

An aerial photograph of Seattle, Washington, showing the city skyline and waterfront. The city is densely packed with buildings, and the waterfront is visible with a large ship and a bridge. The sky is blue, and the water is a deep blue. The text is overlaid on the top left of the image.

Intro to EPR/Product Stewardship

SWAC Meeting, May 1, 2019

Sego Jackson

Strategic Advisor

Waste Prevention and Product Stewardship

Seattle
 Public
Utilities

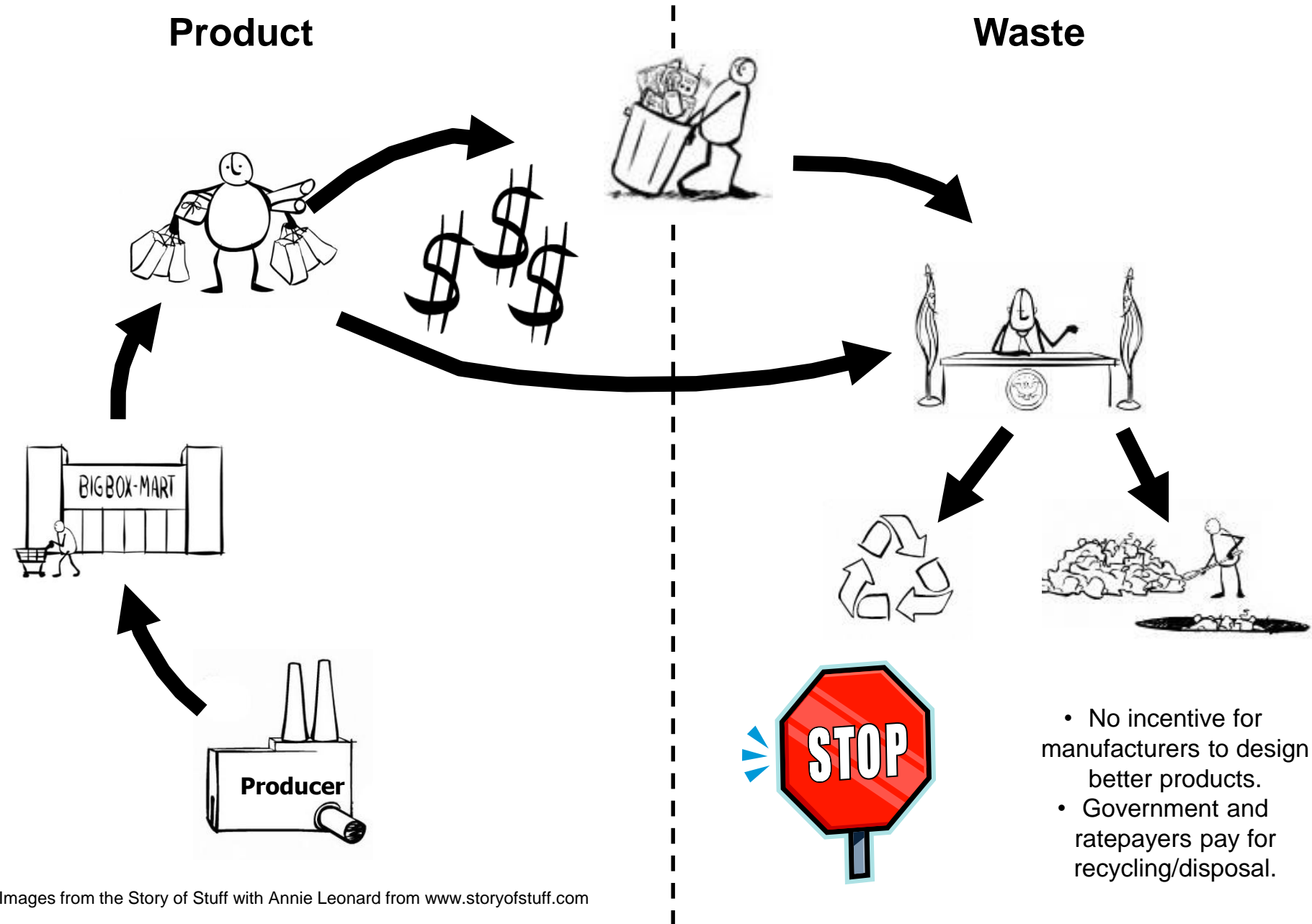
Extended Producer Responsibility Product Stewardship

EPR is an environmental management strategy

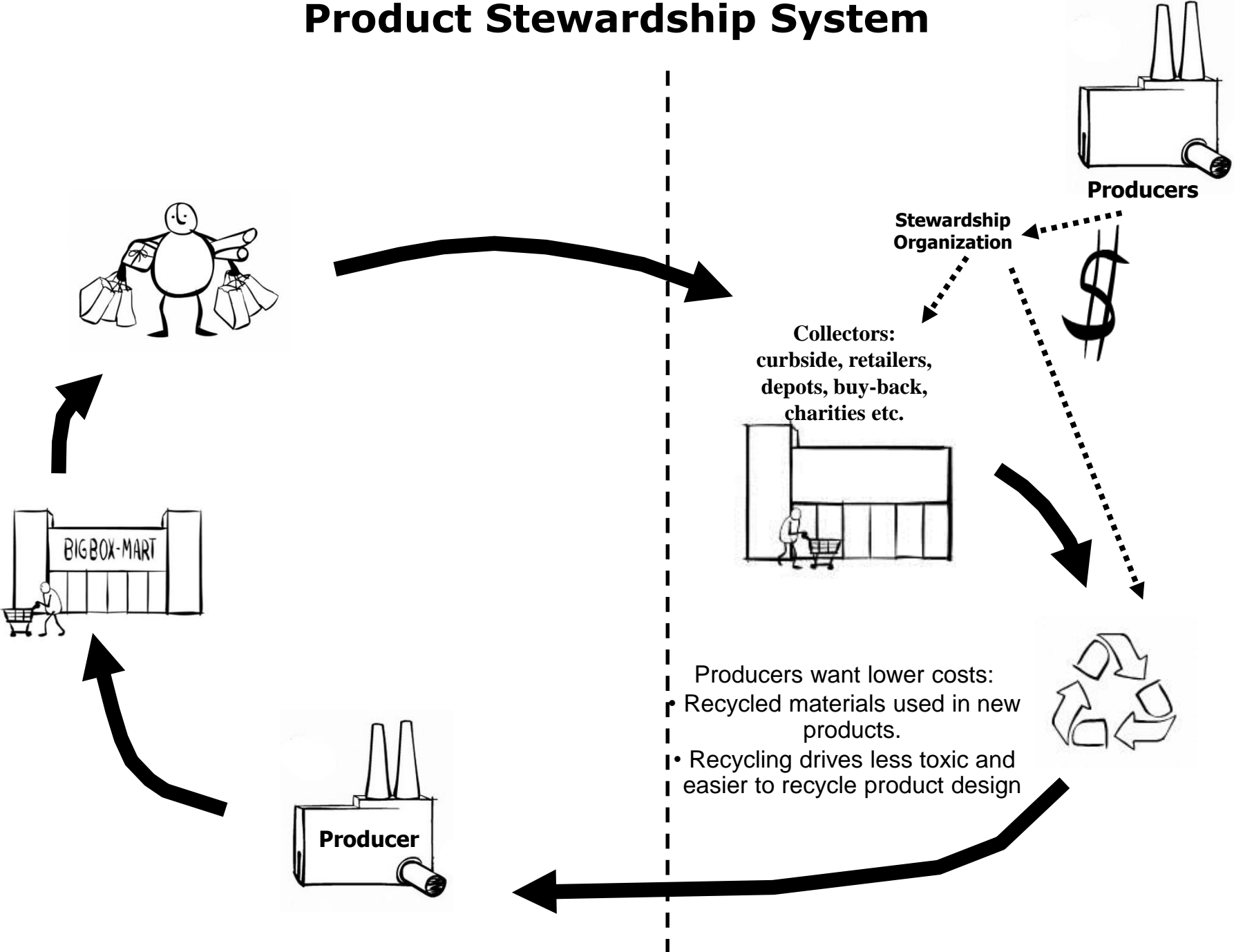
- Manufacturers take responsibility for their products at the end-of-life
- Programs involve recycling and/or safe disposal of unwanted products
- Costs are shifted from local governments to the users and producers of the product
- Cohesive private sector systems are create for effectively providing, accessing, and promoting end-of-life management systems

