

SUPPORT FOR ZERO WASTE IN MARIN SCHOOLS

Tools for Waste Reduction and Diversion

Prepared for
Marin Hazardous and Solid Waste JPA

May 2016



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SECTION 1

Introduction

1.1 Background

Zero Waste Marin is the formal name for the Marin Hazardous and Solid Waste Joint Powers Authority (JPA). Its Board consists of the city and town managers of Belvedere, Corte Madera, Fairfax, Larkspur, Mill Valley, Ross, San Anselmo, Novato, San Rafael, Sausalito and Tiburon, and the County of Marin. In response to local priorities, the JPA’s mission includes certain aspects of hazardous waste management, and it is placing an increasing emphasis on waste reduction and recycling. Looking to the future, the County has a goal of zero waste by 2025, and the JPA is in a position to both lead efforts and track progress toward that goal. Recycling in schools can create lifelong habits, in school, at home, and in today’s students’ eventual workplaces. Schools are an important part of the Zero Waste effort. In addition, as stated in the Blueprint for Environmental Literacy published by the California Department of Education in 2015, the goal is to have “Environmental literacy embedded into formal instruction for History – Social Science standards... This is strengthened by meaningful learning experiences that build environmental literacy in nature; *on school grounds*; in the local community... Etc.¹In other words, developing and strengthening material management programs in schools improves resource conservation, may reduce costs, and is aligned with California Next Generation Science Standards and California Common Core State Standards.

1.1.1 Project Approach

This project’s primary mission is to prepare an effective plan to provide resources from Zero Waste Marin (“the JPA”) to qualifying schools in Marin County, enabling those schools to reduce solid waste and increase waste diversion. In 2014, ESA was contracted to implement this project on behalf of the JPA. Our approach is in two phases:

1. Survey and visit schools and interview knowledgeable individuals and haulers to identify programs that are already working well, those that are not, and other needs; and
2. Estimate the cost and effort to support implementing the most effective programs in eligible schools throughout the County.

¹ A Blueprint for Environmental Literacy Retrieved February 19, 2016. <http://www.cde.ca.gov/pd/ca/sc/environliteracyblueprint.asp>

Section One provides background information on the schools, the hauling companies, the JPA's role, and a more detailed review of the scope of work for this project. It concludes with an Executive Summary of this report.

Subsequent sections summarize current diversion efforts at the schools and school districts that were contacted, and provide an outline, rationale, and implementation plan for a "Best Practices Toolkit" that the JPA could make available to qualifying schools.

1.1.2 Schools and School Districts

The Marin County Office of Education has a total of 19 county school districts; the JPA works with 14 of these. The JPA does not work with the three school districts located in Sonoma County, the Novato School District or the schools that the MCOE self-administers. The 14 districts include 52 public schools and 36 private schools, for a total of 88 K-12 schools.

For our survey of existing programs and needs, ESA originally proposed to involve six school districts, 30 schools, and 12 school recycling advocates throughout the County. The effort to involve districts and schools began in February of 2015 and continued through June, with some follow-up in August and September as schools began their fall classes. The level of interest from the school districts and schools varied widely. To date, we have had useful contact with five school districts, 20 schools (including two private schools), and seven school recycling advocates. Although fewer schools and districts responded than intended, there was sufficient response to identify several key issues found in many schools across a wide range of grade levels. After conferring with JPA staff, the decision was made to report on our efforts to date and also to prepare a compilation of our experiences at each school visited. The compilation is attached as **Appendix A**.

We made a diligent effort to cover all parts of the County that are eligible to receive Zero Waste Marin's support for school recycling, and to observe a wide variety of grade levels and local demographics. We also were careful to include schools served by all five of the hauling companies that serve the eligible school districts, and to include a broad range of diversion performance levels.

1.1.3 Knowledgeable Persons / Recycling Advocates

As part of this project, we identified and interviewed several school recycling advocates from environmental organizations and school support organizations in order to gain further perspective on challenges, barriers and opportunities at school Zero Waste programs. Summaries of these interviews are given here, in order to provide additional background on the individuals and the issues that require attention if school recycling is to be improved.

Each advocate brings a unique viewpoint to Zero Waste practices, and each is deeply committed to resource conservation and education. All of them recognize certain impediments to working toward zero waste in a school setting, and they also see the value to our society in cultivating

waste reduction values in young people. Their personal and professional dedication to this effort is impressive. Summaries of the interviews follow.

Jennie Pardi, Senior Education Manager, NatureBridge Golden Gate. Ms. Pardi previously worked at Conservation Corps North Bay (CCNB) and is a Local Task Force Member. Ms. Pardi is concerned about the packaging used by the contract lunch provider Choice Lunch. She was advocating for Choice Lunch to switch to a bamboo spork and to eliminate straws while at CCNB. She was unsuccessful on both counts. She believes that more regulation at the county and state level is required to improve the uniformity of food service provider packaging. Her experience with schools recycling programs is that participation tapers off over time due to teacher, student and parent turnover. Custodians and Principals are the most consistent members of a school staff; they deserve to be supported and trained. The custodians are particularly essential; without their buy in, programs will not persist. She would like to see training and professional development and monetary incentives for custodians.

While she appreciates the Zun Zun assemblies, Ms. Pardi does not believe that assemblies are particularly effective; she thinks smaller group trainings are more meaningful and have a longer lasting impact. Another successful model in her opinion is, in a K-5 or K-8 setting, to pair older students with younger ones for training and to have older students serve as monitors during lunch. For older students she is a fan of a “Trashion Show” which incorporates discarded items into clothing. She underscored the importance of understanding and applying the Common Core Standards and project based learning to recycling concepts – connecting the Science Standards to recycling is key.

Madeline Hope is a passionate zero waste advocate. As a contractor with the County of Marin, she helps schools and school districts in west Marin with Zero Waste policy and implementation. Ms. Hope serves on the Marin Food Policy Council and contracts directly with a number of West Marin schools to manage programs and initiatives. She believes that raising awareness about the County’s Zero Waste goal at schools, libraries, youth centers, community centers, places of worship, and at community organizations such as Utility Districts, City Councils and the Fire Department will create a broader platform for educating and implementing Zero Waste countywide. She observed that west Marin, due to its physical distance from the rest of the county, is more self-reliant and community based.

Ms. Hope believes that connecting custodians to professional development is key to achieving effective Zero Waste programs in schools. She suggests that part of the annual teacher and staff professional development should include reminders about how to properly separate materials. She believes that students need to be instructed each year until it becomes second nature. Over the years she has developed the “Recycle Circus”, a community reuse and swap meet. She also established a “reuse library” with reusable plates and service ware to reduce the use of disposables at schools and community events.

Strategic Energy Innovations (SEI) is a Marin based non-profit that manages a number of energy and climate change related programs. Their work in the K-12 sector revolves around sustainability-focused project-based curriculum, facilities and retrofit support, district-wide

sustainability campaigns, and student green teams. In addition they coordinate the Marin School of Environmental Leadership (MarinSEL) at Terra Linda High School, where they focus on student skills and leadership development through environmental action projects.

SEI receives funding from the Marin Community Foundation and can therefore offer free curriculum resources to teachers, work on instructional planning and support in the classroom, support student green teams and leadership, and work at the district level on sustainability policy and initiatives including the MarinSEL at Terra Linda High School.

SEI staff observed that individual schools have had some success with zero waste programs but it is fragmented throughout the County and it is not standardized.

Mike Grant, Facilities Director, Marin County Office of Education. Mr. Grant convenes quarterly meetings with the Maintenance and Operations Directors of each district. These meetings offer a regular opportunity to connect with maintenance staff and an opportunity to conduct training and professional development around waste prevention and recycling. These regular meetings also provide a feedback opportunity to learn about barriers and problems at school sites.

Mr. Grant is working with Marin Sanitary Service, the service provider to the Office of Education, to create a model Zero Waste Program at the County Office of Education and Conference Center for teachers, administrators and facility staff to learn from when they visit the facility for meetings and professional development. In addition, he will convene business office staff and custodial staff in the fall of 2015 to strengthen the connections between these stakeholder groups, specifically to connect the potential for cost savings by reducing trash service and increasing recycling and composting services.

Mr. Grant sees the Local Control and Accountability Plan (LCAP) as a possible policy vehicle for zero waste. He understands the importance of leading by example and will help raise awareness about Zero Waste Marin at the County offices and with Board Members. We note that Patty Garbarino of Marin Sanitary Service serves on the County Board of Education as the Area 2 representative.

Jonathan Kaufman, Marin Program Coordinator, Global Student Embassy. Jonathan facilitates student projects at several Marin County high schools (Drake, Redwood, Terra Linda). He collaborates with Marin School of Environmental Leadership and Strategic Energy Innovations to run eco-action clubs that allow students to decide on and pursue environmental projects together. Many of the students come to these clubs after having participated in a Global Student Embassy international development project in Ecuador or Nicaragua. Jonathan believes in the power of students to create change by lobbying principals, school boards, etc. He would like to see more on-line and in-person opportunities to share and access resources to help students lobby effectively (curriculum, language and background (health / labor codes, etc.)). Mr. Kaufman also sees improved janitorial contracts as an opportunity to remove some of the barriers his students are encountering around recycling and composting collection within schools.

