

# **Home Generated Pharmaceutical Waste Collection in California**

Presentation to the Senate Environmental Committee

March 26, 2014



California Department of Resources Recycling and Recovery



## Early Pioneers

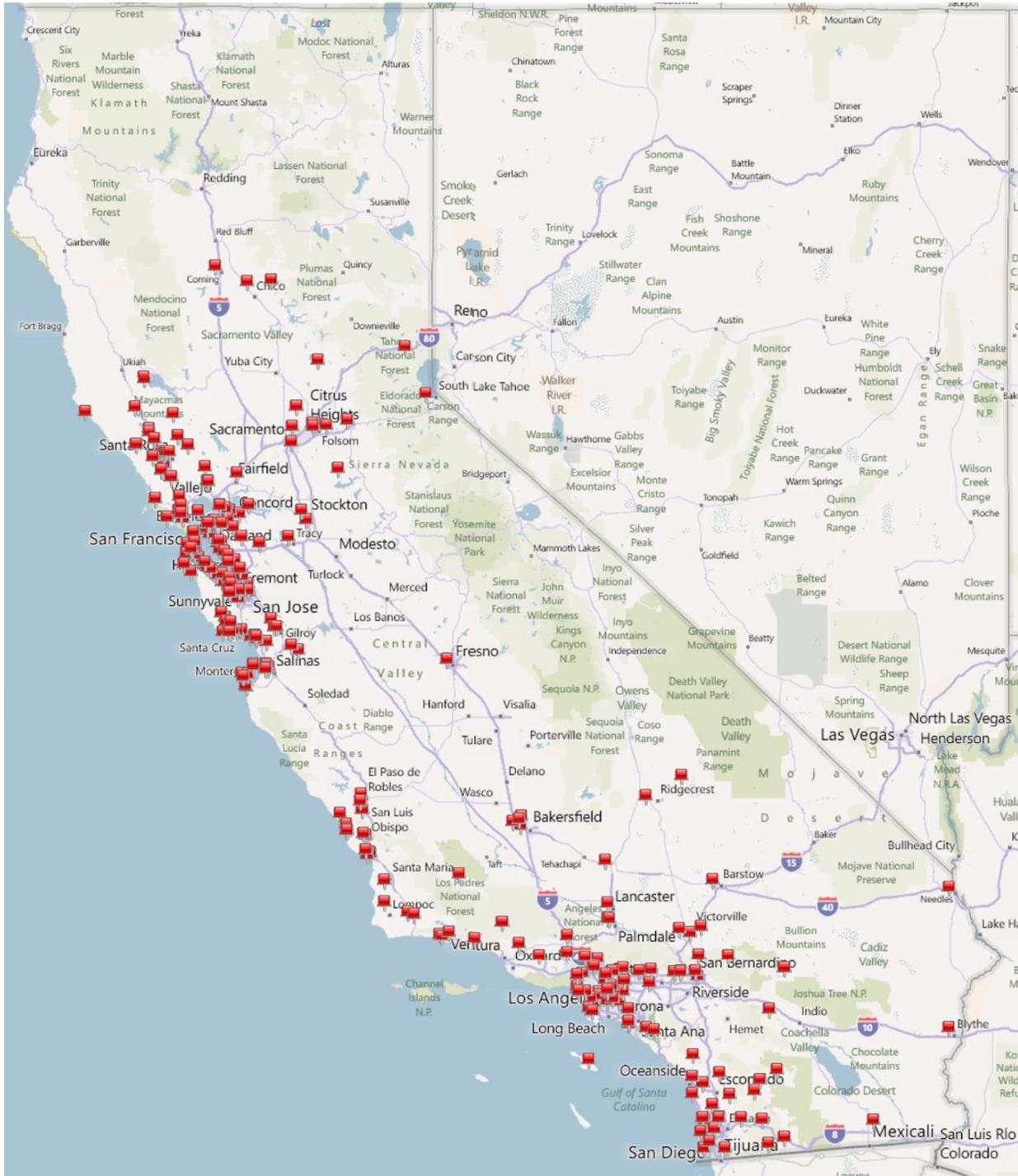
Marin County's HHW/Pharmacy Program



San Mateo County's Law Enforcement Program



# Home-Generated Pharmaceutical Waste Collection Sites in California 2010



~300 sites

## Challenges

- Local governments fund more than 80% of all programs
- Stakeholders consider:
  - Costs to be too high
    - Controlled substances-collected in presence of law enforcement
    - Model guidelines required 2-key bins in pharmacies
    - Per statute, HGPW is solid waste; per CDPH policy, HGPW is medical waste when consolidated – therefore, requires:
      - ✓ meticulous tracking standards
      - ✓ medical waste hauling standards
      - ✓ disposal standards – medical waste incineration (no in-state medical waste incinerators = high shipping costs)
  - Regulatory requirements, policies, and authority too complex
    - Regulators/Stakeholders include:
      - ✓ CDPH
      - ✓ BoP
      - ✓ DTSC
      - ✓ SWRCB
      - ✓ U.S. DEA
      - ✓ Others (e.g., pharmaceutical companies, distributors, pharmacies, retailers, haulers, collectors, etc.)

