

Zero Waste Plan

Resource Packet for Schools



Sustainability Division

You cannot get through a single day without having an impact on the world around you.

- Jane Goodall

Overview



The City of Chula Vista adopted its Zero Waste Plan in January 2022, outlining practical goals to make Zero Waste living achievable. The plan sets a goal of 90% waste diversion by 2035, setting goals addressing all areas of daily life. Surpassing the State of California's goal of 75% waste diversion within the same timeframe.

Zero Waste International Alliance defines Zero Waste as, "The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health."

The Zero Waste Plan follows the principles known as the "triple bottom line," meant to meet the needs of "People, Planet, and Prosperity." These principles are to ensure cultural, environmental, and economic change on a local and global basis. Within Chula Vista, the adoption of these principles and developing a Zero Waste Plan ensures that long lasting sustainable changes are achieved.

Integrating Zero Waste in our everyday lives is important. It addresses three important factors of our consumer culture:

1. To reduce the volume and toxicity of waste by eliminating them in the first place.
2. Use materials and products for their original intended uses and then reuse them in other ways before recycling.
3. Recycle or compost all remaining materials to their highest and best use after they have been reduced and reused as much as possible.

Let's make a difference together!

Contents

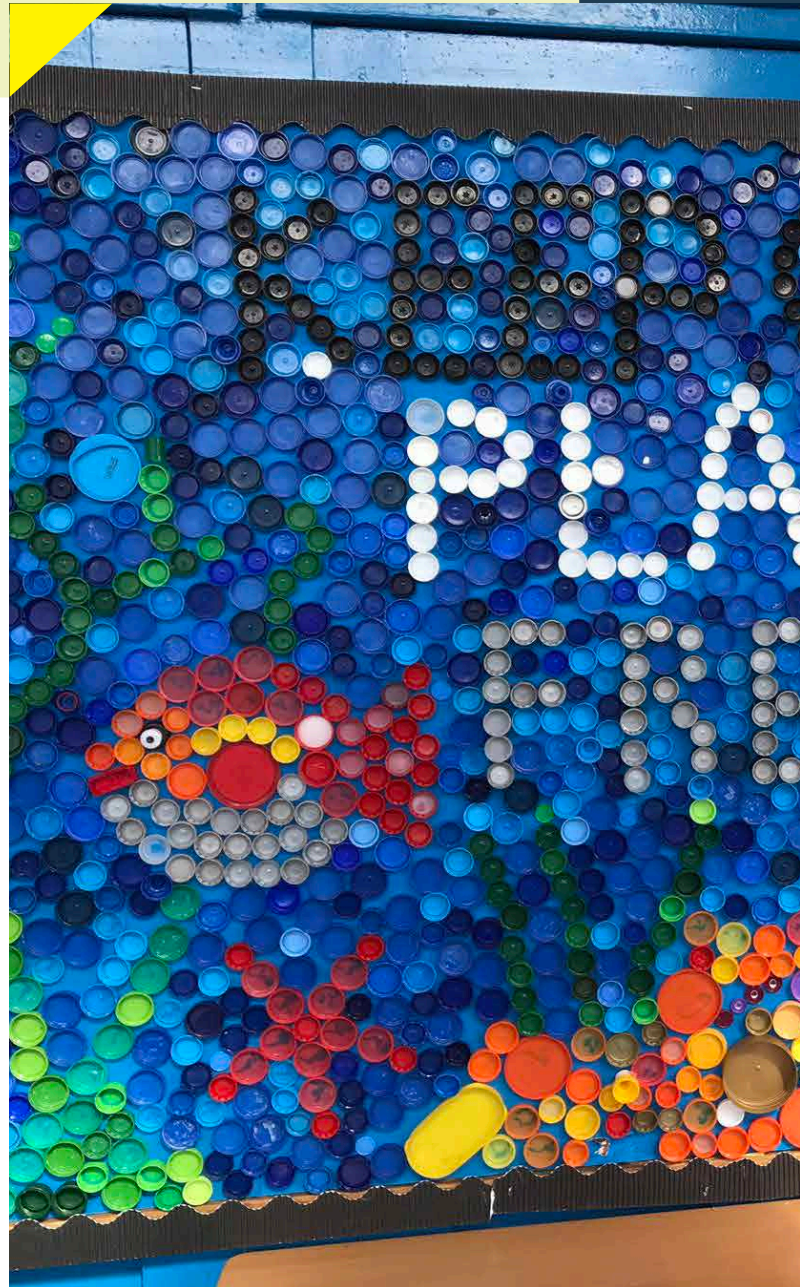
Intro & Background 2 - 7

Overview	2
Definitions	3
Purpose	4
Regulations	4
Zero Waste Hierarchy	5
Diversion by the Numbers	6
Zero Waste in Schools	7

