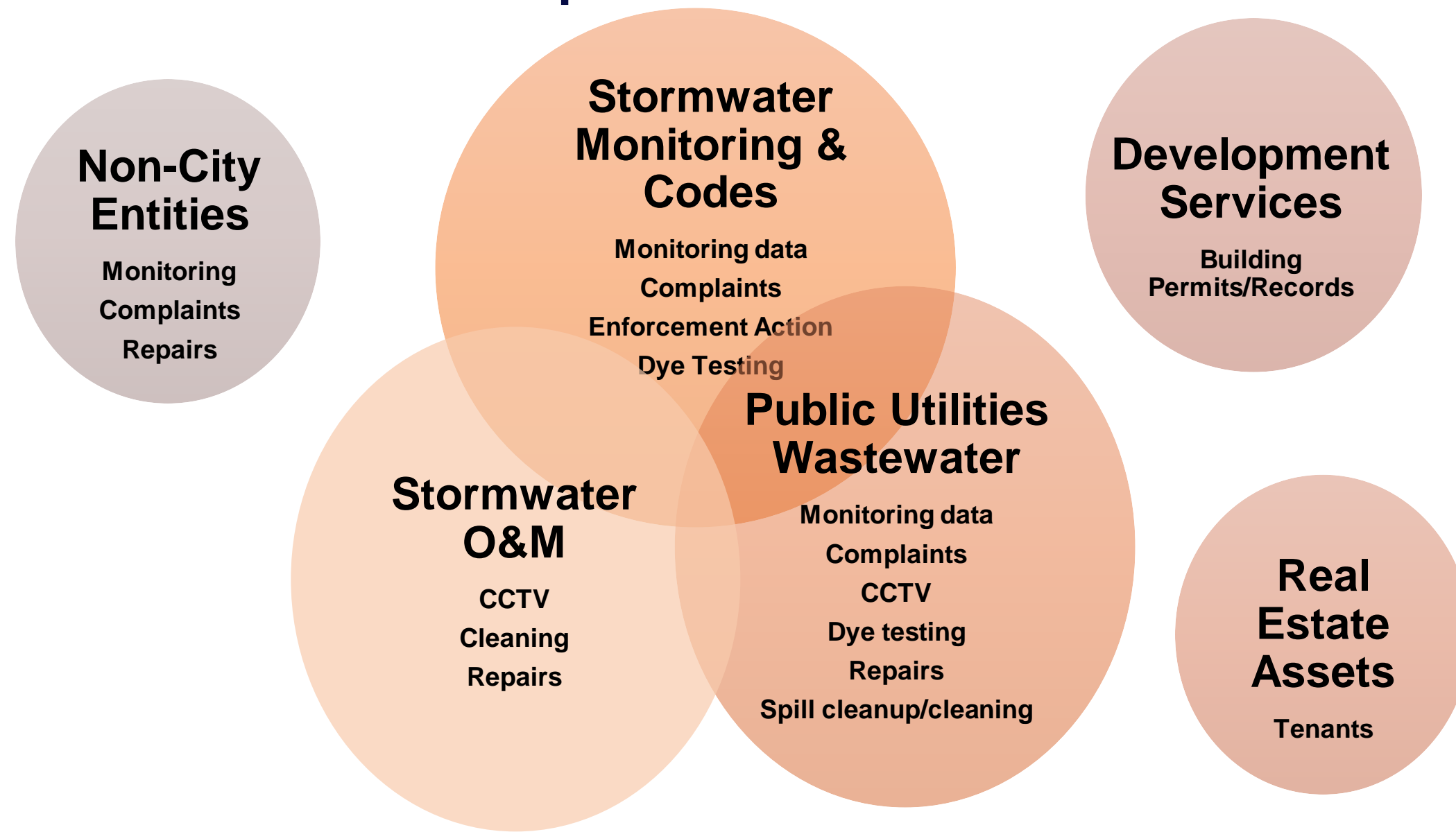


- Tiger Team established in response to SHS data
- Rapid response to findings of elevated HF183
- Combined traditional tools + new tools (HF183) + intra and interdepartmental collaboration

