PUBLIC WORKS
LOS ANGELES COUNTY

TRASH IMPLEMENTATION THROUGHOUT LOS ANGELES COUNTY

2017 CASQA Conference

September 25, 2017

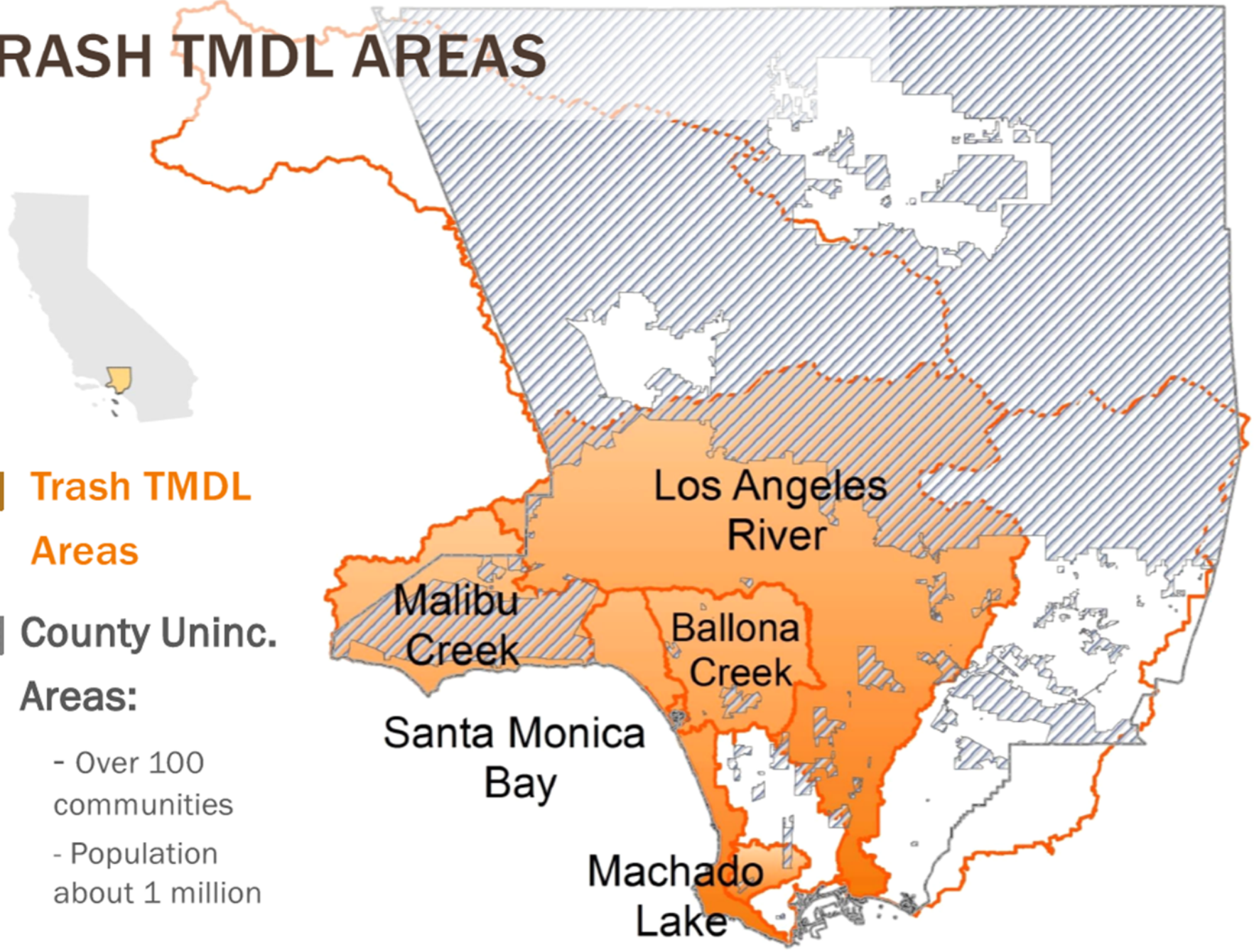
PRESENTATION OUTLINE

- Early Actions
- Trash TMDLs in LA County
- Compliance Options
- Catch Basin BMP Designs
- Full Capture
- Partial Capture
- Street Sweeping
- O&M
- Lessons Learned

