



# E-Cycle Wisconsin: successes and challenges in the first six years

Wisconsin Council on Recycling  
February 19, 2016

Sarah Murray, Wisconsin DNR

# Landfill and incinerator bans

- Televisions
- Computers (desktop laptop, netbook, tablet)
- Computer monitors
- Computer accessories (mice, keyboards, external hard drives, etc.)
- Desktop printers & fax machines
- E-readers with screen 7” and up
- DVD players, VCRs and DVRs
- Cell phones

**Hazardous waste rules still apply for non-households**

## Which Electronics Are Banned From Wisconsin Landfills?

Wisconsin's electronics recycling law bans most electronics from landfills and incinerators. Electronics contain valuable materials and must be reused or recycled. To find a collection site near you, visit [dnr.wi.gov](http://dnr.wi.gov) and search "ecycle."



- ❑ Computers: desktop, laptop, netbook, notebook
- ❑ TVs and computer monitors
- ❑ Cell phones, tablets and e-readers
- ❑ Fax machines and desktop printers, including printers combined with fax machines, scanners and copiers
- ❑ Computer accessories, including keyboards, mice, hard drives, scanners, speakers, flash drives and other devices
- ❑ DVD players, VCRs, DVRs and other video players



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[dnr.wi.gov](http://dnr.wi.gov) "ecycle"

# E-Cycle Wisconsin

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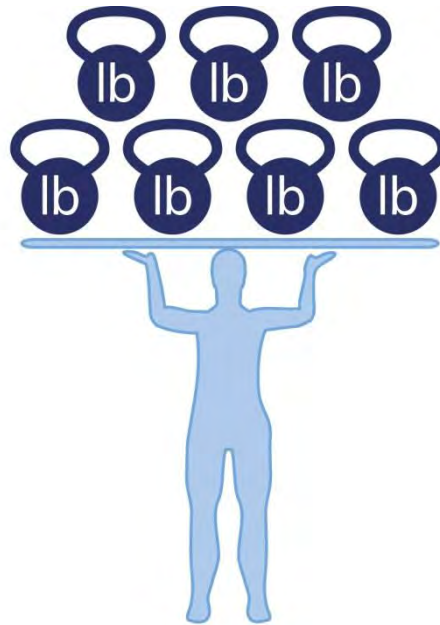


- Product stewardship-based program created to complement disposal bans
- Shared responsibility among manufacturers, retailers, collectors, recyclers, governments and consumers
- Manufacturers of TVs, computers and printers fund recycling based on market share
- Specific network of registered collectors and recyclers meeting certain requirements
- Distinguishes between electronics recycling to meet manufacturer obligations and other collection and recycling activities

# What the law doesn't do

- Guarantee free recycling to consumers or collectors
- Require retailers, local governments or others to collect electronics
- Require a license or permit for collecting or recycling electronics
- Set or guarantee manufacturer payments to recyclers or collectors
- Change recycling requirements for businesses, governments, institutions

# Successes

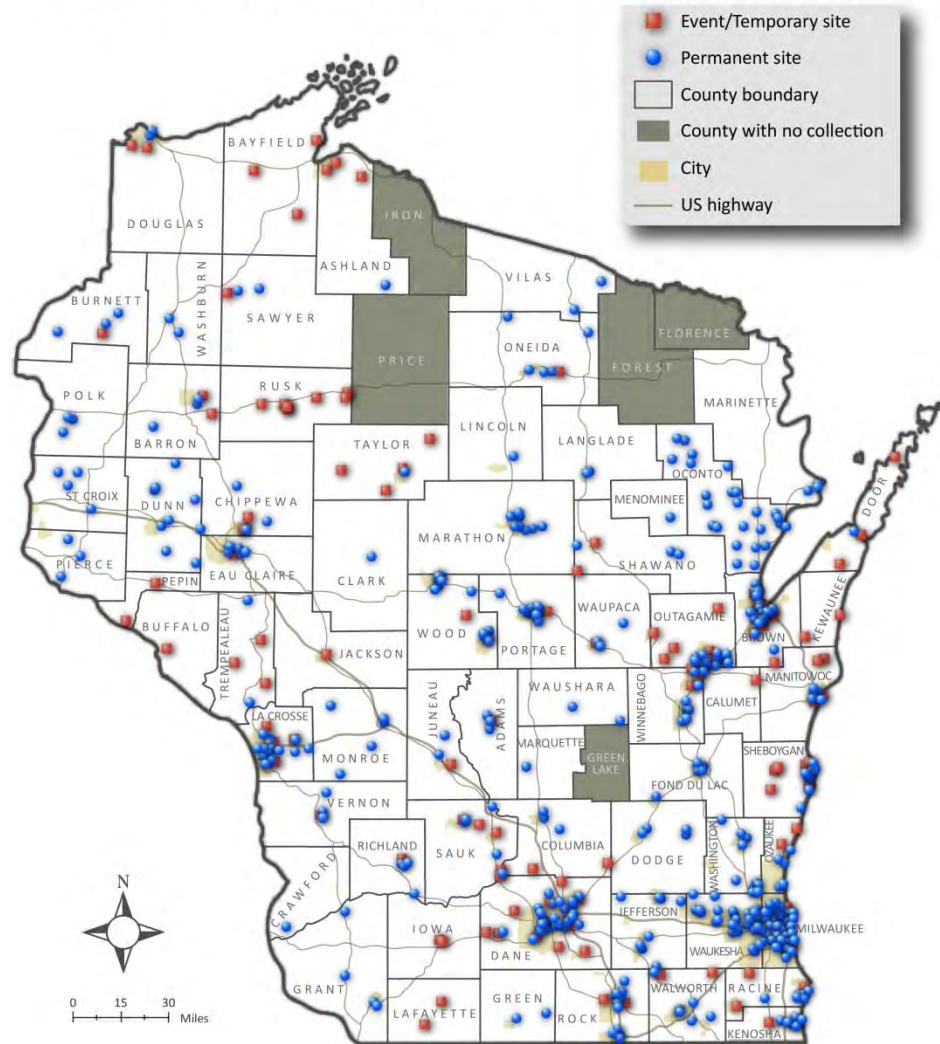


We have recycled nearly 7 pounds of electronics per person every year through E-Cycle Wisconsin – which is one of the highest e-cycling rates in the United States.