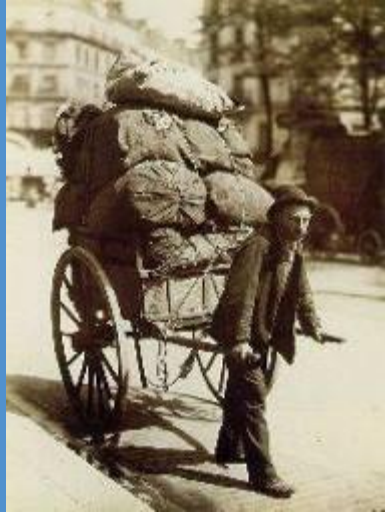


Typical Waste Management System



Product Stewardship System



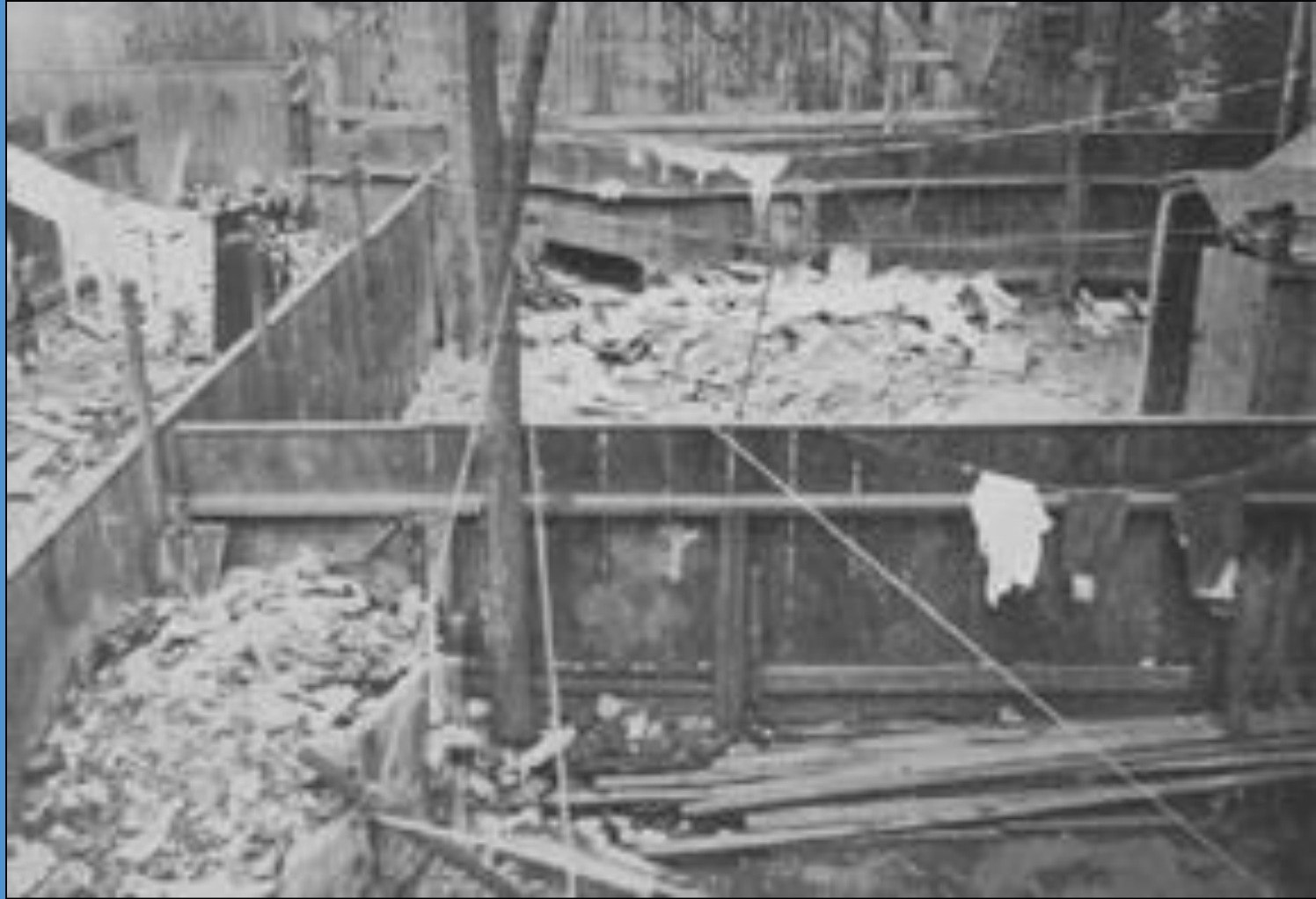


A Simpler Time

before 1900 ...



