Responsible Recycling Symposium

December 13, 2019

Agenda

- **9:30 – 9:40:** Welcome & Introduction

- **9:40 – 10:00:** Communications

- **10:00 – 10:20:** Legislation Updates for 2020

- **10:20 – 11:05:** Tracking Our Recycling: Transparency, Downstream Markets, Commodity Pricing & Contracts

- **11:05 – 11:35:** Market Development

- **11:35 – 12:00:** Lunch

- **12:00 – 1:45:** Group Session: Statewide Stewardship/EPR Policy & Model

- **1:45 – 2:00:** Wrap Up & Next Steps

Responsible Recycling Symposium:
Purpose & Outcome

Meeting Purpose: Review status of action items included in the 2019 Responsible Recycling Task Force work plan and provide cities/attendees with information needed to adopt and continue efforts.

Desired Outcomes:

- Cities/attendees have information needed to implement 2019 action items. If additional info is needed prior to adoption, efforts to obtain that info are clearly defined.

- Advisory committee members share desired methods/process for receiving additional information about actions items in 2020.

Recycle Right Communications Consortium

From 'Empty, Clean and Dry' to 'Plastic Bag Removal'

Matt Manguso, King County Solid Waste Division

RRTF Action Items

3B – Continue the Communication Consortium to create unified messaging about curbside recycling to King County residents.

5B – Remove plastic bags/film and shredded paper from the materials that are accepted in recycling programs in King County and the City of Seattle.

Who we are

Communications specialists representing:

- King County Solid Waste Division; Seattle Public Utilities; City of Bellevue; Sound Cities Association; Department of Ecology; Recology; King County, Republic Services, and Waste Management; with support from C+C

- Formed to provide support for the **Responsible Recycling Task Force**

Works to:

- **Harmonize messaging** across the region to make recycling right easy to understand

- **Provide communications tools** and resources to partnering cities and stakeholders

Branding

- Before campaigns began, branding was developed to ensure unified and recognizable messaging

- Branding Guidelines were established so cities and other jurisdictions could co-brand & emphasize regional collaboration

- All materials offered to partners via:

    http://kingcounty.gov/tool-kit

Empty, Clean and Dry: Strategy

- **Desired Behavior Change:** Reduce contamination in curbside recycling

- **Objective:** Educate King County residents about the how and why of putting empty, clean and dry recyclables in curbside bin

- **Target Audience:** Adults (18+) in King County but outside of Seattle (additional coverage came from the work of SPU and Ecology who ran similar campaigns)

Empty, Clean and Dry: Campaign

- In 2018/19, Consortium focused on development of "Empty, Clean and Dry"

- Included set of outreach/promotion materials for the Recycle Right/Recicla bien campaign

- Messaging focused on ensuring recyclables are empty, clean and dry

- Materials developed in English and Spanish included:
  - Videos, radio scripts, billboards, transit ads, social media posts

EMPTY. CLEAN. DRY.
It Matters.

Empty, Clean and Dry:
Billboards and Bus Ads

Empty, Clean and Dry:
Billboard Locations
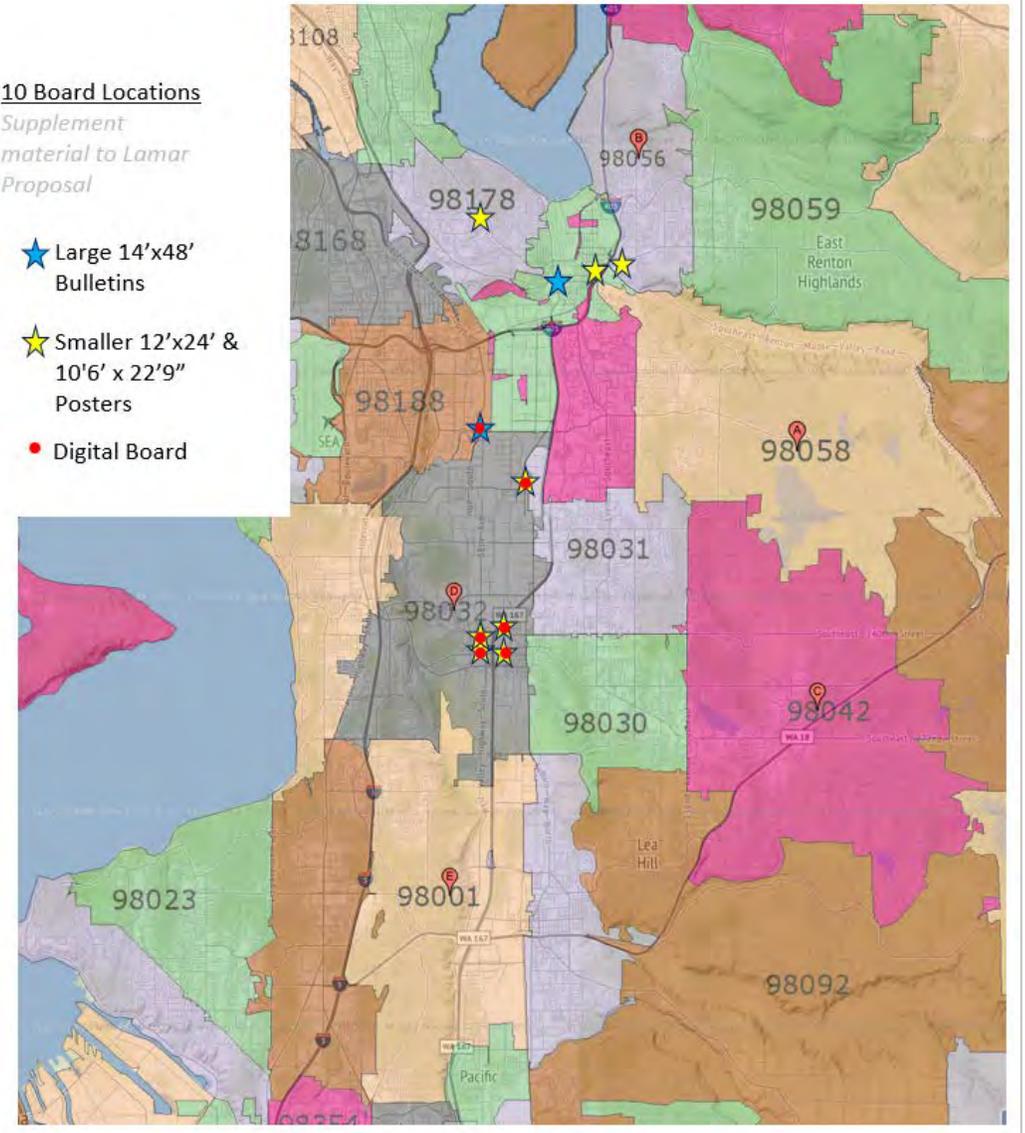
Empty, Clean and Dry:
Social Media Videos

Empty, Clean and Dry:
Social Media Ads

Empty, Clean and Dry: Digital Ads

- **SpotX:** Video ads and banners run in TV shows being accessed digitally (desktop, Smart TVs, Mobile, Roku, etc.)