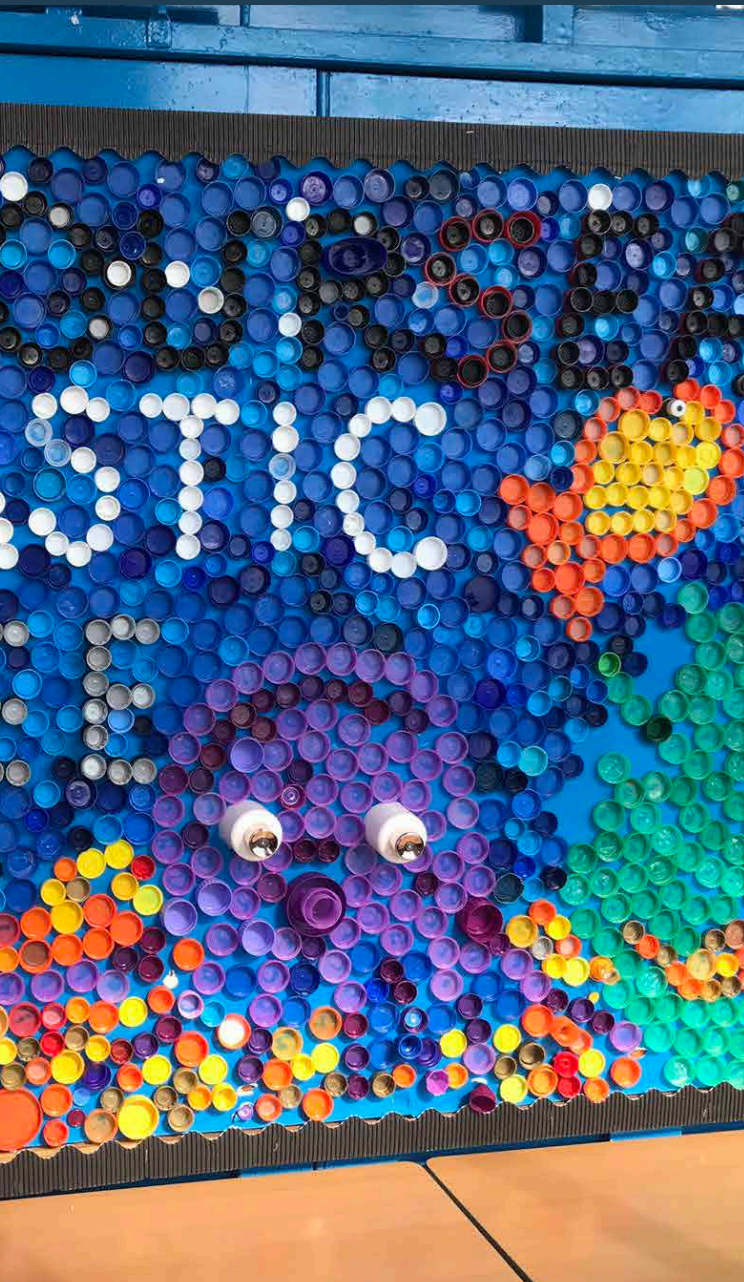
Teacher & Student Led Workshops 8 - 18

Rethink & Re-imagine	8 - 9
Reduce & Refuse	10 - 13
Reuse, Repurpose & Repair	14 - 15
Reducing Waste & Cleanups	16 - 17
Composting	18
Classroom Lessons and Certifications	18

Conclusion & Additional Resources 19



The City of Chula Vista has developed this school resource packet to inspire students and teachers to create new sustainable choices throughout their campus. CalRecycle, a state entity tasked with bringing together the state’s recycling and waste management programs to create a circular economy, estimates that **schools generate up to 562,442 tons of waste per year**; and that a **school’s waste stream is comprised of 50.8% organics, 31.4% paper and 12.7% plastic**. This packet will provide recommendations for integrating sustainable practices at school and their importance. The packet provides education as to why it is essential to have schools adopt more sustainable systems, examples of projects and events that can be hosted at schools, and shares existing networks of recoverable materials for projects.



Definitions

Greenhouse Gas Effect: The process through which heat is trapped near the Earth’s surface.

Greenhouse Gases (GHG): A gas that contributes to the greenhouse effect by absorbing infrared radiation, carbon dioxide and chlorofluorocarbons.

Anthropogenic Climate Change: Human induced climate change directly linked to the burning of fossil fuels, aerosol release, and land alteration from agriculture and deforestation.

Climate Change: A long-term change in the average weather patterns that define Earth’s local, regional, and global climates.

Carbon Dioxide (CO₂): An important greenhouse gas that comes from the extraction and burning of fossil fuels (such as coal, oil, and natural gas), wildfires, and natural processes like volcanic eruptions.

Methane (CH₄): A colorless greenhouse gas 20 times more powerful than carbon dioxide. Largest sources of methane are from agriculture, fossil fuels, and decomposition in landfills.

Circular Economy: Whole system approach, modeled on nature’s circular systems by managing resources, not waste, thereby creating a closed loop system in which materials circulate without being lost.

Extended Producer Responsibility (EPR): Legislative action that holds producers responsible for managing their products and packaging.

Product Stewardship: Minimizes negative impacts of a product and its packaging throughout all lifecycle stages, which can be implemented by a producer, government, or other stakeholders.

Up-stream Zero Waste Strategies: Strategies that address all processes that went into the production of a product before reaching the extraction of natural resources, the manufacturing, the transportation, etc.

Mid-stream Zero Waste Strategies: Strategies that maximize(s) resource longevity through reuse, repair, repurposing, donations, and food recovery.

Down-stream Zero Waste Strategies: All the processes that happen to a product after you dispose of it with the goal of maximizing the recovery of resources from the items we discard.

Zero Waste Planning: Science-backed design that emphasizes sustainability throughout the entire life cycle of a product and elimination of wasteful practices.

Purpose

Having a sustainable lifestyle is essential to fighting climate change. Climate change is the changing in weather and temperature patterns. The United Nations states that “such shifts can be natural, due to changes in the sun’s activity or large volcanic eruptions. But since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil, and gas.” The burning of fossil fuels releases large amounts of green house gases into the atmosphere which has linked human activity to being the primary cause to current climate change.

The main greenhouse gases (GHG) are carbon dioxide (CO2) and methane (CH4). These gases trap heat within our atmosphere creating a greenhouse effect, heating our planet at an unprecedented rate. The main fossil fuels that release carbon dioxide into the atmosphere are coal, oil, and natural gas, while the release of methane comes from organics decomposing in the landfill, livestock farming, and fossil fuel production. Methane has been the focus of recent state laws such as Senate Bill 1383 (SB 1383), “Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reduction,” which has the goal of preventing, reducing the generation of, and recycling organic waste.