Judi Schils, Executive Director, Conscious Kitchen / Turning Green. Conscious Kitchen, a Sausalito-based non-profit, helps schools transition from off-site-prepared/packaged lunches to on-site, from-scratch, locally sourced, organic lunches, served on durable service-ware. The program integrates students into menu planning, food preparation and service, and discard-station monitoring. In the fall of 2013, Conscious Kitchen took on Bayside MLK Jr. Academy as a pilot, providing a chef and a garden/nutrition teacher as well. The program has been successful at Bayside MLK Jr. Academy, and thus far at Willow Creek Academy where it was recently adopted in fall 2015. The Conscious Kitchen website provides detailed instructions for schools to transition their food programs, including assessment of existing resources, staffing, and equipment. It also provides steps for securing funding, and for building and maintaining community connections and support. Ms. Schils is currently working on expanding the model to include all Marin County schools. She would like help identifying and convening superintendents to target a school in each district that could implement on-site (or partial on-site) meal preparation for the 2016-17 school year.

Lauren Klein, UC Cooperative Extension Marin County Community Garden Program Coordinator. As coordinator for school and residential garden programs in Marin County, Lauren is a resource to help Zero Waste Marin network with many organizations that can support waste reduction in schools, such as the Marin Food Policy Council, Go Next Generation, and Extra Food. Lauren would welcome Zero Waste Marin's leadership in addressing real or perceived roadblocks to incorporating school kitchen/cafeteria scraps into on-site composting. She endorses the idea of Zero Waste Marin convening school-district board members and the County Board of Education to encourage school-district facilities departments to integrate recycling and composting infrastructure and labor into their responsibilities.

1.1.4 Hauling Companies Serving the Districts

The JPA provided a letter of introduction to the five haulers within the scope of the project, explaining the project and ESA's role. ESA then contacted each of them to learn about their services and technical assistance including waste audits, facility tours, and participation in school specific green teams.

Each hauler provides recycling (either dual or single stream) and most offer food scraps/organics. There is wide variation in the support available to schools depending on the hauler, the size of the service area and the number of schools within the service area. Marin Sanitary Services has a recycling coordinator dedicated full time to schools recycling while the Ratto Group has commercial recycling coordinators who attend to schools (very enthusiastically) as part of their account management. Mill Valley Refuse does not employ any recycling coordinators; requests for trainings and technical assistance are addressed by the company president. The Tamalpais Community Services District is deeply engaged with the one school it serves. Bay Cities Refuse Service offers training and bins to schools upon request, but does not proactively engage with schools. See **Table 1-1** for details.

**TABLE 1-1
HAULER CHARACTERISTICS**

Hauler	Services	Assistance Offered	Districts Served
Ratto Group			
Contact: N/A at time of report Company website: http://unicycler.com/outreach School related resources available on the website http://unicycler.com/go_green/schools include a flyer about starting a green team and how to set up a lunch "deconstruction" station.	<ul style="list-style-type: none"> • Trash • Single stream recycling • Food scraps¹ • Plant Debris 	Recycling coordinator assigned to schools, Waste audits, training, green team organization, posters, quarterly newsletters, annual contact with school each September, table at school events, if requested.	<ul style="list-style-type: none"> • Bolinas-Stinson Union School District • Lagunitas School District • Nicasio School District • Shoreline Unified School District
Marin Sanitary Service			
Contact: Zoe Pearl Company website: http://marinsanitaryservice.com/educational-services/ School related resources available on the website.	<ul style="list-style-type: none"> • Trash, • Dual stream recycling • Food scraps • Plant Debris 	Recycling coordinator assigned to schools; Initial discard station monitoring assistance; Assemblies/ Workshops/ Tours of San Rafael site and Environmental Classroom provided to schools within and outside of Marin Sanitary service area. School specific resources available on the website.	<ul style="list-style-type: none"> • Dixie School District • Larkspur-Corte Madera School District (partial) • Ross School District • Ross Valley School District • San Rafael City Schools District Office • Tamalpais Union High School District (partial)
Mill Valley Refuse			
Contact: Jim Iavarone Company website: http://www.millvalleyrefuse.com/ No school related resources available on the website.	<ul style="list-style-type: none"> • Trash • Single stream recycling • Food scraps • Plant Debris • Separate cardboard dumpster (if warranted) 	Waste audits, training, flyers.	<ul style="list-style-type: none"> • Larkspur-Corte Madera School District (partial) • Tamalpais Union High School District (partial) • Mill Valley School District (partial) • Reed Union School District
Tamalpais Community Services District			
Contact: Jon Elam District Website: http://www.tcsd.us/index.aspx?page=4 No school related resources available on the website.	<ul style="list-style-type: none"> • Trash • Single stream recycling • Food scraps • Plant Debris • Separate cardboard dumpster (if warranted) 	Waste audits, training, and "How to add food scraps to yard trimmings" flyer. There is only one school in the TCSD. The school is minutes from the CSD office. The students live in the District. The school offers the same services available to residents.	<ul style="list-style-type: none"> • Mill Valley School District (partial)
Bay Cities Refuse Services			
Contact: Greg Christie Company website: http://baycitiesrefuse.com/ No school related resources available on the website.	<ul style="list-style-type: none"> • Trash • Compostables • Container recycling • Paper • Cardboard 	Training & interior bins to schools upon request, but does not proactively engage elementary, middle & high schools. More involved with pre-schools.	<ul style="list-style-type: none"> • Sausalito Marin City School District

¹ Acceptance of Ratto's commercial food scraps for composting at Redwood Landfill is problematic per Steve McCaffrey of the Ratto Group. Therefore Ratto is unable to increase the number of schools (or other commercial accounts) that can receive food scrap service. Currently there is no pre-determined rate for commercial food scraps. Also, the Ratto Group does not collect food scraps as part of its residential or commercial organics services in Stinson Beach and the town of Bolinas, because those organics are brought to the Bolinas-Stinson Resource Recovery Project, which is not permitted to accept food scraps.

During each hauler interview, in addition to questions related to service options and technical assistance, ESA also inquired about how Zero Waste Marin could help the hauler succeed in achieving zero waste in schools. Responses included:

- “If the JPA had staff that could help with school outreach and be a point of contact for school information and resources would be helpful. That person could also collect contact names and information and help keep it all in one place.”
- “If the JPA could provide interior collection containers for the school sites, that would be helpful. The Conservation Corps used to do that but not anymore.”

Hauler representatives provided school specific service level information for trash, recyclables and food scraps/yard trimmings. The details of that information have been kept confidential for this report, to protect the schools’ privacy.

1.2 Executive Summary

1.2.1 Key Findings

We have reviewed the current schools-recycling landscape in Marin County by visiting 20 schools and five school district offices, and by speaking with seven exceptionally dedicated school-recycling advocates. We believe that this sampling has been sufficient to indicate what the most widespread issues and limiting factors are with regard to diverting waste from schools. We found that all schools had some level of recycling; many were doing well with basic materials but struggling with food scraps and cafeteria wastes; and most were somewhat isolated in their efforts, supporting unique programs on a school-by-school basis rather than a School District, regional or Countywide basis. On the whole, the situation is consistent with those that we have encountered in other Bay Area school districts and counties

We believe the following efforts by the JPA will have the greatest effectiveness in helping schools reduce solid wastes:

- Provide educational and networking resources through a dedicated portion of the JPA web site.
- Conduct waste audits and observations, education and training, and feedback to interested schools.
- Provide infrastructure improvements: equipment and signage, especially receptacles at schools and school district offices.
- Influence lunch suppliers to reduce wastes by changing packaging.

1.2.2 Recommended Actions

Section 3 of this report lays out eleven Action Items that describe these and related efforts in some detail, with estimated budget-level costs. The Action Items are organized into four topic areas:

- **Information and Communications** – Addresses the question, “Where do we start?” by providing informative web pages that will enable school representatives to learn useful techniques, read examples of successful local school recycling efforts, and connect with peers that are dealing with similar issues. Haulers could also link to these pages from their websites.
- **Feedback to Schools on Performance** – Addresses the question, “How are we doing?” by providing in-person, on-site feedback based on observations, waste audits, and discussions with staff. These will identify needed program elements and infrastructure; education and training, and help schools anticipate and circumvent common problems that interfere with recycling and waste reduction.
- **School Infrastructure Improvements** – Addresses the question, “What do we need in order to do better?” by providing the signage, receptacles, and accessories that make recycling obvious, easy, and uniform from school to school. Also lays the groundwork for future waste reduction from a major source, food services.
- **Addressing Institutional Barriers** – Addresses the question, “What’s interfering with our performance?” by enabling the JPA to gain a deep understanding of the institutionalized conditions that limit recycling and waste reduction, such as: purchasing requirements, janitorial work rules, downstream constraints that limit services to schools, and cost accounting that fails to recognize recycling savings at the school level.

Recognizing the potential for budgetary constraints and competing priorities, we show several of the larger Action Items with two levels of effort. Both levels assume a full time employee whose primary role is waste reduction in schools in addition to support from senior JPA staff as required, plus contractor assistance and additional funds for school site recycling infrastructure. The Lower Level proposes \$52,200 in contractor assistance and expenses. The Higher Level approach adds resources with a value of approximately \$150,200. The major difference between the two is the number of schools that can be targeted for assistance each year: four for the Lower Level, and ten for the Higher Level, depending on the proximity of the targeted schools and the extent of their needs. **Table 3-1 in Section 3**, summarizes the items and their costs.