TRASH BOOMS IN LA COUNTY

- First installed in 2000
- Captures floating trash, debris, and vegetation
- Improves water quality, enhances recreation, and improve navigation
- Two Trash Booms
  - LA River Trash Boom
  - Ballona Creek Trash Boom

TRASH TMDL AREAS



Trash TMDL Areas

County Uninc. Areas:

- Over 100 communities
- Population about 1 million

TRASH TMDL COMPLIANCE STATUS

Watershed	Effective Date	Final Compliance
Ballona Creek	08/11/2005	09/30/2015
Machado Lake	03/06/2008	03/06/2016
Los Angeles River	09/23/2008	09/30/2016
Malibu Creek	07/07/2009	07/07/2017
Santa Monica Bay	03/20/2012	03/20/2020

- Over 5,000 catch basins have been retrofitted in the County Unincorporated Areas with a full capture device.

TRASH TMDL COMPLIANCE OPTIONS:

1) Install **full-capture** systems throughout jurisdictional areas
   - CPS in every catch basin

2) Install **partial-capture** devices and apply **institutional controls**
   - ARS
   - Trash DGR Study
   - Institutional Programs

LA REGION TRASH TMDLS VS. STATEWIDE TRASH AMENDMENTS

LA Region Trash TMDLs	Statewide Trash Amendments
Numeric Objective = Zero Trash	Narrative Objective
Option 1 – Full Capture Option 2 – Partial Capture + DGR	Track 1 – Full Capture Track 2 – Combination of Full, Partial, Regional Project, Institutional Programs
Required Zero Trash for All Areas	Focus on High Trash Generating Areas
Monitoring Required for Option 1 in Reopener	Track 1 – No Monitoring Required Track 2 – Annual Monitoring Required
Annual Reporting	Annual Reporting
Schedule for Final Compliance: 8-10 yrs	Schedule for Final Compliance: 10-15 yrs

Selection of Option 1

- Effective Method
- Assurance in compliance
- Simplicity in reporting
- Commitment to Long Term O&M