Climate policy also encompasses international efforts, most notably the 2015 Paris Climate Accord, where world leaders committed to limiting the global average temperature increase to below 1.5 degrees Celsius above pre-industrial levels. Achieving this target is a collective responsibility, particularly among consumers and the waste we generate. According to the U.S. Environmental Protection Agency (EPA), each ton of waste buried in a landfill results in an average of 20 tons of upstream waste generated during production processes. Another study found that for every ton of material

landfilled locally, approximately 71 tons of resources are wasted upstream through activities such as mining, manufacturing, and distribution. The impact is even greater with electronics, which can generate up to 1,000 tons of upstream waste for every ton of finished product. Practices such as reducing, reusing, and recycling significantly lower energy consumption compared to the extraction and processing of raw materials. As a result, manufacturing new products from recycled materials not only conserves energy but also reduces greenhouse gas emissions.

Practicing sustainable and zero waste habits at both school and home is essential for students, as it helps lay the foundation for lifelong responsibility and environmental awareness. When students actively engage in sustainable practices, they can help shift broader social norms. By leading through example, they influence their peers and families, demonstrating that environmentally responsible choices are not only achievable but also practical and rewarding. These small changes in mindset and behavior, when multiplied across communities, can lead to meaningful societal transformation. This packet has been developed by the City of Chula Vista to encourage students and teachers to adopt and promote sustainable practices throughout their campus.

This packet will outline education on sustainable practices and their importance, such as:

- Providing education that will encourage schools to adopt more sustainable systems.
- Providing examples of projects and events that can be hosted at schools.
- Zero Waste School and Classroom certification requirements.



State Regulations

Mandatory Commercial Recycling (Assembly Bill 341)

The Mandatory Commercial Recycling law went into effect in 2012 and requires public entities that generate a minimum of four cubic yards of solid waste per week to reuse, recycle, compost, or otherwise divert solid waste from disposal.

- Solid waste refers to garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control.

Plastic Pollution Prevention and Packaging Producer Responsibility Act (Senate Bill 54)

Establishes a new extended producer responsibility (EPR) program to manage packaging and single-use plastic food ware products across every sector of the economy. Producers will ensure that the packaging and plastic food ware sold in California is recyclable or compostable.

Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reduction (Senate Bill 1383)

Effective on January 1, 2022 schools and local education agencies were required to prevent, reduce the generation of, and recycle organic waste. As of January 1, 2024, schools and local education agencies with an on-site food facility are required to recover edible food.

City Regulations

The Zero Waste Plan has a City Council-approved goal of **diverting 90% of waste from the landfill by 2035.**

Chula Vista Municipal Code 8.25.050: It shall be mandatory for all generators of residential, commercial, and industrial recyclables in the City to separate from refuse, for recycling purposes, all designated recyclables and otherwise participate in recycling as described by this chapter.

Zero Waste and its Hierarchy



What is Zero Waste?

The first step toward the future we seek to create is for an understanding of the terminology and goals presented in this resource packet. The City recognizes the definition of Zero Waste presented by the Zero Waste International Alliance as:

"The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health."

Zero waste planning is based on science-backed design frameworks that promote reuse, recycling, and conservation programs with measured improvements and success. Zero Waste programs over the decades have emphasized sustainability throughout the entire life cycle of a product, shifting the focus from 100% recycling and composting to waste reduction, product design, and overall elimination of wasteful practices. Such frameworks can reduce generations of wasted resources while also maximizing the diversion of reusable resources from landfills in our communities.

RETHINK / REDESIGN

REDUCE / REFUSE

REUSE / REPAIR

RECYCLE / COMPOST

MATERIAL RECOVERY

RESIDUALS MANAGEMENT

UNACCEPTABLE: BURY/BURN

Recycled Material

EMISSION REDUCTION

recycled aluminum



95.9% less GHG emissions

recycled steel



81% less GHG emissions

recycled paper products



61.5% less GHG emissions

recycled cardboard products



55.3% less GHG emissions

Greenhouse Gas Emissions

Recycling saves over 50% in greenhouse gas emissions versus producing new material. **Estimated equivalents for miles driven of breakdown of energy savings for recycled material,** according to the U.S. Energy Information Administration:

- One ton of recycled aluminum is equivalent to 9,874 miles driven by a gasoline-powered vehicle
- One ton of recycled steel is equivalent to 339 miles driven by a gasoline-powered vehicle
- One ton of recycled paper is equivalent to 2,483 miles driven by a gasoline-powered vehicle
- One ton of recycled cardboard is equivalent to 236 miles driven by a gasoline-powered vehicle



Diversion by the Numbers

The path to Zero Waste is iterative, with each Zero Waste strategy building upon the City's goals to achieve waste reduction and reinforce waste diversion practices. Actions that emphasize behavior change have been proven to yield the greatest reductions in landfilled tons and GHGs.

Table 1: Summary of Diverted Tons Based on Zero Waste Plan Actions

Recommended Zero Waste Strategy	Annual Additional Potential Diversion			
	Those who live in Houses	Those who live in Apartments	Commercial	Total Sectors
Promote and Support Reduction and Reuse	1,220	530	720	2,470
Reduce the Use of Toxic Materials	40	30	30	100
Promote and Educate on Zero Waste Principles	6,710	2,630	4,980	14,320
Support the Recycling Industry as an Innovative Engine for Regional Economic Development	4,270	1,500	2,910	8,680
Improve Education in Trash and Recycling Programs	3,750	1,580	4,670	10,000
Keep Organic Materials Out of Landfills	24,050	10,980	14,210	49,240
Total Estimated Tons Diverted	40,040	17,250	27,520	84,810

Table 1, above, displays the estimated number of tons diverted from the landfill if all of the City's Zero Waste Plan actions are implemented.

Based on the U.S. EPA Waste Reduction Model (WARM) to calculate the Zero Waste Plan's estimated GHG reductions. The model calculates emissions in metric tons of carbon dioxide equivalent (MTCO₂) across a wide range of material types.