SECTION 2

Current Efforts at Selected Schools

2.1 Background

2.1.1 Selection of Schools

Beginning in February 2015, ESA approached school districts, both to learn about zero waste practices at school district offices and to gain permission to approach specific schools. Depending on the size of the school district, ESA contacted Maintenance and Operations staff, or other staff as appropriate. Some school districts declined to meet with ESA; others were very enthusiastic. In West Marin, ESA attended the monthly Wellness Committee Meetings at the Lagunitas and Shoreline Unified School Districts and contacted facility and maintenance staff as well as other district administrators at these meetings. In addition, local haulers as well as school recycling advocate Madeline Hope and SEI's Emily Quinton were instrumental in making connections with schools to set up school visits. See **Table 2-1** below for the districts contacted and their responses.

**TABLE 2-1
SCHOOL DISTRICT CONTACTS AND RESPONSES**

District	District Contact	Response
Shoreline Unified School District	Wellness Committee Meeting	Meeting + Referrals
Mill Valley School District	Shawn Gatewood - Director of Maintenance and Operations	Meeting + Referrals
Lagunitas School District	Wellness Committee Meeting	Meeting + Referrals
San Rafael City Schools District	Chris Thomas - Chief Business Official	No Response
Dixie School District	Thomas Lohwasser - Superintendent	No Response
Sausalito Marin City School District	Alan Rothkop - Maintenance & Operations	Meeting + Referrals
Reed Union School District	Mike Chitwood - Director of Maintenance and Operations	Declined to meet in person but provided comments via email and permission to approach schools
Larkspur Corte Madera School District	Nichole Urrea - Assistant to Chief Business Official on behalf of Wolf Gutscher, Director, Operations and Sustainability	Declined via email

School selection was based on access, geography and socioeconomic differences. In addition, ESA solicited recommendations from haulers, recycling advocates and school district staff about schools with strong or low performing zero waste programs, so that the full range of performance could be observed. A complete list of the schools is found in **Table 2-2** below, which is organized by hauler. Summaries of information from each selected school are provided in Appendix A. The summaries indicate the number of each size of collection container for each stream, such as two 4-cubic-yard refuse bins, three 64-gallon recycling carts, etc. To preserve confidentiality of the customer's service levels, the summaries do not indicate collection frequency, which may be one or more times per week, differing by stream. The summaries also show an estimated diversion level; this is described in more detail at the beginning of Appendix A.

**TABLE 2-2
SELECTED SCHOOL SITES**

Grades	School	District	Hauler
K-8	Willow Creek Academy	Sausalito Marin City	BCRS
PreK-8	Bayside MLK Jr. Academy	Sausalito Marin City	BCRS / MSS
K- 8	Brandeis Marin School	(Private) San Rafael	MSS
9-12	San Rafael High School	San Rafael	MSS
K-5	Sun Valley Elementary	San Rafael	MSS
K-5	Dixie Elementary	Dixie	MSS
6-8	Miller Creek Middle School	Dixie	MSS
K-5	Vallecito Elementary	Dixie	MSS
K-8	Venetia Valley School	San Rafael	MSS
K-5	Mary E. Silveira Elementary	Dixie	MSS
K-5	Laurel Dell Elementary	San Rafael	MSS
3-5	Bel Aire Elementary	Reed Unified	MVR
PreK - 8	Greenwood School	(Private) Mill Valley	MVR
K-5	Cove Elementary	Larkspur-Corte Madera	MVR
K-5	Edna Maguire Elementary	Mill Valley School District	MVR
6-8	Mill Valley Middle School	Mill Valley School District	MVR
9-12	Tomales High School	Shoreline Unified	Ratto
K-8	Lagunitas School	Lagunitas School District	Ratto
K-8	West Marin Elementary School	Shoreline Unified	Ratto
K-5	Tamalpais Valley Elementary School	Mill Valley School District	Tam CSD

2.2 School Programs and Needs

This section provides a summary of the schools that were visited and the relevant information that was obtained during those visits. The summary is divided into three sections based on the types of services and support that are available to those schools from their haulers. As it happens, this results in a geographic breakdown, which we are labeling as "West County" (served by the Ratto

Group), "Central County" (served by Marin Sanitary Service) and "South County" (served by Mill Valley Refuse Service, Bay Cities Refuse, and the Tamalpais Community Services District).

Following the three summary sections, we provide a recap of the issues that arose most consistently in the observed schools. As a further summary, Table 2-3 shows the types of programs found at each school, with icons indicating the degree of success associated with each program type in each location.

2.2.1 West County

There are four west County School Districts: Nicasio, Bolinas-Stinson Union, Lagunitas, and Shoreline Unified. ESA visited four schools in this area: West Marin Elementary, San Geronimo Valley Elementary, Lagunitas School and Tomales High School. Most students in west Marin, except those served by Tomales High School, receive their K- 8 grade education in west Marin then travel to central and south Marin for High School.

West County schools face unique challenges. Most particularly, the distance to this secluded part of the county adds time and expense to vendors serving schools in west Marin. In addition, students travel farther from their homes to school. Schools in this area offer a physical place of community connection where social events and social services come together serving not only students but their parents as well.

West County schools use School Wellness Committees as a convening mechanism to discuss issues ranging from Zero Waste programs to garden programs to school lunches. This may be due to their location or due to these committees' multifaceted role in these rural communities. The Lagunitas School District Wellness Committee meeting takes place at the Lagunitas Community Center, located adjacent to the school. The community uses both facilities for sports, education, play and entertainment.

School district staff reported that **they are struggling with the cost of food and the impact of the existing food delivery model on their overall operating costs**. Schools in west Marin are most likely to have dedicated Food Service staff who prepare breakfast and lunch each day both in order to control the quality of what is served but also because prepared food service vendors levy a premium to cover travel costs. In fact, the Shoreline Unified School District recently conducted a study of its Food Service system to better understand the impact of the program on its operating costs.

This local problem is giving rise to local solutions. At West Marin Elementary (which also prepares and delivers food to Inverness Elementary School each day) they use durable plates and cups which are washed each day. San Geronimo uses compostable service ware. Both schools set aside kitchen scraps for local farmers who feed the scraps to their animals. In short, reduction of waste and food waste in particular, is especially valuable to this part of the County. Our current understanding is that the local service provider (The Ratto Group) and the operators of the closest large-scale food waste diversion facility (composting at Redwood Landfill) have been unable to come to terms that would enable Ratto's west county commercial food scrap diversion program to

expand beyond its current volume and serve local schools. The Ratto Group does provide single-stream service for traditional recyclables (cans, bottles and paper) to all schools in this area.

2.2.2 Central County

Within the Central County, eight schools agreed to participate in this study:

- Brandeis Marin School
- Dixie
- Laurel Dell Elementary
- Miller Creek
- San Rafael High School
- Sun Valley Elementary
- Vallecito Elementary
- Venetia Valley Elementary

Many of these schools had similar issues that impacted the effectiveness of their recycling programs. First, though, it should be noted that they are all being served by a local hauler - Marin Sanitary Service - that provides educational experiences focused on their recycling programs, for student groups from throughout the County. (The Ratto Group companies, which serve West County and Novato, offer similar experiences but are not as conveniently located.)

In general, the discards that are generated by food service are the largest stream produced by a school, and the reduction of those wastes can be a major challenge. Food scraps and other compostables make up the majority of materials in this stream; fortunately, Marin Sanitary can provide organics-composting service. However, **only 4 of these 8 schools are able to divert food scraps and other lunch-related organics** (e.g. food-soiled paper) into organics service. The main impediment appears to be an inability to effectively monitor lunch-time discards, coupled with a high volume of non-compostable packaging at most schools.

A noteworthy exception is Vallecito Elementary, which has a very high level of **attention to lunch discards from parent-monitors**. The number of compost carts at Vallecito is twice that of the next highest service level among the Central County schools that we visited, while the student head count is essentially the same. Also, at Vallecito, an interested parent facilitated coordination between Choice Lunch and Marin Sanitary that resulted in substitution of recyclables for hard-to-process compostable plastics.

Unfortunately, we also heard about **parent lunch monitor burnout** at Vallecito, and about similar lunch discard monitoring concerns at several other Central County schools. We did not encounter a school that had a real solution for this issue.

One aspect of school recycling that seemed to vary widely across the Central County schools was the level of **involvement by janitorial staff**. In some instances, the daytime or end-of-day janitor(s) quite willingly convey all materials to their appropriate service containers. At the other end of the spectrum, at San Rafael High School the janitors will only collect trash. The student Green Team is collecting recyclables and transporting them to the service containers and the students are trying to resolve this issue with the school district.

Another highly variable feature at these schools was the number of **waste prevention measures being implemented in staff lounge and work areas**. Most schools had some measures, such as a recycling bin or a drinking fountain (rather than a cooler that requires paper cups), but very few had a full suite of measures that would include organics collection, a water bottle refill station, reusable plates and cutlery, etc.

Most of these schools have gardens, and many of those gardens have compost systems for garden waste; but none of them has been able to establish **an ongoing closed loop that uses lunch scraps as compost feedstock, and grows some lunch ingredients using that compost**. This has been attempted in several schools but without lasting success. It might be possible to establish such a compost / garden / food / compost system, as in a few other Marin schools (see next section), but it would likely require a higher level of involvement by staff, parents, and/or the lunch supplier.