waste
management
was a private
sector activity

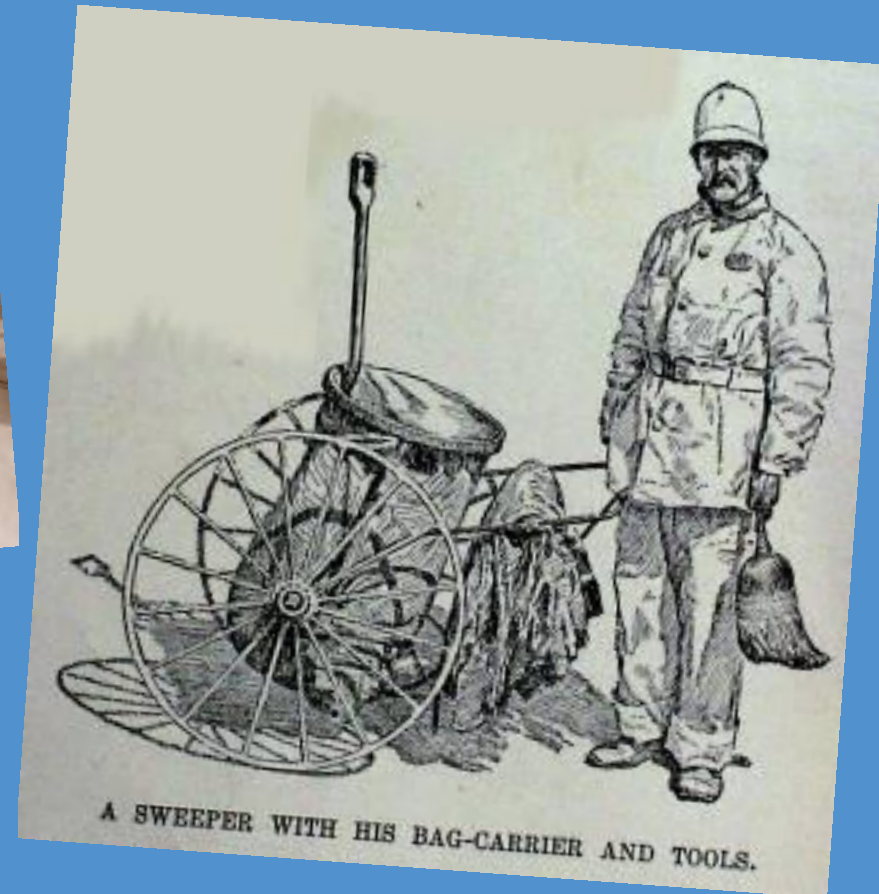








citizens demanded action ...



.... local government responded



Waste was different, simpler...

CARD OF INSTRUCTION FOR HOUSEHOLDERS

*Put into **Ash** Receptacles*

Ashes, Sawdust,
Floor and
Street Sweepings,
Broken Glass,
Broken Crockery,
*Oyster and Clam
Shells,
Tin Cans.

*Put into **Garbage** Receptacles*

Kitchen or
Table Waste,
Vegetables,
Meats,
Fish,
Bones,
Fat.

*Put into **Rubbish** Bundles*

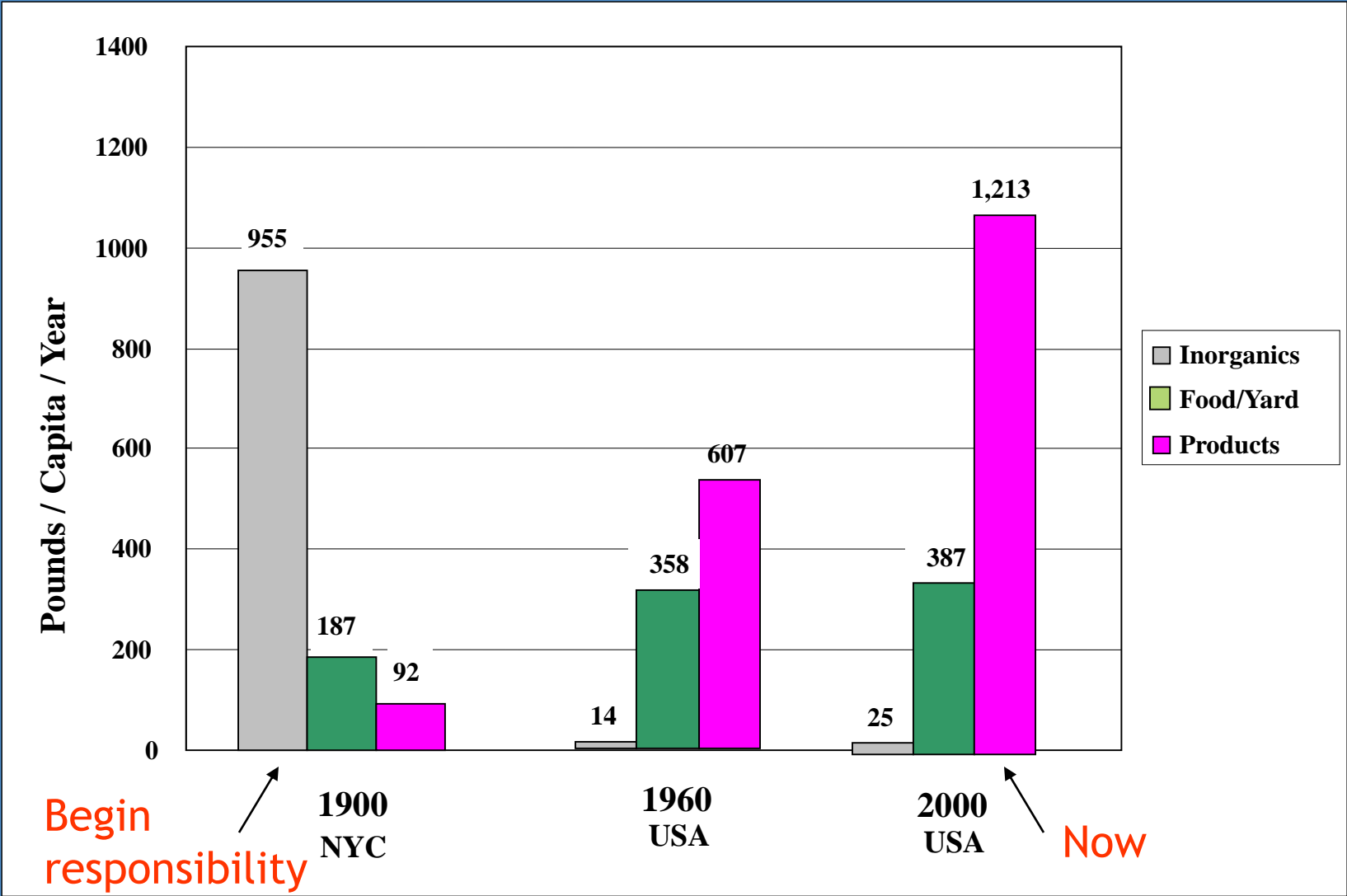
Bottles, Paper,
Pasteboard, etc.
Rags, Mattresses,
Old Clothes, Old Shoes,
Leather and Leather Scrap,
Carpets, Tobacco Stems,
Straw and Excelsior,
(from households only)

The Sanitary Code requires householders and occupants to provide separate receptacles for ashes and garbage and forbids mixing these in the same receptacle.

This law will be strictly enforced.

New York City - 1905

But waste changed ...



Waste “Generated”



Existing Programs in Washington State



COMPUTERS & TVs

- Launch: January 1, 2009.
- More than 350 collection sites.
- Over 363 million lbs. recycled.
- More than 125 private-sector jobs created.
- By 2018, \$14 Million for e-waste from Seattle