Table 2: Estimated Reduction in MTCO₂ by Zero Waste Task

Estimated reduction in metric tons of carbon dioxide by each Zero Waste strategy; number of cars driven and cell phones charged per year.

Zero Waste Strategy by Task	Estimated Reductions in GHG Emissions Metric Tons of Carbon (MTCO ₂)	Estimated Equivalents of MTCO ₂ cars driven for one year	Estimated Equivalents of MTCO ₂ to number of smartphones charged
Promote and Support Source Reductions and Reuse	2,004	477	132,297,435
Reduce the use of Toxic Materials	86	20.5	5,677,435
Promote and Educate on Zero Waste Principles	36,146	8,603	2,386,239,066
Support the Recycling Industry as an Innovative Engine for Regional Economic Development	18,759	4,465	1,238,406,978
Improve Education in Trash and Recycling Programs	17,124	4,076	1,130,469,700
Keep Organics Out of the Landfill	67,234	16,002	4,438,565,743
Total Estimated MTCO₂ Reductions	141,353	33,642	9,331,656,357

Table 2, above, displays the estimated reduction in metric tons of carbon dioxide (MTCO₂) by Zero Waste Strategy.

Zero Waste in Schools



The City of Chula Vista's Zero Waste Plan created action items to reduce the amount of waste that is generated from schools within our city. These goals are outlined below:

Action 1.3: Short Term

Work with 10 retail stores and other businesses annually to reuse and repurpose items that are routinely discarded. Support existing networks using mailers, press announcements, webinars, and social media to create awareness and encourage behavior change that will increase items donated from businesses that are listed for creative reuse (also known as upcycling or repurposing) and accessed by organizations, artists, crafters, teachers, and individuals to obtain reusable items.

Action 1.7: Short Term

Collaborate with and inspire the Chula Vista Elementary and Sweetwater Union High School Districts to encourage all Middle and High schools to create an "Eco-Friendly Vintage Clothing Exchange" at their schools. Exchanges would include "Uniform Swap Day" and "Vintage Clothing Day" events where clothes could be displayed and traded at no cost or sold for nominal, below-market prices.

Action 1.8: Short Term

Collaborate with Sweetwater Union High School District to encourage and provide innovative approaches and guidance to high schools to expand on the established Princess Project during spring that provides prom dresses for girls and include dress clothes (tuxedos and suits) for boys. In the fall, encourage a similar exchange of Halloween costumes in K-6, middle, and high schools throughout Chula Vista.

Action 3.2: Short Term

Collaborate directly with five schools in the Sweetwater Union High School and Chula Vista Elementary School District schools to offer waste reduction education sessions. Utilize current, reliable information from educational sources specific to educating children on sustainability.

Action 3.3: Short Term

For schools with Eco-Clubs/Groups, coordinate with group leaders, to conduct annual workshop summit during Earth Month (April) to further educate on Zero Waste principles, actions, and learning opportunities and support school's Green Week activities.

Action 3.5: Short Term

Establish a network of 30 volunteers to serve as "sorter associates or liaisons" at four City events annually. Provide students (middle, high school, college) and other interested community members, including Master Composter program participants, with training opportunities for participation to fulfill community service requirements.

These goals are set to target and reduce the amount of waste that is diverted from schools in the effort to meet the City's 90% diversion, as outlined in the Waste Reduction Strategic Plan. Schools can make significant contributions to help our community reach its zero waste goals by incorporating, leading, and participating in the practices contained in this packet!

Advocacy is a powerful tool for driving sustainability, empowering students and communities to push for meaningful changes – like expanding environmental education, adopting zero waste policies, and influencing district-wide practices such as using washable food ware and eco-friendly products. By speaking up and taking action, individuals can help shape greener, more responsible campuses.

Actions that embody environmental advocacy are identified with "★ *Advocacy Action*"



Teacher / Student Led Workshops:

Rethink & Re-imagine

School-Wide / Classroom Waste Audit

When thinking about zero waste, one of the first R's is rethink/re-imagine. In the context of a school setting, rethinking can simply be to rethink your consumption and trash generation. If your school is not actively recycling or composting properly, then a school-wide audit will shine a light on how much waste is being generated and help create a plan to divert certain waste streams from the landfill. When it comes to waste, trash is the most expensive stream and by reducing the volume of trash, the school could save money on their trash service. Waste audits require participation from everyone at school including principals, teachers, students, and staff.

How do you conduct a school-wide waste audit?



STEP 01 Form Your Team

Before setting out to do a waste audit, it's important for key school staff to be informed. They may even be able to support your planning efforts. **Key Staff may include:**

- Principal or Vice Principal
- Teachers (passionate/like-minded leaders, club advisors)
- The Custodial Team
- Eco-Clubs or other like-minded students



STEP 02 Evaluate and Plan

Once your waste audit team is formed, think about what happens every day at school and ask yourself these questions:

- What type of materials do students, teachers, and staff bring on campus?
- What do you notice about materials that get discarded in the waste stream?

Before the team conducts a waste audit, it is important to assess the school campus to learn how wasted material flows and where there is opportunity for introducing sorting bins (bins designated for specific waste streams) if not already implemented. It is necessary to observe a lunch or break period to see how students and staff are using sorting bins. Ask yourself the following questions:

- Are bins accessible?
- Are there any stand-alone trash bins?
- Is signage clear?

All of this can provide insight to your findings once you collect waste audit data.



STEP 03 Gather Materials and Waste Samples

Safety is of utmost importance when doing a waste audit. For personal protection, all participants must wear gloves, goggles, aprons, and face masks.

For the audit, it is recommended to use colored tarps, bins, and trays to distinguish each waste stream sample. Bags are used to sort the waste and a hanging scale or floor scale is used to weigh the material.

- Work with your custodial team to gather at least 25-pound samples of waste.