- **NW Media Partners:** Video ads run as pre-roll before selected video content on desktop, mobile and tablet platforms
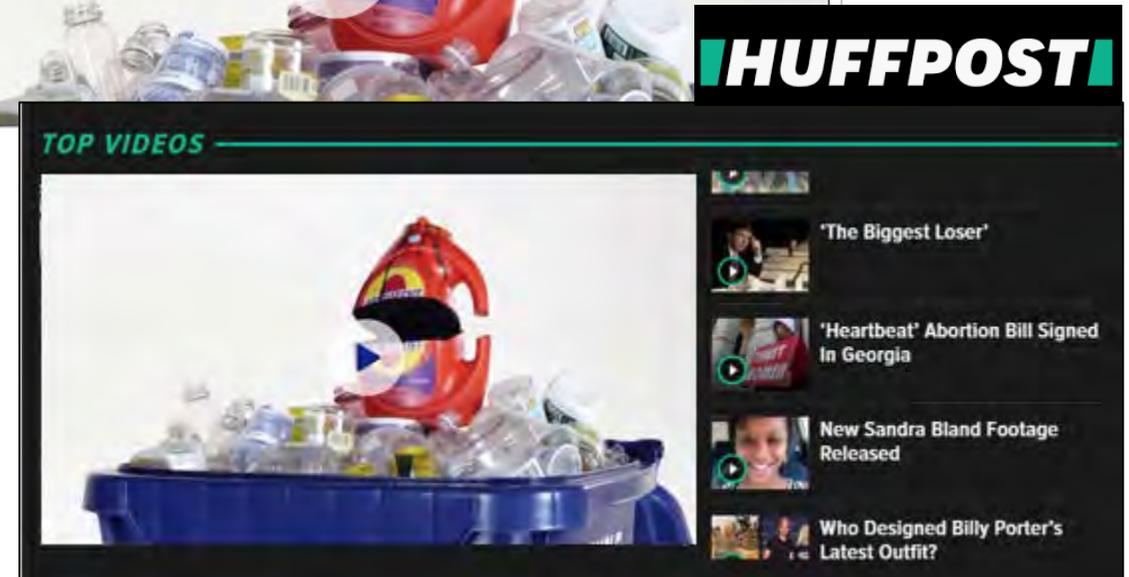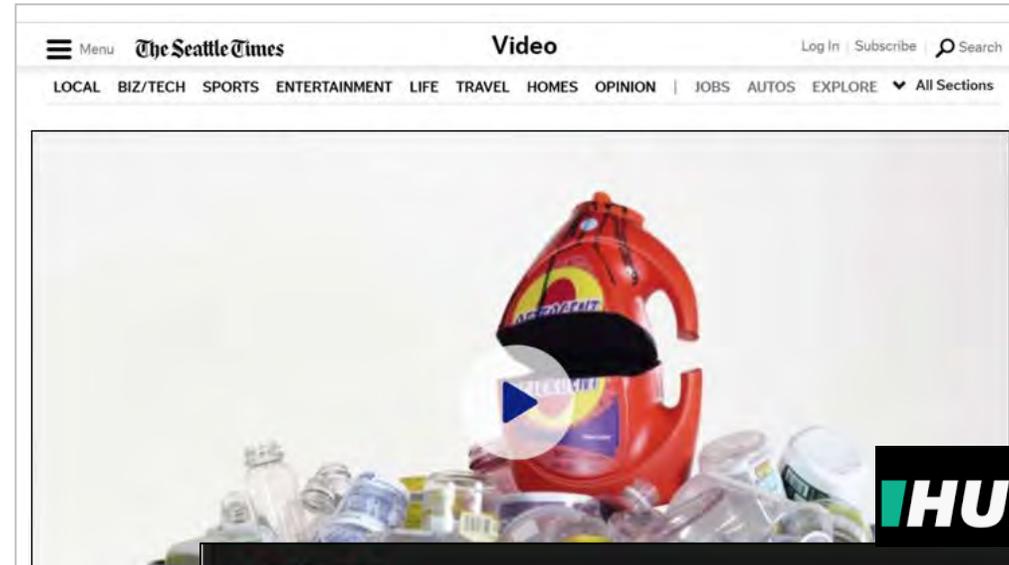
Empty, Clean and Dry:
Traffic Sponsorships Radio Ads

This traffic report is brought to you by King County Solid Waste Division...

Is your plastic bottle headed for the recycling? Or the landfill? Remember, it's not recyclable until it's empty, clean and dry. Recycle Right. It Matters.

This traffic report is brought to you by King County Solid Waste Division...

Did you know just one dirty container can spoil a whole load of recycling? Before it goes in the bin, be sure it's empty, clean and dry. Recycle Right. It Matters.

This traffic report is brought to you by King County Solid Waste Division...

That not-quite-empty yogurt container has landfill written all over it. Before you recycle it, make sure it's empty, clean and dry. Recycle Right. It Matters.

Empty, Clean and Dry: TV Spots

Empty, Clean and Dry: Print Ads

Full-page print ad in Spanish-language ECO-Logica magazine (10,000 circ.)

Empty, Clean and Dry Campaign
10.8 million total impressions

Print:

- Impressions: 10,000

TV:

- Spots: 1,392
- Impressions: 3,014,113

Radio:

- Spots: 784
- Impressions: 4,197,800

Digital:

- **SpotX Digital TV:** 893,353 impressions

- **NW Media Partners Video Ad Network:** 2,209,694 impressions

- **Facebook:** 2,733,381 impressions

Plastic Bag & Wrap Removal: Timeline & Messaging

- In Summer 2019, shifted focus to removing plastic bag and wrap from curbside bins *(based on RRTF recommendation 5B)*

- With a Jan. 1, 2020 launch, took an "earned media" approach and organized media event at Recology's King County MRF on Oct. 17, 2019

- Primary Messages:
  - Plastic bags and wrap disrupt MRF operations
  - There are better recycling options (drop-off)
  - Putting these materials in the garbage is not ideal, but OK

Plastic Bag Removal: Media Event

- Speakers:
  - King County Solid Waste Division Director, Pat McLaughlin
  - Seattle Public Utilities Interim Deputy, Director Jeff Fowler
  - Seattle Public Utilities Solid Waste Planning Director, Susan Fife-Ferris
  - Recology King County Government and Community Relations Manager Quinn Apuzzo
- Subject matter experts on hand to answer additional questions
- Remarks followed by tour of the MRF to see problems firsthand

Plastic Bag Removal Media Event:
Positive Response

- Six major news organizations attended and covered the event

- Following event and coverage, visits to plasticfilmrecycling.org increased by 85 percent

Plastic Bag & Wrap Removal:
Next Steps

- **Oct. – Dec. 2019:** Continue messaging reinforcement to prepare residents – update city recycling guides and websites; update city tool kit; develop social media plan

- **Jan. 2020:** Announce change is in effect – issue second press release; media outreach; organic and promoted social media posts

- **April/May 2020:** Launch marketing campaign – paid media; possible retail/WRAP partnership; expand city tool kit

Visit the Tool Kit for these materials

Branding guidelines
Social media posts with pictures
Videos
Advertisements
Talking points

http://kingcounty.gov/tool-kit

Matt.Manguso@kingcounty.gov |206-477-7914

Questions?

Legislation Updates

Sego Jackson

Seattle Public Utilities

RRTF Action Item

1B - Support legislation that promotes the use of innovative technologies and/or processes to help develop and build local recycling infrastructure and market development.

Passed in 2019:
- HB 1543 70.370 RCW Recycling Development Center
- Jan 2020 first meeting with 14-member advisory board

RRTF Action Item

1C - Support and refine Plastics Packaging Stewardship legislation in the 2019 legislative session.

Passed in 2019:
- HB 1204/SB 5397 introduced (Rep Peterson, Senator Rolfes)
- SB 5397 passed as study bill 70.380 RCW
- Report with recommendations for management of plastic packaging due to legislature Oct 31, 2020

RRTF Action Item

5C - Support "Reusable Bag" legislation *to reduce the number of plastic bags entering the garbage and recycling system.*

2020 Legislation:

- HB 1205/SB 5323 introduced in 2019
- Will be reintroduced in 2020
- Important bill - local preemption section is a problem

2020 Legislation

Other possible bills limiting single-use plastic:

- HB 1632 Single-use Plastics, Rep. Gregerson (local preemption issue)

- SB 5077 Plastic Straws, Sen. Kuderer (local preemption issue)

- Expanded Polystyrene ban, Sen. Das

Battery Stewardship:

- Sponsor is Rep. Mead

Sharps Stewardship:

- Sponsor is Rep. Peterson

2020 Federal Legislation

Lowenthal/Udall Comprehensive Plastic Waste Bill

- Discussion draft released Oct 2019

- Elements:
  - EPR for all packaging
    - Much of approach and text is from HB 1204
    - Includes litter, marine debris and compost clean-up
  - Includes EPR/container deposit system for beverage containers
  - Bans EPS foam and other single-use plastics
  - Establishes national plastic bag ban and fees
  - And more...

