

# PRACTICAL STRATEGIES FOR ADDRESSING CONTAMINATION:

Change at the Curb, Processing,  
Responsibilities, & Longer-Term  
for ZW CONFERENCE, December 2020

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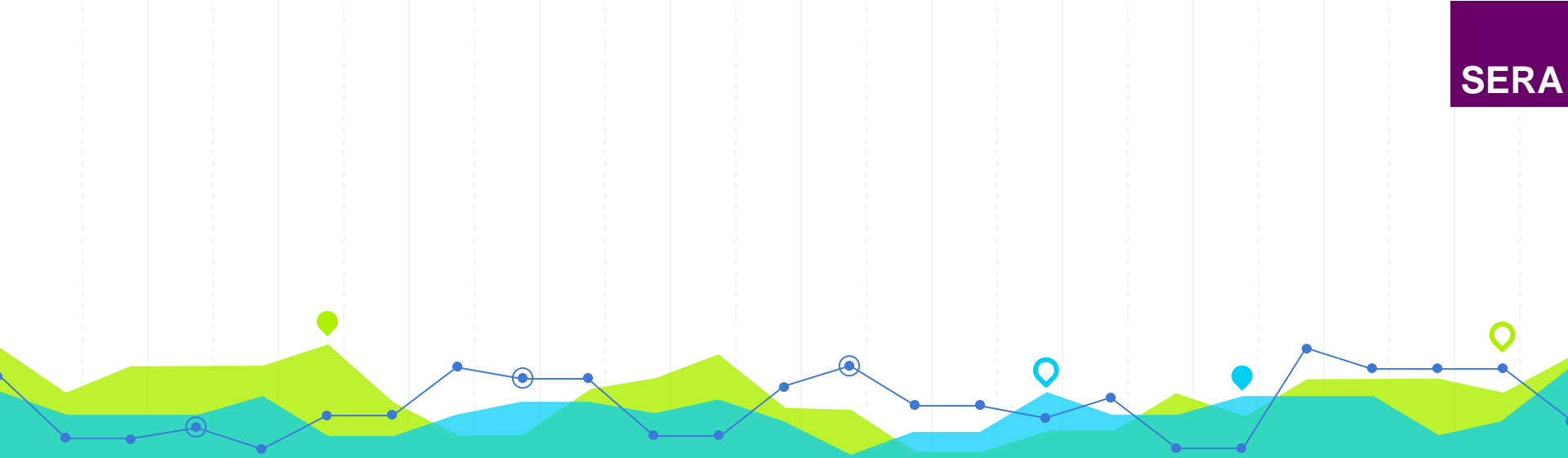
# TOPICS

- ① Contamination Strategies – “Now”
- ① Longer-Run Strategies
- ① Summary

Thanks to EREF  
For funding on  
This project!

## **SERA Background / Qualifications - Why am I here?**

- ❖ *40 years of experience on local / state / federal policy and program issues; many publications.*
- ❖ *Multiple perspectives – worked as city, elected, consultant, non-profit; National, state, local. Staff also includes haulers.*
- ❖ *Clients are major (and minor) communities across US and Canada (and overseas); publications*
- ❖ *Data from 1000 communities with oversampling in largest 100; research based on “real world”, not “hypothetical”*
- ❖ *Statistical / transferable research and modeling*