# Participation

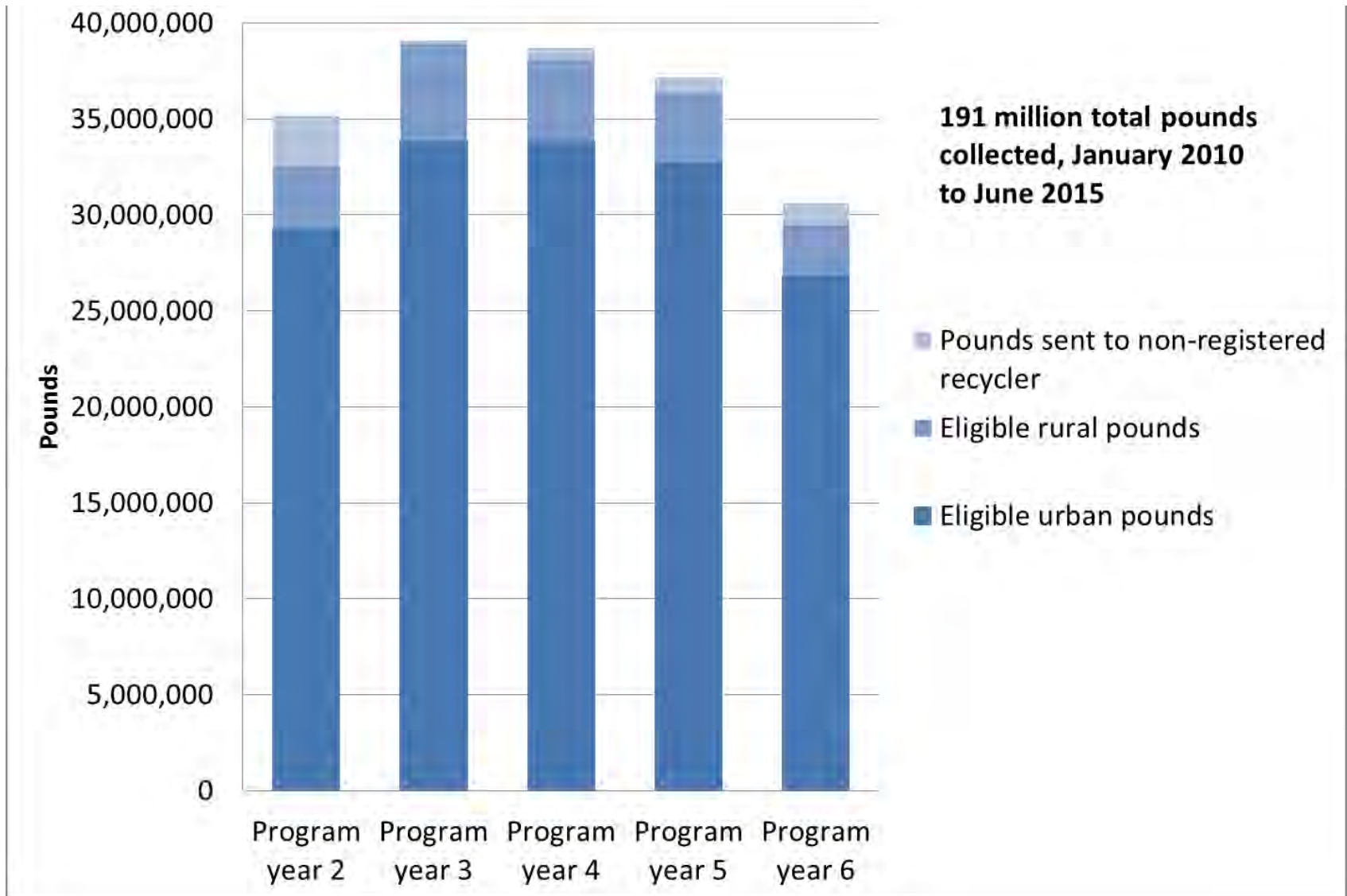
## Registered E-Cycle Wisconsin Collection Sites, July 1, 2014 to June 30, 2015

- 130+ registered collectors with about 400 collection sites
- 20 registered recyclers
- 160 registered manufacturers with nearly 250 brands