Questions?

Measuring Recyclables

Material Recovery Facility Study

Alexander Rist, King County Solid Waste Division

RRTF Action Item

5F - Measure real recycling *by tracking and documenting MRF residuals, measuring contamination in bale breaks, and conducting periodic MRF material characterization studies.*

Measuring Recyclables: Study Scope

- Contracted with Cascadia for MRF evaluation study: Recology, Republic, WM facilities

- Characterized incoming materials, residuals, contamination levels in processed streams and quality of finished products

- Compared with CA & other West Coast results

- Include recommendations about changes in collection and processing that could increase output quality

- Sorting activities are concluded – analysis will be done in 2020

- The last evaluation was done 10 years ago

Input from Haulers & MRFs: Initial Results

- Some cities report very different splits of material characterizations out of the MRF (same operators)

- Another city reported a sudden increase from month to month in the amount of refuse from the MRF operation

- Haulers report different levels of detail in materials collected and processed.

- Differences in reporting create difficulty in understanding how difference in materials, contamination, and processing effect commodity value

Commodity Pricing

Tracking Prices for Recyclables

Alexander Rist, King County Solid Waste Division

RRTF Action Item

5G - Track the market price and conditions of recyclable materials on a monthly basis.

Commodity Prices: Background

- Commodity prices define revenues from recycling activities and influence tons recycled

- Reported commodity prices vary by region and haulers

- Variety of data sources:
  - Public resources like FRED
  - Industry Publications
  - Regional Data
    - Sound Resource Management
    - Hauler Data provided to Cities

- Prices differ depending on location (transportation), time, supply/demand, and quality/contamination

Puget Sound Recycling Market Prices
Baled HDPE Bottles
January 1993 - June 2019
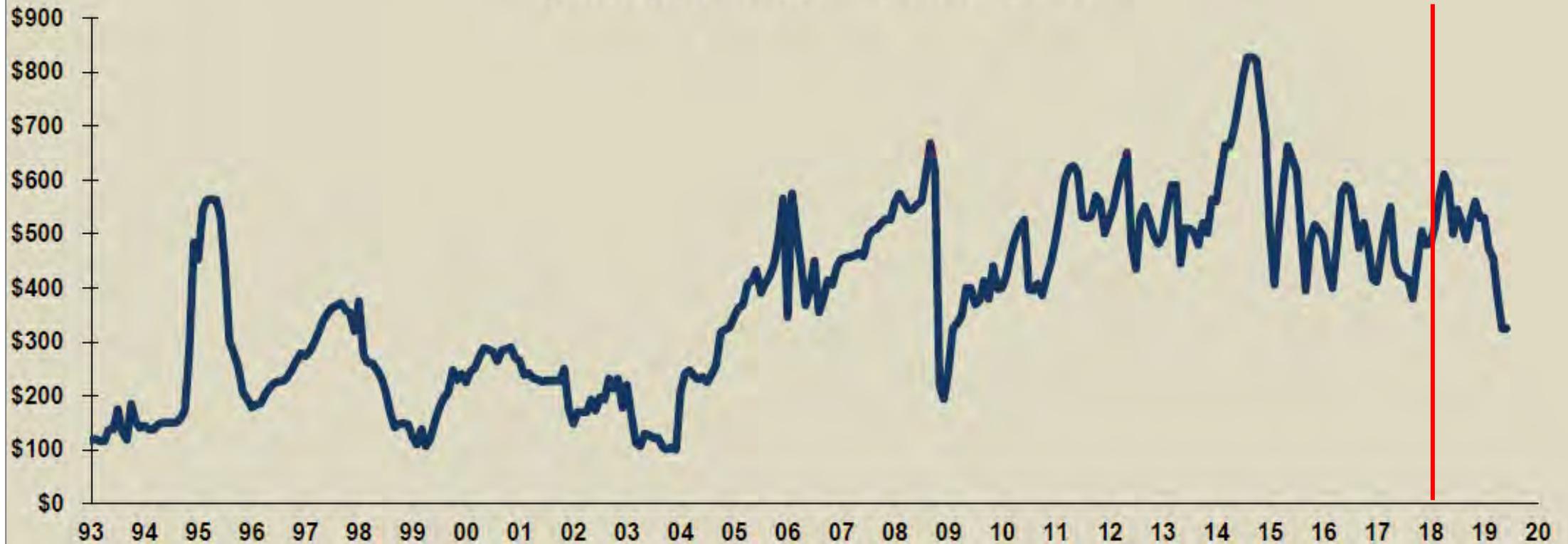
Puget Sound Recycling Market Prices
Old Corrugated Cardboard Boxes
January 1993 - June 2019

Puget Sound Recycling Market Prices
Mixed Paper
February 1988 - June 2019

Average Price for Curbside Recycled Materials
Pacific Northwest, 1985-2019

Contract Language, Surcharges and Waivers

Lindy Oliver Honaker

King County Solid Waste Division

RRTF Action Items

5A - Update City and County Recycling Contracts and Codes *to prioritize domestic sorting and processing and require documentation of the chain of custody from sorting facilities to legitimate end markets.*

5E - Develop a consistent process for evaluating and granting surcharges *on recycling rates and waivers to allow for periodic disposal of recyclable materials.*

Work to Date

Initial research:

- Survey of Existing Contracts
- Wavier Information
- UTC Process and Response
- Exploration of New Contracting Methods

Surveys sent to all ILA cities asking for:

- Information about Survey and Waivers
- Criteria for Decision Making
- Information about Existing Contract Language
- Considerations for Future Contracts

Survey results compiled and analyzed

Recommendations to develop consistent approach

Can Contract and Code Language Promote Responsible Recycling?

- We value proper recycling but have few options for ensuring:
    - True recycling
    - Human and environmental health and safety

- Legal language may provide tools

- Early adopters of new methodology:
    - Mercer Island WA and Recology
    - KC SWD and Recology
    - Palo Alto CA and GreenWaste
    - Recycle BC
    - Basel Action Network

Processing Standards, Waivers, and Surcharges

Contract and Code Language

Contamination Levels

Processing Cost

Commodity Pricing

Rates and Surcharges

Waivers: Overview

Overview:

- Six cities granted waivers
- Typically, waivers were time-limited and most have expired

Best practices for considering waivers:

- Should be considered last resort
- Before granting, cities should ensure that haulers are complying with contract requirements
- Clarify the extent that the waiver is related to commodity value
- Explore alternatives to disposal

Elements to include in a waiver:

- Should be in writing and approved according to contract
- Include duration, type of materials, disposal in county system, notice to county, and require reporting

Surcharges: Overview

Most cities were asked to apply a surcharge; Nearly half granted one.

