

# Waste Management in Minnesota Correctional Facilities

**Maggie Kristian**

**MnTAP Advisors: Nathan Landwehr**

**Company Supervisor: Alice Remillard**



UNIVERSITY OF MINNESOTA  
**Driven to Discover<sup>SM</sup>**

# Agency Background



## Minnesota Dept. of Corrections

- 10 facilities throughout Minnesota
- Employ, house, feed provide medical care, oversee rehabilitation programs to offenders
- 42% recycling rate

# Incentives to Change

- **Executive Order 17-12**

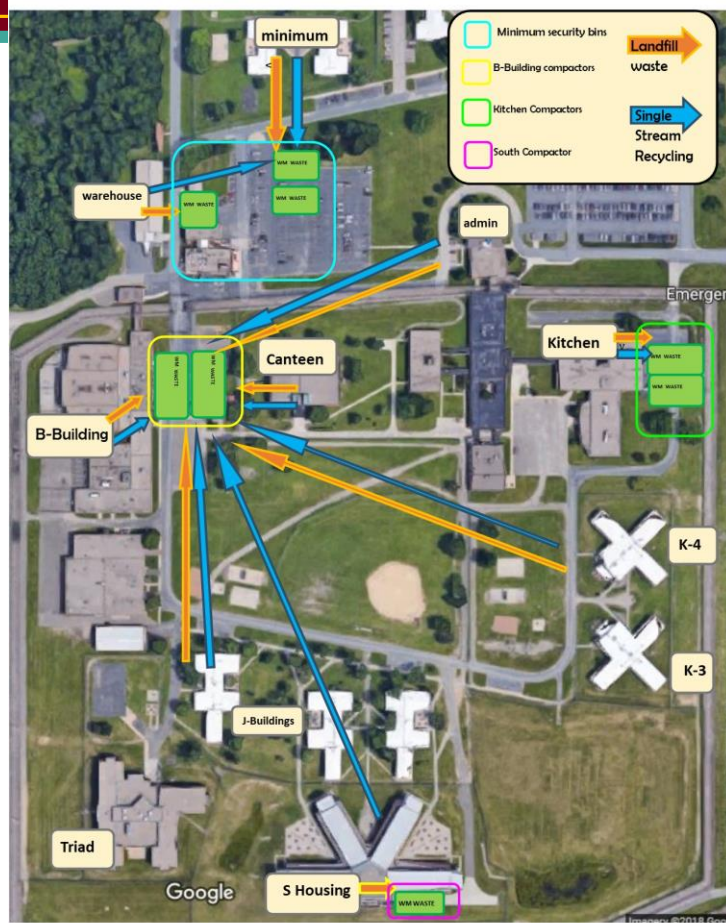
- State agencies must “Reduce Solid Waste: 75% combined recycling and composting rate of Solid Waste by 2030