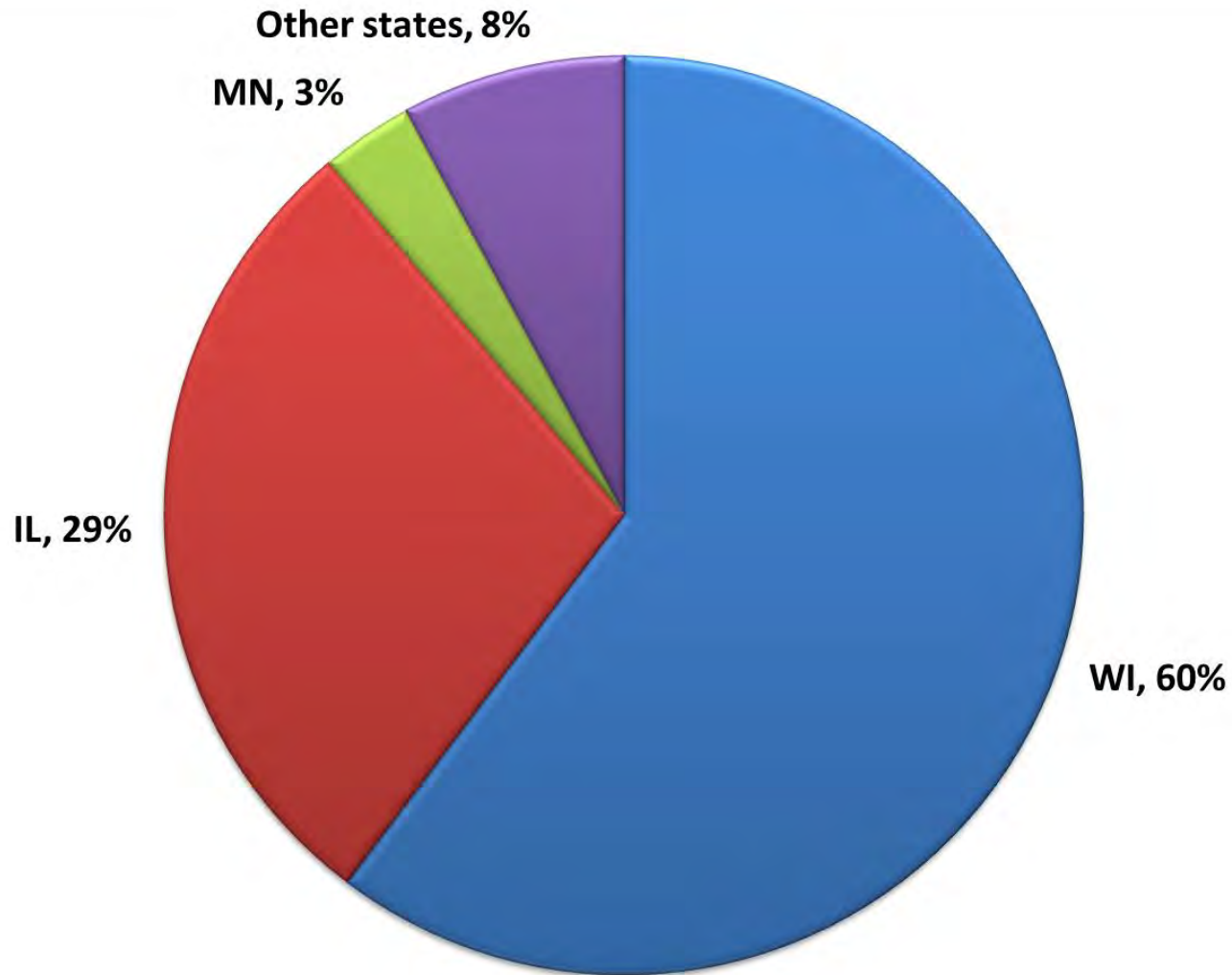


November 9, 2015

# Pounds collected by program year



# Where collected materials go (PY6)

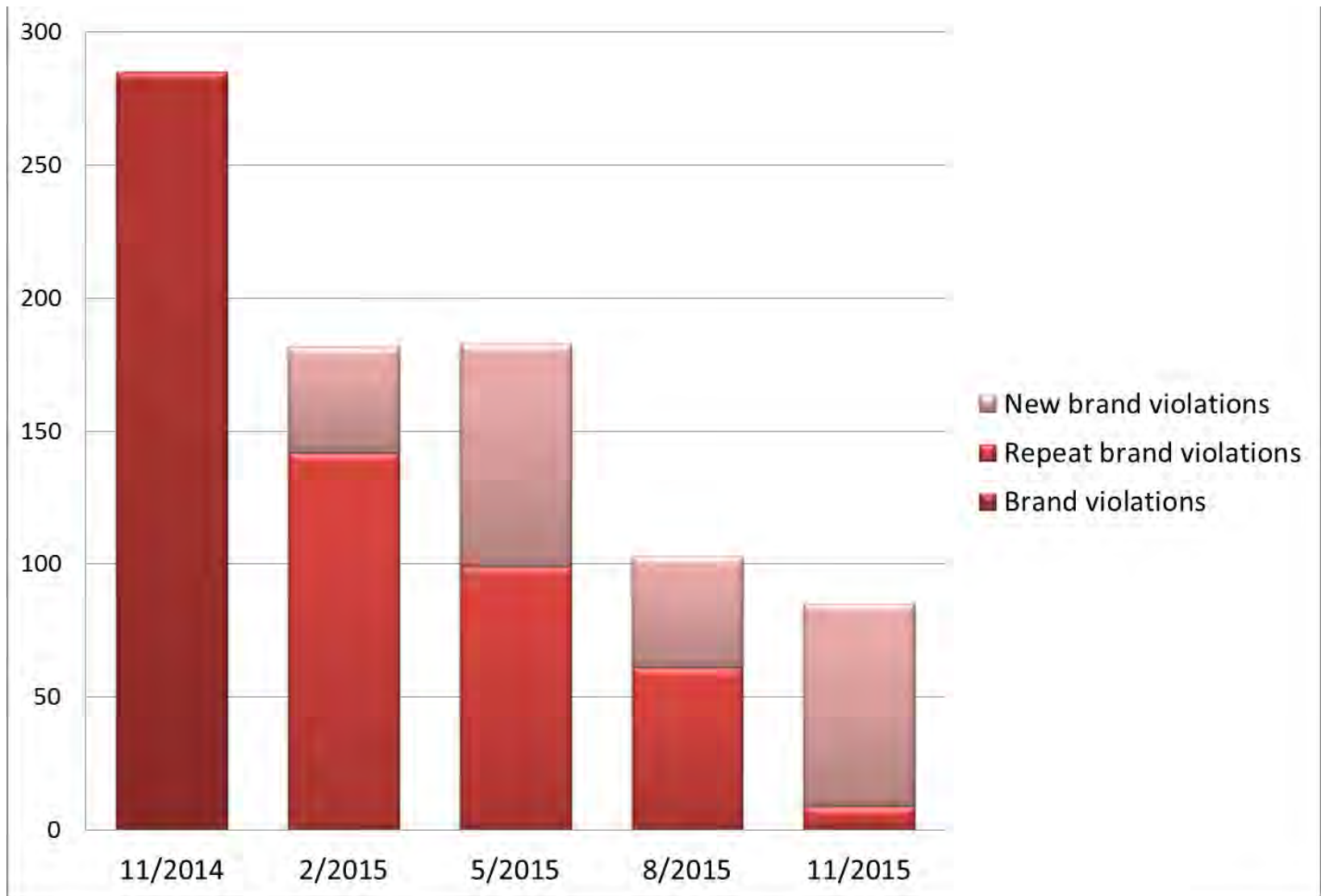




# Leveling the playing field

- Have significantly increased the number of registered manufacturers and brands, with help from retailers
- Working with retailers to improve compliance with customer education requirement and “do not sell” list
- Continued inspections of in-state recyclers, and some out-of-state site visits
- New suspension/revocation guidance
- Closer scrutiny of reporting using online system
- Will be working with collectors to improve recordkeeping used to verify recycler weights

