Zero Waste Schools

Susan Casey
Zero Waste Schools Program Manager
Seven Generations Ahead
Nonprofit serving Chicago metro area and Midwest since 2001
Mission: Promote ecologically sustainable and healthy communities
Programs include: PlanItGreen, Green Town, Fox Valley Sustainability Network, IL Farm to School Network, IL Harvest of the Month, and Zero Waste Schools
Our Zero Waste Schools Program works with school staff and students to shift operations and minds towards generating zero waste through **source reduction, recycling, composting, and food recovery.**

Seven Generations Ahead:

- Helps schools plan effective waste reduction strategies
- Provides on-the-ground support for operational changes
- Educates students and staff about the How and Why of going zero waste
- Connects schools with local partners and opportunities
- Drives policy changes and infrastructure development that promote zero waste.

Zero waste is a path, and SGA’s role lies in meeting schools where they are in the process and supporting the changes needed until zero waste is the new normal for our schools and our next generation of environmental leaders.

On average, area schools we have supported in implementing commercial composting and recycling programs divert as much as 80-85% from the landfill.
We help lunchrooms that look like this...
... become a zero waste lunchroom that looks like this.
CPS Commercial Composting & Recycling Program
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Results at Sandoval Elementary, a school of 1,015 students:

Check out our impact!

In One Day
257 lbs composted
99 lbs recycled
167 lbs liquid diverted
523 lbs diverted from landfill!

Potential for One School Year
46,260 lbs composted
17,820 lbs recycled
30,060 lbs liquid diverted
94,140 lbs diverted from landfill! (about 47 tons!)

Waste Audits of Cafeteria/Kitchen

Sandoval went from 36 big trash bags per day to less than 7 bags per day (from lunchtime and kitchen).
Recycling in the Lunchroom
Recycling and Plate-stacking
FoodShare - Recycling - Plate-stacking
Food recovery:
Share Tables & CPS FoodShare
USDA & EPA: U.S. Food Waste Challenge

Reduce food waste by 50% by 2030

Food Recovery Hierarchy

- **Source Reduction**: Reduce the volume of surplus food generated
- **Feed Hungry People**: Donate extra food to food banks, soup kitchens and shelters
- **Feed Animals**: Divert food scraps to animal feed
- **Industrial Uses**: Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy
- **Composting**: Create a nutrient-rich soil amendment
- **Landfill/Incineration**: Last resort to disposal

*Feed people, not landfills*
*Feed soils, not landfills*
Composting is a way of recycling food scraps and yard trimmings.
Three Ways to Compost

On-site Composting
Fruit and vegetable scraps collected and mixed with yard trimmings in an outdoor compost bin.

Vermicomposting (Worm Bins)
Fruit and vegetable scraps and newspaper are fed to worms in an indoor bin.

Commercial Composting
Food scraps and food-soiled paper are collected and hauled to a commercial compost facility.
On-site Composting

Collect fruit and vegetable scraps in lunchroom sorting station.

Students record the weight of food scraps and the temperature of the compost pile (120* Fahrenheit today!) -- great science/math skills and teamwork.
Students sift the finished compost for spreading on the school flower beds.
Plate-stacking to reduce trash volume
Example of source reduction

Polystyrene Trays → Compostable Plates
Commercial Composting & Recycling Program

Program Implementation Basics

- Onsite support
- Zero Waste Team at every school
- Waste audits (baseline, launch day)
- Education on the How and Why
  - All students
  - Kitchen staff/ custodians / engineers
- Coordinating operational changes
  - Equipment and supplies
  - Hauling service and equipment
Build a Zero Waste Team

- Administration & Staff
- Custodian & Cafeteria Staff
- Student Ambassadors
- SGA
- PTO/ Green Team
Curriculum Connections & Service Learning
Composting program uniquely integrated at each school

NGSS Aligned Chemistry Unit (HS-PS1-7)
Essential Question: Where does the mass from our garbage end up?

- Students apply knowledge of conservation of atoms and stoichiometry to evaluate the human impact of landfills and incinerators
- Service Project: Students apply principles of conservation of mass to design an improved waste management program at Solorio and to advertise the program to students.

Solorio High School: Zero Waste focus in chemistry unit, service learning opportunity for all students
Composting program uniquely integrated at each school

Southside Occupational High School:

Onsite and commercial composting are used as training opportunities in their Career and Technology Education programs in Culinary Arts, Horticulture, and Agriculture.
Composting program uniquely integrated at each school

McAuliffe Elementary:
Integrates composting program into school-wide focus on sustainable agriculture practices
What do local carrots have to do with milk carton recycling?
THE CLOSED LOOP LUNCHROOM

Healthy Students

Healthy Planet

Healthy Food
Thank You

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