Rural School Recycling Success

Schools in rural areas can face unique obstacles when setting up recycling programs. Recycling collection services may be limited. It may not be economical for private haulers to collect materials from schools in areas that are distant from recycling processors and where there are few other businesses requiring recycling services. Rural schools may generate insufficient materials for cost effective recycling collection. However, options are available and with thought and creativity successful rural school recycling can be sustained.

Step One: Form a Recycling Team

- Start by finding out who supports recycling in the school and who is willing to make the time and commitment to help start or expand the school's recycling efforts.
- Consider conducting a survey asking for interest, ideas, suggestions, and volunteers.
- Get permission from the school principal to form a recycling team.
- Include representatives from administration, teaching, custodial, cafeteria, parents, and students.
- Appoint a recycling coordinator or committee chair.

Tips:

- If implementing the recycling team for the entire school district or multiple schools, be sure to include representatives from each school.
- Consider ways to involve students in the recycling program. Make sure the level of participation by the students is appropriate based upon their grade level. Student participation in the school recycling team, in-school collection, and outreach is beneficial for fostering greater participation and success in the recycling program.

Step Two: Conduct a Waste Assessment

- Learn about the school's waste stream by conducting a waste assessment to determine the types of waste generated at the school and materials that can be targeted for recycling, reuse, reduction, or even elimination.
- Look at where the waste is coming from, the types and amounts of waste, available space for recycling containers, and current recycling and waste reduction efforts.
- See the NERC Waste Assessment and Waste Audit Introduction Tip Sheet (http://www.nerc.org/documents/waste_assessments_and_waste_audits.pdf).

What to Recycle

Paper

- All clean school paper is recyclable
  - Copier paper
  - Writing paper
  - Colored paper
  - Junk mail
  - Newspapers & magazines
- Do not recycle
  - Paper with glue, paint, stickers, glitter on it
  - Tissues and paper towels

Cardboard

- Develop a collection & storage system
    - Where is it generated?
    - Who will be responsible for breaking it down?
    - Where can it be stored?
- Cardboard can be stacked & stored in an outside shed or on pallets under plastic
- Must be kept clean & dry
- Flatten to conserve space
- Remove excess tape
- If a recycling hauler collects school paper, likely will also take cardboard
    - Sometimes cardboard & school paper can be stored together
    - Often an outside cardboard dumpster will be provided by hauler
- Cardboard is usually accepted at recycling centers or transfer stations

Plastic bottles

- Typically only plastics #1 (soda/water bottles) & #2 (milk containers) are recyclable
    - Check with hauler & local recycling center to see if other plastics or aseptic containers are accepted
- Empty bottles of all liquid
- Bottles do *not* need to be rinsed
- Labels are okay
- Caps are okay
- Most likely plastic bottles will need to be taken to a recycling center
- Consider separating redeemable containers from non-redeemable for fundraising

Steel (tin or #10 cans) food and beverage cans

- Rinse to remove food
    - Labels are okay
    - Consider rinsing at end of regular cafeteria kitchen cleanup in available sink water to conserve water, or wash in less-than-full dishwasher
- Flatten cans
    - Nest cans to save space
- Cans may need to be taken by school or volunteer to local recycling center
    - Check with hauler first to see if will accept for recycling

Glass containers

- Rinse to remove food
- Remove plastic & metal caps
- Labels are okay
- Only beverage & food containers are recyclable
    - No ceramic or Pyrex glass, drinking glasses, plates, or other types of glass are acceptable
- Glass will likely need to be taken by school or volunteer to a local recycling center

Step Three: Goals, Work Plan, Action Steps

- Set a waste reduction goal or recycling goal that is achievable in the school year.
- Develop a work plan that includes "action steps" to meet the goal.
- Start small, with one or two of the materials that make up the highest percentage of the school's waste stream, such as mixed paper and cardboard. Or collect paper along with aluminum cans since aluminum will generate revenue.
  - Starting with just one or two items will allow the recycling team to work out problems that may occur in the collection and allow time to get the entire school on board.
- Implement the program in phases so that it can be easily modified.
- Expand an existing recycling program by adding at least one material type; conduct an outreach campaign to promote the new addition to the program.
- The work plan should outline specific tasks that need to be done, who will perform the tasks, and a timeline.
- Obtain support for the work plan from school administration. If implementing the program school district-wide, get approval from the superintendent or school board.
- Develop a budget: Costs for recycling may include recycling bins, staff and teacher time, promotion (signage, fliers), and hauling charges (see below). These funds can be minimized by using cardboard boxes as recycling bins or soliciting donations for bins.
  - A partnership with businesses and community members can help support the effort.
- Collect redeemable beverage containers (or aluminum cans) and use these revenues to defray the costs of collecting paper or other recyclables.
- A key to realizing success is making sure that the recycling records are maintained and that the school's waste disposal contract is based on actual volumes disposed. Reduction in trash generation can lead to cost savings in the school's waste bills.