STEP 04 Conduct the Audit

With your materials and waste samples in hand, find a location that is suitable for your audit. Lay out your tarps, trays, and samples. Sort each waste stream on the appropriate colored tarp, for example:

- Black or Red for garbage stream sample
- Blue for recycling stream sample
- Green for compost/organics stream sample

Weigh each category and keep record. If also collecting volume data, put each category of materials in a bin and note the volume (length x width x height of materials in the bin)



STEP 05 Analyze, Report, and Celebrate!

★ **Advocacy Action** - A picture is worth a thousand words! In addition to gathering quantitative data, qualitative data like photos can really show your community exactly what's in the waste stream. Create a final report of your findings, including your recommendations for reducing waste (examples on page 16) and any celebrations of successful sorting and waste reduction!

Table 3 - Audit Recording Template

	Landfill Bin		Recycle Bin		Compost Bin	
	Pounds	%	Pounds	%	Pounds	%
Landfill	2	26%	0.2	2%	0.2	0%
Recycling	2.4	31%	8.8	90%	0.2	0%
Compost	3.4	44%	0.8	8%	77.6	99%
Total Sample Weight	7.8	lbs	9.8	lbs	78	lbs
% Correct	26%	Correct	90%	Correct	99%	Correct
% Contamination	74%	Contamination	10%	Contamination	1%	Contamination

“ An environment-based education movement – at all levels of education – will help students realize that school isn’t supposed to be a polite form of incarceration, but a portal to the wider world. ”
– Richard Louv



Reduce / Refuse

Zero Waste Events ★ *Advocacy Action*

Planning for events that aim for zero waste are a great way to get involved in your school's sustainability efforts. This includes reducing as much waste as possible through items purchased for the event, reusing materials whenever possible, and proper sorting of material. To conduct a Zero Waste event, the following are key to consider:

U **Upstream:**

Purchasing – Purchasing options are often limited for teachers so it is important to have teachers and staff advocate to administrative/district leaders to purchase items that are reusable, recyclable, or compostable. This will help avoid distributing items that will end up in the landfill.

Committee – Start a committee to encourage your school to aim for zero waste for all school events.

M **Midstream:**

Supplies and Staff – Ensuring that proper containers and staff are available for the proper sorting of the waste stream.

Reuse Considerations – Reusing or repurposing any items before placing in a waste container.

D **Downstream:**

Proper Sorting – Making sure that trash, recycling, and composting are properly sorted to divert the most amount of waste from ending up at the landfill.

Composting on site – Composting at the site is the best and most sustainable way of reducing impact. This is because it reduces the need for transportation for the pickup and travel of the food waste to any facility. When this option is not available, placing food waste in the food waste container ensures that it is recycled at the end. Just be sure there is no contamination!

Starting a school garden – When the food waste from events can be composted on site, it can assist in creating a school garden. The compost created can provide a soil amendment to start a garden where students and teachers can feel a sense of pride and accomplishment that they are not only reducing waste, but creating a circular system where the nutrients are being returned to the soil.



Awareness Campaigns ★ *Advocacy Action*

Schools' sustainability efforts can be disseminated through awareness campaigns. Awareness campaigns inform and educate students, teachers, and staff of the problem regarding waste and possible solutions that will help the school move closer to zero waste. These awareness campaigns are a key component in gaining Zero Waste Classroom Certification through the City of Chula Vista. Teachers and staff that are interested in having their classrooms be certified as Zero Waste can do so by following criteria such as participating in recycling and food waste collection, having trash bins paired with recycling and food waste containers, having a Waste Monitor on the job list, and conducting zero waste educational activities bi-monthly. To find out how to get your classroom or school certified as Zero Waste, please contact environmentalservices@chulavistaca.gov or (619) 691-5122.

Pledge

These awareness campaigns aim to encourage students and staff to commit to reducing waste. Pledges provide ideas for actions that an individual is committing to. Examples include: "I will reduce my use of single use plastics. I will reuse items I purchased whenever possible." These pledges encourage individuals to hold themselves accountable for the actions they commit to.

How to Handle Your Trash

Discover the possibilities of dispose trash properly, and see how your actions can save our planet.



Step 1: Refuse

Say no to single-use items, such as: straws, cups, and plastic utensils. Replace with reusable alternatives.

Step 2: Reduce

Buy long-lasting products with minimal or no packaging to minimize the trash you generate.



Step 3: Reuse

Think twice before putting an item in the trash. Find another use for it, donate, or sell it.

Step 4: Recycle

Separate your trash by type. Recycle Plastics, Cardboard, Paper, Cartons, Glass, Newspaper & Magazines.



Step 5: Make compost

Separate your trash by type. Compost food scraps and food-soiled paper.



MY SUSTAINABILITY PLEDGE

To help the environment I pledge to...

RECYCLE

Use both sides of paper, recycle paper, glass, cardboard, plastic & aluminum



SAVE ENERGY

Turn off lights when I leave a room, unplug electronics I am not using



SAVE WATER

Turn off tap when not in use, take short showers, only run full loads of laundry



REDUCE PLASTIC

Use reusable water bottles and shopping bags, say no to single use plastic utensils & straws



COMPOST

Place food scraps and food soiled paper in green bin



DATE: _____

SIGNATURE: _____

WWW.CHULAVISTACA.GOV/SUSTAINABILITY

Start your own pledge campaign!

Follow these steps:

1. Choose actions you are pledging to do.
2. Unify your classroom or school around the shared goals and commitment.
3. Build meaning into signing the pledge so that every student understands why it's important.
4. Involve students in creating the pledge and have multiple versions for different grade levels.
5. Remember that the success is built upon the pledge that student, teacher, principal, parent, and community must take every school day.