2.2.3 South County

ESA visited seven schools in southern Marin County. Willow Creek Academy and Bayside MLK Jr. Academy are within the Sausalito Marin City District; Edna Maguire Elementary, Tamalpais Valley Elementary School and Mill Valley Middle School are within the Mill Valley School District; and Bel Aire Elementary is within the Reed Unified School District. ESA also visited Greenwood Montessori, a private school.

Mill Valley Refuse Service (MVR) serves Greenwood Montessori, Bel Aire Elementary, Edna Maguire Elementary, and Mill Valley Middle School. Bay Cities Refuse Services (BCRS) provides service to Willow Creek Academy. Bayside MLK Jr. Academy reportedly self-hauls its refuse and recyclables. Tamalpais Elementary is served by the Tamalpais Community Services District.

Tamalpais Elementary School benefits from being within the TCSD. The school serves all the residents within the TCSD, and the TCSD offers the same recycling, food scrap/yard trimmings and trash service at the school that it offers to its residents. This aids in reinforcing “what goes where” habits which reduce confusion and contamination. In addition, the school benefits from long term staff who are dedicated members of the school and wider community.

The Mill Valley schools did not express that they had a strong **connection to their hauler**. Many would like more direct service in terms of education and explanation of services and pointers on proper discard management. It was noted by a number of school representatives that the brown (rather than blue) carts used by MVR for recycling cause confusion to the students, especially since the interior recycling containers at the school are all blue. Switching from blue to brown for recycling was a decision promulgated by MVR residents who felt that the brown was more neutral and aesthetic on the streetscape.

Nearly all the schools served by Mill Valley Refuse that we visited, as well as Tam Elementary, use Choice Lunch as their lunch service provider. The only exception is Greenwood Montessori which uses Good Earth. **Most of the schools reported confusion about where to put the many**

different products found in a Choice Lunch and would welcome more clarity and guidance from the hauler, school district, Zero Waste Marin and/ or the lunch service provider. Bay Cities Refuse Service, which collects from Willow Creek Academy and Lycée Français de San Francisco (a large Private Pre-K – 5th grade school in Sausalito), does some direct outreach to nursery schools, and will provide compost and recycling service, signage, and interior containers to elementary, middle, and high schools on request. At the time of our research, Bayside MLK Jr. Academy was receiving composting collection from Marin Sanitary, since they were not receiving compost service from BCRS.

A number of the South County schools we visited have robust **garden education programs** including Edna Maguire and Tamalpais Elementary. However, it is less clear how (or if) these programs connect to the student’s experience of lunch or eating on campus. Also, neither of these schools has a full kitchen, even though Edna Maguire was recently rebuilt. This is particularly glaring in light of the Mill Valley School District’s “Resolution on Sustainability and the Design and Construction of High Performing Schools” adopted in September 2009 which connects sustainable design principals and waste minimization. Unfortunately, the connection did not extend to the inclusion of a kitchen in the school’s redesign and the reduction of lunch waste over time.

The **garden – lunch connection** is stronger at Bayside MLK Jr. Academy and Willow Creek Academy, the two public schools in the in the Sausalito Marin City School District. The Sausalito non-profit, Conscious Kitchen, has worked with both schools to transform their food service programs. Now, all meals are prepared on-site from scratch using locally-(including school garden) sourced, seasonal, organic, non-GMO ingredients, and served on durable service-ware which is washed on-site. Students are involved in menu planning, food preparation and service, and discard-station monitoring. Donated flowers that would have been discarded from local flower shops are placed on cafeteria tables each day. Teachers are often join their students in eating the high-quality food, further emphasizing the concept that mealtimes are special times to be enjoyed and not rushed through. The combination of all these factors leads to much less pre-and-post consumer waste. Often, the only discard from an individual meal is one paper napkin.

2.2.4 Summary of Recurring Issues

From the visits described above, the following recurring issues emerged:

- Garden programs are usually disconnected from food service, even though there is an obvious potential for a meaningful connection (food to garden-compost to food).
- There is a need to strengthen (or start) monitoring lunch discards, to increase recycling, reduce contamination and enable food scrap collection. However, it is easy for parent monitors to "burn out" from too much of this task.
- There is a high volume of packaging, requiring careful monitoring, with most (but not all) lunch suppliers. There is less packaging, but more effort and cost, when meals are prepared by school staff.

- In some instances there is a limited willingness to recycle and/or a limited understanding of local recycling rules by janitors.
- Some haulers provide substantial information and support to schools; others, not so much.
- The completeness of recycling and waste reduction systems in teacher/staff lounges and work areas varies from school to school.

In addition, there are a few general issues that were often noticed or mentioned during school visits:

- There is a **lack of uniformity from school to school in the signage, bin colors, bin styles, symbols, and other communications regarding recycling**. Students and parents move among schools as the students advance through the grade levels, and greater consistency in recycling messaging would help to reinforce recycling behavior.
- At many schools, the waste receptacles in the yard areas have **no companion recycling receptacle**. As a result, recyclables are thrown into the trash.
- There is a need for more **recognition and incentives for schools to recycle**. Zero Waste Marin could cultivate good will among schools through active recognition.
- There is also a limited amount of **feedback to the schools about their recycling volumes and contamination**. Feedback most often occurs when recyclables become so contaminated that the hauler no longer wants them. This problem could be reduced, and some good will created, if the JPA provided "lid-flip" audits as part of its outreach to schools, and recognized the high performers with some positive reinforcement.

2.3 Summary of Observed Program Elements

To assist in summarizing our observations and moving toward recommended actions, Table 2-3, on the following page, provides a matrix that matches schools with observed program elements and uses green, yellow and red icons to indicate the degree of success of those program elements.

Table 2-3 is meant to serve as a resource for planning, not a set of conclusions.

- Colored icons indicate that ESA learned about, or observed, a program element at a particular school. It is possible (indeed, likely) that some existing program elements were not observed and are not noted.
- Green indicates a program element that is working satisfactorily. Red indicates unsatisfactory performance in the current setting. Such elements might be successful with increased support or a change in approach. Yellow icons denote mixed results.
- Program elements are grouped based on the type of support that we believe the JPA is best suited to provide for those elements. Each element is only listed once, but some elements may be compatible with, and may need, several types of support.

**TABLE 2-3
SCHOOLS AND PROGRAM ELEMENTS**

		Schools																			
Type of potential support	Programs	Willow Creek Academy	Bayside MLK Jr. Academy	Brandeis Marin School	San Rafael High School	Sun Valley Elementary	Dixie Elementary	Miller Creek Middle School	Vallecito Elementary	Venetia Valley School	Mary E. Silveira Elementary	Laurel Dell Elementary	Bel Aire Elementary	Greenwood School	Cove Elementary	Edna Maguire Elementary	Mill Valley Middle School	Tomales High School	Lagunitas School	West Marin Elementary	Tamalpais Valley Elementary
		Infrastructure Purchases	Garden Compost Bins		🟡		🔴			🟢	🟡	🟢	🟢	🟡				🔴			🟢
	Durable Serviceware for Student Lunches	🟢	🟢													🟡				🟢	
	Meals Cooked On-Site	🟢	🟢		🔴														🟢		
	All-in-One campus sort stations			🟢			🟡		🟢					🔴				🟡	🟢		
	Enclosure and exterior cart/ bin signage			🟢				🟢								🔴					
	Lunchtime discard container signage	🟢	🟢	🟢		🟡		🟢	🟢		🔴		🟢	🟢	🟡	🔴			🟢	🔴	
	Zero Waste Marin Grant for garden program																		🟢		
	Refillable Whiteboard Markers				🟢																
	Refillable Water Bottle faucets															🟢	🟢				
Event Coordinator	Contests	🟢				🟢															
	Student Assemblies	🟢				🟢		🟢	🟢												
	Zero Waste Week	🟢		🟢																	
	Waste Audit				🟢																
	Field trip to recycling facility or landfill													🟢	🟢						
	E-Waste Fundraiser															🟢					
Guidance, Facilitator	Feedback on Quantity, Quality														🟢						🟢
	Student Environmental Club				🟢		🟢		🟢									🟡		🟡	
	Lunch Food Sharing/Reuse			🔴						🟢									🔴	🟢	
Useful information, case studies, or peer matching	Lunchtime Discard Station Monitoring	🟢	🟢	🟢		🟡		🟢	🟢		🔴		🔴	🟢	🟢	🔴					
	Food Scraps to farm animals (On-site)	🟢																			
	Food Scraps to farm animals (Off-site)																		🟢	🟢	
	Recycling Integrated into Classroom	🟢		🟢	🟢			🟢	🟢	🟢			🟢	🟢	🟢	🟢	🟢		🟢		🟢
	Students Transport Recyclables				🟢	🟢				🟢											
	Reusable Container Promotion				🟢				🟢												
	End of Year classroom clean out			🔴																	
	Tenant's use of school recycling program													🟡		🔴					
	Recycling in staff areas, library, etc.			🟢	🟢			🟢					🟢	🟢		🟢			🟢		🟢
	Durable Service-ware in Teachers' Room							🟢		🟢											
	Waste Prevention at school events							🟡	🟢												
	Marker Recycling				🟢																
	Junk Mail Prevention Campaign				🟢																
	Separate CRV Collection				🟢	🟢	🟢	🟢	🟢		🟢										
Curriculum materials	Classroom zero waste lessons		🟡					🟢						🟢	🟢						
	Classroom Instructional Video							🟢	🟢												
	Video infomercials												🟢								
	Principal Announcements									🟢											
	Garden Program				🟢			🟢								🟢			🟢		
Other/NA	Partner with CCNB, SEI or other support				🟢			🟢					🟢		🟢						
	Offsite Food Scrap Processing capacity																		🔴	🟢	

SECTION 3

Action Items: Descriptions and Costs

3.1 Introduction

This section presents a series of Action Items that collectively comprise a “Best Practices Toolkit” that the JPA can use to address issues identified in the preceding sections of this report. The Action Items are grouped into the topics listed below. Their detailed descriptions are followed by **Table 3-1**, which summarizes their costs.