# Fewer retailer brand violations



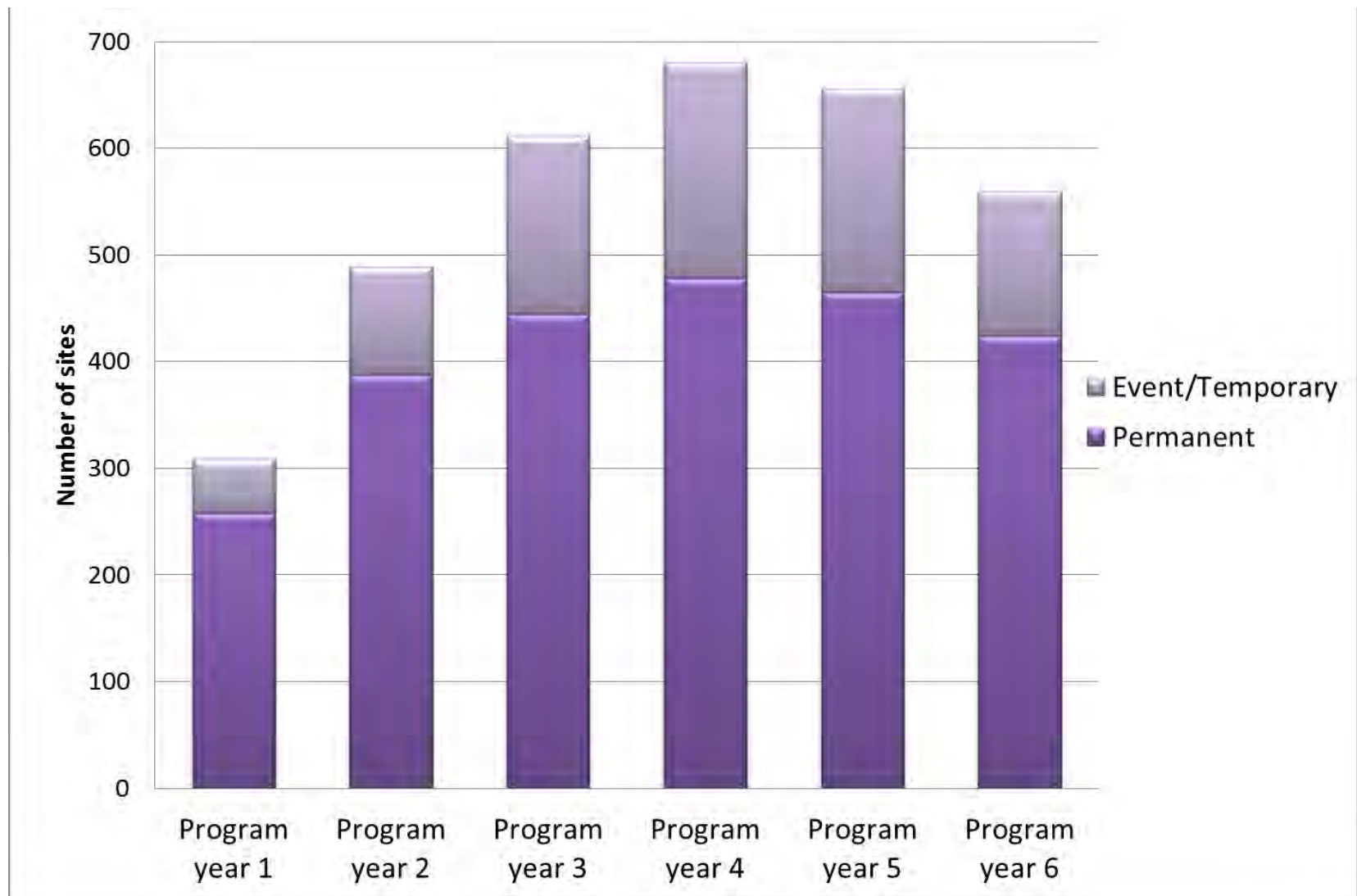
# Challenges



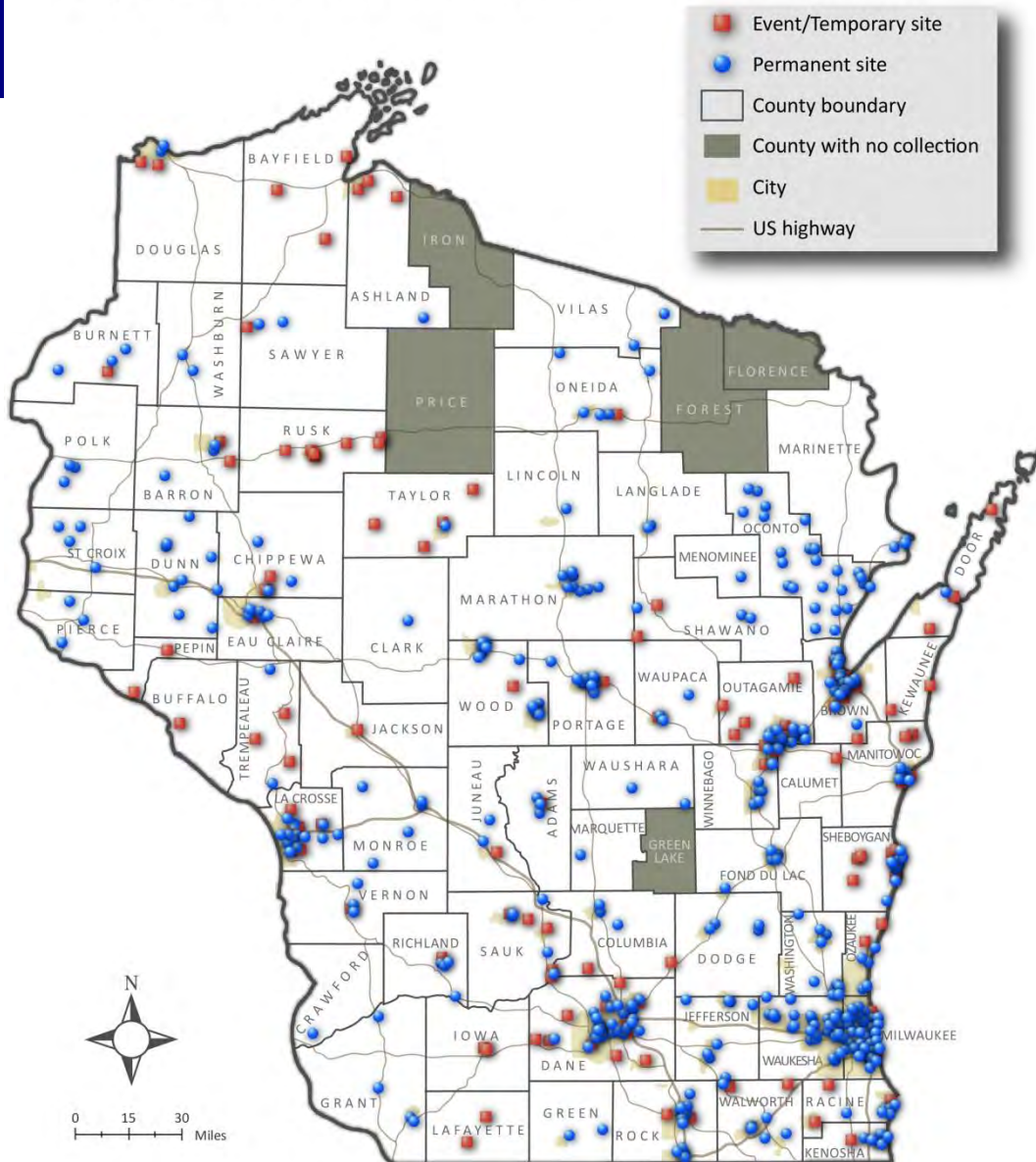
# Key current program challenges

- Consumer access
- Increased costs/fewer recycling options
- Downstream markets & changing nature of electronics
- Reliance on inefficient collection/recycling methods
- Illegal dumping, backyard scrapping and irresponsible recycling