# Contamination – Near & Mid-Term Strategies

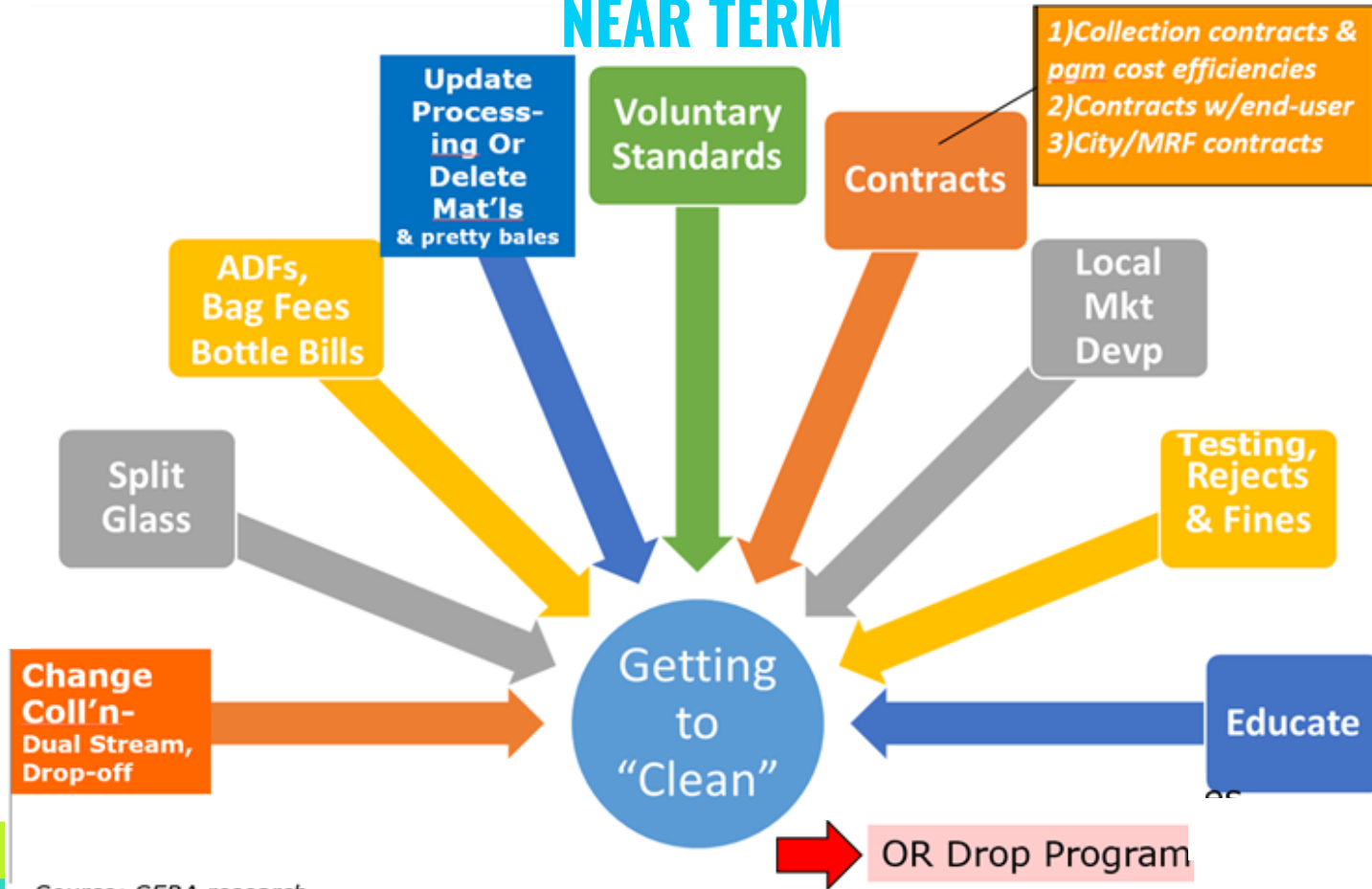
“More” isn’t Everything

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## PROCESSING & CONTAMINATION: BACKGROUND

- Collection isn't recycling, and 20% trash in recycling is no longer workable for anyone
- Single stream is preferred by households & simpler for businesses (space); dual stream simpler to sort
- MRF technology can clean single stream if slow enough, enough steps (and technology improving) BUT need market incentives (China)
- Need better material in and out; China brought long-standing problem to a head

# SERA RESEARCH ON CONTAMINATION STRATEGIES – NEAR TERM



Source: SERA research

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# HELP AT THE INPUT STREAM AT THE CURB - EDUCATION / OUTREACH

## Best way to address input stream

- ❖ Targeted, informed education, tailored/social
- ❖ Messaging: Motivation, not information; trusted messenger, reasonable number of lessons, cost / effects of contamination appeal on what they value / what resonates
- ❖ Be clear – including on bans, etc.
- ❖ Oops tags on carts, periodic inspections / penalties with reasons why
- ❖ Consider best (incl. least confusing) program design
- ❖ → **BEST WAY TO IMPROVE RECYCLING INPUT STREAM**