## Unresolved Issues

- Model guidelines did not:
  - Reduce costs
  - Provide sustainable funding
- Since 2010:
  - Collection has stalled
  - Pharmacy participation dropped 15%

## Participation Requires Strong Incentives

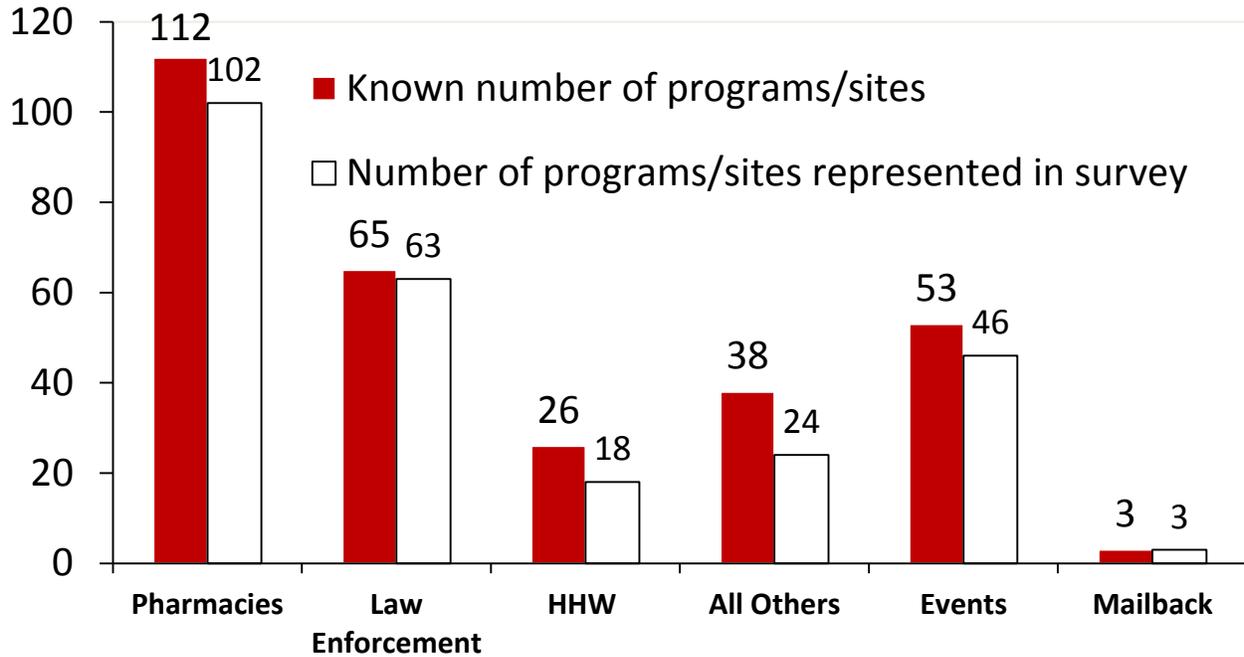
	Pharmacy collection sites		Population per pharmacy		Pounds collected per capita	
<b>California Meds<sup>1</sup></b>	1%		437,241		0.009	
<b>California Sharps<sup>2</sup></b>	4%		170,582		?	
<b>British Columbia Meds</b>	95%		4,000		0.04	