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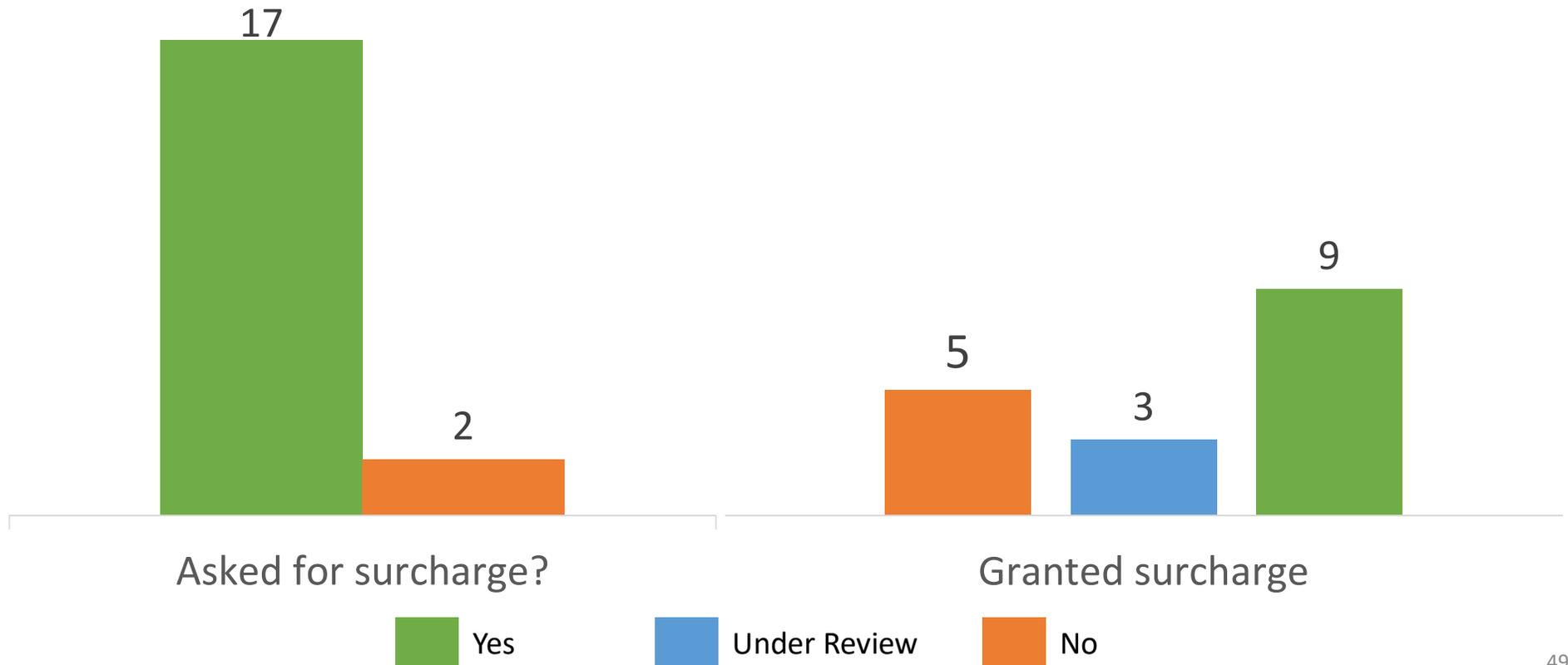
Surcharge Requests: Residential

Residential Surcharge Amounts

Denied: $0.79, $0.85, $1.40, $2.88

Reviewing: $2.91, $2.70, $2.96

Allowed: $0.76, $2.26, $0.96, $0.96, $1.35, $1.35, $1.35, $1.35, $1.73

Questions about status/amount for a particular city should be directed to city staff.

50

Surcharge Requests: Commercial

Commercial and Multifamily Surcharge Amounts

Denied: $0.81, $0.46, $1.35, $1.71

Reviewing: $1.50, $1.42, $0.92, $1.15

Allowed: $2.98, $3.05, $2.25, $2.25, $2.25, $4.50
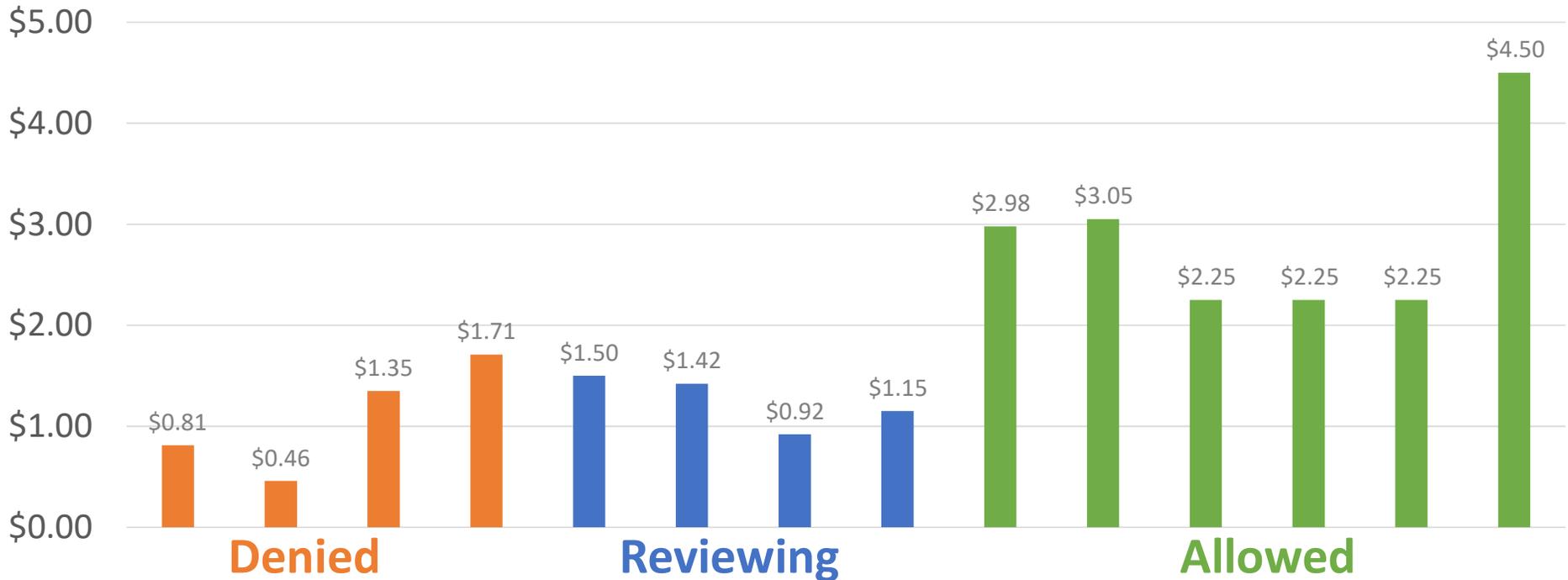
Questions about status/amount for a particular city should be directed to city staff.

Surcharges: Evaluation Criteria Used

- Are charges allowable under the contract?

- Is the hauler complying with other provisions of contract?

- What is the effect of the rate increase on rate payers?

- Are other options available to mitigate the effects of market changes?
  - *Example: Focus on contamination reduction versus increasing rates*

- Is the rate increase warranted from a business perspective?
  - *Example: Overall profitability of company*

- Other considerations:
  - What is the surcharge meant to compensate for – processing costs or commodity pricing?
  - Change in commodity price indexes

Surcharge Evaluation: Applying Market Data

- Use commodity pricing data to compare market conditions at time of contract negotiation to current market conditions

- Compare commodity values from time of contract negotiation to timeframe of surcharge request

- Reported values should be weighted to reflect composition of recyclables

Options for Managing Risk

Hauler assumes all risk/ No adjustment to contract	Hauler assumes risk/ Adjustment may be permitted	City and Hauler share risk/ Price is adjusted during contract	City pays for processing/ City retains revenue
Pros: • Predictable pricing • Minimal administration	Pros: • Mostly predictable pricing • Minimal administration • City retains control of adjustment process	Pros: • Adjustable pricing will buffer changes in commodity pricing • Risk is shared between city and hauler	Pros: • Clarity of costs and revenue • Ratepayers could benefit
Cons: • Haulers will have less incentive to invest in processing • Current market conditions are at low point	Cons: • Adjustments will be only upward • Uncertainty in approval process will be priced into rate • May result in uneven application across region	Cons: • Rates will be more variable • Requires more administration • Methodology will require more negotiation	Cons: • More volatility to city/ratepayers • More administration for city • More oversight required
Recommendations: • Enforce processing standards • Consider current market conditions during procurement	Recommendations: • Understand regional market • Consider coordinating response with other cities that a hauler serves	Recommendations: • Develop model methodology for regional use • Use common indexing standards	Recommendations: • Use indexed pricing for material value

Recommendations for Consideration

- Surcharge should be evaluated in accordance with contract

- Compliance with other contract provisions should be assessed

- Distinguish between commodity price related increases and processing cost increases

- If granted, cities should define deliverables required in exchange for surcharge

- Cities should consider regional coordination

When procuring new contracts, considerations include:
- What level of risk is the city willing to assume?
- How will the contract handle future market fluctuations?
- What requirements are placed on the hauler regarding contamination reduction and processing standards? How will these be enforced?