## MOTIVATE, DON'T JUST INFORM

- ❖ → Need market research (surveys, focus groups, pilots, research)



# HELP PROCESSING

## Plastic bag fee / ban

- MRF & Bin
- 80% reduction in 3 months w/fee
- Ordinance (*SERA RR article*)

## Glass

- Consider splitting: multiple drop-offs + bin (with education encouraging drop-offs) (*SERA RR art*)
- *And some deleting glass*

## Collection Efficiencies

- *Saves money for education & processing slow-downs*

## Consider bottle bill

- Helps with glass
- Less contamination / Separates / more recovered
- Admin / system cost considerations

## New Processing Technologies & Considering Dual Stream

- Separation helps BUT citizens like single stream convenience (C&I also)
- SS improving (robots, optical...), slower speeds, incentives
- Commercial??

### HOW TO IMPLEMENT:

- ✓ Ordinance, legisl, facilities (with enforcement)
- ✓ No cost / minimal cost for City

# HELP THROUGH CHANGES IN RESPONSIBILITY

## Contracts for Material

- Process for a specific end-user's specs / contract
- Relates to (local) Market Development...

## Enforcement

- Rejects, fines

## HOW TO IMPLEMENT:

- ✓ Contracts between involved parties
- ✓ Cost depends on arrangements

## City / MRF Contracts

- Becoming more common (being forced by MRF restructuring as “service”)
- Statistical Inbound / outbound sorts with penalties
- “Set” processing cost
- Agreements about decisions, responsibilities & shares for education, equipment, education
- Pros / cons: Can reduce program cost variability
- SERA examples / research



## LESS SUCCESSFUL / BENEFICIAL

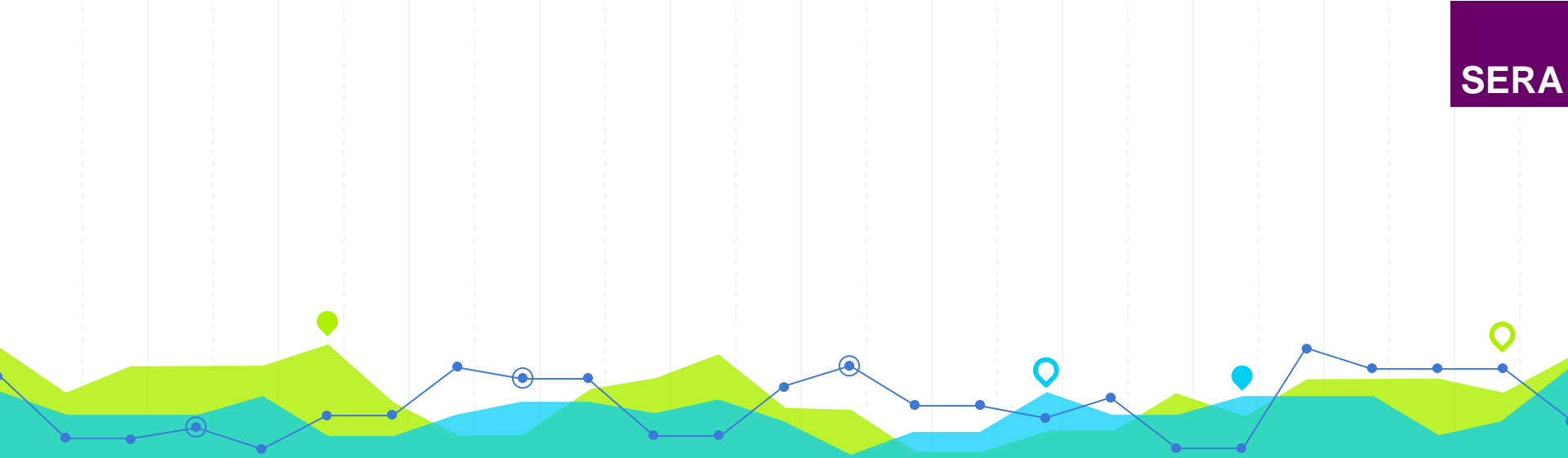
- Voluntary standards
- Market development
- Delete materials *ad hoc*
- Dropping programs