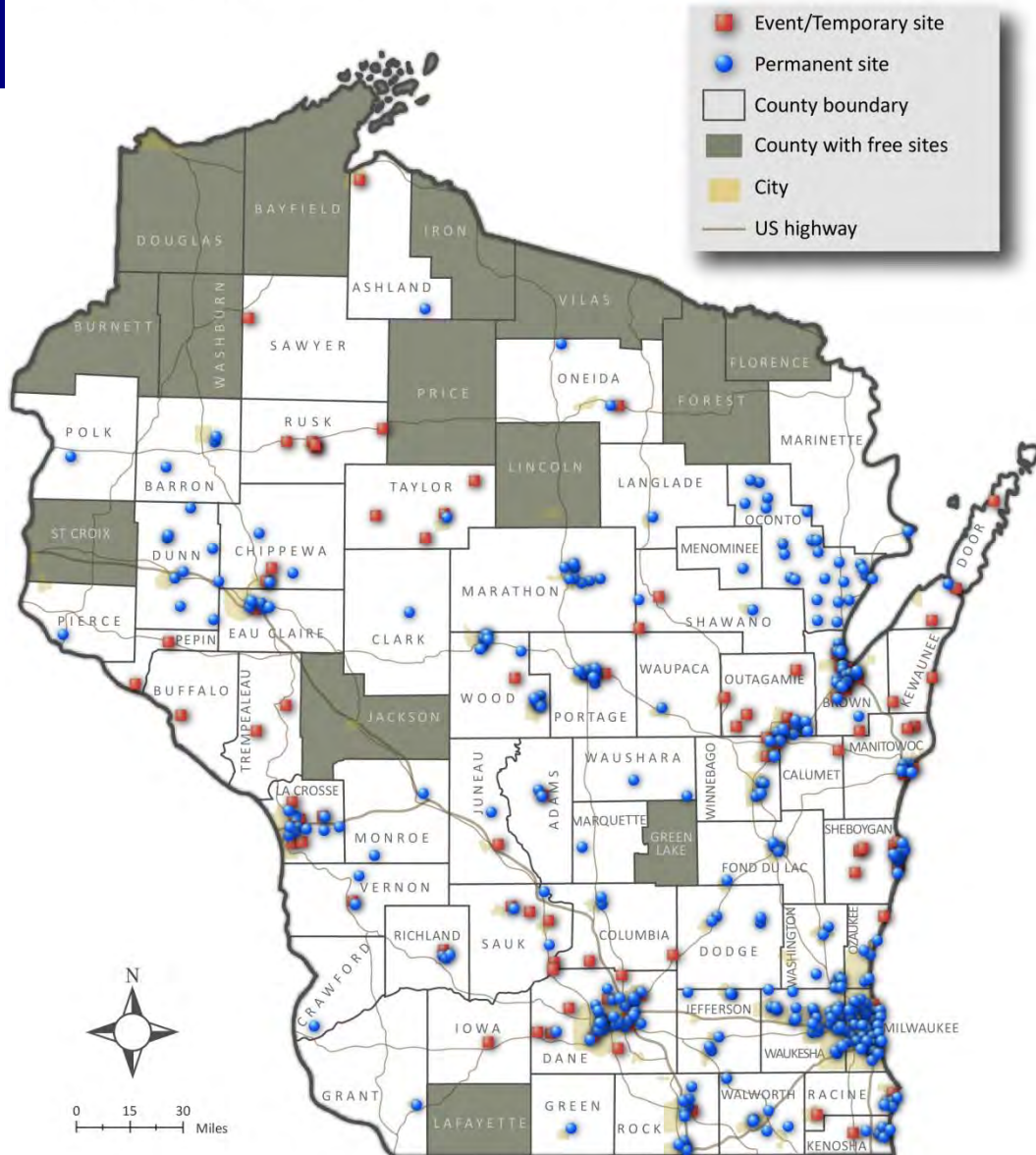
# Registered collection sites



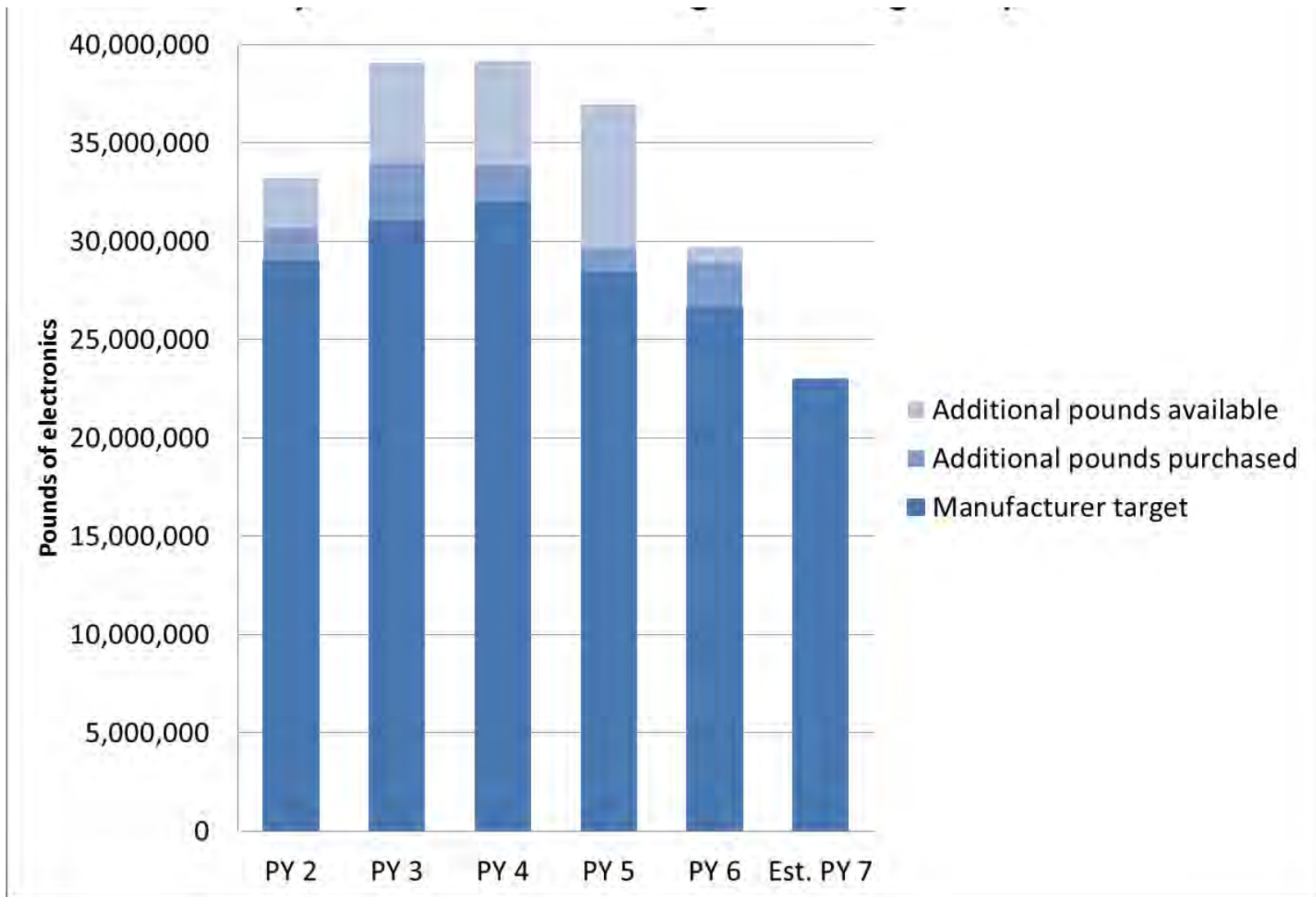
# Registered E-Cycle Wisconsin Collection Sites, July 1, 2014 to June 30, 2015