Types of Catch Basin BMPs

Filter
Basket Insert
2003

Automatic
Retractable Screen
(Early Designs)
2003-2007

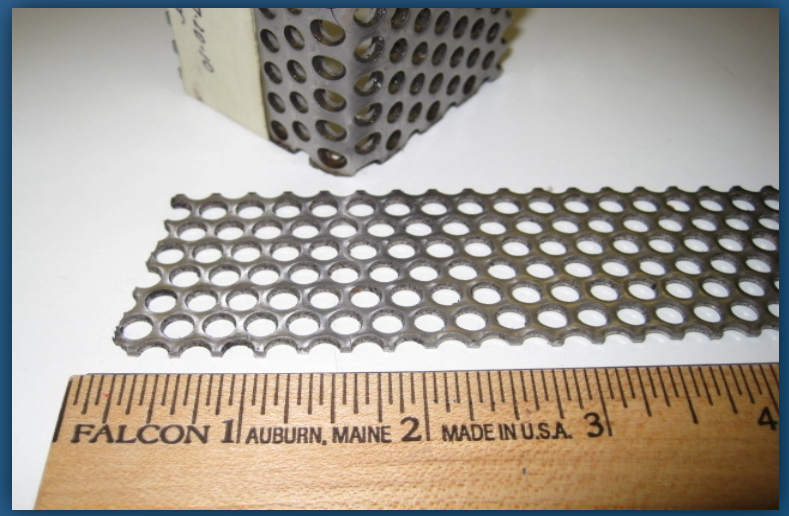
Connector
Pipe Screen
2008 - Present

Manual
Retractable Screen
2003

Automatic
Retractable
Screen (Current
Design) 2008 to
Present

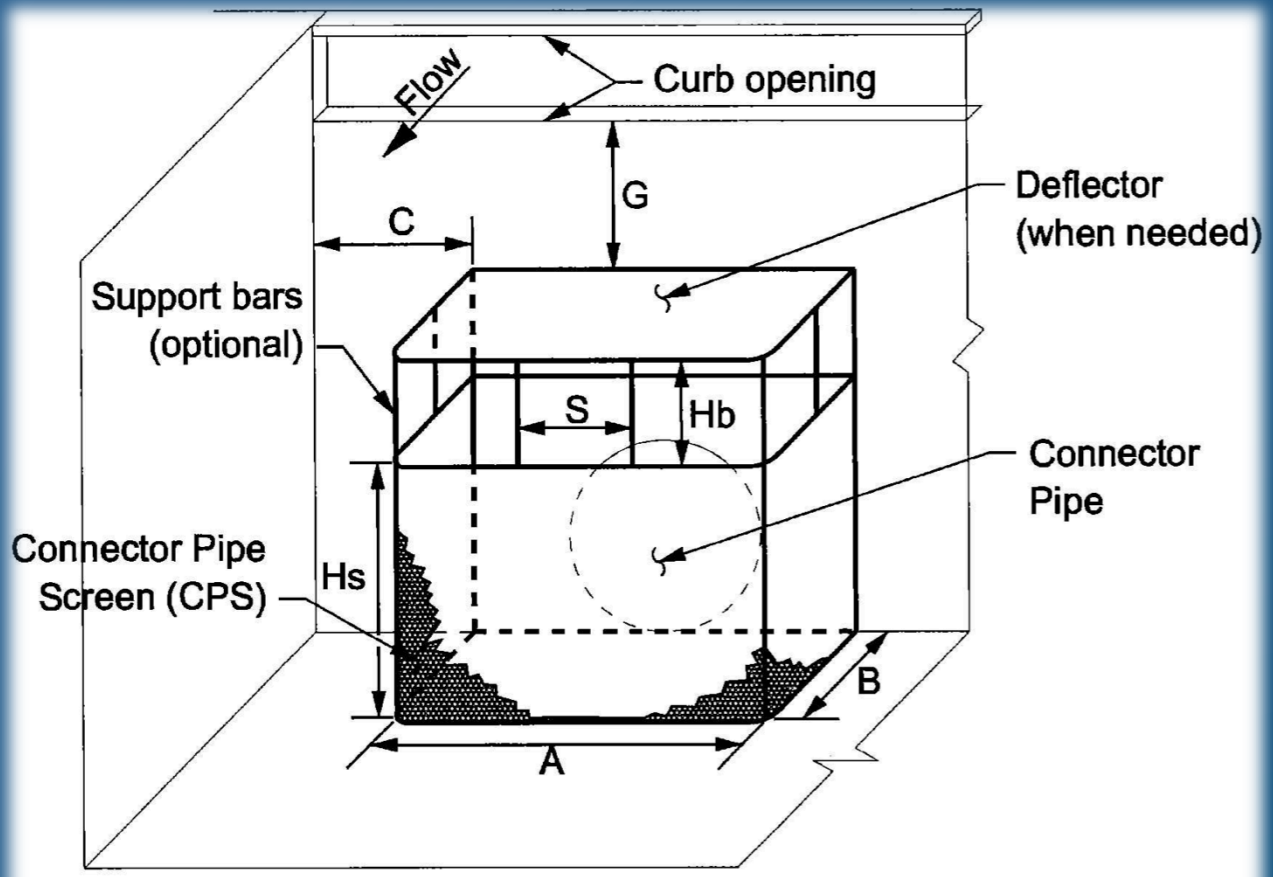
CONNECTOR PIPE SCREENS (CPS)

- Acts as primary defense
- 5 mm screens
- Treats 1-year, 1-hour storm
- Includes a bypass
- Minimum clearances to prevent flooding
- Certified by LA Regional Board in 2007



CPS INSTALLATION

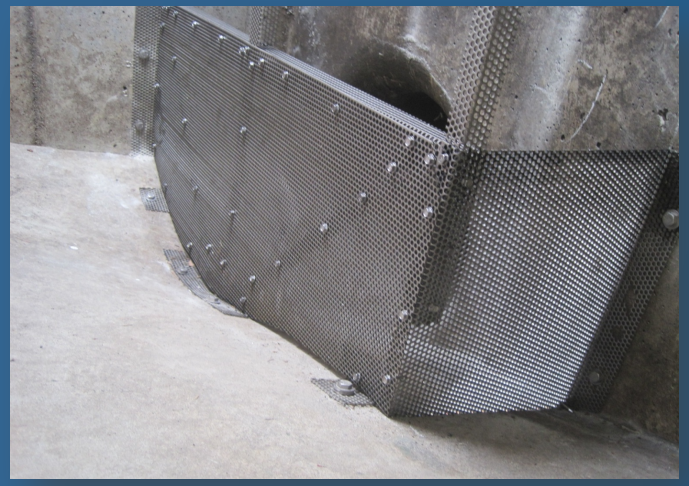
- Best field fabricated
- Strict performance standards
- Field inspection and testing during installation
- Gauge thickness
- Accurate measurements of catch basins
- Material and installation about $450 per unit