Several of the recommended Action Items are presented at two levels of effort. The Low level (L) applies to certain items which, taken together, assume a Zero Waste Marin employee dedicated to schools recycling plus \$52,200 in contractor assistance and additional funds. The High level (H) approach to those same items assumes a Zero Waste Marin employee plus either \$150,200. The major difference between the two is the number of schools that can be targeted for assistance each year. The L level assumes four schools will be assisted in a school year, while the H level assumes ten schools will be assisted in the same time frame.

Apart from the items with L and H levels of effort, some items carry significant costs and may need to be managed as distinct budget items.

Action Item Topics

- Information and Communications
- Feedback to Schools on Performance
- School Infrastructure Improvements
- Addressing Institutional Barriers

3.2 Action Items

3.2.1 Information and Communications

This topic area largely focuses on enhancements to the JPA's internet presence and resources.

3.2.1.1 Add Resources to JPA Web Site

The JPA can create a Schools Section on its existing web site by inserting a Schools topic heading on the home page and linking it to several schools-specific pages. Providing a “go to “

place for school resources will ease the burden on school site administrators and staff by providing much needed tools in an easily accessible manner. Pages can include:

Requirements – A summary of local goals and local / State requirements related to recycling and waste reduction at Marin schools.

Options for Schools – Brief descriptions of common and uncommon recycling and waste reduction options being used by schools in Marin and beyond.

Links to Resources – Can include information about available waste audit/visit technical assistance from JPA staff, downloadable signs, labels and posters; case studies on specific techniques; and links to third-party resources related to school recycling including, for example, sample sublease language related to requiring use of recycling programs by sports teams or preschools or other tenants of specific school sites as a condition of the lease. Other resources can include links to other Bay Area school zero waste programs with school specific ideas, tips, and resources.

Curriculum – links to existing, age appropriate curriculum tied to Common Core standards for teachers to use. For example, the Education and the Environment Initiative curriculum developed by CalRecycle integrates education about the environment into core subjects already taught in the K–12 school system. Teachers would welcome easy access to curriculum that ties to Next Generation Science Standards and incorporates Science and Technology, Engineering and Mathematics standards. Other project based curriculum that integrates zero waste into classroom activities such as designing sculptures with discarded materials should also be provided.

Web site improvements can be achieved with assistance from O’Rorke and Associates through the JPA’s existing contract with this contractor, therefore no specific additional funds are associated with this Action Item in Table 3-1. Additionally we recommend that support include development of a Marin Schools Zero Waste logo that can be launched on the web page and replicated on school site posters and stickers. We would expect this effort to require the equivalent of one-half day per week from the current schools recycling staff person during the upgrade period.

3.2.1.2 Hold Web Site Launch Event

It will be important to bring the web site improvements to the attention of schools and school districts, to assure that they are used as fully as possible. An email "blast" to the JPA's school-related contacts is one way to do this, but we also suggest a postcard-mailing with a simple, vibrant image, the URL for the Schools page, and a QR code² prominently displayed. Tacking this up in the front office or staff lounge will help to spread the word among individual teachers. The mailing should go to both the schools and school districts.

A total of 200 to 300 postcards should suffice. JPA staff may be able to create a suitable graphic design and text for the card; alternately, the existing outreach contract with O’Rorke can be used to develop a graphic design and mailing labels.

² The QR code is a type of bar code that can be easily read by smartphone apps. The QR code typically contains a link to a web site, and the app launches the smartphone’s browser and makes it display that web site.

3.2.2 Feedback to Schools on Performance

This topic area largely focuses on school visits and waste audits to advise schools on additional waste reduction measures that will work in their situation. Along with the audits, education and training to appropriate staff members and student will be provided. Initially visits and audits should be done in response to schools' requests, to assure that they reach a receptive audience and are likely to be acted upon.

3.2.2.1 Determine the Scope(s) of a Visit/Audit

As a first step, JPA staff should determine what they can effectively offer as a school site visit / waste audit. Determining the general scope of the audits would involve a one-hour meeting of one JPA staff, to produce a description of a typical visit and the report back to the school.

The following description of a visit/audit is provided as a starting point for staff to develop their visit/audit scope. A waste audit consists of manually sorting through a single day's worth of discards to complete a waste characterization study. This study provides data on lunch habits, packaging, and discards generated from other locations including classrooms, offices and sports fields. Findings and recommendations would be communicated to the school via a waste audit report. A total of four hours, plus time to arrange for the visit and travel to and from the site, is likely to be necessary for each audit of this type.

3.2.2.2 Hold Annual School Services Meetings with Haulers

Next, the haulers should be made aware that the JPA is paying special attention to schools and intends to provide site visits and waste audits. In a meeting with the haulers, the roles of the JPA and each hauler can be clarified, for thorough support without duplication of effort or conflicting information. City staff responsible for franchising services and approving rates can be included as well. School districts and cities with haulers that provide less direct support to individual schools may need more attention from the JPA. These meetings would facilitate communication between a particular hauler, city and JPA staff and a schools site representative. At each meeting, the hauler could provide each school with a cost/savings profile. The meetings should require two days' worth of staff time to invite, prepare for and conduct the meetings each year.

3.2.2.3 Provide Direct Support: Visits/Audits

The visits/ audits are a fundamental component of the JPA's ZW Schools Program. They involve a school site visit to observe container locations, teacher and staff awareness and use of recycling options, recycling and organics capture in kitchens and cafeterias, school gardens' relationship to the school's recycling program, janitors' participation, and any unmet needs or problems that the school is having with regard to waste reduction and recycling. They also involve a thorough audit of the materials that have been placed in bins or carts for collection as refuse, recyclables, or organics. Next, they offer staff and student training, lunch time monitoring and Green Team assistance. They conclude with a memo to the school evaluating the current system and

recommending changes if needed, and identifying additional resources (e.g., field trips to recycling facilities).

Schools' involvement in the ZW Schools Program can be initiated in batches during September and January (at the beginning of each semester). With over 88 schools in the JPA's purview, a first-come first-served principle should apply during the first year, with the number of schools per batch limited by the available staff and resources. The schools seeking and receiving assistance the first year can serve as examples to the remaining schools. In order to serve the remaining schools with direct support, a year by year plan should be developed. For this report, two batch sizes are considered; they are designated L for low volume (fewer schools) and H for high volume (more schools). The L level of effort would make use of existing staffing, plus some supplemental resources as described in sections 3.2.2.4 and 3.2.3.1 below.

The H level of effort would augment JPA staff with a support contractor estimated here as equivalent to one 3/4-time person for eight months a year, plus their travel and basic expenses, estimated at \$60,000 per year. Another alternative (not costed out in this report) would be for the JPA and the Marin County Office of Education to share the cost of an employee's salary to implement the H level of effort. This person could be employed through MCOE but 50% of their salary would be funded by the JPA. The JPA would provide guidance and monitor outcomes. This position would create relationships with school district staff and facilitate school site ZW plans. As a contractor or an additional staff person, the extra support would cover many of the basic but time-consuming duties such as waste audits, lunch time monitoring, janitorial and other staff training, infrastructure upgrades (e.g. setting up signage and recycling containers), etc.

For the L level of effort, existing staff at the JPA plus an additional \$15,000 for a limited amount of contracted assistance are capable of handling two new interested schools per semester (four per year), providing site visits, waste audits, and infrastructure such as containers and signage. For the H level of effort, existing JPA staff would be less involved in visit/audits and more involved in coordinating the support contractor or support staff person and attending to other related school activities such as assemblies, service changes, troubleshooting service and contamination issues, in addition to tracking progress and monitoring among the schools. Depending on the proximity among schools, up to ten schools could be taken on each school year at this higher level of effort.

For the purposes of this report, we are assuming that the ZW School's Program would assist 80 out of 88 schools; this takes into consideration that schools may close, may be satisfied with their services or may be too small to merit assistance. Therefore, at the L level, it will take 20 years to provide direct assistance to each of the 80 schools, at the H level, it will require eight. Regardless of the pace of implementation, maintaining relationships and providing follow up assistance and monitoring to previously visited schools will be important; the function of follow up will increase year by year. In order to track performance over time, defined metrics must be applied to gauge program success. Using Excel or a similar tool, the metrics should include defining service levels, tracking changes in service level over time and/or the introduction of new services (such as organics service). The JPA's specific measures of success should be based on the number of school audits conducted each year and the number of schools contacted for follow up monitoring

and check in each year. In addition, the JPA should track the time spent at each school. School specific metrics could include: Did the school develop a Green Team? Do students, staff and administrators understand the Program “Do’s and Don’ts?” How much contamination is present in the recycling? In the organics? Does the school promote the program to its stakeholders through its website, email blasts to parents and to the greater community?