- **Resource Savings**

- **Environmental Stewardship**

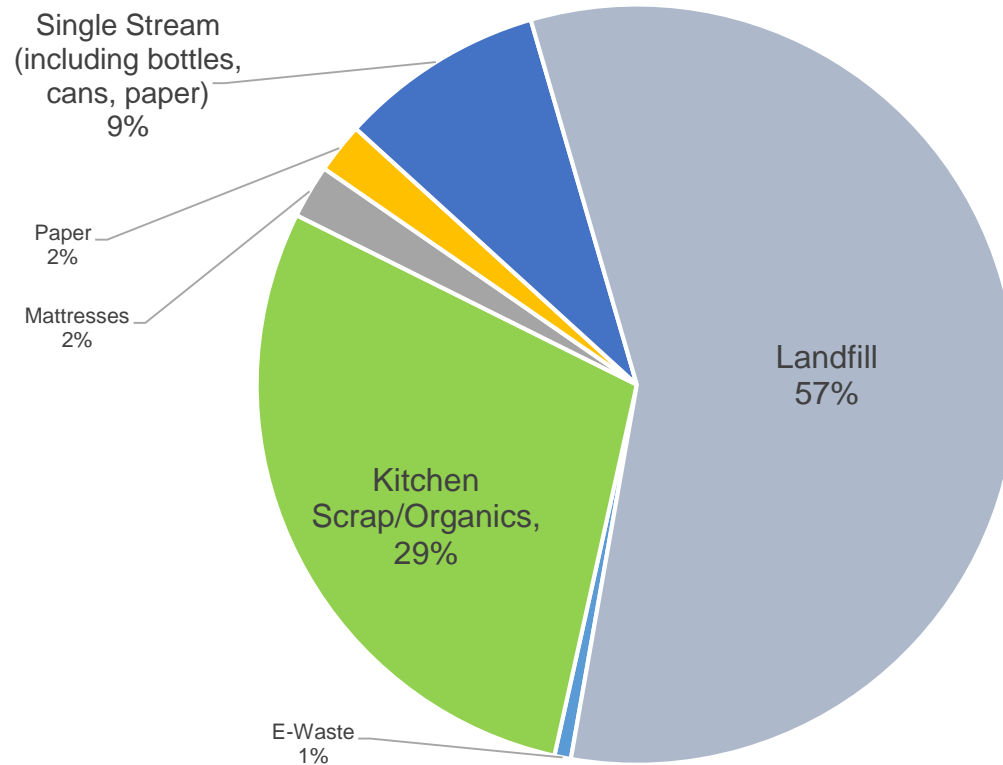
# Approach 1: Increase Recycling Rate at MCF-Lino Lakes

- Determine where waste is generated and how it moves through the facility
- Develop targeted recommendations for high-impact waste streams

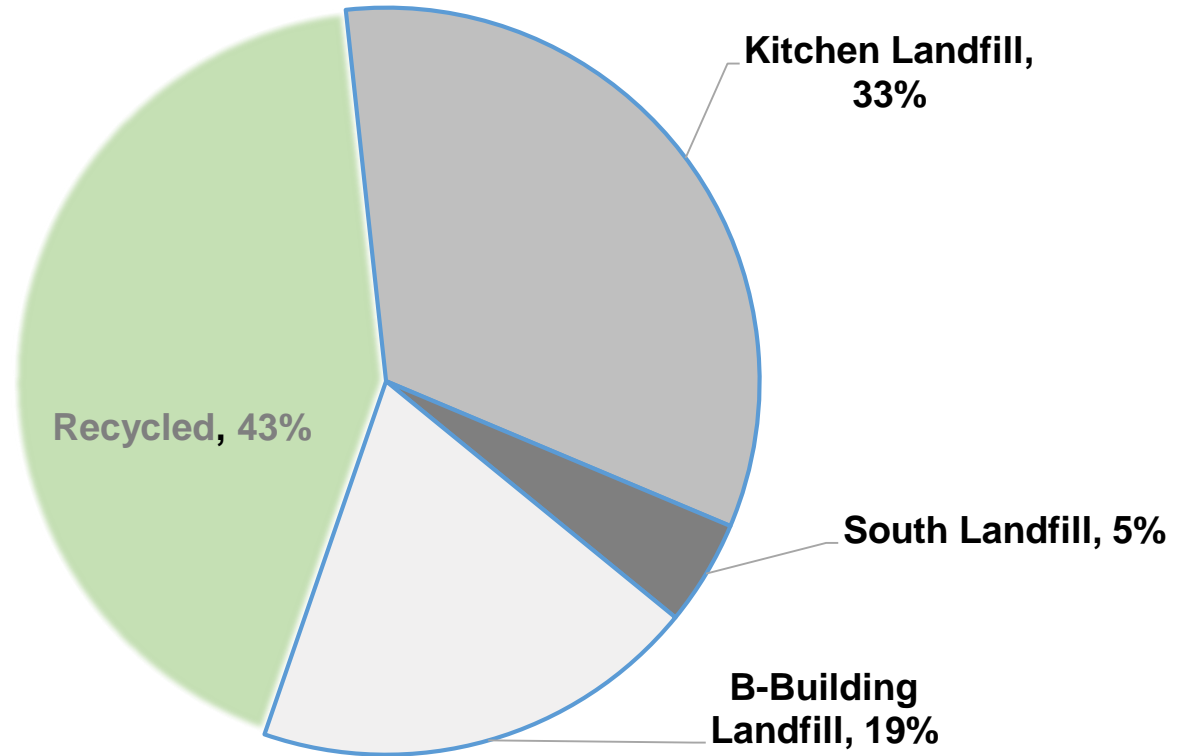


- Offender yard crews collect waste bags put outside on curbs each morning
- B-Building compactors contain waste from most of the facility
- Each compactor has a 7 ton capacity and is emptied weekly