City Engagement: Next Steps

Survey cities to gauge interest in new approaches, including:

- Develop **model contract framework** for market indexing and processing/contamination standards and tracking methods
- Compile examples of **code language** regarding recycling
- Discuss **options** for tracking and verifying real recycling
- **Provide indexing tool** to allow for market comparison of calculations

- **Establish and facilitate** a "clearinghouse" for data such as:
  - Recycling Contracts
  - Model Contract Language
  - Surcharge/Waiver Information
  - Hauler Data
  - Market prices, Indices, etc.

Questions?

Market Development

Andy Smith & Emily Coleman

King County Solid Waste Division

RRTF Action Items

1B - *Support legislation that promotes* *the use of innovative technologies and/or processes to help develop and build local recycling infrastructure and market development.*

4A – *Establish recycled-content legislation* *that requires that certain products be made with a certain amount of recycled material.*

RRTF Action Items

4B – Establish or update procurement ordinances for products made with post-consumer recycled materials.

4C – Work with the Association of Plastic Recycler's (APR) Demand Champions program.

4D – Explore other procurement opportunities similar to Demand Champions.

Washington State Recycling Development Center: Recommendations

- Develop a **regional partnership** for recycled materials

- Create a **business accelerator** program

- **Research strategies** to attract manufacturing facilities

- Develop public databases to better **connect industry stakeholders**

- **Research infrastructure needs** to determine current gaps

WASHINGTON STATE'S

RECYCLING DEVELOPMENT CENTER

Developing Secondary Markets for Recycled Materials in the Pacific Northwest

Washington State Recycling Development Center: Current Status

- Center Coordinator hired; other hiring in process

- Partnership between WA Dept. of Ecology and Commerce

- Convening the advisory board in early 2020

- Will finalize work plan after advisory board meets
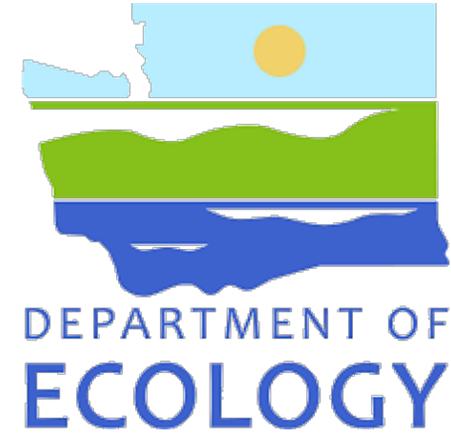
Creating the right investment conditions

- The Recycled Material Standard (RMS) is a chain of custody based standard that certifies recycled material in products and packaging

- Provide a market-based tool to drive progress in the industry

- Developing a universal framework and beginning with plastics

- King County is on the advisory board setting up the RMS

Refocusing Market Development in King County

- Shifting away from hard-to-recycle materials

- Concentrating on markets for recyclable and reusable materials to achieve zero waste of resources with economic value

- Paper and Plastics (#3-7 & film) are priorities for 2020
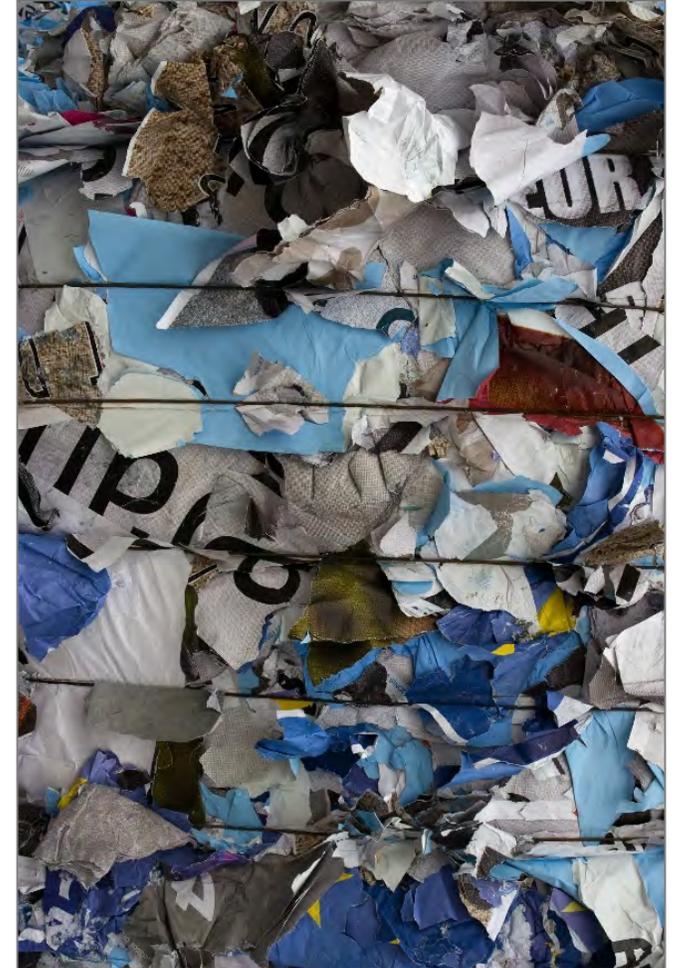
Market Development: Priorities for 2020

- Execute a **market assessment for paper**

- **Engage** with **Sustainable Packaging Coalition** and **How2Recycle** programs regarding packaging design and recyclability

- Support efforts to **locate new innovative infrastructure** in the region

- Work with APR's Demand Champions program and other similar programs to **increase demand for recycled materials**

- Support an **expanded regional take back program** for plastic film

Questions?

Plastic Bag/Film Markets & Collection Infrastructure

Lisa Sepanski

King County Solid Waste Division

RRTF Action Item

2B - Advocate for the expansion of the Wrap Recycling Action Program (WRAP) to establish an effective statewide program to capture plastic bags/film.

Phase I: April – December 2019

Partners: American Chemistry Council, Association of Plastics Recyclers, The Recycling Partnership, Sustainable Packaging Coalition, Seattle Public Utilities

- Refresh the existing retailer take back program - Wrap Recycling Action Program (WRAP)
  - 125 stores in Seattle/King County
- Contact major grocery chain participants: Albertsons/Safeway, Kroger/Fred Meyer/QFC
  - Reaffirm participation with Trex as the end market
  - Verify **plasticfilmrecycling.org** listings
  - Provide new signage and bins at front of store if needed
  - Employee awareness of program
- Establish Baseline Evaluation Metrics

Phase II: January – December 2020

- Recruit Independent grocery/retail stores

- Develop turnkey recycling program
  - Logistics for collection, transportation, consolidation
  - New end markets (Trex is at capacity)

- Coordinate messaging between WRAP and Recycle Right Consortium

- Store audits/evaluation
  - Work with MRFs to collect data on plastic bags/film volumes over time

Questions?

Lunch!

Group Session: Statewide Stewardship/EPR Policy and Model

Lisa Sepanski (KC SWD), Sego Jackson (SPU) and

McKenna Morrigan (Cascadia Consulting Group)

Group Session: Purpose & Outcome

Session Purpose: Present keys aspects of a stewardship/extended producer responsibility (EPR) policy to begin gathering input and garnering support for EPR in Washington state.

Desired Outcomes: Attendees have a concrete understanding of EPR and how it could work in Washington state; they are inspired and motivated to keep the conversation going and understand their potential role in an EPR system.