3.2.2.4 Plan Special Recognition & Awards

This is also a scaleable effort that can be as simple as asking interested schools to document their recycling, organics and waste reduction efforts, and providing recognition on the JPA web site. Or, it can provide tangible rewards for schools that are making special efforts. Or it can take the form of teacher professional development stipends to NatureBridge, a Marin – based non- profit that offers skills development, workshops and resources to create science and educational curricula that teachers can bring back to their classrooms, or other professional development opportunities that the JPA identifies. At this time, based on JPA staff availability, we recommend budgeting for several staff work sessions to develop this idea in more detail, for future use by the JPA.

3.2.2.5 Recognize Janitors Who Recycle

The long term success of a school recycling program requires active involvement from facility staff. Our site visits made us aware of the wide variation from school to school in participation by janitors in recycling. Overtime, the JPA can work to facilitate union- district agreements that clearly include recycling and organics programs as required responsibilities and strive to incorporate recycling and related waste reduction/waste management duties into job descriptions and performance reviews for janitors/custodians.

One simple way to promote greater participation, and to raise awareness of Zero Waste Marin, would be to provide recognition to janitors who promote recycling in their school. The best place to begin is with School District management to determine what recognition is consistent with the district's practices vis-a-vis their janitors' current union contract. In some settings, such recognition can be misconstrued as extra pay for special work, contrary to the janitors' contract. To avoid this pitfall, the award can be something of modest monetary value to the recipient, while still being a source of pride, such as having one's name on a plaque at the District office, adding a recycling-arrows patch to the janitor's safety vest, recognizing the employee at a school district or community meeting, or sponsoring a field trip to a recycling center. Another approach would be to have students write letters, as part of an English-class exercise, to express appreciation to the janitors for their work. The primary cost to the JPA would be in staff time spent making school districts and schools aware of the award, developing a nomination process, reviewing applications and selecting awardees. We estimate that twenty-four hours of staff time will be needed for a single award cycle plus \$500 at the L level and \$1,500 at the H level for expenses.

3.2.3 School Infrastructure Improvements

This section focuses on physical improvements and vendor choices that will make waste reduction, recycling, and resource conservation more efficient and effective at individual schools.

3.2.3.1 Provide Direct Support: Receptacles, Signage, Etc.

Our observations indicate that many schools need receptacle clusters that contain separate bins or cans for recycling, organics, and trash, both indoors and outdoors. For student lunch areas, custom signage with age-appropriate text and images based on specific hauler practices might ease lunch monitors' burden of constant correction and explanation. To address all of these issues, the JPA could manage the distribution of assets it provides to school and school districts by instituting a Zero Waste School Resource Center and providing useful physical resources to schools that are receiving Audit/Visit support. In essence, the ZW Center would be warehouse space, reasonably close to the JPA offices, where a variety of color – coded receptacles, receptacle-tops, signs, and other useful items would be held for distribution.

The ZW Center resources can be publicized as part of the messages to schools about visits/audits and through links on the updated pages of the JPA website.

Examples of what can be offered to participating schools include:

- Outdoor container clusters (trash, organics and recycling) or
- “Brute”- style blue recycling barrels, or
- “Slim Jim”- style recycling or organics containers, or
- various styles for the above containers, or
- Indoor recycling bins, useful in a classroom setting.
- Customizable and/or pre-made signs, stickers and posters that feature the ZW Marin School logo.

Each recipient school would be able to choose from a menu of items, based on the guidance from the visit/audit, to fully equip their school and grounds with receptacles and signage that increase a school’s recycling infrastructure. We have allowed \$5,000 at the L level for the production of instructional posters and stickers to be placed on or adjacent to trash, recycling and organics receptacles. At the H level, the production budget is increased to \$11,000.

Additionally, based on experiences in Marin and other communities, we are assuming \$7,000 per school to provide all the containers necessary to fully implement an effective Zero Waste Program. Some schools with developed programs may require less. In Table 3-1, the Low level approach assumes four schools per year and the High level assumes ten schools per year.

Staff time to establish and manage the ZW Center could require 32 hours for the start-up phase (finding space, ordering assets, setting up inventory control, etc.) but then would likely involve about four hours per participating school for inventory control, access and reordering.

3.2.3.2 Reduce Wastes from Food Service

Through the site visits conducted for this project, we have seen the dramatic difference between the discards from traditional school lunch catering and those from the Conscious Kitchen approach where waste to landfill can be reduced by 50% or more. We propose a half-day mini-conference to bring together interested food service managers from schools throughout the JPA area. They could compare notes on their vendors, evaluate the wastes generated from their food service discards, and consider waste reduction measures to incorporate into their vendor specifications. It could begin with presentations from several vendors, describe ways to monitor and evaluate waste generation, break into small groups to compare specifications, and finish with "reporting out" about unanswered questions and concerns.

As a first step, a JPA staff member should network with food service staff at several schools to gauge the perceived need for such an event, and the specific topics that would be of interest. We recommend allocating up to 16 hours of staff time to conduct these explorations and, if there is sufficient interest, to identify the best time of year to pursue this subject. The staff member should also finalize the topics, time requirement, costs, and other logistical matters including the possible need for a facilitator to provide structure and pace. The agency could use O'Rorke to provide meeting facilitation and attend to other meeting details. A desired outcome would be template contract provisions for food service agreements that would be available to school districts using various lunch vendors.

An additional 16 hours has been allocated for time to follow up with food service vendors directly to educate them about the about the preferred food service ware/packaging in each hauler's jurisdiction/school district and to implore them to simplify their packaging.

3.2.4 Addressing Organizational Barriers

In our work on this project, we identified a number of systemic improvements that can be considered, these are discussed in Sections 3.2.4.1 and 3.2.4.2 below. In addition, we found two significant barriers that are limiting schools' ability to divert discards from landfill; these two items are further discussed in sections 3.2.4.3 and 3.2.4.4 below. Unfortunately the JPA cannot solve these problems, but it can try to bring the parties to the table better understand barriers and at least determine if a solution is likely. This would help the JPA make better-informed decisions about where to direct its efforts and resources.

3.2.4.1 At the District Level

It is worth noting that principals and other managers at the school level may have no direct incentive to save money by diverting waste, because the cost for these services is not part of their budget; costs of refuse and recycling services are often managed at the school district level. JPA staff should, when appropriate, incorporate this topic into meetings where a JPA representative and district administrators are present, reminding them that reduced disposal costs results in more budget for salaries, text books and other learning resources district-wide such as during the meetings proposed in Section 3.2.2.2 above.

In addition, districts should be encouraged to develop a Waste Management /Zero Waste Policy such as the Dixie School District has done (See Policy 3545 in **Appendix B**). Districts should be encouraged to access Strategic Energy Initiatives' School Sustainability Policy Guide. This tool, available for purchase for \$50/each on the SEI website³, simplifies the task of policy development and implementation by providing examples of existing policies and regulations that address issues in a wide array of sustainability topics, including energy, water, waste, mechanical systems, lighting, building envelop and solar panel systems. In addition to examples, the guide also includes templates to give policy writers the opportunity to create brand new policies tailored to your district and school. We have budgeted funds for the JPA to purchase a copy of the Guide for each of its school districts.

3.2.4.2 County Office of Education

The JPA and the Marin County Office of Education (COE) need to develop a closer working relationship. With encouragement from JPA and other Zero Waste stakeholders, the Superintendent should encourage managers at each District and principals at each school that zero waste is a priority responsibility. The foundation of this relationship has already been established as described in Section 1.1.3. Mike Grant, the COE Facilities Director is in favor of having the COE offices serve as a model zero waste facility. He meets regularly with the Maintenance and Operations Directors of each district, providing a regular opportunity to discuss zero waste and he understands the importance of connecting facility and business office staff. A further step would be for the COE itself to adopt a Zero Waste Policy thereby leading by example. With the JPA and other stakeholder's assistance, the COE can offer further guidance and leadership on zero waste programs at each school district and at school site.

3.2.4.3 Address Janitorial Unions and Work Rules

The situation at San Rafael High School is probably not unique. There, we learned that the janitors will only move trash from receptacles to the trash bins, and if material has been placed in recycling receptacles, the janitors might place that material in the trash bins also. This situation appears to be a product of work rules that are antiquated, together with the janitors' perception that they are already overworked. There may be other causes as well. Although we did not directly encounter this constraint in any of our other 19 site visits, it may be an issue in other Marin County schools; we have seen it in other Bay Area counties.

We suggest that the JPA invest 4 to 8 hours of senior management time in fully understanding the basis for this problem. Dialog with both sides of the issue, and a written summary of the situation, would be the short-term goal. Through that process, a solution may become apparent; or the JPA may conclude that such schools are the wrong place to invest significant resources until the problem is solved. In addition, this process would serve to identify schools that are eligible for the Janitor Recognition Program as described in 3.2.2.5.