Adaptive Management Approach to Human Source Control



Intra/Interdepartmental Collaboration + Toolbox Approach



GIS Analysis



Visual Surveys



Traditional Investigative Tools:
Dye testing, CCTV, facility inspections



Water Quality Testing:
Field WQ, Chemistry, FIB, MST markers
(including HF183), PCPs



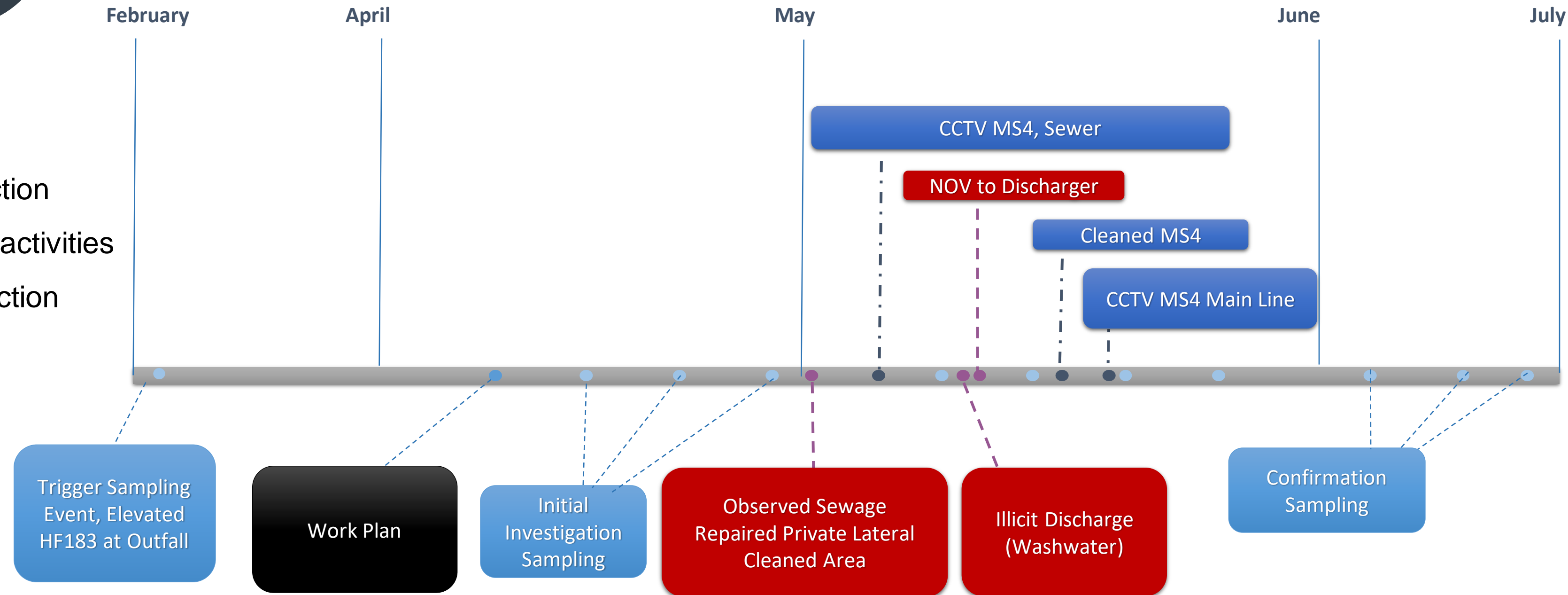
Flow Monitoring

Adaptive Management Approach to Human Source Control



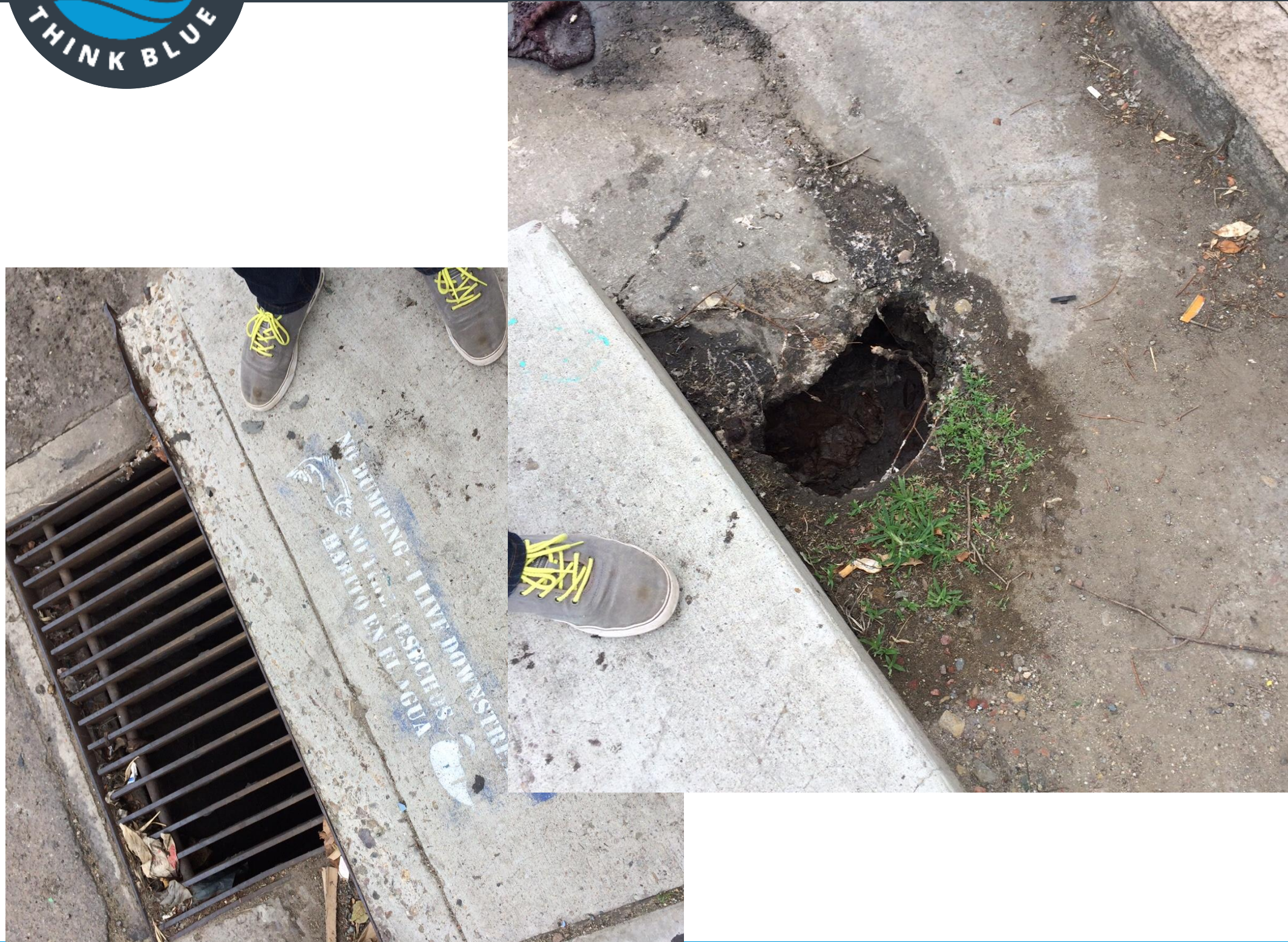
LEGEND

- General info
- Corrective action
- Investigative activities
- Sample collection