<sup>1</sup> 2% of all independents and 0.2% of all chain pharmacies participate

<sup>2</sup> 2% of all independents and 6% of all chain pharmacies participate

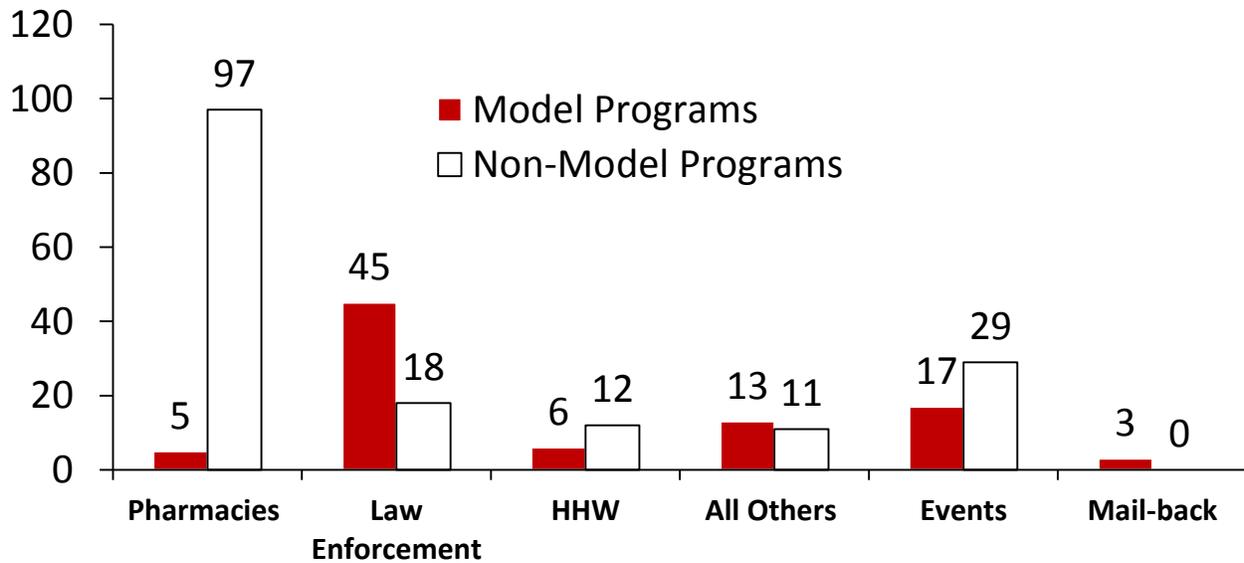
- Chain pharmacy participation is greater for sharps collection
- Greatest participation with EPR programs
  - e.g., 1 site for every 10,000 to 15,000 people
- Strong incentives for more sites/capita = more lbs/capita

### High Response Rate



### Security

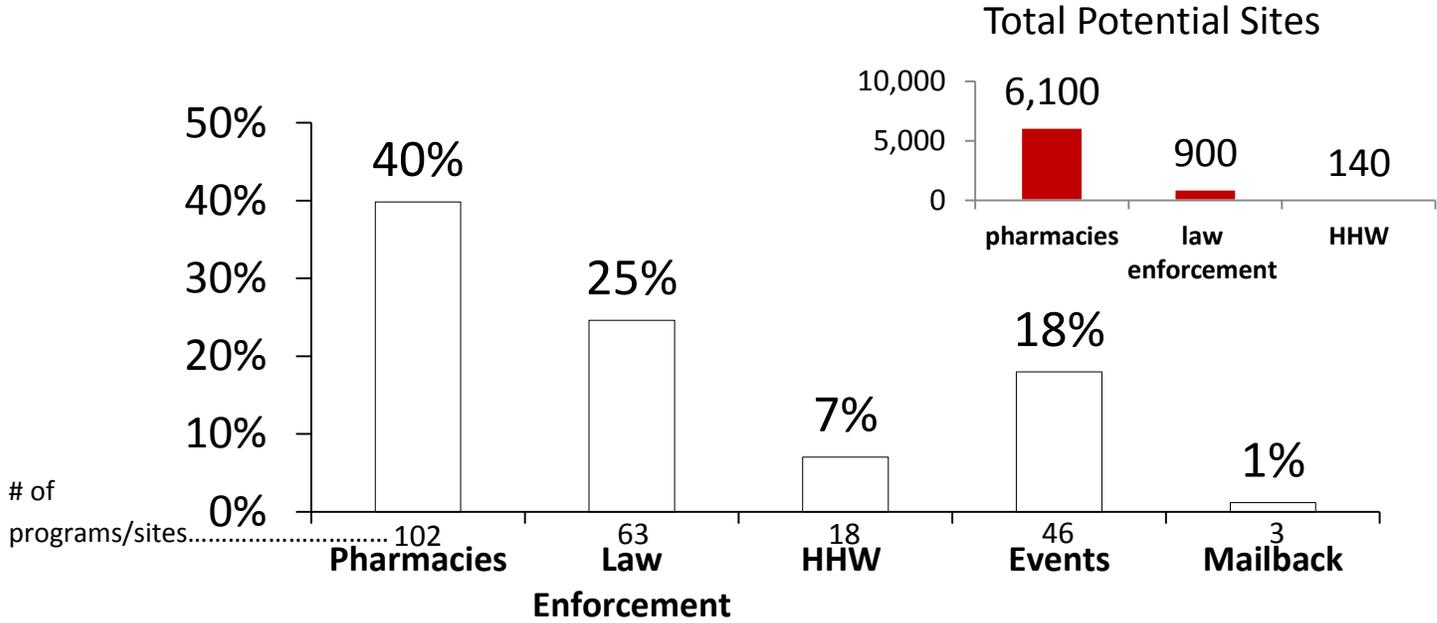
Number of Model/Non-Model Programs by Type