Zero Waste Lunch

According to the U.S. EPA, packing a waste-free lunch saves an average student \$250 and 67 pounds of trash per the nine-month school year (CalRecycle). This type of awareness campaign allows individuals to review their lunch waste and consider alternatives. This allows the individual to see the direct impact of the choice they made. The goal of this campaign is for students to find alternatives to commonly used lunch items that are reusable and create less waste.



Waste Free Wednesdays

This awareness campaign allows students to practice zero waste one day a week. This campaign can bring awareness to the impact of our daily choices and how they add up to a lot of unnecessary waste. Having a designated day can foster a community of individuals that value reducing their waste:

In the classroom

- Reusing backside of paper for scratch paper
- Recycling and sorting properly
- Minimizing use of plastic items

Outside the classroom

- Recycling and sorting properly
- Bringing reusable items when applicable

During lunch / recess

- Bringing a zero-waste lunch to school
- Sorting your waste properly

Guest Speakers

Guest Speakers are a great way to bring awareness to your school regarding zero waste concepts and practices. There are many organizations and agencies that provide these outreach opportunities. These organizations and agencies include:

City of Chula Vista Sustainability Division

Environmentalservices@chulavistaca.gov
Office Phone: (619) 691-5122
www.chulavistaca.gov/sustainability

Living Coast Discovery Center

info@thelivingcoast.org
(619) 409-5900
www.thelivingcoast.org

Republic Services

Customerservicecv@republicservices.com
(619) 421-9400
www.republicservices.com/municipality/chula-vista-ca

South Bay Sustainable Communities

SBsustainablecommunities@gmail.com
www.southbaysustainablecommunities.org

I Love A Clean San Diego

(619) 291-0103
www.cleansd.org

Solana Center

info@solanacenter.org
(760) 436-7986 ex. 700
www.solanacenter.org



Zero Waste Art

Zero Waste Art is a great way to reduce what is going to the landfill while creating beautiful, creative pieces to display. Zero Waste Art allows individuals to use their creativity as an outlet all while reducing their waste! Before tossing something into the trash, consider using materials to create zero waste art. The examples on this page show different discarded or recyclable materials that were used to create art. Consider using materials that are not recyclable or hard to recycle before using recyclable material.

Non-Recyclable / Difficult to Recycle:

- Bubble wrap
- Plastic film
- Plastic bags
- Single-use utensils
- Single-use straws
- Plastics that are not recyclable (3, 4, 6, 7)

Remember, Zero Waste Art is supposed to have “zero waste” so be sure to use all material that is not recyclable first before you use recyclable items. If you are unable to find any, consider the following items to reuse that are recyclable:

Recyclable Items

- Cardboard
- Plastic Bottles (1, 2, 5)
- Aluminum
- Paper
- Cans



Art Contests

Art contests are an amazing way to spread awareness regarding zero waste. Besides creating something that is visually appealing, this sort of awareness campaign allows individuals to see the direct impact that the volume of trash creates. Using art contests that are done at the class level or individually are a great way to reduce waste and change the thinking of individuals to diminish the rate at which they consume. This creative and beautiful art can be displayed throughout the school to raise awareness of the impact that waste has on our environment. Consider having an important message be part of the contest!

As another form of art contest, students can also host a recycled materials fashion show where students use their artistic and creative skills to create fashion from recycled or repurposed material. This could be a great opportunity to highlight the importance of reuse and recycle while bringing awareness to the negative effects that fast fashion has on our environment. These type of art activities are a great way to emphasize zero waste during Earth Month in April.

For art contests, consider using colorful material that is either trash or recyclable. One of the best ways to gather material is to gather usable items from a campus cleanup or individual classroom waste.

CREATE YOUR OWN CONTEST!

Follow these steps to compile materials for an art contest:

STEP 01

Gather material from a classroom or a school-wide site. This material can be water bottles, water bottle caps, paper, or any other product that can be used to create art with.

STEP 02

Think about an idea or message you want to relay to others with your art. Some ideas can include using a certain material that has an impact on the earth or on certain animals or using words that have meaning. Be creative!

STEP 03

Once you have your materials and your message, the fun part begins. You can use different mediums of paint to color your material to design your art.

STEP 04

Finally, art will be submitted by the deadline and the organizer will decide the winner. The winning pieces can be displayed around the school to bring awareness to students about waste and the impact it has on our planet.



Reuse/Repurpose/Repair Upcycling Workshops

Upcycling is the act of making something new out of something old instead of recycling or throwing it away! This is a form of reusing or repurposing something to its highest and best use. Upcycling workshops allow you to use your creativity to make new things without having to buy anything. Upcycling workshops can provide numerous benefits including learning new skills, expressing creativity, and promoting sustainability.

Upcycling plastic items

- Using plastic water bottles as a planter
- Creating items out of plastic bags, including woven bags or baskets
- Crafting art from plastic containers

Upcycling clothing material

- Using old clothing to make bags or cleaning towels
- Using old clothing to make new clothing items

Repair Workshops

Repair workshops focus on repairing items that are still in good condition but need a little love to get them back to where they are functional again. Many of these repair workshops exist around Chula Vista and are called "Fix-It-Clinics." These repair workshops provide free service and show participants how to fix all sorts of items. These workshops are meant to teach you valuable skills on repairing your own items and build skills and confidence to tackle future repairs at home. Many students have valuable skills that could be of use for other peers. Whether it's knowing how to sew ripped clothing or fixing jewelry, these repair workshops can be implemented to encourage reuse at schools. In addition to having students host repair workshops, these workshops could recruit parents who have specific skills that can assist in repairing items for students.





Swaps

Swaps provide another great avenue for reuse. There are different kinds of swaps that can be organized. A Buy Nothing Group for Students exist in different platforms which allows individuals to share items they no longer use that might be of use to someone else. For schools, the Buy Nothing Group could include items that are in decent condition and are no longer being used but can be given to someone else who will make use of it. This kind of swap can be created through social media groups or through a creation of a swap meet type of event where individuals showcase items that they wish to discard of, and their peers can come and shop items for free.