Tiger Team Morena Timeline

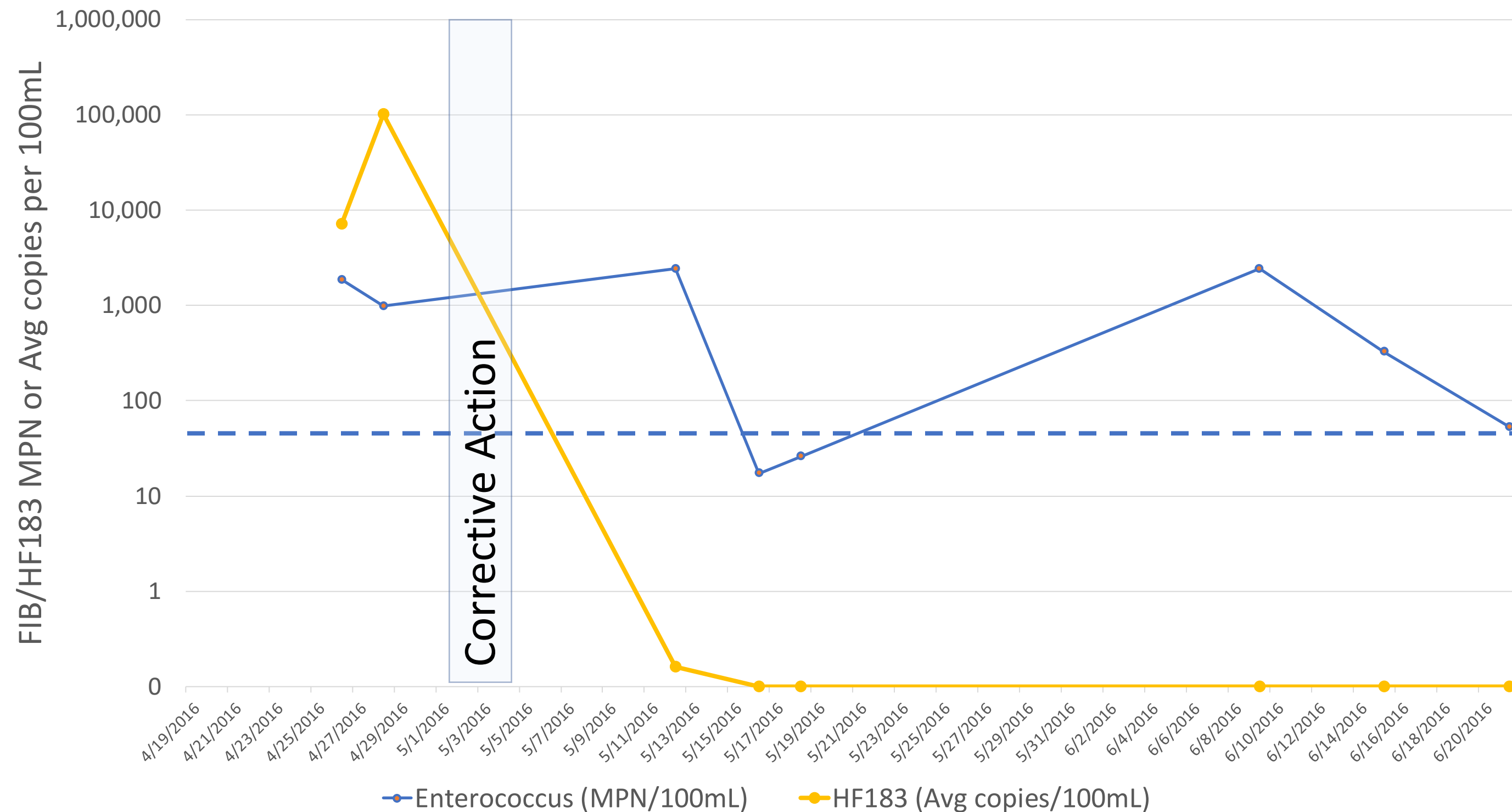
Adaptive Management Approach to Human Source Control