Note: many pharmacy programs pre-existed the voluntary guidelines and therefore did not meet those standards (e.g., 2-key collection receptacles).

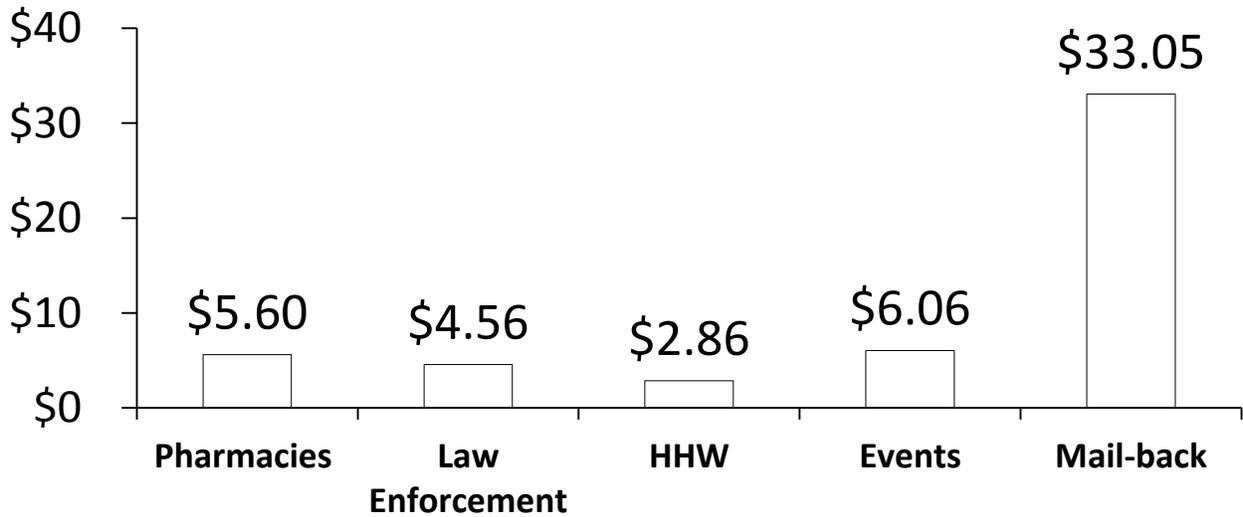
## Accessibility

Number of program sites (% of total)