Clothing Swap Events

The fast fashion industry is one of the leading polluters and is responsible for 8-10% of global emissions, which is more than aviation and shipping combined. Combating the fast fashion industry can be done through clothing swaps. These clothing swaps allow students to bring in lightly worn or new clothing and trade or swap these items for something else. Many clothing swaps require you to bring in a specific number of clothing items and limit the

number of items that you can take. Whichever way it is done, clothing swaps are a great way to refresh your closet without going out and buying fast fashion items that are detrimental to the environment.



Book Swaps

Like clothing swaps, book swaps are a great way to get new books without going to buy books. Clubs that focus on reading such as a Book Club or a Reading Club could host a book swap to share books that a student no longer reads to give others the opportunity. It would be helpful to ask to “give a book to get a book” to make sure that there is supply for the book swap. These swaps can be held at school events like open house to establish sustainability as part of the school culture.



Reducing Waste

Reusable Bags, Utensils, and Cups ★ *Advocacy Action*

One of the most common and effective ways to reduce waste is by using reusable bags, utensils, and cups. By switching to a reusable water bottle or coffee mug, you can prevent hundreds of single-use items from ending up in landfills each year. These items not only help conserve valuable resources, but they also save money over time.

Choosing to carry reusable items is a simple yet impactful way to reduce reliance on single-use plastics and move toward a zero-waste lifestyle. For example, keeping a set of reusable utensils in your backpack ensures you won't need to use disposable cutlery at school. Single-use plastic items from school cafeterias are a major source of waste. Transitioning to washable, reusable foodware can significantly reduce both the volume of trash produced and the ongoing cost of purchasing disposable items. Encouraging your school or district to adopt reusable ware is a powerful step toward sustainability. Schools across California have successfully made this switch, cutting down on waste, lowering costs, and benefiting the environment in the process.



Recycling

Despite being the most known tier of the zero-waste hierarchy, recycling is close to the bottom of the best use of material. Recycling is considered a downstream approach to managing material because it requires time and energy to break these products down to make new items. Nonetheless, recycling is a key component and making sure individuals are recycling properly is crucial to attaining zero waste.

In Chula Vista, the following are the only materials that are allowed to be recycled through commercial recycling collection services »



Recyclables include cardboard, cartons, paper, aluminum, tin, glass, and plastic (1 & 2)

Recycling Drives

While most schools have recycling services, many schools can benefit from having recycling drives. These drives could include a school supply recycle drive. School supply recycle drives are a way to recycle school supplies that have not been used or were gently used. This can extend the life of the product for students who might need school supplies but might not be able to afford them. School supply recycle drives could have used tools, left over paper supply, left over tape, left over staples, gently used binders, or any other type of supplies that students can use. These are ideal for back to school or during the end of the year. Hosting a California Redemption Value (CRV) recycle drive can also serve as a fundraising opportunity for parents to redeem the collected CRV items and raise funds for their committee.



Zero Waste Sorting Stations



Adopting zero waste sorting stations is an essential way to increase awareness and participation in diverting material to the landfill while making sure that contamination is minimized. Zero waste sorting stations are simply specified stations where all three recycling streams are present: Recycling, Composting, Landfill. The reason why zero waste sorting stations are so successful is because it allows individuals to think about where their waste goes. Ideally, someone would be supervising these zero waste sorting stations so that contamination is eliminated. However, in the absence of staff or student

availability, these stations, having clear and informative signage, help individuals know where to throw their waste.

Your school does not have to buy brand new containers to create these zero waste stations. Reusing the containers you already have is the best way to create these stations. It provides opportunities for art classes or clubs to decorate and design the containers with the right color and signage with the right material that goes in each stream.



NOTE: Use of a black trash bag in the organics cart is not allowed in Chula Vista. Only clear plastic bags are permitted for schools and commercial businesses.

Clean-ups *Team Work divides the task and multiplies the success!*

Cleanups are a great way of reducing waste in our local environment. Hosting a cleanup at your school can help reduce the amount of trash and litter on campus. These events bring awareness to students on the impact of their waste and can help reduce the amount of trash that students throw around the school campus. Schools can develop a lunchtime clean up rotation of 10 – 15 minutes during lunch/snack time to give students the opportunity to participate and gain insight on the different types of contamination that are occurring on campus. This activity allows students to feel pride in their school and in the work that it takes to maintain it. Students can be rewarded for this activity or provide with some incentives to get students to participate. In addition to having a dedicated lunchtime rotation, after school eco or environmental clubs can also have weekly cleanups where they take the lead in cleaning up the campus. This club could compile valuable information that can then be disseminated in an awareness campaign to inform students of the type of contamination and litter that they are finding on campus!



Having a cleanup on the weekends that have parents, students, and teachers involved is another great way to get the whole community involved in making your school more beautiful. There are community clean ups held by community partners that offer volunteer hours to students.

During the City of Chula Vista's Annual Beautify Chula Vista day, schools can sign up as a group and participate. Cleanups are a great way to integrate zero waste into the school's culture.



For more info for
Beautify Chula Vista »



Composting

According to a CalRecycle Waste Characterization Study conducted in 2014 for schools, about 50% of school's waste stream is composed of organics. This means that half of what is being thrown away is food waste and can be recycled. Composting is nature's way of recycling which yields a rich soil amendment that can be used in gardens and landscaping and saves water and money spent on soil conditioners and fertilizers. Composting inedible fruit and vegetable food scraps from a food preparation or dining area can be done on site. Food scraps including meat, bones, and dairy can be disposed of in the green waste bin, further diverting the amount of organics that are landfilled. In addition, composting programs complement school garden program efforts, both of which supplement and support classroom instruction.