Adaptive Management Approach to Human Source Control



HF183 fully abated,
FIB persists above action level





Focus
on effective
and efficient
processes

Adaptive Management Approach to Human Source Control



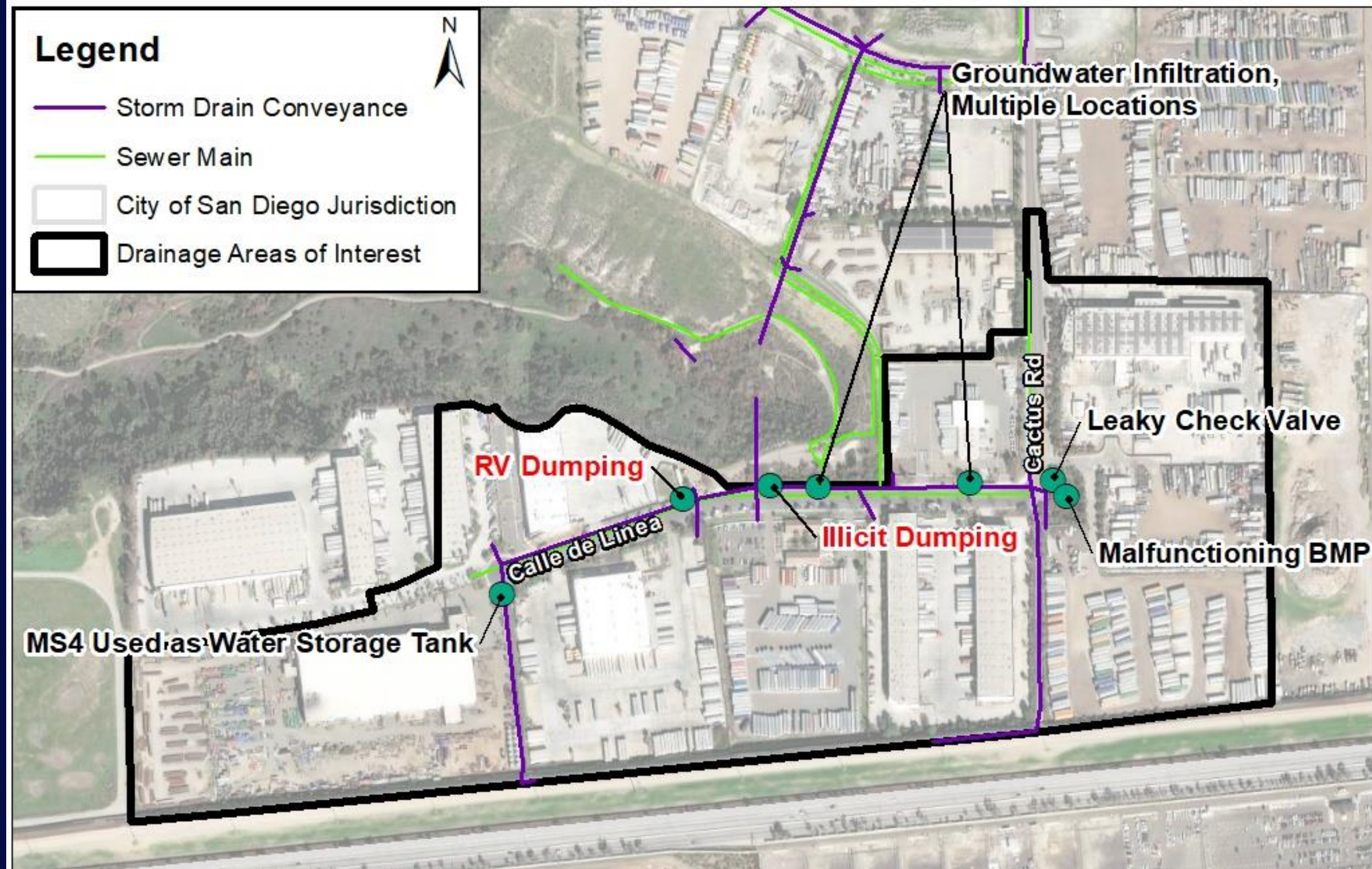
Expanded City-wide, holistic approach to focus on human sources

- **Strategies to Reduce and Abate Bacteria**
Outlines all bacteria related activities City-wide
- **Prioritization Process**
Uses a combination of CHWSRS, regulatory deadlines, and other factors
- **Water Quality Response Team**
Dedicated team of staff investigating and abating human sources and other priority pollutants

Water Quality Response Team



Water Quality Response Team prioritizes human sources, but also identifies and abates complex flow and FIB sources