## Cost

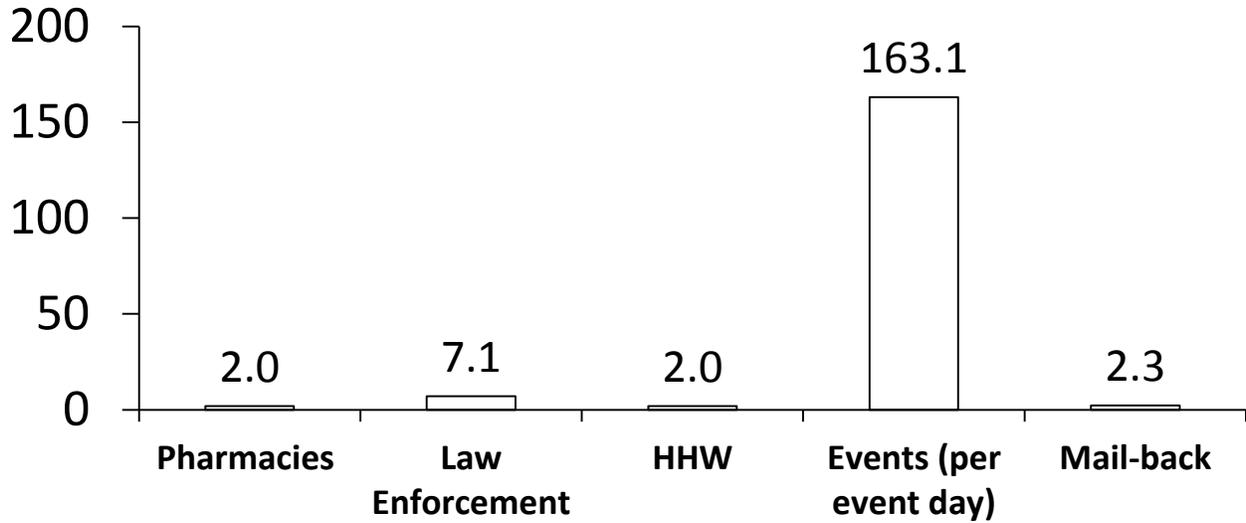
Average Cost per Pound



Note: High mail-back costs are an anomaly due to new program and few returned mailers – costs would decrease with increased participation. HHW program costs are likely under-reported due to difficulty in accurately tracking costs as relatively few meds are added to their existing waste stream.

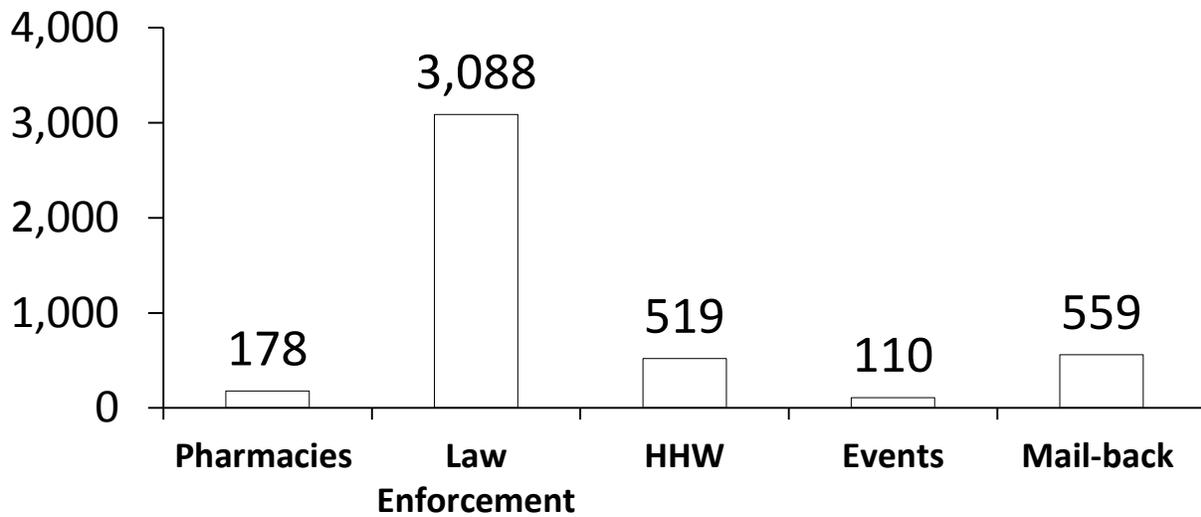
### Efficacy (per day)

Average Pounds Collected per Day of Operation



### Efficacy (total)

Average Total Pounds Collected per Program/site



Note: Law enforcement data is artificially inflated due to one outlier where initial collection resulted in unusually high response. Without outlier, law enforcement collection would be consistent with others.

## Potential Options in SB 966 Report to the Legislature

1. Continue Current Practices
2. Improve Guidelines & Regulation
3. Implement EPR (Extended Producer Responsibility)
4. Use ADF (Advanced Disposal Fee) and State Oversight

Option:	1 (continue)	2 (improve)	3 (EPR)	4 (ADF)
Safety	↔	↑	↑	↑
Accessibility	↔	↓↑	↑	↑
Cost Effectiveness	↔	✗	↑	✗
Efficacy	↔	↑	↑	↑
Collection Cost	↔	✗	↓	✗
Awareness	↔	↔	↑	↑
Sustainable funding	↔	✗	√	√
Goals	✗	✗	√	√
Complexity of Requirements	✗	✗	√	√
Environmental Impacts	↔	↔	↓	↓

↔ = no change      ✗ = not addressed  
 ↑↓ = good change    √ = addressed  
 ↓ = bad change

## Conclusions

- High Costs; no sustainable funding
  - Local governments fund more than 80% of all programs
  - Voluntary programs stalled since 2010 (~300 collection sites; pharmacy participation dropped 15%)
- Regulatory requirements, policies, and authority too complex
  - Per statute, HGPW is solid waste; per CDPH policy, HGPW is medical waste when consolidated – therefore, requires:
    - ✓ meticulous tracking standards
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  - HGPW needs special management statute for collection, handling, disposal
- Each program type has advantages
- Most stakeholders prefer EPR