MERCURY-CONTAINING LIGHTS

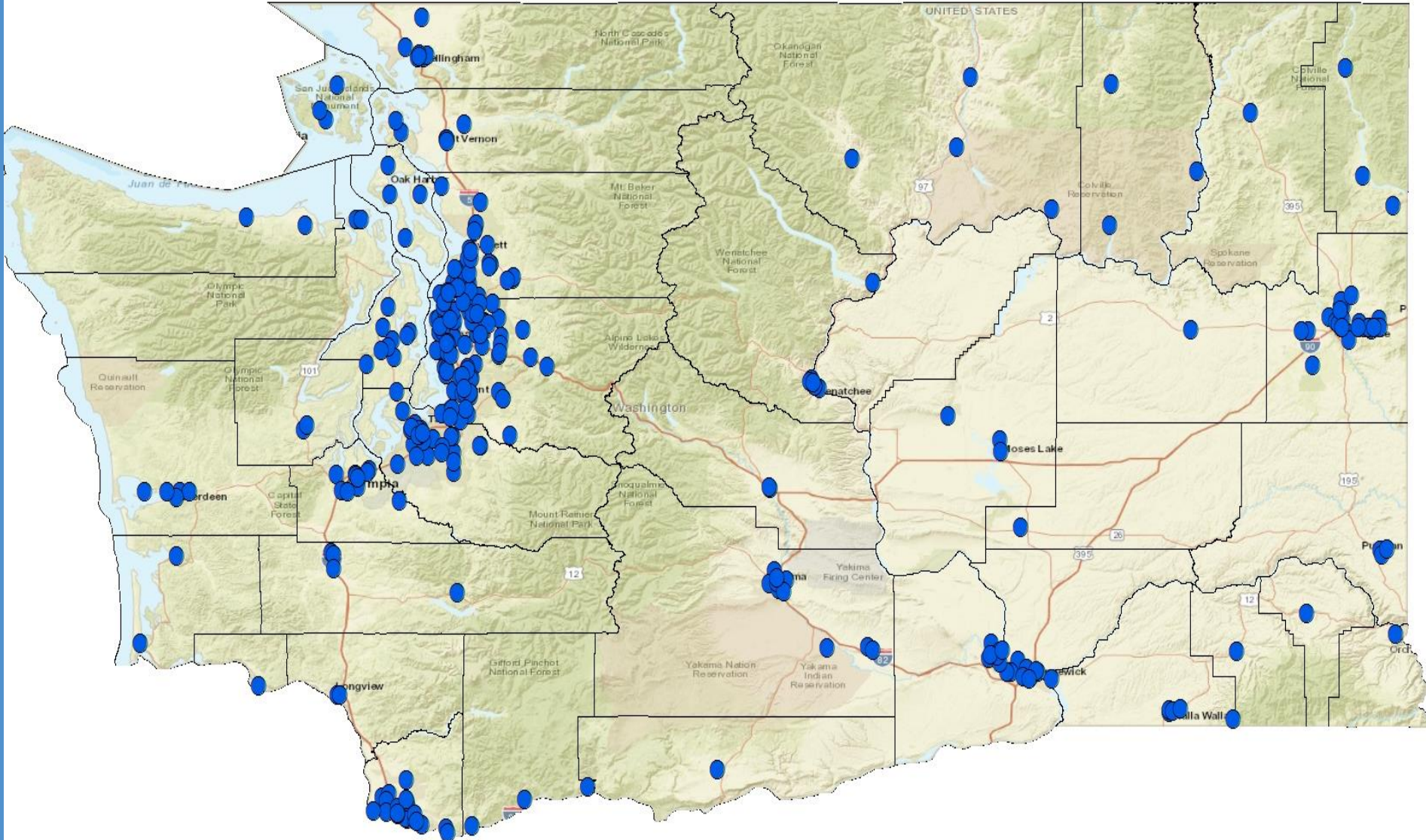
- Launch: January 1, 2015
- More than 220 collection sites
- Over 3 million lights recycled
- 41 collection sites in Seattle



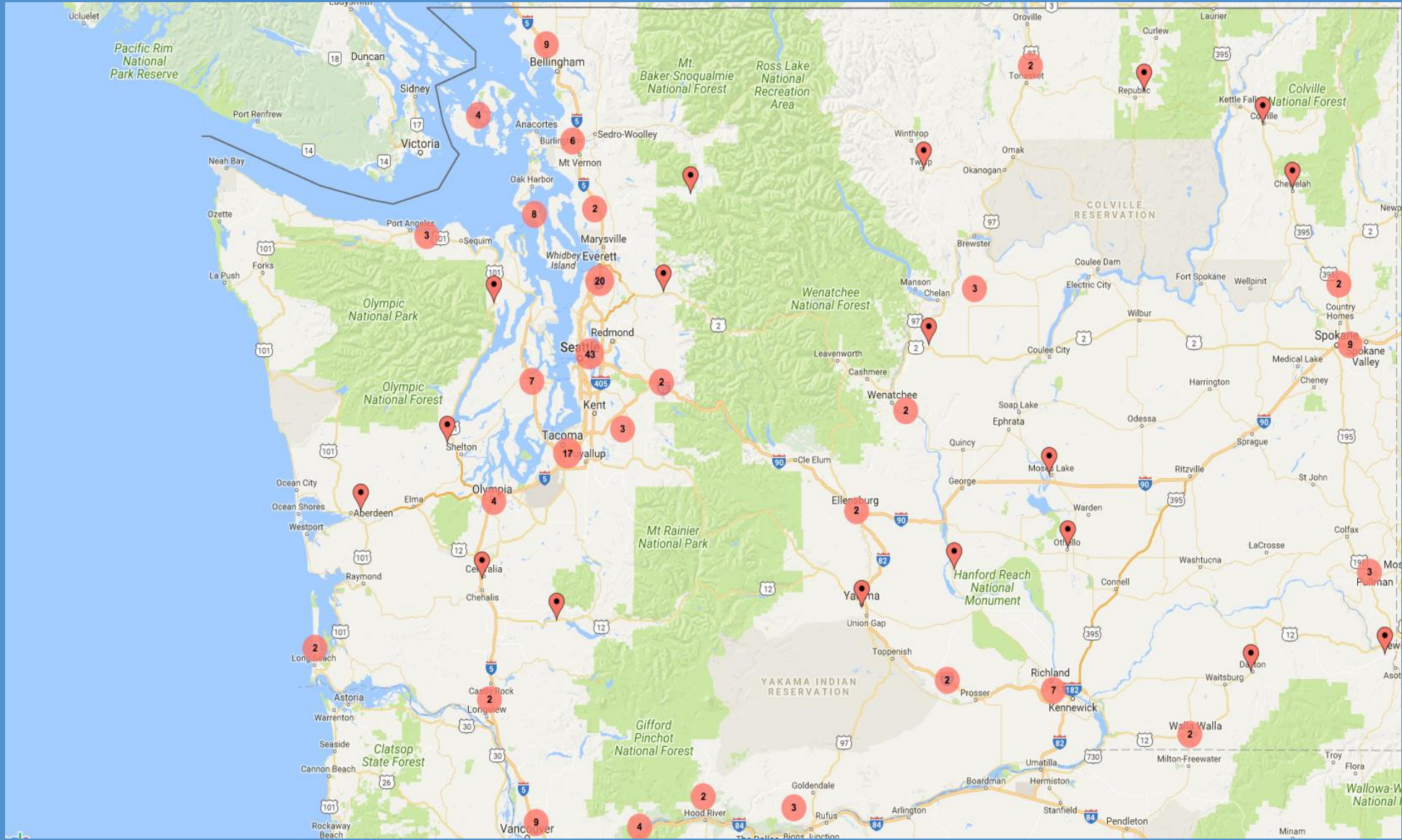


E-CYCLE
washington

Collection Sites – Over 350



Collection Sites – Over 220



Existing Programs in Washington State



Pharmaceuticals



Established:

- King County
- Snohomish County

Passed and Coming:

- Pierce County
- Kitsap County
- Clallam County
- Whatcom County



State legislation passed 2018!