## MCF Lino Lake Facility Waste 2018



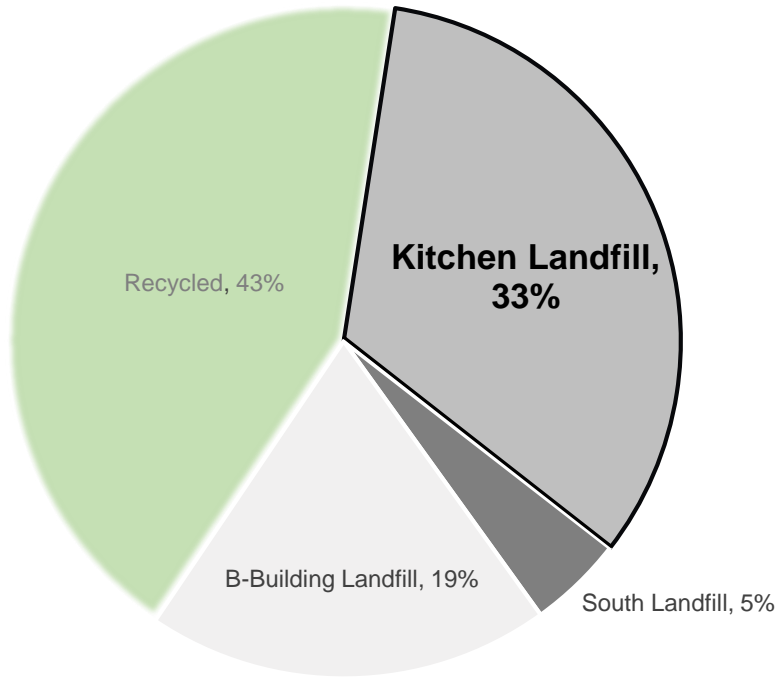
## MCF-Lino Lakes Landfill Waste 2018



# Current Recommendations

1. Re-design offender tray line in dining hall
2. Introduce standardized recycling bins
3. Reduce Compactor Pickups
4. Introduce plastic film collection
5. Switch to bulk milk
6. Eliminate small liners in offender cells
7. Account for un-recorded waste streams