Session Activity: House Rules

- Opportunities for clarifying questions throughout

- Hold non-clarifying questions until session activity

- Note down non-clarifying questions and recommendations on sticky notes:
  - 1 per sticky
  - Include name and organization

- Sticky notes will be used during activity

- Sign up sheet for 1:1's

RRTF Action Item & Objective

1A – Develop a comprehensive, statewide stewardship policy approach that helps achieve a funded, robust, and harmonized curbside recycling system throughout Washington State.

Responsible Recycling Framework

Utilized the framework principles as parameters for the policy/model:

Quality vs. Quantity

Regional Policy Alignment

Harmonized Messaging

Domestic Sorting & Processing

Demand for Recycled Feedstock
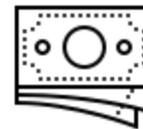
Responsible Recycling Requires Additional Investment

Measure Real Recycling

Terminology

- **Extended Producer Responsibility (EPR) & Product Stewardship** – The policy requiring producers to reduce the environmental impact of their products and packaging, including the funding and coordination of the recycling system in a given area.

- **PPP** – packaging and paper products.

- **Producer** – the Brand Owner that makes the packaging and paper products – includes recyclable and non-recyclable packaging and paper.

- **Producer Responsibility Organization (PRO)** – the non-profit organization that works on behalf of the producers to fulfill the requirements of the law.

Terminology

- **Residential Recycling** – includes both single/multifamily curbside service and drop-off collection for materials that don't work well in the recycling bin.

- **Collection** – the system for picking up residential recyclable materials from single/multifamily curbside bins or drop-off locations.

- **Post-Collection** – the system for sorting, processing, and marketing the recyclable commodities from the residential recycling system.

- **Funding Obligation** – all producers of PPP, including non-recyclable PPP, are required to pay into a system to provide residential recycling.

EPR System

- Design for recycling/content
- Producer funded
- Producer Responsibility Org. (PRO)
- Harmonized materials list
- Consistent service standards
- Material-specific recycling rates
- Responsible recycling & end markets

Accountability & enforcement

MANUFACTURE — PURCHASE — COLLECTION — POST-COLLECTION

Questions about EPR?

Work Process: Creating a Statewide EPR Policy and Model

Two parts to the Study:

1. **EPR Policy** – laws/regulations that are needed to implement an EPR system in Washington

2. **Implementation Models** – possible scenarios for how EPR could be executed in Washington with minimal stranded assets

Hired Consultant Team:

- C+C, Cascadia Consulting
  - Full Circle Environmental, Bell & Associates
- Foster Garvey, PC
- Maria Kelleher and Geoff Love

Work Process: Existing Regulations

Step 1: Existing regulations

- **Recycling Goals / Service Standards** (RCW 70.95)
  - *Recycling standards set by each county in SWMP*
  - *State has ultimate authority to set standards to assure effective programs statewide*
- **WUTC/County/City Roles** (RCW 81.77)
  - *WUTC-permitted collectors provide service as required in SWMP unless provided by city/contracted collector*
  - *WUTC is responsible for monitoring compliance*
- **County Authority** (RCW 36.58.040)
  - *Counties have "complete authority to manage, regulate, and fix the price of the residential recycling service"*

Work Process: Infrastructure

Step 2: Existing Infrastructure

- Collection
- Post-collection

(processing & markets)
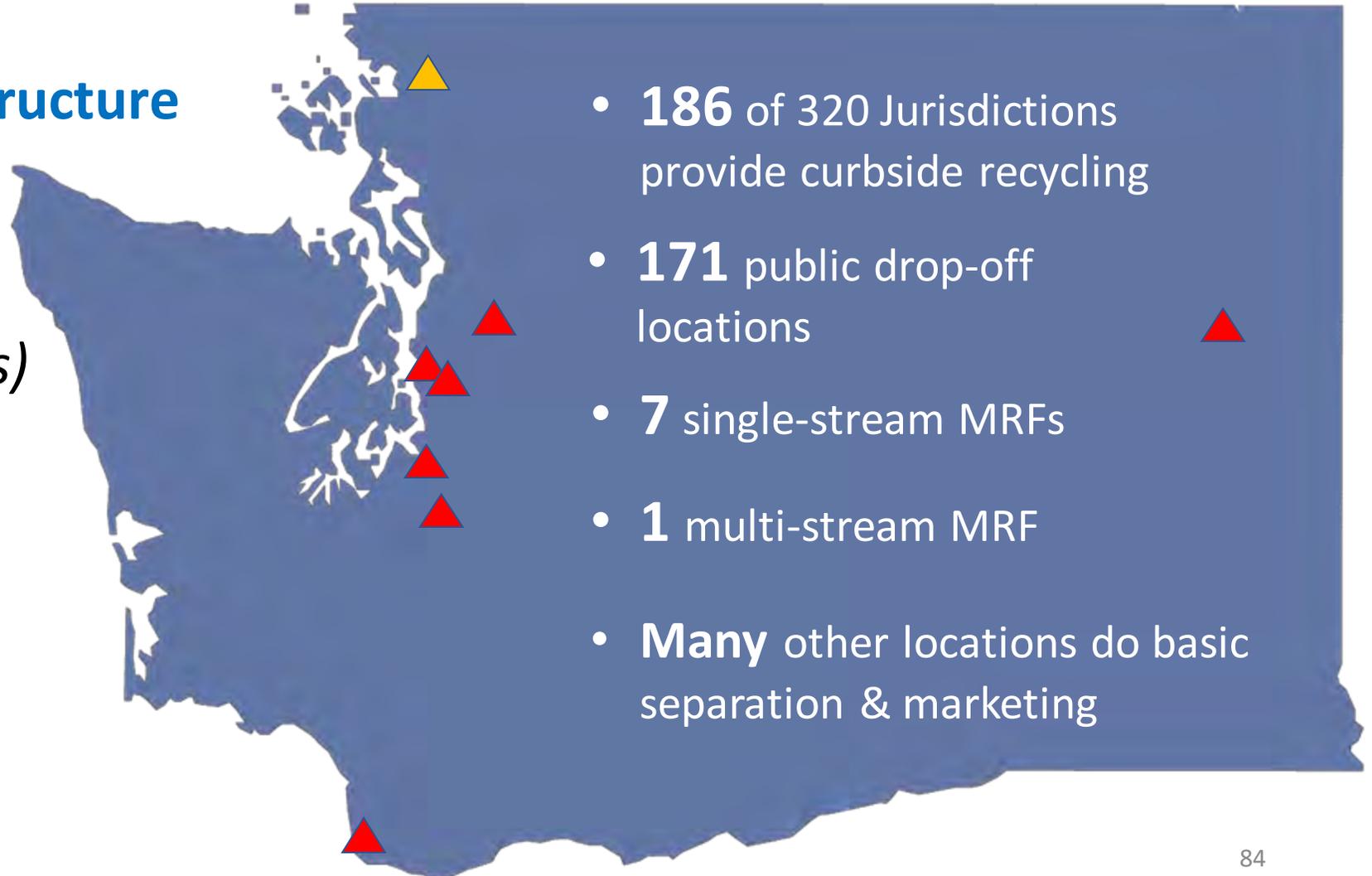
- **186** of 320 Jurisdictions provide curbside recycling
- **171** public drop-off locations
- **7** single-stream MRFs
- **1** multi-stream MRF
- **Many** other locations do basic separation & marketing

Work Process: Create Policy and Implementation Models

Step 3: EPR Policy Framework

- What policy changes are required to create an EPR System in Washington?

Step 4: Implementation Model/ Scenarios

- How have successful EPR programs in other parts of the world been implemented?
- Develop scenarios for Washington State

Policy Framework: Overview

Require producers to fund the collection, processing & marketing of residential recyclables.

- *100% producer funding and all commodity risk is borne by producers.*

Authorize producers to form PRO(s) to jointly manage responsibilities.

- *Develop harmonized, efficient statewide system utilizing economies of scale.*

Require harmonized list of materials to be collected statewide.

- *Expansive list, includes all rigid plastics, film/flexible packaging, cartons, etc.*

Establish consistent service standards for convenient collection/drop off.