Solar PV Modules

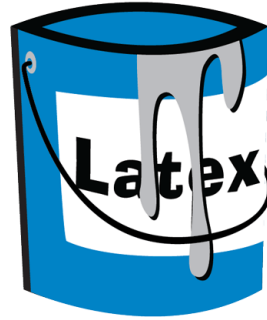


Passed 2017, drop-off will be established by 2020 for each region of the state



What's next in Washington State?

Paint
SHB 1652



- 6th year try at legislation
- Anticipate passage 2019 or 2020

Plastic Packaging
HB 1204/SHB 5397



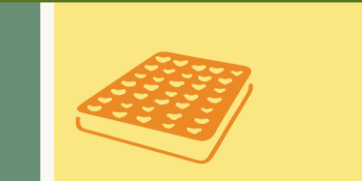
<https://www.youtube.com/watch?v=gHbE8q6CA5s>



What else could be covered by EPR?

Stewardship to the Rescue!

- Framework Legislation
- All Packaging
- All Electronics
- All Lighting
- Carpet
- Mattresses
- All Batteries
- All Household Hazardous Waste
- Cigarette Butts
- Furniture
- Gas Cylinders
- Textiles
- Sharps
- Smoke and Fire Alarms
- Etc.

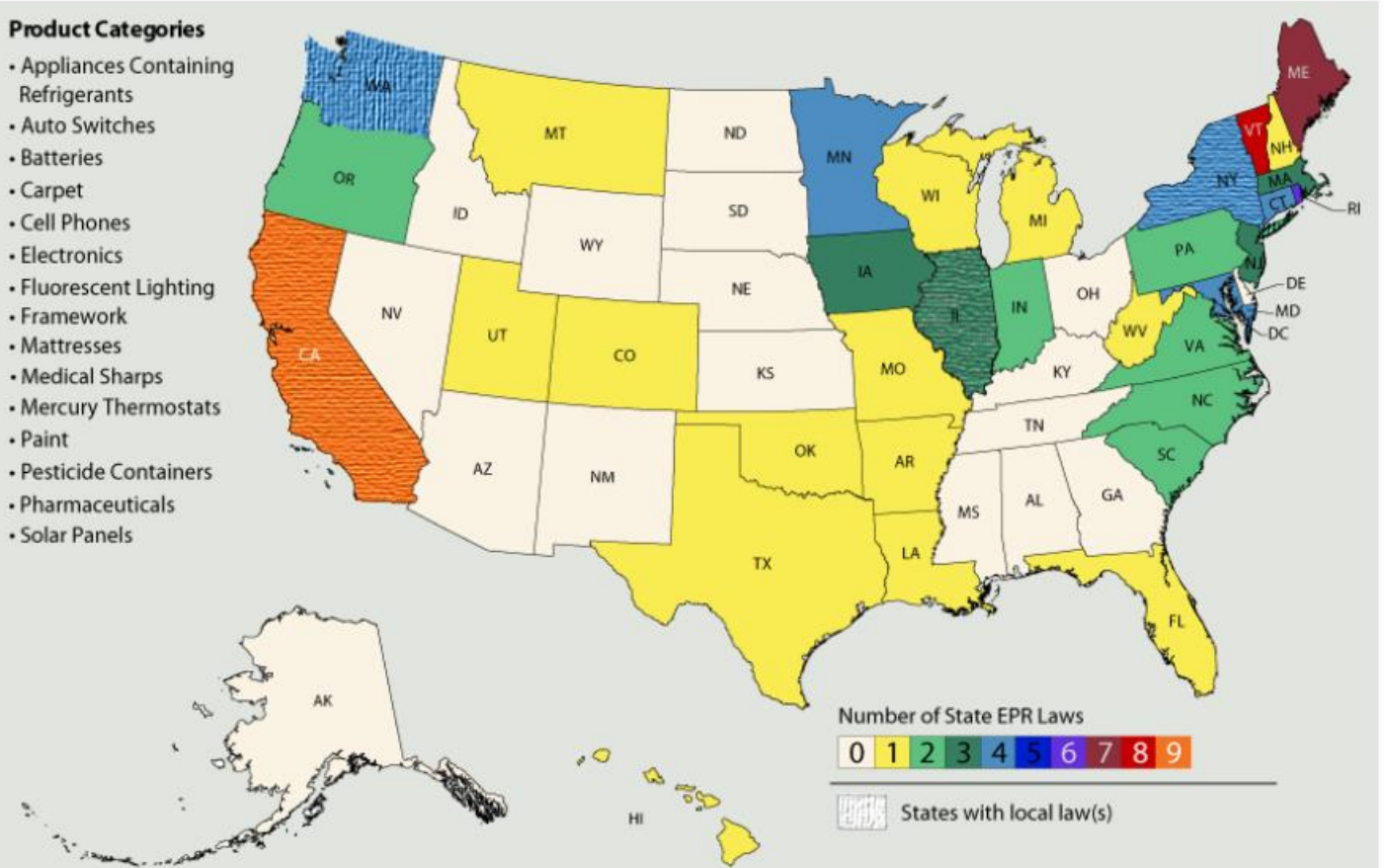


EPR is the Future

Current as of April 2019

Product Categories

- Appliances Containing Refrigerants
- Auto Switches
- Batteries
- Carpet
- Cell Phones
- Electronics
- Fluorescent Lighting
- Framework
- Mattresses
- Medical Sharps
- Mercury Thermostats
- Paint
- Pesticide Containers
- Pharmaceuticals
- Solar Panels



Source: Product Stewardship Institute, Inc. (2018)

There are currently 10 states with "Bottle Bills" (container deposit laws). These systems are highly effective at recovering beverage containers and providing high quality recovered materials to recycling markets that create jobs. Bottle Bills shift responsibility upstream to container producers but differ among states in the roles and responsibilities assigned to manufacturers, distributors, retailers, and state governments.

The map does not include other laws that contribute to the appropriate management of products, such as disposal bans and sales bans on products containing toxic materials, deposit fees that may be redeemed when the consumer recycles the product, policies requiring retailers to collect products for recycling, and policies requiring the purchase of environmentally preferable products.

Programs Across Canada – Over 200

Stewardship Programs in Canada

- ★ In-Place (Regulated)
- ★ In-Place (Voluntary)
- Pending (Regulated)