# CONTAMINATION – NEAR & MID-TERM STRATEGIES



## How to Implement:

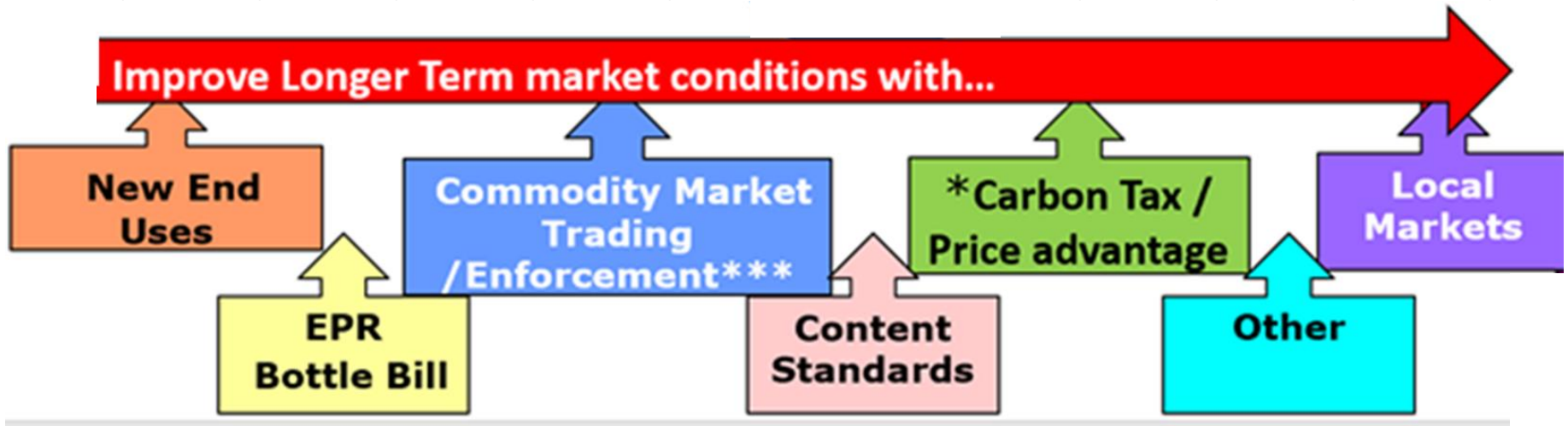
- ✓ Legislation, lobbying
- ✓ Market Dev'p
- ✓ Enforcement & rewards



# Mid-to-Longer Term Strategies

# 2

# CONTAMINATION - MID & LONGER-TERM STRATEGIES



## How to Implement:

- ✓ Legislation, lobbying
- ✓ Market Dev'p
- ✓ Enforcement & rewards

# MID-TO-LONGER TERM STRATEGIES

## Trading on Commodity Markets / BOT

- Vital for reducing price volatility, and ability to count on an input to production
- Existed for a couple years in 90s

## Carbon Tax/ Strategies

- Enviro/externalities internalized
- Most important long-term strategy
- Recycled will be preferred