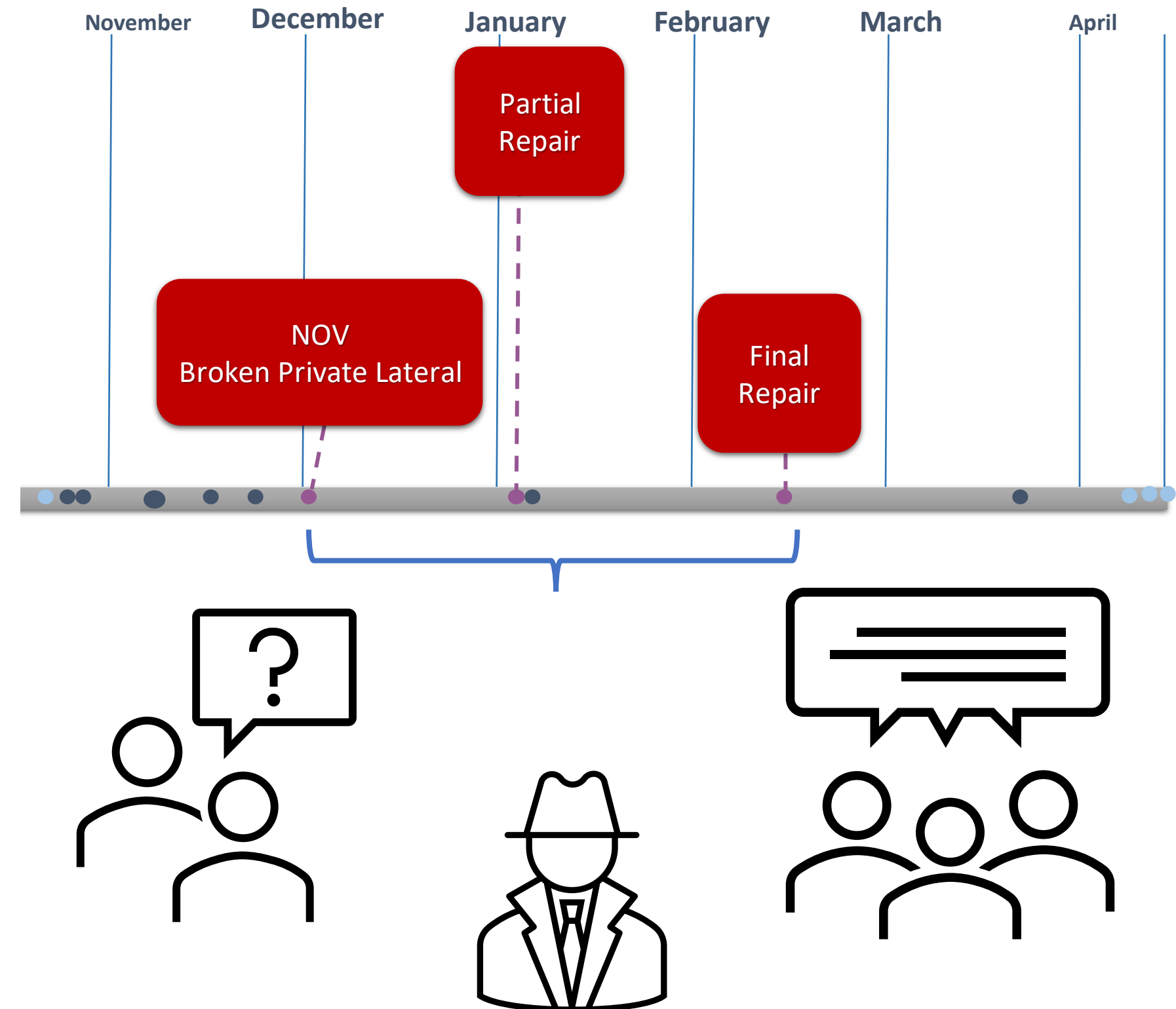




Challenges

Source abatement process has had its challenges

- Corrective action timelines
- Coordination with other agencies or property owners
- No clear “smoking gun” source





Challenges

Despite applying the latest science, current bacteria TMDL regulations are still unachievable



- Prioritizing science-based strategies to protect swimmers and aquatic habitats
- TMDL dry weather deadline passed April 2021
- No regulatory relief – compliance impacts

Finding Solutions Together



City of San Diego's continued efforts

- Focusing limited resources on highest-risk human sources
- Continuing to work with Regional Board, stakeholders and partners
- A committed partner to find solutions





Thank you!

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