Tips:

- Be prepared to discuss with school administration how the recycling program can help reduce disposal costs for the school, as well as the other benefits to recycling.
- Examples of Work Plans can be found in Case Studies on the NERC Website at http://www.nerc.org/documents/index.html#SchoolWaste.
- Consider Waste Reduction & Reuse— See NERC's Action Tip Sheets (http://www.nerc.org/documents/index.html#SchoolWaste):
  - School Reuse Tips
  - Paper Use Reduction in Schools
  - School Cafeteria Waste Reduction

Step Four: Determine Where the Materials will Go

- Locate a hauler or recycling center that will accept the recyclable materials.
- Begin by talking with the school trash hauler; they may be willing to also take the school's recyclable paper.
  - Negotiate with the hauler to offer a reduced rate for hauling both the trash and paper.
- Look on the Internet or check the local telephone directory under "recycling" for other haulers providing services in the area.

Questions to Ask a Hauler

- What kinds of paper will they accept?
- Can cardboard and other paper be collected together?
- What is the minimum amount of paper required for pickup?
- Can they provide containers? What kind?
- Is there a hauling charge?

- Transport materials to the local recycling center. Check with the recycling center to find out what types of materials they accept.
  - A parent or teacher may be willing to transport the materials.
  - School personnel may be able to transport materials.
  - The closest recycling center may be a town "transfer station." Schools may need permission from the town to bring materials there for recycling.
- Working with other schools to coordinate collection activities may provide an effective collection opportunity. Consider organizing a district-wide collection.
- Check to see if materials can be sent to a central location using school supply vehicles. A hauler or school personnel can perhaps collect materials from this location.
- Talk with local solid waste authorities. If they provide hauling in the community, they may be willing to pickup the school's recyclables. If not, they may have helpful suggestions on a cost effective way to recycle.
- Ask the county public works (highway) department if they have a crew regularly in the area that may be willing to pick up the materials and transport them to a recycling center.
- Work with a local business to combine the school's materials with their recycling program. Town offices may recycle and be willing to act as a drop-off point or provide collection.
- A local nonprofit may be willing to collect materials.
- If all avenues for paper recycling have been explored, there may be local agricultural markets for some types of paper. Newspaper can be used as animal bedding. All types of paper can also be composted. Check with farmers or farm organizations to explore these options.

Tips:
- Explore all options before determining where the recyclables will go.
- Pooling materials with other schools, town offices, and businesses can work to the advantage of all involved. The greater the volume of material, the more cost effective it may be for a hauler to collect.
- Most haulers collect only paper. A hauler may be willing to collect steel food cans (tin cans) if sufficient quantities are generated and the area has a good market for them.
- In states with bottle bills, glass, plastic bottles, and aluminum cans can be redeemed for cash. In states without bottle bills, aluminum can drives offer a recycling fundraising opportunity. If transportation can be arranged, the school may benefit from receiving the revenue from these containers.

Step Five: Determine Storage for the Collected Materials
- Work with the hauler to figure out the best type of collection container and the best location. The hauler will provide containers for storage, these may be large carts (which can also be used for the inside collection; see below) or an outside dumpster-style container. If an outside container is used, it must be conveniently located for easy access to dumping. Carts can be stored inside and wheeled out on collection day.
- If the material is being transported to the local transfer station or recycling center, determine what container system will allow for easy transport. This may be small carts that can be easily lifted onto a truck or reusable bags that can be transported in a car or truck.
- Storage areas can include hallways, closets, an empty room, or a small outside storage shed. Consider safety, health, and fire codes when determining the storage area.

Tips:
- Be sure to involve the custodial staff in establishing the collection storage system.
- Collected recyclables must be kept clean and dry.

Step Six: The In-School Collection System
- Set-up a collection system for moving the recyclable materials from the classrooms (and offices) to the outside recycling storage container (or to larger carts stored inside).
- Determine who will collect the material and how often.

Options for collecting the material
- Each classroom and staff member could be responsible for emptying their classroom or desk-side recycling bin into a more central container. The recycling team or custodian could transport the central container to the outside bin (or to the curb for collection by a hauler or a storage area for later transport to a recycling center).
- The custodial staff could empty the recyclables from the classroom and office areas. This could be done on an as-needed basis or every other day in order to not overly burden the custodial crew.
- The recycling team or another group could empty the recyclable containers.