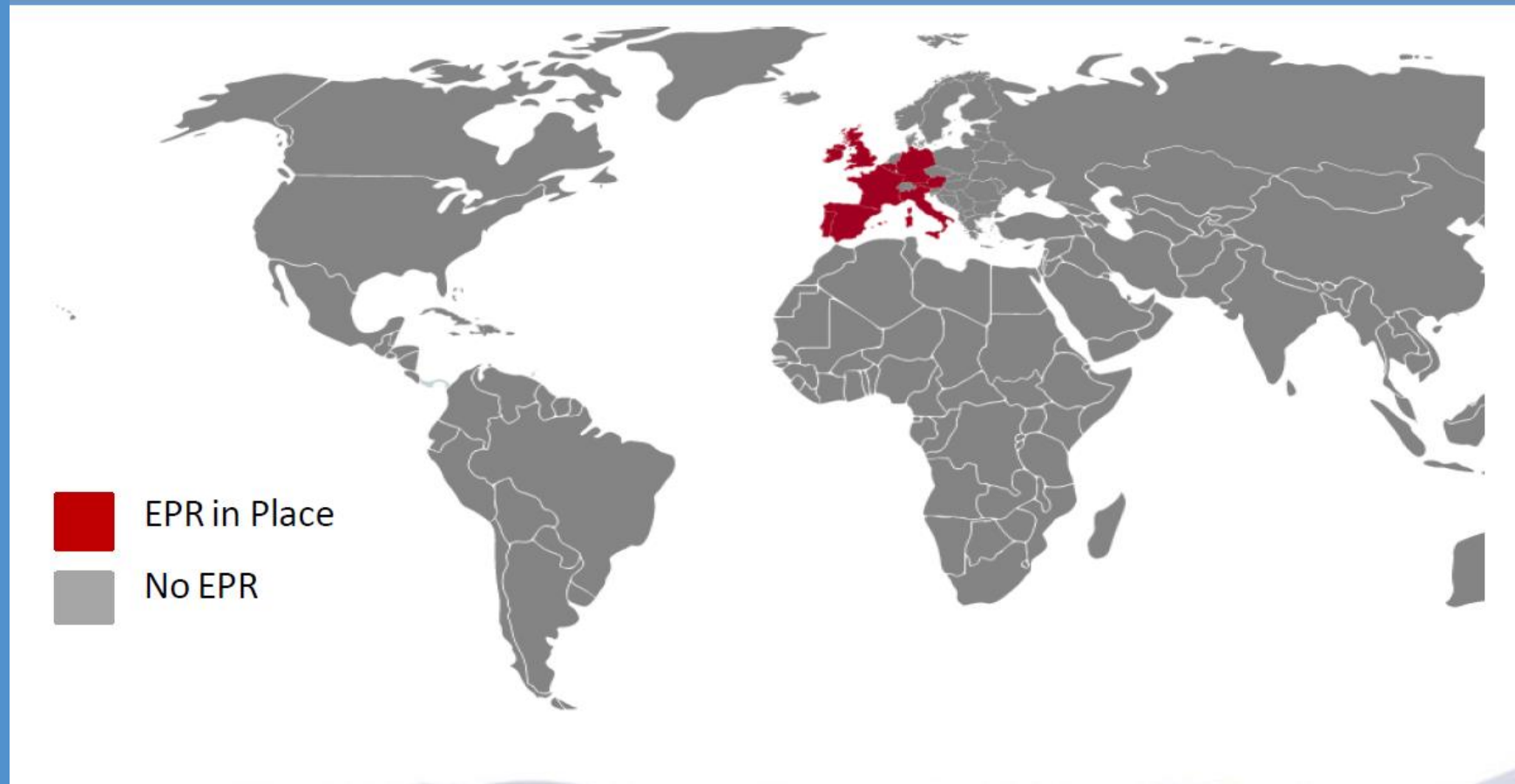
	Small Appliances	Oil	Tires	Organics	Beverage Container Deposits	Packaging & Printed Paper	Used Paint	Printed Materials	Electronics	Fluorescents	Batteries	Household Special	Pharmaceuticals	Needles / Sharps	Autos	Milk Containers	Commercial Pesticide Cntrs	Agricultural bags & twine	Mercury Containing Equip	Cell Phones	Anti-freeze	Single-use retail bags	
Newfoundland		★	★		★	●	★		★		★				★	●	●	★	★	★	★		
Nova Scotia		★	★	★	★	●	★	★	★		★		★	★	★	★	★	★		★	★		
New Brunswick		★	★		★	●	★		★		★		★		★	★	★	★	★	●	★		
P.E.I.		★	★	★	★	★	★	★	★	★	★		★	★	★	★	★	★	★	★	★		
Quebec		★	★	●	★	★	★	★	★	★	★	●	★	★	★	★	★	●	★	★	★		
Ontario		★	★		★	★	★	★	★		★	★	★	★	★		★		★	★	★		
Manitoba	★	★	★			★	★	★	★	★	★	★	★	★	★	★	★		★	★	★		
Saskatchewan		★	★		★	★	★	★	★		★		★		★	★	★		★	★	★		
Alberta		★	★		★		★		★		★		★		★	★	★	★	★	★	★		
British Columbia	★	★	★		★	★	★	★	★	★	★	★	★		★	●	★		★	★	★	●	
Northwest Territories					★				★							★				★		★	
Yukon	●		★	★	★	★			●											●			

No regulated programs in Nunavut; Ontario - deposits on wine, liquor and beer only; MB - microwave ovens; Ink cartridges not regulated; Milk containers in BC part of Packaging & Printed Paper