- *Recycling service for all residents with curbside garbage collection, convenient drop-off access for problematic materials.*

Policy Framework: Overview

Require producers to achieve material-specific recycling rates.

- *Recycling is amount sent to verifiable end markets, not amount collected*
- *Separate rates for rigid plastic, film plastic, paper, glass, aluminum, steel*

Require that materials be responsibly recycled, with end market documentation.

- *Recycling claims must be backed up with verifiable documentation*

Require producers to use recycled content in their packaging materials.

- *Recycled content standards by material, PRO may meet collectively*

Establish mechanism for effective oversight and enforcement.

- *Independent regulatory agency funded by producer registration fees*

Model/Scenarios

Design for recycling/content

Producer funded

Producer Responsibility Org. (PRO)

Responsible recycling & end markets

Accountability & enforcement

Harmonized materials list

Material-specific recycling rates

Consistent service standards

MANUFACTURE

PURCHASE

COLLECTION

POST-COLLECTION

Implementation Model: PRO

Producer funded

PURCHASE

PRO

Accountability & Enforcement

Harmonized materials list

Consistent service standards

Material-specific recycling rates

recycling/content

ecycling & kets

Producer responsibility spans full product management lifecycle, 100% of system costs – starts with what is sold into the state.

- *All* packaging producers are obligated to pay, not just producers of recyclable packaging and printed paper.

- Producers form non-profit organization (PRO) to carry out requirements of law, meet performance standards.

- PRO develops plan for managing reverse supply chain through extensive consultations, collaboration with recycling system stakeholders.

- PRO is accountable for contracting for services, reporting on performance, has incentive to use eco-modulated fees to influence upstream design.

Implementation Model: Collection
Jurisdictions with contracted/municipal service

Cities can choose how to interface with the PRO:

Scenario A: Operate as contracted collector for EPR system

Scenario B: Transfer recycling service responsibility to PRO

Scenario C: Opt out of PRO funding, maintain status quo

Implementation Model: Collection
Jurisdictions with contracted/municipal service

Scenario A: Operate as Contracted Collector for PRO

- Keep existing recycling contract or municipal service to collect recyclables, but align service with statewide standards to minimize contamination.

- Receive payment from PRO to offset collection and education costs, no longer vulnerable to commodity market fluctuations.

- Can return payment to ratepayers via rebate or use to expand/subsidize other services (e.g. organics collection).

Majority of jurisdictions in BC operate under this option. Maximizes local involvement alongside benefits of harmonization.

Implementation Model: Collection
Jurisdictions with contracted/municipal service

- Producer funded
- PRO
- Accountability & enforcement
- Material-specific recycling rates
- Harmonized materials list
- Consistent service standards
- COLLECTION

Scenario B: Transfer Recycling Service to PRO

- Jurisdiction transitions recycling collection to PRO.
- PRO selects collector via competitive process.
- PRO responsible for all transition costs, may purchase assets (e.g. carts) from jurisdiction.
- PRO responsible for education and administration related to residential recycling.
- Jurisdiction no longer charges residents for recycling, but maintains garbage/organics programs.

Chosen by BC jurisdictions with sunsetting contracts or facing significant capital investments as service providers.

Implementation Model: Collection
Jurisdictions with contracted/municipal service

Producer funded

PRO

Accountability & enforcement

COLLECTION

Harmonized materials list

Consistent service standards

terial-specific cycling rates

Scenario C: **Opt Out of Producer-Funded System**

- Jurisdiction continues to provide collection with existing service contracts via ratepayer financing.
- No financial support from producers.
- Must provide service in accordance with new statewide recycling service standards.

Only one city and a few small townships operate under this option in BC.

Implementation Model: Collection
Jurisdictions with WUTC regulated service

Producer funded

PRO

Accountability & enforcement

COLLECTION

Harmonized materials list

Consistent service standards

Material-specific recycling rates

Scenario A-WUTC: WUTC retains oversight of recycling collectors in WUTC-regulated areas

- G-certificate collection companies retain residential recycling collection monopoly in WUTC-regulated areas.

- WUTC continues to review, approve recycling rates.

- PRO reimburses collectors at WUTC-approved rates.

- G-certificate collection companies required to provide recycling collection to all residential garbage customers, held to new statewide recycling service standards.

Implementation Model: Collection
Jurisdictions with WUTC regulated service

Producer funded

PRO

Accountability & enforcement

COLLECTION

Harmonized materials list

Material-specific recycling rates

Consistent service standards

Scenario B-WUTC: **State law allows PRO to contract for recycling collection in WUTC-regulated areas**

- PRO contracts for residential recycling collection service in WUTC areas, pays contracted collectors directly.

- Recycling collector could be same as g-certificate holder or different.

- Service aligned with statewide recycling service standards.

- WUTC no longer reviews and approves recycling fees.

Under either scenario, cities/counties could still opt to contract for collection services in WUTC areas and receive funding for education, administration.

Implementation Model: Collection
Recycling Collectors

Recycling collectors get paid to collect recycling:

- Under contracts with jurisdictions
- By PRO directly via contracts or WUTC-rate reimbursement

- Producers pay in either case:
  - Stable funding for collection.
  - Not subject to fluctuating markets, decreasing commodity values.

- Garbage and recycling pricing are separate in future contracts.

- Collection and processing are split into separate contracts.

Most service providers remained the same through BC transition.

Producer funded

PRO

Accountability & enforcement

COLLECTION

Harmonized materials list

Material-specific recycling rates

Consistent service standards

Questions about Collection?

Implementation Model: Post-Collection
Coordinated Statewide Processing Network

PRO responsible for securing a statewide processing network:

- System would be developed in collaboration with existing processors – not predetermined.

- PRO investments likely necessary to achieve recycling performance standards.

- Processors get paid to process residential recyclables, not dependent on commodity values.

- Recyclables from commercial entities are not included.

Producer funded

Design for recycling/recycled content

Accountability & enforcement

POST-COLLECTION

Responsible recycling & end markets

Consistent service standards

Material-specific recycling rates

Post-Collection: Green by Nature
## *Coordinated Processing Network – BC Example*

**A partnership between three pioneers in
materials recovery and recycling in North America:**

Implementation Model: Post-Collection
Coordinated Processing Network – BC Example

BRITISH COLUMBIA

🟡 **32** Receiving, Consolidation & Transfer Facilities (RCTs)

⭐ **11** Pre-conditioning Facilities (PCFs)

⭐ **1** Container Recovery Facility (CRF)

32 Receiving, Consolidation and Transfer Facilities (RCTs)

Baled Fibers → Market

Mixed Containers → CRF

11 Pre-Conditioning Facilities (PCFs)
Sorts fiber from containers

Paper → Market

Containers → CRF

Glass, Residuals → Market, Disposal
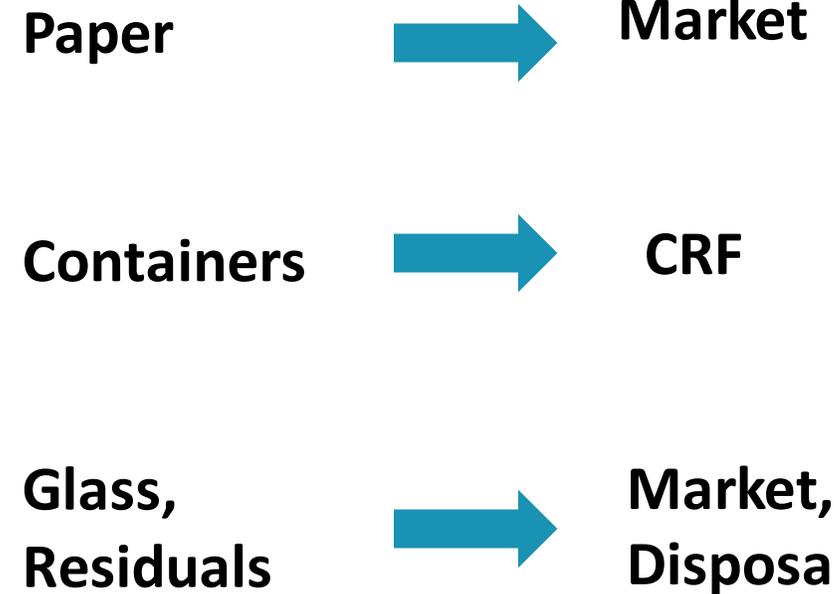
1 Container Recovery Facility (CRF)

> **10 optical sorters** to separate plastics by resin type.