# Registered E-Cycle Wisconsin collection sites accepting some items for free during PY6



# Declining manufacturer targets





# Rising costs mean change & uncertainty

- Manufacturers are dealing with programs across many states and their bottom lines—need to control costs and manage liability
- Oversupply of pounds can mean lower manufacturer payments, in addition to pounds not covered at all
- Manufacturer contract changes lead to network disruption
- Rising costs must be passed on to consumers or absorbed
- Less cushion to deal with sudden changes and unexpected events

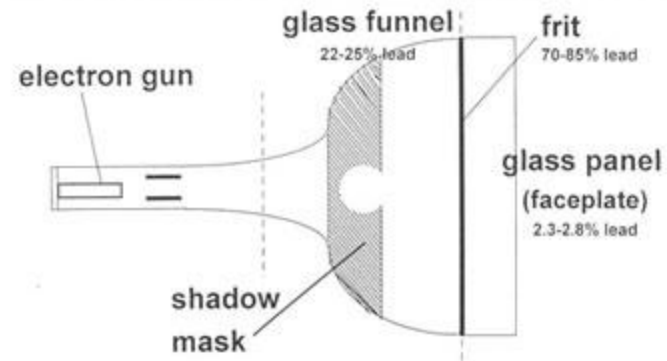
# Cathode ray tube



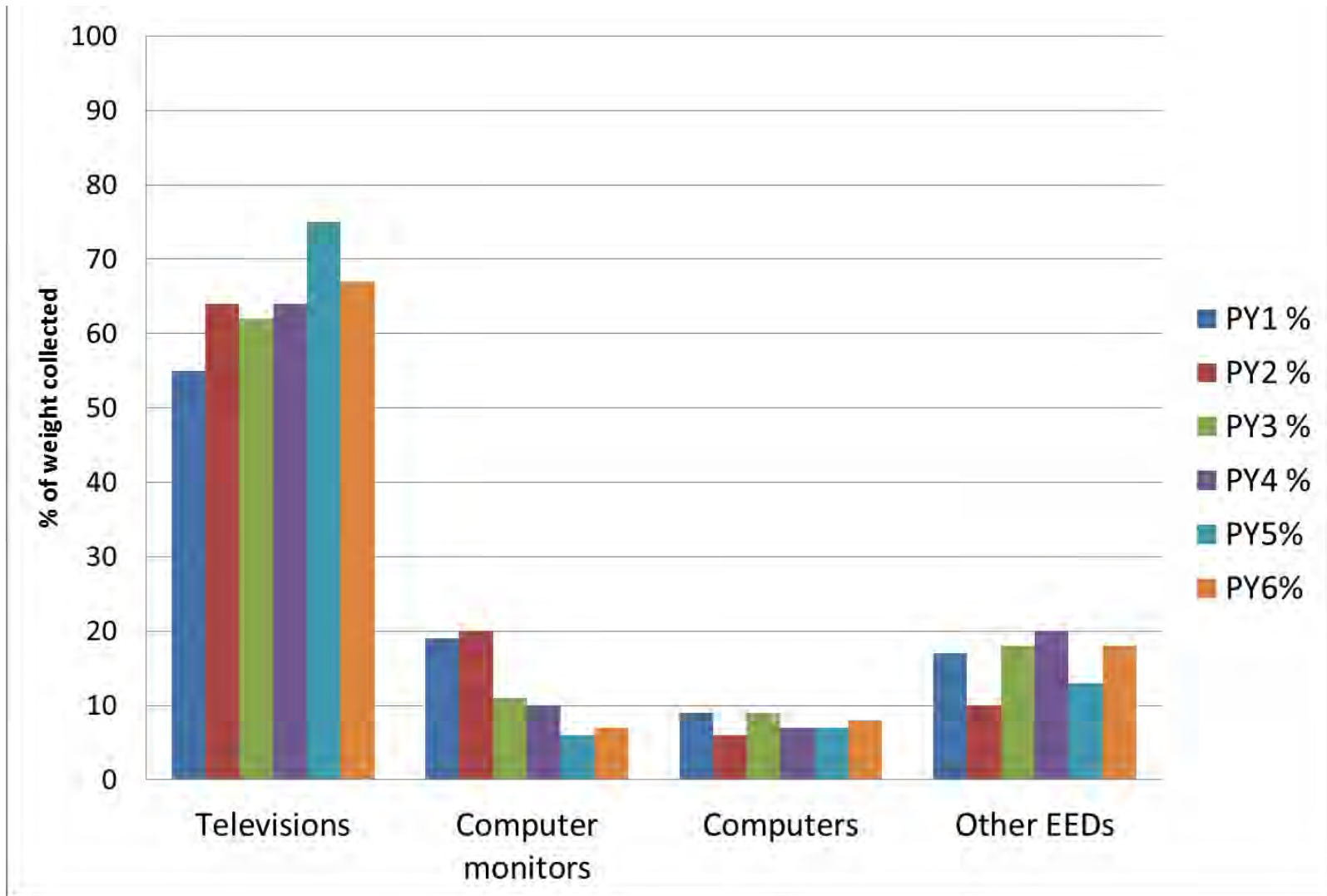
# CRT basics

- **Panel glass** (screen) contains very little lead, though hazardous phosphor coating must be removed. Can be reused/recycled (with some limitations)
- **Funnel glass** contains lead and must be treated as hazardous waste if not recycled. Average CRT can contain 4 to 7 pounds lead