CATCH BASIN INTERIOR VIEW
(Not to scale)

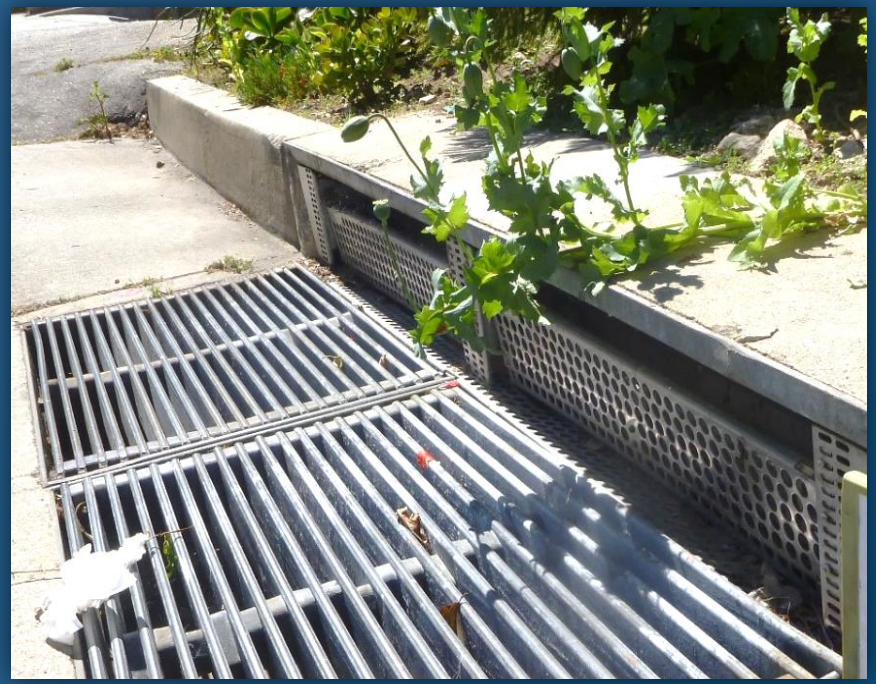
CPS PHOTOS:

CPS PHOTOS:



AUTOMATIC RETRACTABLE SCREENS (ARS)

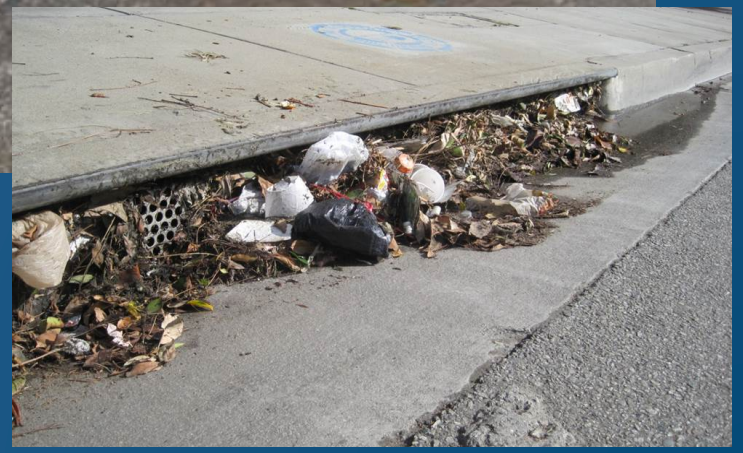
- A partial capture device
- Need routine street sweeping
- Test devices and pre-approve manufacturers prior to advertising



ARS INSTALLATION

- Provide inspection to ensure quality control
- Conduct water testing on ARS
- Material & installation about $400 (<5 ft) to $2,000 (>21 ft) per catch basin

ARS PHOTOS:



STREET SWEEPING

- Minimum Frequency of Once a Week in areas that have CPS and ARS
- Reduces O&M needed for CPS
- Combination of internal fleet of sweepers and contracts with external street sweeping contractors to provide these street services to all County UA areas
- Regenerative Air Sweepers vs. Traditional Broom Sweepers