In Chula Vista, the following are the only materials that are allowed to be composted through commercial composting collection services »

Food Waste

Desechos de Comida

Acceptable items / Artículos aceptables

- ✓ Food Waste / Desechos de comida
- ✓ Food-Soiled Paper / Papel sucio por comida



✓ Food waste may be placed in clear plastic bags.
Desechos de comida pueden colocarse en bolsas de plástico transparentes ✓

Unacceptable items / Artículos inaceptables

- ✗ Trash
- ✗ Recyclables
- ✗ Manure
- ✗ Pet waste
- ✗ Fats, Oils, or Grease
- ✗ Polystyrene containers
- ✗ No metal. No glass. No black bags.

Vermicomposting

Vermicomposting is the practice of using worms to transform non-meat or non-dairy food scraps into a nutrient-rich finished product called vermicompost. In a school setting, a vermicomposting system can provide classroom science experiments and a finished product that can be used in school gardens.

Why choose worm composting?

- Worms break down food waste into compost faster, over 8-12 weeks.
- Traditional composting takes 3 months.
- You can worm compost in your home, even under your kitchen sink.
- You can also vermicompost at school or the office.

“Vermi” is Latin for worm.



Worm Facts

- Worms like to feed on food waste.
- Worms break down food scraps efficiently.
- Worms eat over half their body weight a day.
- Worm manure contains beneficial microbes and nutrients for plants.

Classroom Lessons and Certifications

In addition to the workshops described above, there are many classroom lesson plans that are aligned with Next Generation Science Standards that provide teachers with step-by-step guides to implementing many of these concepts. Grades of Green is an educational non-profit that has partnered with CalRecycle to provide education regarding waste management. The lesson plans or toolkits that are provided on the website give teachers an opportunity to implement lessons and receive a stipend after completing a certain number of the toolkits. These toolkits can help assist in implementing recycling and waste diversion programs that could qualify you for a Zero Waste Classroom or School Certification from the City of Chula Vista.

LAUNCH Lessons: Educator Led Environmental K-12 Projects

The City of Chula Vista is offering Zero Waste Certifications for Schools and/or Classrooms in Chula Vista.

grades of green Lunchtime Sorting

LAUNCH Eco-Toolkit

Help reduce waste in landfills by bringing a Lunchtime Sorting Station to your school!



Eco Level

.....

Implementation Time*
4-8 Weeks


*Based on weekly usage of 1 hour

LAUNCH Lessons: Lunchtime Sorting K-5th

grades of green Trash Free Lunch

LAUNCH Eco-Toolkit

Help your school reduce lunchtime waste by starting a Trash Free Lunch program!



Eco Level

.....

Implementation Time*
2-6 Weeks

*Based on weekly usage of 1 hour

LAUNCH Lessons: Trash-Free Lunch K-5th

grades of green Classroom Recycling

LAUNCH Eco-Toolkit

Take action to reduce or eliminate the amount of waste in landfills through Classroom Recycling!



Eco Level

.....

Implementation Time*
3-6 Weeks

*Based on weekly usage of 1 hour

LAUNCH Lessons: Classroom Recycling K-5th

Teachers and staff who are interested in having their classrooms be certified as Zero Waste can do so by following criteria such as participating in recycling and food waste collection, having trash bins paired with recycling and food waste containers, having a Waste Monitor on the job list, and conducting zero waste educational activities bi-monthly. To find out how to get your classroom or school certified as Zero Waste, please contact environmentalservices@chulavistaca.gov or (619) 691-5122.

Conclusion

In adopting a zero-waste approach, schools can play a pivotal role in fostering environmental stewardship and inspiring the next generation. By integrating sustainable practices into daily routines, students not only learn the importance of reducing waste but also become active participants in creating a healthier planet. Implementing the strategies outlined in this packet, such as minimizing single-use items, encouraging recycling and composting, and promoting sustainable community events will significantly impact our communities and achieve the City's goal of 90% waste diversion by 2035. As educators and leaders, we have the responsibility to model these practices and instill a sense of accountability in our students. Let us work together to

create a culture of sustainability within our schools. By empowering students with knowledge and practical skills, we are equipping them to make informed decisions that will resonate beyond the classroom and into their homes. Remember that every small action counts. Whether it's a student refusing a plastic straw, participating in "Zero Waste Wednesdays" or conducting a classroom waste audit, these efforts contribute to a larger movement toward sustainability. Together, we can transform our schools into zero waste champions, leading by example and inspiring others to join this sustainable mission.



Additional Resources



◀ City of Chula Vista's Sustainability Division

www.chulavistaca.gov/sustainability

The official site of the City of Chula Vista's Sustainability Division; showcases all the City's environmental programs, services, and events.



◀ City of Chula Vista's Climate Action Plan

www.chulavistaca.gov/CAP

City of Chula Vista's Climate Action Plan outlines ambitious goals and policies to strengthen the City's climate action efforts.



◀ CalRecycle - School Waste Reduction Site

calrecycle.ca.gov/recycle/schools

The official site of CalRecycle's School Waste Reduction programs, initiatives, and funding opportunities.



◀ CalRecycle - SB 1383

calrecycle.ca.gov/organics/slcp

CalRecycle's information on Senate Bill 1383. Providing the significance of the bill, its goal, and why it is important to divert reduce and divert food waste.



◀ Fixit Clinics

sdfixitclinic.org



◀ Princess Project

www.princessprojectsd.org

The Princess Project provides free prom dresses and accessories to high school teens.



◀ Friar Tux

www.friartux.com/school-sign-up

Friar Tux provides free tuxedo and suit rentals for chaperone and students for middle and high school.



◀ Zero Waste San Diego & Zero Waste Youth San Diego

zerowastesandiego.org/education



◀ zerowastesandiego.org/zero-waste-youth-san-diego

Zero Waste San Diego creates zero waste programs and events, while advocating for resource management policy change.



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YOUR COMMUNITY. YOUR ENVIRONMENT. YOUR CHOICE.

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