³ <http://www.seiinc.org/eco-smart-education-k-12-table-layout/school-sustainability-policy-guide>

3.2.4.4 Evaluate Recycling and Compost Market Options

In our work in West Marin, we were told by the collection company (Ratto Group) staff that their market for compostable organics, which is the Redwood Landfill composting operation, is not allowing them to increase their daily tonnage, and hence the schools in West Marin cannot add compost service at the present time. It would be in the JPA's interest to understand if this is a short term or long term problem, driven by permit limits, physical limitations, or a business decision. This will be especially important as the County of Marin will need to comply with AB 876, (McCarthy) which requires each county or regional agency to include in its annual report to CalRecycle an estimate on organics recycling capacity needed over a 15-year period. More generally, JPA staff needs to be aware of and support efforts to increase local and cost effective capacity for all materials markets, including organics so that market capacity is not a barrier to diversion at schools and more generally

3.3 Conclusion

Estimated costs associated with the foregoing set of Action Item descriptions are summarized in **Table 3-1** below. In preparing this list of Action Items, we are defining building blocks for a multi-year budget and work flow. The web site improvements (3.2.1.1 and 3.2.1.2) are a logical point of beginning, but after that there is no preferred sequence for these items. They can be taken in whatever order works best for the JPA's overall purposes, which may include a combination of Low Level and High Level actions in a given year.

The estimates are intended to show order-of-magnitude costs, for budget planning purposes. In Table 3-1, "JPA Staff Hours" are provided to indicate an assumed level of effort by budgeted staff; some Action Items will require no new dollars to implement. The term "Contractor" is intended to mean an existing or new agency vendor with specific expertise who can extend the agency's capacity to implement one or more of the Action Items discussed above. Contractor expenses such as mileage, etc. are covered under this heading as well. "Expenses" are the cost of physical assets to enhance school site recycling infrastructure: stickers, in-house containers, postcards, posters, etc.

**TABLE 3-1
SUMMARY OF ACTION ITEMS**

Item No.	Item Name	LOWER LEVEL OF EFFORT				HIGHER LEVEL OF EFFORT			
		JPA Staff Hours	Con-tractor	Expenses	Total	JPA Staff Hours	Con-tractor	Expenses	Total
3.2.1.1	Add Resources to JPA Web Site	50	\$0	\$0	\$0	50	\$0	\$0	\$0
3.2.1.2	Hold Web Site Launch Event	8	\$0	\$0	\$0	8	\$0	\$0	\$0
3.2.2.1	Determine the Scope(s) of a Visit/Audit	3	\$0	\$0	\$0	3	\$0	\$0	\$0
3.2.2.2	Hold Annual School Services Meetings with Haulers	16	\$0	\$0	\$0	16	\$0	\$0	\$0
3.2.2.3	Provide Direct Support: Visits and audits	144	\$15,000	\$0	\$15,000	120	\$60,000	\$0	\$60,000
3.2.2.4	Plan Special Recognition and Awards	16	\$ 2,000	\$0	\$ 2,000	32	\$6,000	\$0	\$6,000
3.2.2.5	Recognize Janitors Who Recycle	24	\$0	\$500	\$500	24	\$0	\$1,500	\$1,500
3.2.3.1	Infrastructure: Interior and Exterior Receptacles, Signage and Stickers	56	\$0	\$33,000	\$33,000	96	\$0	\$81,000	\$81,000
3.2.3.2	Strategy to Reduce Waste From Food Services	32	\$1,000	\$0	\$1,000	32	\$1,000	\$0	\$1,000
3.2.4.	Address Organizational barriers	16	\$0	\$700	\$700	16	\$0	\$700	\$700
Totals		365	\$18,000	\$34,200	\$52,200	397	\$67,000	\$83,200	\$150,200

Appendix A

School Site Visit Summaries

Please note: In the following summaries, the diversion percentage for each school was computed using the volumes of weekly cart and bin services provided by the hauler(s), where known. It does not include cardboard that is collected separately, nor does it include other non – hauler managed collection such as diverting food scraps to a local farm. Cardboard is typically diverted at Marin County schools, but in many cases, hauler data does not indicate quantities, which vary.

Very little cardboard is handled by or generated by students, so this material is not a key indicator of the performance of school diversion programs. Cardboard diversion is important, though, because it requires a commitment by school staff to divert materials.

Zero Waste Marin School Site Profile: Bayside MLK Jr. Academy



As of:	March 10, 2015
Present:	Jonathan "JJ" Foley – Conscious Kitchen, Larry Kass - ESA
# of Students:	157
Grades:	K-8
School District:	Sausalito Marin City
Hauler:	Reportedly self-hauling refuse and recyclables
Service level reported by hauler:	No records reported by haulers.
Trash	
Recycling	
Cardboard	
Compost/Food Scraps	Marin Sanitary
Notes:	Service level info not available from hauler(s), district, or school. History of self-haul
% Diversion	Insufficient data
Lunch Service:	Conscious Kitchen

Questions

1. What gets recycled here?

- Bottles / Paper from classrooms
- Compostables / Paper / Recyclable containers from Cafeteria
- Cardboard

2. What doesn't get recycled here that could be?

- Recyclables / Compostables from school campus bins (catch-alls)
- Compostables from classrooms

3. What is working well?

Conscious Kitchen lunch program means no single-use products except for napkins. The program is linked to the school garden and garden compost program, and it creates an opportunity for students and community volunteers to monitor cafeteria zero-waste station.



4. How do people here know what can be recycled?

Conscious Kitchen Garden/Nutrition teacher monitors/educates at lunchtime zero waste station for the first 2-3 months of the school year. She also teaches 1-2 classroom zero waste lessons per trimester in each grade. Conscious Kitchen student ambassadors also monitor zero waste cafeteria station.

5. What are the unmet needs?

Training?/Resources?/Fund Hrs? to get zero waste education campaign streamlined and consistent with county standards.

6. What tools or devices are needed?

Earthtub to process food scraps in addition to garden trimmings. This would need additional infrastructure (concrete slab, etc.)

Channels for zero waste educators to communicate with each other.

Programs

Classroom zero waste lessons: Neutral

1-2 per trimester per grade by Garden Nutrition Teacher – Paloma Collier. Needs to be more frequent, but currently this is limited by Paloma's availability

Meals cooked on-site / Durable serviceware: Positive

Breakfast, lunch, and snack are prepared from scratch on-site by Conscious Kitchen. Durable plates, cups & silverware are washed on site. The only disposable is the napkin. Students are involved in menu planning, and emphasis is placed on taking only what you'll eat and vice-versa.

Lunchtime discard station monitoring: Positive

Conscious Kitchen Garden/Nutrition teacher monitors/educates at lunchtime zero waste station for the first 2-3 months of the school year. Community volunteers, and student ambassadors (5-8 grade students nominated by teachers) help prepare and serve food, and sometimes monitor discard station as well. More emphasis is needed on the monitoring role of ambassadors, to reduce contamination.

Garden compost bins: Neutral

For garden plant debris only. Needs more connection to lunchtime zero waste program. Garden funded by Milagro Foundation & SMCS

Zero Waste Marin School Site Profile: Bel Aire Elementary



As of:	March 3, 2015
Present:	Judith Silver, Casey Poldino, David Sawyer, Vice Principal
# of Students:	650
Grades:	3-5
School District:	Reed Union
Hauler:	Mill Valley Refuse
Service level reported by hauler:	
<i>Trash</i>	1 x 2yd
<i>Recycling</i>	25* – 64 gal carts
<i>Cardboard</i>	1 x 2yd
<i>Compost/Food Scraps</i>	1 x 2yd, 1x1 yard, 10 – 64 gal carts
Notes:	Mill Valley Refuse does not keep track of the number of recycling carts. ESA observed 25 carts.
<i>% Diversion</i>	68%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Food scraps
- Yard trimmings

2. What doesn't get reduced or recycled here that could be?

- Bathroom paper towels

3. What is working well?

The Zero Hero Action Team is the result of applying the “Design Thinking Process,” developed at Stanford University, to teaching about achieving Zero Waste at the school. The Zero Hero Action Team consists of students who are particularly passionate about Zero Waste. Teachers choose two students from each class to participate. During their week-long winter intensive class, 5th graders study zero waste, and they tour Marin Sanitary Services and the Redwood Landfill. “Zero Heroes” (3rd, 4th and 5th graders) continue to meet with teacher advisors a few lunch periods per month to plan and implement waste prevention programs including serving as lunch monitors. ESA joined one of their lunch meetings. They asked great questions and were somewhat frustrated by having to explain over and over about “what goes where” to their fellow students.

4. How do people here know what can be recycled?

Mr. Sawyer is not a fan of school assemblies. He feels they are too disconnected to be effective; he prefers 1: 4 -5 for effective education. He would like to partner with Reed Elementary, the K-2 feeder school for Bel Aire, to teach them about recycling so when those students get to his school, they would already understand sorting protocols. Zero Hero Group students go class by class and educate their peers. Students use the classroom signage and the different color carts to understand what can be recycled. Students pass by the Zero Waste Bel Aire bulletin board each day.

5. What are the unmet needs?

Lunch is prepared and served by an outside contractor, Choice Lunch. The school has a full kitchen with dishwasher, stoves, ovens, stove top, etc.; it is sitting idle. Mr. Sawyer understood that ignoring the kitchen and the opportunity to prepare food on site was unfortunate. The size of the school makes it difficult to serve students individually from large pans or bowls. The population is 650 students in three grades; Mr. Sawyer pointed out that the student flow into the dining area is not well designed and it would be tricky to move students through the line to get food in a safe and timely manner.