OPERATION AND MAINTENANCE PROGRAM

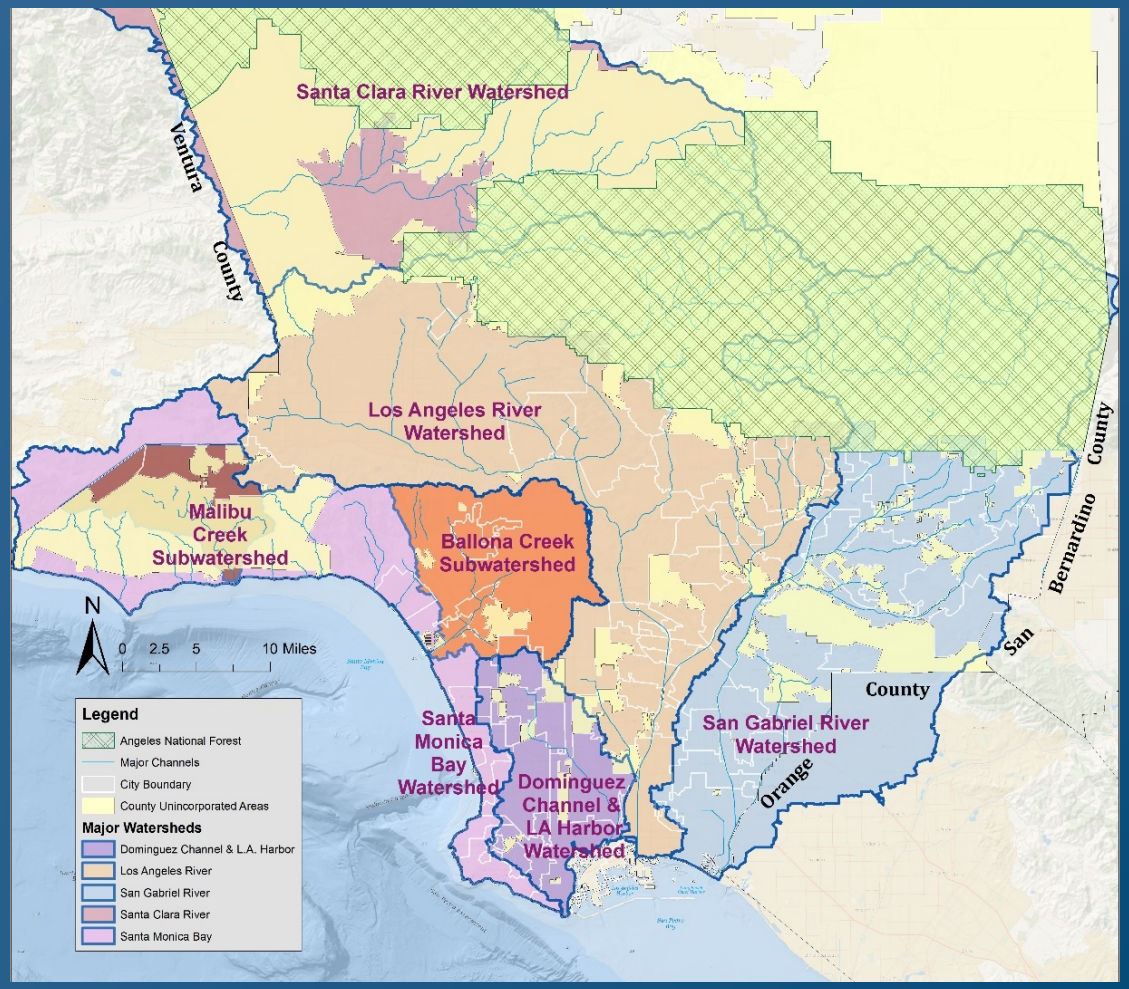
- Annual Contract for Inspections and Cleanout – Dry and Wet
- Ongoing As Needed Repairs and Replacement When Needed
- Street Sweeping Program is Critical
- Annual Cost – Approx. $1.6M

LESSONS LEARNED

- Approximately $9M to date
- Reduced avg cost from $2,000 to $800 per catch basin
- Larger contracts benefit from economy of scale
- Good Inspection is Key
- Need Accurate Mapping
- Robust O&M Program
- Street Sweeping Program in Parallel
- Some will always be infeasible

ACTIONS IN LA COUNTY UNINCORPORATED AREAS TO ADDRESS TRASH

- 2 Trash Booms
- 5,000 + CPS and ARS
- Annual Inspections, Cleanout, and Maintenance
- Street Sweeping Program
- Public Education
- Styrofoam Ban at County Events/Facilities
- Plastic Bag Ban at Grocery Stores



QUESTIONS

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