Compiled by : MGM Management; mckenney@vip.net

April 2017

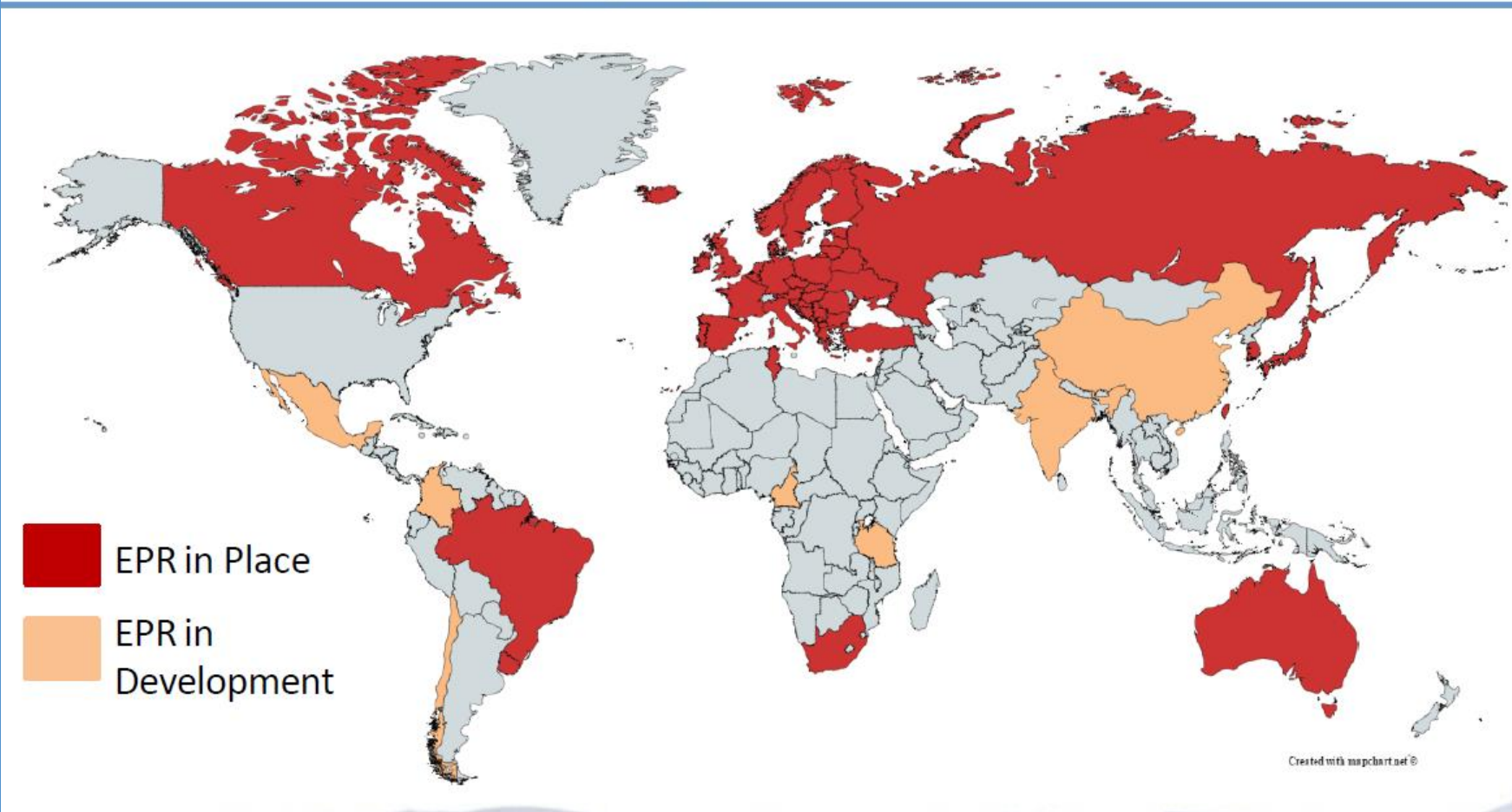
Packaging EPR in 2000



Note: First EPR Law was in Germany - 1992

Source: Victor Bell, EPI

Packaging EPR in 2015



Source: Victor Bell, EPI

PACKAGING EXTENDED PRODUCER RESPONSIBILITY (EPR)



Packaging EPR in 2000



Packaging EPR in 2019



Source: EPI

Key Considerations

- Costs and Financing
- Convenience Standards
- Equity of Access and Rural Communities
- Right Role of Government
- Measuring Success



Financing and Costs



COMPUTERS & TVs

- Cost Internalization.
- Covers costs of collection, transport, processing, promotion.
- Average cost per lb. about \$.28 now, compared to \$.35 for gov. programs in 2008.
- ~\$8.3M in 2017, ~\$98.16M overall.



MERCURY-CONTAINING
LIGHTS

- Env. Handling Charge at point of sale = \$.95 each bulb or tube.
- PROBLEMS – technologies going extinct, government oversight of fee.
- Does not cover full cost of collection, just supplies, transport, processing.



Setting Goals and Requirements

- Base legal responsibilities on access to service (convenience) and on-going or frequency of service.
 - Have to take ALL of it that is submitted.
- Do not base legal responsibilities on certain amount of lbs. collected, certain percent of items in market place or waste stream, etc.
 - Otherwise, after target is reached, service could be cut off (such as mid-year) , or communities are “cherry picked”
- Do require measurements and tracking to help assess the program.



Convenience Standards



COMPUTERS & TVs

- Convenient, including rural and urban areas.
- Open convenient hours. Mail-back, events allowed for very rural areas.
- Minimum 1 per county, 1 per city pop. 10,000 or more.
- About 90 required, actual is over 350.



MERCURY-CONTAINING LIGHTS

- At a minimum, in all cities pop. 10,000 or more and all counties.
- On-going, year round basis.
- About 90 required, actual is over 220.



Convenience Standards



Paint
(proposed legislation)

- In urban and rural areas, including island communities.
- 90% of pop to have collection site with 15 mile radius, 1 additional for every 30,000 in population center.
- Other areas – at least annual events.



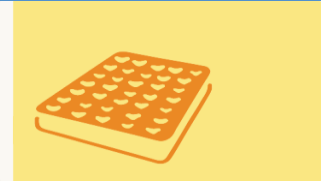
Pharmaceuticals

- Local law was one per 30,000 minimum
- State law preempted local law. Now one per 50,000

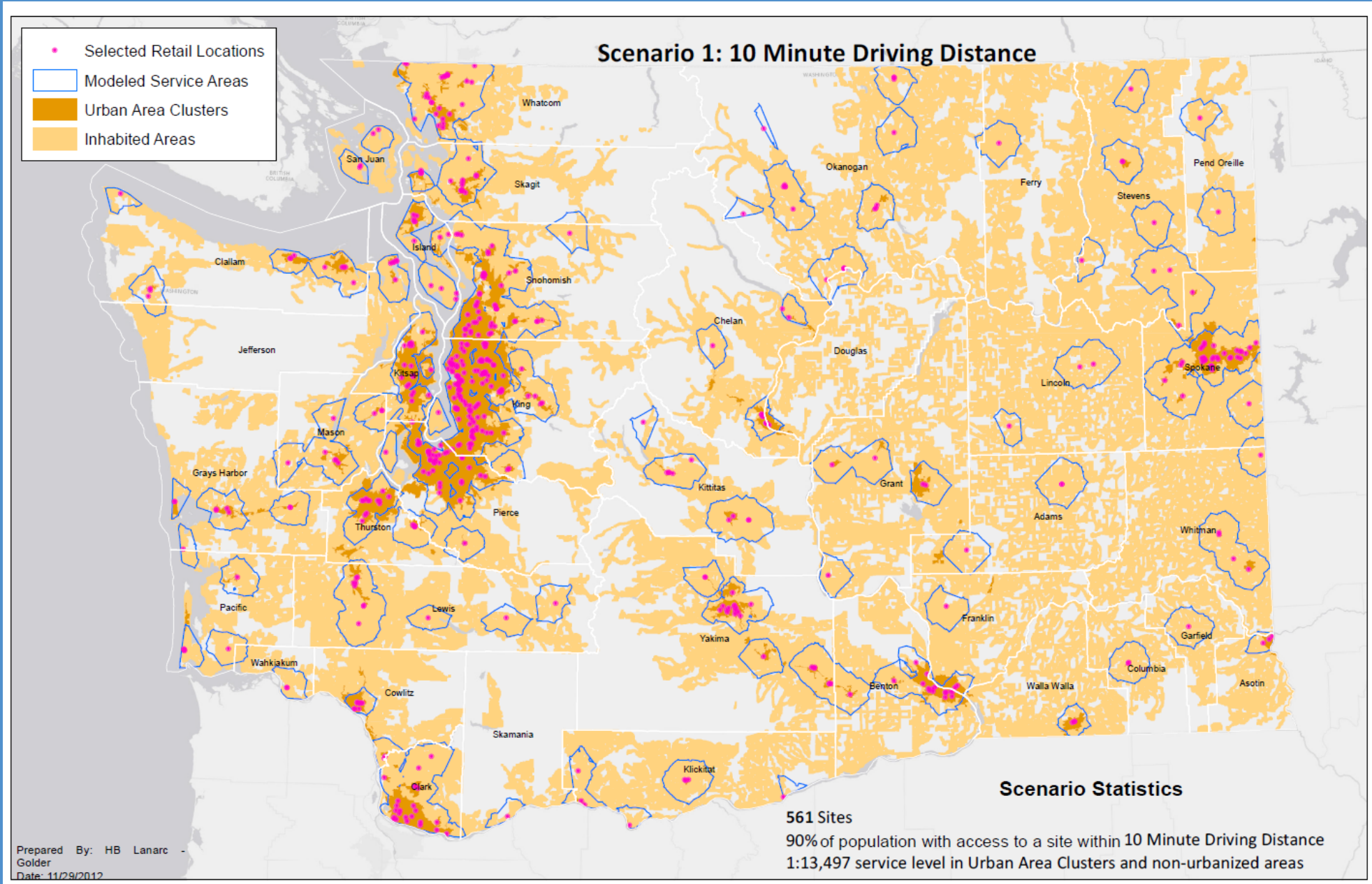


Convenience Standards and Other Tools to Drive Equity

- Program has to pay for collection
- Program has to accept any qualified collector
- Materials addressed are same in all communities, urban and rural
- Alternative options provided where service level can't be met
- Must geographically spread options in community
- Rural service levels adapted to typical rural community practices
- Urban service levels adapted to typical urban community practices
- Drive time requirements (not distance)
- Number of sites per population density
- Outreach is multilingual, transcultural, etc.
- For packaging: must use and expand curbside programs
- Advisory committees or consultations
- Local government/community opportunity to comment annually



One of Six Convenience Models for Paint 2012



Even after law passes, things can go wrong!