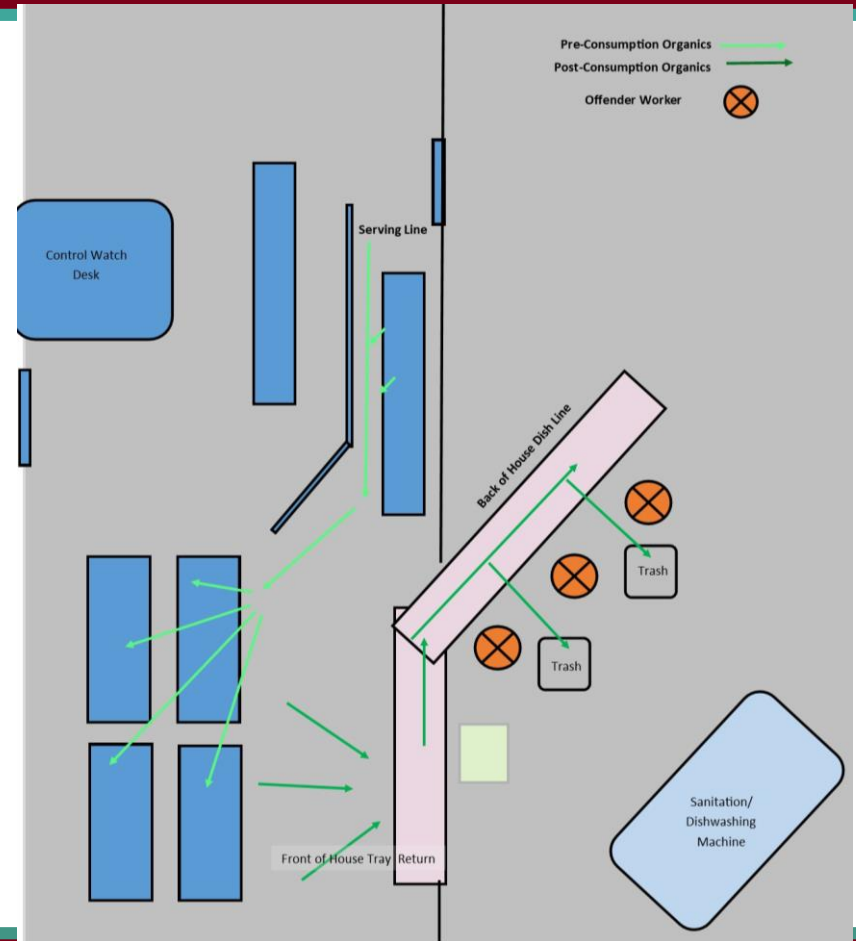




- **86% Post-Consumption Organics**
- **10% Paper**
- **4% plastics**

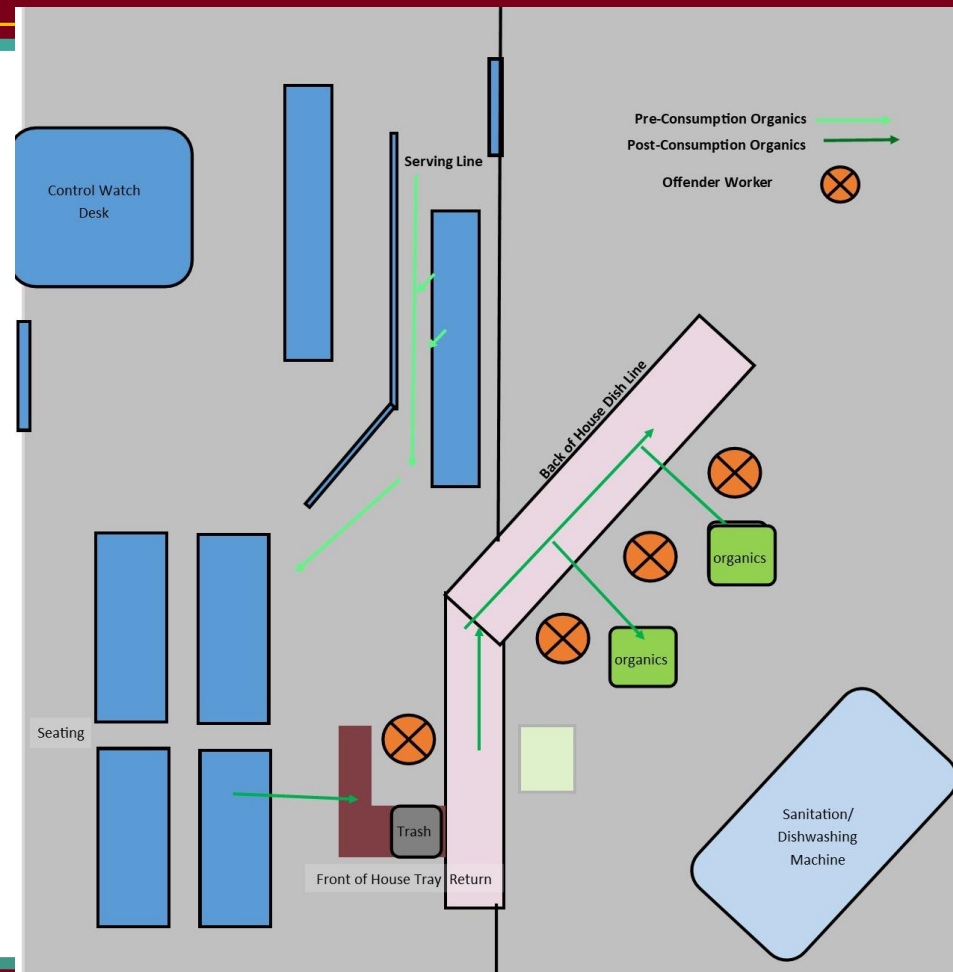
# Post-Consumption Organics Recovery

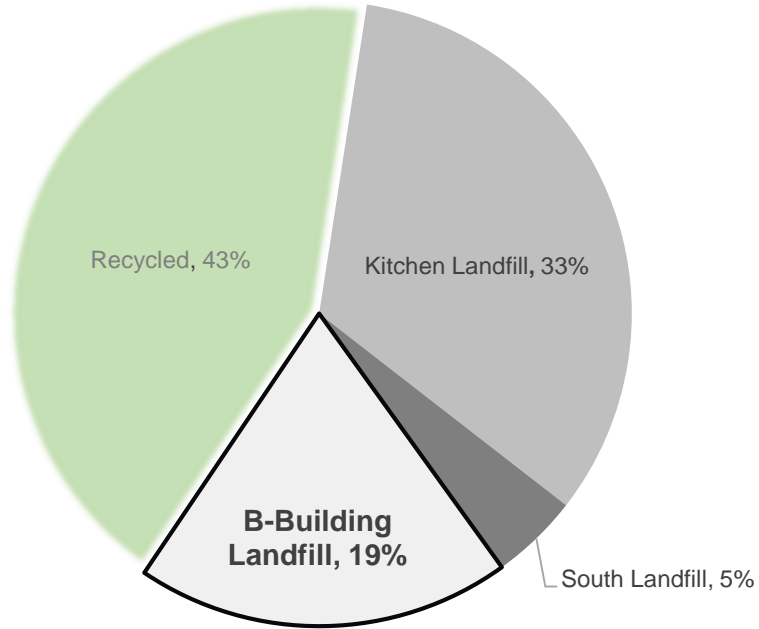
- Co-mingling prevents recovery
- Limited dish room space
- Fast paced tray return



# Post-Consumption Organics

- Separate waste before trays are returned to prevent co-mingling
- Test run showed low co-mingling after sorting





- **Canteen** (plastic film, paper receipts)
- **Property** (textiles, plastic film)
- **Health Services** (hazardous waste, plastic packaging, paper)
- **Administration and Programming** (paper)

# Standardizing Waste Bins

- **Based on Capitol Complex Recycling**
  - Color coded
  - Signage modified for specialized DOC and Canteen items
- **Funded through Anoka County**
  - \$20,000 grant for new bins and signage



# Approach 2: Develop Waste Management Toolkit for All DOC Facilities

## Tools

### •DOC Toolkit

- Outlines likely waste streams within different facility departments and ways to best manage them, possible resources, funding.
- I-Share Materials