- Packaging changes = CRF changes. More than **$20 million in new equipment**, 30,000 TPY

- PET clear/colored
- HDPE natural/colored
- PP
- PVC
- Plastic Film
- Other Plastics
- Aseptic/Polycoat
- Steel
- Aluminum

Recycled plastic, in the form of **pellets** and **flakes**, are used by the plastic industry for various applications.

Merlin Plastics

Clear PET Flakes

Colored HDPE pellets
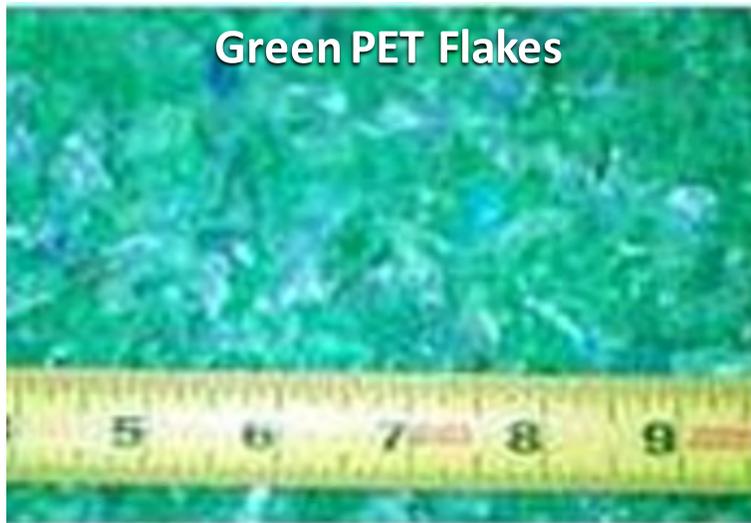
Green PET Flakes
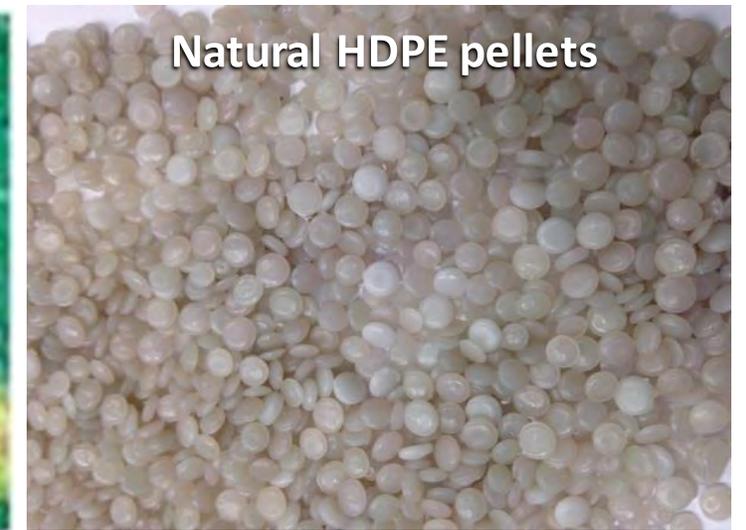
Natural HDPE pellets

Implementation Model: Post-Collection
Material marketing and recycling

Producers bear commodity risk:

- Material deemed recyclable in state law must be collected and recycled - cannot stop recycling a material because of low commodity value.

- Motivated to invest in viable end markets to achieve material-specific recycling rates.

- Processors may be involved in marketing materials but revenues returned to producers via contract agreements.

- Chain of custody documentation required via vetted, pre-approved end markets.

- Recycling rate calculation based on net tons of recycled materials delivered to commodity buyers/end markets.

Producer funded

Design for recycling/recycled content

Accountability & enforcement

POST-COLLECTION

Responsible recycling & end markets

Consistent service standards

Material-specific recycling rates

Implementation Model: Post-Collection
Recycling Outcomes – BC Example

BEFORE (2013)	AFTER (2018)
• 50-57% recovery rate for PPP • Difficult/expensive to track	• 78.1% PPP recovery rate (tons collected) • 87% of material collected is recycled
• Separate and uncoordinated recycling programs, facilities, and MRFs	• Harmonized collection/post-collection • Economies of scale • Investments in local infrastructure • New materials added to collection, marketed • No materials dropped, no changes to service due to volatile commodity markets
• Most recyclable paper and plastic materials were exported in mixed bales	• Plastics sorted by resin type at central Container Recovery Facility (CRF) • 99% of material recycled in North America

Questions about Post-Collection?

Implementation Model: Recycled Content
Closing the loop through use of recycled materials

Producers required to use recycled content in their products and packaging:

- **New element** of an EPR policy package that will create demand for recycled materials.
  - Much easier to track/enforce under an EPR system.
  - Coordination can be integrated into PRO and/or enforcement entity role.
- Already being used to drive circular economy in packaging in CA and OR; will be implemented soon in Europe.

Recycled content required

Producer funded

MANUFACTURE

Accountability & enforcement

Responsible recycling & end markets

Material-specific recycling rates

Consiste sta

Implementation Model: Accountability

Strong performance standards are essential for achieving responsible recycling through EPR policy:

- Convenient residential collection service
- Regular education and outreach to *all* residents
- Material-specific recycling rates
- Material-specific recycled content requirements

Producer funded

PRO

Harmonized materials list

Consistent service standards

Material-specific recycling rates

Accountability & enforcement

g/recycled

ing &

Implementation Model: Accountability
BC Example

Material-specific net recovery rates now in effect in BC.

Reporting on GHG performance will begin in 2020.

Material Category	2017 Recovery Rate	Target Recovery Rate	Year to Achieve Target
Paper	87%	90%	2020
Plastic	41%	50%	2025
Rigid Plastic	50%	55%	2022
		60%	2025
Flexible Plastic	20%	22%	2022
		25%	2025
Metal	66%	67%	2020
Glass	72%	75%	2020

Implementation Model: Enforcement

Effective enforcement requires consistent, dedicated resources, sufficient authority, and independence.

- Independent enforcement agency model:
  - Ontario "RPRA" enforcement agency includes a "registry" that all producers must join.
  - Self-funded by producers through registration fees.
  - Dedicated resources, staff and skills-based board track compliance with performance standards, verify claims, investigate concerns.
  - Able to issue meaningful penalties.

Producer funded

PRO

Harmonized materials list

Accountability & enforcement

Consistent service standards

Material-specific recycling rates

/recycled

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Questions about Accountability & Enforcement?

In Review: The Benefits of EPR

- Establishes stable, sustainable financing source for the recycling system.
- Provides more equitable recycling service, education for state residents.
- Results in reduced contamination while increasing material recycling (quality and quantity).
- Facilitates investment in additional infrastructure, jobs, and businesses that increase resource conservation and support circular economy.
- Creates a feedback loop for producers, improves recyclability of packaging.
- Creates demand for recycled content and supports market development.
- Provides transparency and assurance that collected materials are responsibly recycled.

Session Activity

Julie Colehour, C+C

Session Activity: House Rules

- Note down non-clarifying questions and recommendations on sticky notes:
  - 1 per sticky
  - Include name and organization
- Sticky notes will be used during activity
- Sign up sheet for 1:1's

Wrap Up & Next Steps

- Sign-up sheet for 1:1

- Further discussion at individual advisory meetings

- Reporting out to SWAC & advisory sessions in 2020

- Final Study Report available January 2020