Email alert on Proposed Rules 4/17/19

- Ensuring convenient and equitable access to drug take-back services: WAC 246-480-060 (2) on the collection system limits the criteria that DOH and Local Health Jurisdictions can use to define “underserved areas” of the state that must be given additional mail-back services or collection events. The WAC does not allow use of criteria that are clearly defined in the same section of the RCW. The proposed rule would not allow DOH and LHJs to consider whether drop boxes and other take-back services are “equitable” and “geographically distributed”. The criteria reference county population distribution and the total number of drop boxes, but does not explicitly allow consideration of how drop boxes are distributed at a community level within cities, towns and unincorporated areas. One criteria is “driving distances and times” which locks the rule into a personal vehicle metric, without consideration of residents who rely on public transportation. The pharmaceutical industry was demanding restrictions on how “underserved areas” are defined, so we can expect they will insist on a rigid interpretation of criteria in the rule.

Even after law passes, things can go wrong!

Email alert on Proposed Rules 4/17/19

- Ensuring transparent and fair processes for including potential authorized collectors as drop box hosts: ...The CR102 draft also removed the requirement that manufacturers provide a list in their annual report of all the potential authorized collectors who offered to host a drop box, and the reasons why any collectors were not allowed to join the drug take-back program. These requirements were in the final draft of the CR101 process, allowing DOH and interested stakeholders like pharmacies, hospitals, and law enforcement to check that manufacturers are meeting the law's requirements to include any qualified collector.

	Pounds by CEP* type			CEP* Pounds by County			
	Estimated quantity in pounds by CEP* type collected December	YTD Pounds	Percent of total pounds by CEP* type YTD	WA State County	Estimated quantity in pounds by WA State county December	Estimated quantity in pounds by WA State county YTD December	Percent of total pounds by county YTD December
*Covered Electronic Products TYPE (CEP) Plan accepts only computers, monitors, e-readers, tablets, TVs and portable DVD players							
TELEVISIONS				Adams	1,748	9,154	0.0%
Household TV	2,039,426	25,253,312		Asotin	8,233	75,121	0.2%
School District TV	594	19,283		Benton	33,249	581,414	1.9%
Small Business TV	1,112	12,304		Chelan	19,719	388,506	1.2%
Small Government TV	499	16,640		Clallam	25,435	279,845	0.9%
Total TELEVISIONS	2,041,631	25,301,539	81.9%	Clark	180,258	2,290,822	7.4%
				Columbia	NR	8,200	0.0%
				Cowlitz	52,178	661,516	2.1%
				Douglas	5,783	67,292	0.2%
				Ferry	2,885	22,413	0.1%
MONITORS				Franklin	22,188	244,788	0.8%
Household Monitors	259,375	3,232,593		Garfield	1,847	15,025	0.0%
School District Monitors	2,420	29,511		Grant	8,844	136,893	0.4%
Small Business Monitors	122	8,225		Grays Harbor	NR	292,884	0.9%
Small Government Monitors	0	9,235		Island	40,427	488,903	1.5%
Total MONITORS	261,917	3,279,564	10.6%	Jefferson	12,717	202,578	0.7%
				King	784,155	9,688,114	31.4%
				Kitsap	66,891	871,499	2.8%
				Kittitas	16,957	219,382	0.7%
COMPUTERS (includes laptops)				Klickitat	3,794	27,233	0.1%
Household Computers	168,495	2,257,784		Lewis	35,393	422,721	1.4%
School District Computers	1,612	46,570		Lincoln	NR	35,854	0.1%
Small Business Computers	498	10,743		Mason	7,004	99,040	0.3%
Small Government Computers	122	5,153		Okanogan	2,511	34,814	0.1%
Total COMPUTERS	170,727	2,320,250	7.5%	Pacific	8,715	100,862	0.3%
				Pend Oreille	NR	40,640	0.1%
				Pierce	324,384	3,593,757	11.8%
				San Juan	13,408	71,720	0.2%
				Skagit	31,287	398,743	1.3%
				Skamania	NR	53,271	0.2%
				Snohomish	299,139	3,935,697	12.7%
				Spokane	154,204	1,856,872	6.0%
				Stevens	11,099	104,409	0.3%
				Thurston	126,439	1,479,148	4.8%
				Wahkiakum	NR	2,188	0.0%
				Walla Walla	38,357	347,541	1.1%
				Whatcom	83,246	981,024	3.2%
				Whitman	14,359	184,994	0.6%
				Yakima	37,866	628,698	2.0%
Total pounds CEPs by type	2,474,275	30,901,363	100%	Total	2,474,275	30,901,363	100.0%

9 Year Collection Summary in Millions of lbs.

Year	Lbs. Collected	% Change	Lbs./capita
2009	38.55	NA	5.78
2010	39.47	2.30%	5.86
2011	42.19	6.90%	6.23
2012	43.47	3.00%	6.33
2013	45.18	3.90%	6.55
2014	44.36	-1.80%	6.37
2015	42.58	-4.00%	6.03
2016	36.86	-13.43%	5.13
2017	30.90	-16.16%	4.23
Total	363.56		

363.56 Million lbs.
collected

1. Report represents all pounds collected, transported, and processed, by month end December 2017 and YTD
 2. Pounds reflect NET weight of CEPs based on actual net weights as received and verified by processors at month and YTD ending December 2017
 3. When no pounds are reported for smaller county collectors they are shown as NR=(Not Reported) and will be updated as pounds are reported

The Right Role of Government

- Establish effective law that will meet needs of residents and their communities and protect the environment.
- Review stewardship plans, monitor programs, enforce the law.
- Ensure a level playing field by holding all responsible parties to the law.
- Otherwise, stay out of way and let private sector establish effective efficient services while meeting their obligations.

WARNING: if government gets into role of setting or approving fees, much higher level of government oversight, auditing and fiscal review is needed – and this can be problematic.



Discussion and Questions

An aerial photograph of Seattle, Washington, showing the city's dense urban landscape and waterfront. The image is partially obscured by a green gradient overlay at the top, which contains the title text. The city features numerous skyscrapers, including the Smith Tower and the dark, cylindrical Smith Tower. The waterfront is visible with the blue water of the city and the green hills of the surrounding area. The overall scene is a vibrant and detailed view of the city's architecture and geography.

Sego Jackson

Seattle Public Utilities

206.615-0706

Sego.Jackson@seattle.gov