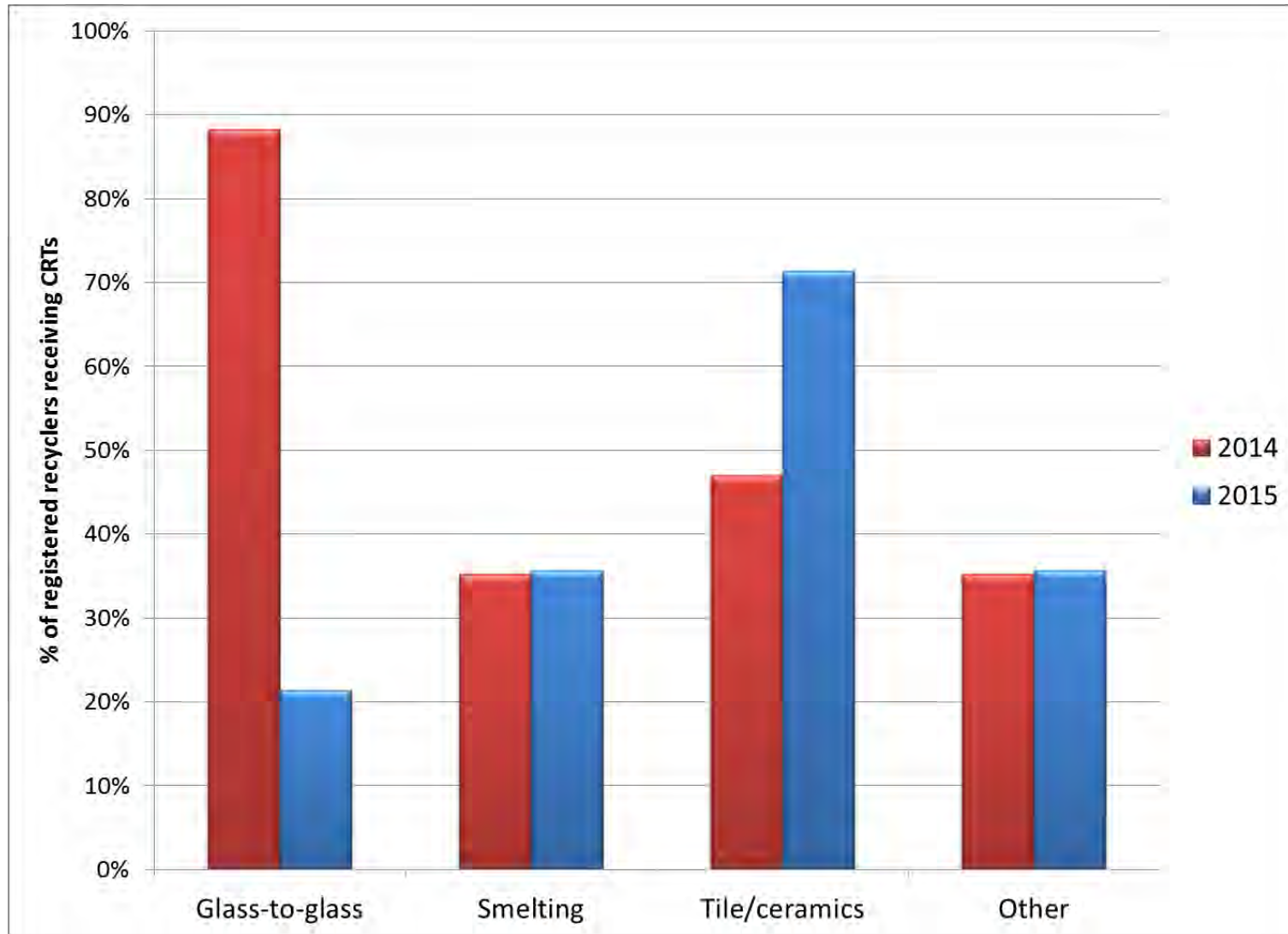
## CRT Components



# Collection by product type



# Where do E-Cycle WI CRTs go?



# Flat-panel displays

- Growing portion of the waste stream (though CRTs still dominate by weight)
- Main concern is LCD TVs/monitors, which contain up to 20 thin fluorescent bulbs with 1-10 mg mercury each
- Labor-intensive to hand-disassemble (lots of screws, fragile bulbs)
- Currently represent another negative-value item in recycling stream



# Dumping/irresponsible recycling



# Irresponsible recycling





# Finding solutions

- Many fixes would require legislation
- Continue to work with stakeholders
- Continue to improve compliance and maintain a level playing field
  - DNR hiring part-time compliance LTE
- Look closely at downstream for items like CRTs
- Work with collection sites to keep electronics in good condition and find efficiencies
  - Well-received collector workshop in November 2015; additional ones planned for 2016

# Potential legislative changes

- Change manufacturer target formula so it's based on weight received by registered recyclers
- Replace rural “bonus” with collection percentage requirement
- Switch program year to coincide with calendar year
- Update definitions of covered devices
- Cover all K-12 schools
- Reduce registration fees for smallest manufacturers
- Add additional recycler reporting detail

# Contacts

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