### HOW TO IMPLEMENT:

- ✓ Clear, reliable PRODUCTS, enforced
- ✓ Legislation, lobbying

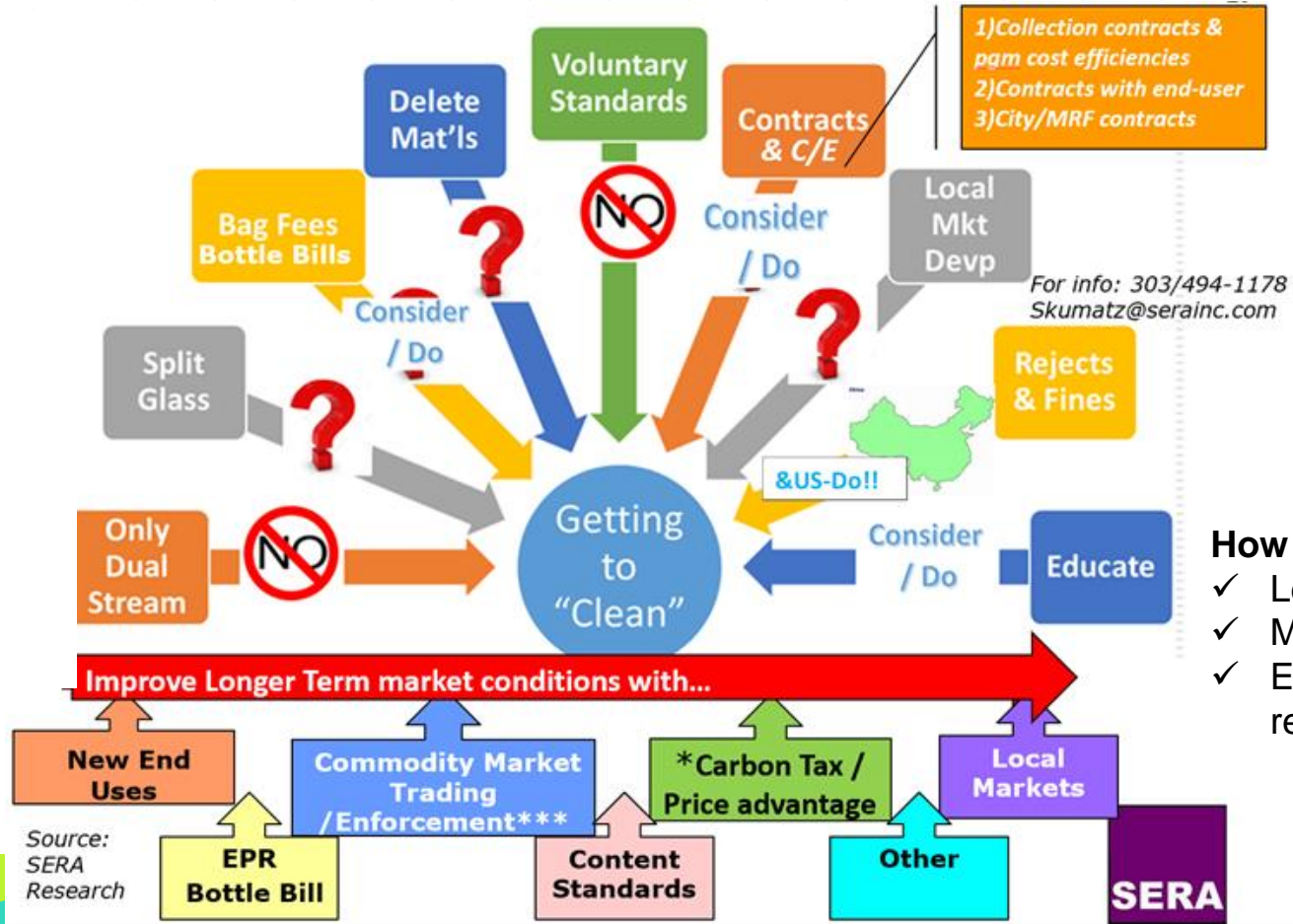
## EPR / Bottle Bill / Manufacturer Pgms

- Brings shared responsibility AND input to other actors in the chain
- Examples exist

## Other

- New End Uses, Content Standards, Local Markets
- SERA Research, examples

# CONTAMINATION STRATEGIES – NEAR & LONGER TERM



- How to Implement:**
- ✓ Legislation, lobbying
  - ✓ Market Dev'p
  - ✓ Enforcement & rewards



# Summary 3

# Summary –addressing contamination...

- **Near-Mid term:**
  - **help processing, change responsibilities, educate**
- **Mid-Longer term –**
  - **EPR, industry funding, bottle bills**
  - **Commodity Trading**
  - **Carbon tax/strategies**
  - **New end uses, content standards, local markets**

## Processing & Contamination

### NEAR-MID TERM

Help at the input stream / curb

- ✓ Education - Needed for input stream

Help processing

- ✓ Plastic bags, Glass options, Bottle bill, Pros/cons of dual stream
- ✓ Cost-effective collection to free funds for education, MRF steps

Changes in responsibility

- ✓ End user contracts, MRF / city contracts, Enforcement

Possibly useful, but not as successful: voluntary standards, market development, delete materials ad hoc.

### MID-LONGER TERM

- ✓ EPR / industry funding; bottle bills
- ✓ Commodity market trading
- ✓ Carbon tax / strategies
- ✓ New end uses, content standards, local markets





# *THANKS!*

## Questions?

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