Options for storage and collection

Each classroom and each office (each desk is best) should have recycling bins (small containers, 15 - 25 gallons, or boxes of comparable size) for paper. These bins could be as simple as decorated cardboard boxes, old trash cans (decorated and with recycling signage), or plastic totes, such as curbside recycling containers.
- Contact your local jurisdiction or hauler to see if they can provide curbside collection bins for school use. Solicit business sponsorship to purchase bins or seek grant funding.
- Paper collection bins should be placed near printers, copy machines, and the teacher work area.
- To make it easier for collection of beverage containers, place recycling bins in hallways, the cafeteria, and near vending machines.
- The classroom and office bins can be emptied into larger, intermediate or centralized containers (30-60 gallons) located around the school. These can be rolling carts or large reusable bags. The carts may be able to be picked-up and emptied by the hauler (check to see if the hauler provides these). Alternatively, smaller carts can be used and then emptied into an outside storage bin or used to transport material to a recycling center. These carts or bags can also be rolled into the classroom and office areas for collecting material. If students are doing the collection, material can be placed in reusable bags and transported in a small wagon or by simply dragging the bags to the storage area.

Points of collection
- Classrooms (mixed paper)
- Office areas and teacher work area (mixed paper, cardboard, and beverage containers)
- Printers and copy machines (paper)
- Library (newspaper and mixed paper)
- Break areas, vending machines (aluminum and plastic beverage containers)
- Cafeteria (beverage containers, cardboard)
- Supply and storage rooms (cardboard)

- Machine shop areas (metal, paper, used motor oil, antifreeze, other chemicals)
- Labs (chemicals)
- Athletic areas (beverage containers)

Tips:

- Involve the custodial staff in determining the most effective way to haul and store the recyclables prior to collection by a hauler or transport to a recycling center. Even if the custodial staff does not do the collection, be sure to involve them so that recyclables do not inadvertently end up in trash or get contaminated with trash.
- Use the same style recycling bins for the classrooms and offices. If larger collection carts are used, these should also be uniform. Be sure to label all collection bins for recycling and acceptable material. Distinguish paper recycling bins from beverage container recycling bins by using different styles or colors. Recycling bins should be easily distinguishable from trash bins. Make sure the storage bins meet fire safety codes.

Step Seven: Publicity and Education

- Develop a school recycling slogan and logo (a graphic symbol that instantly identifies your program). Hold a school contest to create these and develop support for the program.
- Hold a kick-off event and announce the program to the local media.
- Have students design posters, educational displays, newsletter articles, and PA announcements to show what can and cannot be recycled, how to recycle, and the importance of their participation.
- Have the recycling team do class presentations, skits, or raps. Plan for an ongoing outreach effort by adding fresh activities periodically.
- Conduct special training sessions for teachers, cafeteria workers, and student leaders on what can and cannot be recycled and why.
- Encourage teachers to incorporate recycling lessons in the classroom.
- Invite special environmental speakers to talk about the importance of recycling and taking care of the environment, careers in the environmental field, and local or regional solid waste issues and opportunities.

Step Eight: Troubleshooting and Monitoring

- Monitor the recycling bins for contamination. Respond quickly and appropriately to any issues of contamination. Ask for classroom volunteers to monitor the program and provide educational reinforcement as needed.
- Check on the efficiency of material handling: Are the collection bins in the right place? Are they overflowing too quickly? Are the people in charge of the collection satisfied with the system? Are the collection bins and storage areas neat and clean? Are there any problems with insects around the beverage recycling bins?
- Keep records of the recycling materials collected and any reductions in garbage disposal. Do a waste assessment at the end of the school year and publicize the results. The school may be able to reduce the size of its garbage dumpster, the number of dumpsters used, and/or the frequency of collection.
- Use EPA's WARM Tool to calculate energy savings and greenhouse gas emission reductions from the school's recycling efforts; regularly post the results. (http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html).
- Add new members to the recycling team to avoid burnout.

- Ask the custodial staff for their input about the recycling efforts and any suggestions on how to improve the program.

Tips:
- Program monitoring and outreach activities must be an ongoing and permanent part of the school's recycling efforts.
- Be positive and rewarding. Consider contests and awards as a way of rewarding participation and encouraging more students to recycle. Promote the recycling tonnages, environmental benefits, contest winners, etc. on the school Website, Facebook page, and in school announcements.

Helpful Websites
- Tools to Reduce Waste in Schools: http://www.epa.gov/wastes/education/toolkit.htm
- Waste Prevention and Recycling Clip Art: www.ciwmb.ca.gov/gallery/wasteprev
- Lesson Plans and Other Resources: www.paperrecycles.org
- Go Green School Initiative: www.gogreeninitiative.org
- Green School Resources: http://www.dec.ny.gov/chemical/8803.html
- The Green Team: www.thegreenteam.org
- Various School Resources: www.kab.org

For more information on the Northeast Recycling Council's school project and other School Waste Reduction Tip Sheets, check its Website at www.nerc.org or contact Athena Lee Bradley by email at athena@nerc.org or by phone at 802.254.3636.

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