- Online Training

## Connections

### •Inter-Facility knowledge sharing

- Hotline newsletter to exchange success stories and tips between facilities

# **Approach 2: Develop Waste Management Toolkit for All DOC Facilities**

- 1. Standardize bins**
- 2. Bale recyclables**
- 3. Recover post-consumption organics**

# Lessons Learned

- 1. Unique requirements of corrections facilities**
- 2. How facilities can learn from each other**
- 3. Locating information across different agencies, states, vendors**



Current Recommendations	Annual reduction	Total cost	Annual savings	Payback period	Status	Recycling Rate Increase
Re-Design Offender Tray Line	400,000lbs	0	\$6,500	Immediate	In Progress	30%
Standardize Recycling Bins	TBD	\$20,000	TBD	TBD	In Progress	7-9%
Account for un-recorded waste streams	33,000 lbs	0	0	n/a	Implementing	~2%
Reduce Compactor Pick-ups	n/a	0	\$14,500	Immediate	Implementing	n/a
Introduce Plastic Film Collection	300 lbs	0	\$350	Immediate	Implementing	1%
Eliminate Liners from Offender Cells	n/a	0	\$7,400	Immediate	Investigating	<1%
Switch to Bulk Milk	18,000 lbs	\$3,000	\$28,000	1.5 months	Investigating	4%