There is still some confusion about what goes where, especially the Choice Lunch paper trays and milk cartons. The staff would appreciate more clarity and guidance from MVR or Choice Lunch. In addition, they would like a closer sense of partnership with MVR in terms of service and investment in the success of their zero waste programs.

Mr. Sawyer would like more students to have the opportunity to see a recycling sorting operation to help demonstrate how materials are managed, why sorting is important how contamination is a problem.

He suggested actual field trips or a “virtual field trip.”

6. What tools or devices do you need?

The Custodial staff would like the green carts switched out or cleaned more frequently. Staff would like additional education on sorting and WHY it’s important.

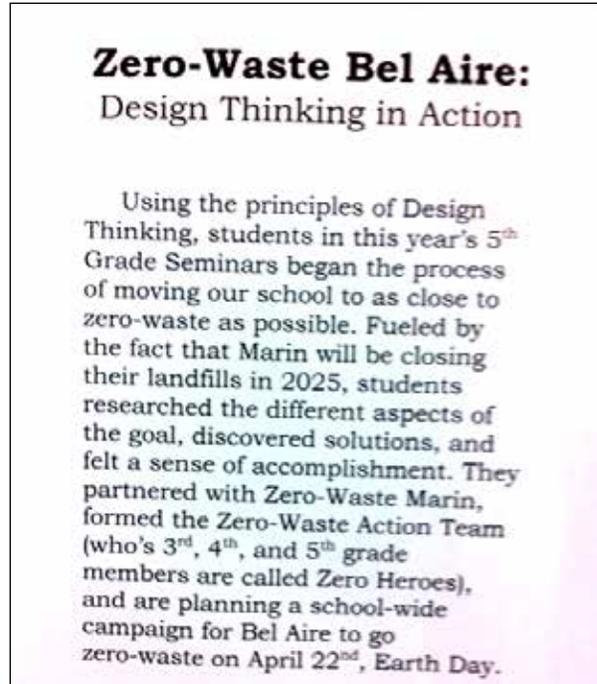
Programs

Design Thinking Process for Zero Waste: Positive

The Zero Hero Action Team builds on a winter week long intensive study of waste and recycling. The students are extremely engaged and challenged to problem-solve around barriers to achieving zero waste.

Video Trainings: Positive

The school has the capability to create video segment trainings on how to separate materials by type. This can also be shared with Reed Elementary students and others throughout the County, at least at schools that use Choice Lunch as a lunch provider. Mr. Sawyer suggested that a video of the recycling sorting operation for MVR would be helpful if actual field trips are not feasible.



Close up from Design Think Bulletin Board Display

Conservation Corps North Bay (CCNB) Technical Assistance: Positive

In 2014, CCNB partnered with the school to conduct two waste audits. The result was a graphically rich “pre-training” report card that showed what was being wasted (uneaten food, food scraps and food soiled paper, primarily). After five months of training and education, the “post” audit showed an 87% reduction in waste overall. Specific recommendations from CCNB included continuing education and banning certain items (e.g. single use plastic lunch bags). In 2015 the Zero Hero Action Team is continuing its peer education program and lunch monitoring program.

Three-Stream Sort Stations: Negative

CCNB provided the school with a number of durable three-stream sort stations but, one year later, Mr. Sawyer is asking CCNB to remove them as they are difficult to service and clean, and they are attracting vectors.

Lunch Program: Negative

The school is challenged by its size. The 650 students are divided into two lunch periods as there are too many kids to accommodate in one lunch period. Parents volunteer to supervise the hot lunch program provided by Choice Lunch. Choice Lunch uses a great deal of packaging which results in a lot of packaging and food waste. Because of the crowd size, students pick up and consume their lunches as quickly as they can, and they don't have time to separate uneaten food from plastic wrap and containers; it all goes into the trash. The Zero Waste Heroes monitor and attempt to fix student mistakes by picking misplaced items out of one cart and putting them in the right cart. The custodial staff is very lean; one person manages the entire lunch clean up (conveying carts from the lunch area to the cart pick up area and final clean up after both lunch periods). Good Earth, another lunch provider, uses less packaging. The Conscious Kitchen program might be an option for this school since they have a kitchen.

Zero Waste Marin School Site Profile: Brandeis Marin School



As of:	April 30, 2015
Present:	Judith Silver, Rich Seymour, 7 th grade science teacher
# of Students:	175
Grades:	K-8
School District:	Private
Hauler:	Marin Sanitary Service
Service level reported by hauler:	
<i>Trash</i>	2x3 yds
<i>Recycling (containers)</i>	5x64 gal cart
<i>Recycling (fibers)</i>	9x64 gal cart
<i>Cardboard</i>	1x 2yd bin
<i>Compost/Food Scraps</i>	3x64 gal cart
Notes:	Service level is for whole Jewish Community Center; school uses ~1/3 of capacity.
% Diversion	47%
Lunch Service:	School Foodies

Questions

Brandeis Marin School is a tenant of the Jewish Community Center. The school shares the JCC's exterior enclosure area for refuse and recycling carts and bins.

1. What gets recycled here?

- Mixed Containers

- Mixed fibers
- Food scraps
- Cardboard

2. What doesn't get reduced or recycled here that could be?

Due to allergies and kosher restrictions, students are not allowed to share food; any uneaten food must be composted. This results in additional food waste. There was no composting or recycling container in the staff lounge.

3. What is working well?

There is ample evidence of recycling and composting infrastructure. Each classroom has three small plastic containers with lids: one for containers, another for mixed paper, and a third for trash. These are emptied daily by the custodian. There are discard stations in the halls with a four stream split: trash, compost, containers and mixed paper. Each internal compartment is lined with a black bag. Clear bags would be more helpful for the recycling processor, and a compostable bag would be ideal for the organics stream.

4. How do people here know what can be recycled?

There are signs on the receptacles. However, there are no accompanying posters on nearby walls. None of the teachers I spoke to had confidence in the janitorial staff. They are tasked with emptying the classroom containers every day, perhaps which is too often. Maybe students could bring the containers to the hall and the custodians could empty from there. The night time custodian may not be getting the paper/containers into the exterior containers.

5. What are the unmet needs?

- Parents have asked for better recycling options at social events. I suggested a one-time purchase of durable plates etc., which they could wash in the adjacent Temple kitchen. The school itself does not have a kitchen.
- Rich expressed concern about the janitorial staff's willingness and understanding of how to properly manage the classroom and sorting station materials. Other teachers expressed this same concern. Additional education and communication between the stakeholders is necessary. If the janitors are objecting to extra effort involved with recycling, students in each classroom could bring full bins to the hallway at the end of the day.

6. What tools or devices are needed?

- The staff lounge does not have a container for compost or recycling.

Programs

Sorting Stations: Positive

The school invested in a number of sorting stations at the entrance to, and in the halls of, the school. While the stations are visually appealing and provide the correct sorting options, each section is lined

with a black bag. Ideally, the compost section would be lined with a green, compostable liner, and the recycling (cans & bottles, and paper) would be lined with clear bags.

Lunch Program: Positive:

The lunch program food is provided by a San Francisco based private school lunch program called School Foodies. Most students bring their own lunches; only ten percent, on average, purchase lunch provided by School Foodies. There are two separate lunch times (K – 5 and 6-8). The school is small, so the current practice of having one staging area for organics, recycling and trash is sufficient. The janitor rolls full carts to the enclosure area and swaps them for empty ones.

Classroom Containers: Positive

There is a pair of recycling containers in each classroom, the result of a 7th grade Student Council initiative and their teacher in 2014. Rich thinks his students understand how to use the various containers. Custodians are responsible for emptying the recycling containers and the trash each day. Rich was concerned that the custodial staff was not conveying the recyclables to the proper exterior containers.



Classroom Recycling Containers

Earth Week 2015 Program: Positive

A series of events were planned and executed during Earth Day 2015. For example, seventh grade Student Council members conducted trainings in each of the classes about how to separate materials, a representative from Marin Sanitary Services made a presentation, and the science teacher created an Earth Day project where students planted beans and graphed how they grew.

Shared Enclosure Area: Neutral

There is effective metal exterior signage with detailed lists of acceptable materials. Nonetheless, there is still contamination – film plastic and juice cartons in the recycling instead of the trash, and paper cups in the trash, not the compost. Also, the community center would benefit from a separate bin for yard trimmings; there were tree limbs in the trash bin.

Food Sharing: Negative

Due to concerns about allergies and kosher food restrictions, students are actively discouraged from sharing food except among siblings. All leftover lunch food is composted.

Material Purge: Negative

As is typical at all schools, there are classroom clean out events. On the day of the ESA visit, there were four 64- gallon recycling containers full of books that had been purged from the school library. It was not clear if any effort had been made to make these books available for reuse elsewhere.



Zero Waste Marin School Site Profile: The Cove Elementary School



As of:	April 9, 2015
Present:	Judith Silver; Grier McCurdy Mathews, O'Rorke, Inc.
# of Students:	350
Grades:	K-5
School District:	Larkspur Corte Madera
Hauler:	Mill Valley Refuse
Service level reported by hauler:	
Trash	2- 2 yard
Recycling	10 - 64 gal
Cardboard	1 - 2 yard
Compost/Food Scraps	6 - 64 gal
Notes:	Service levels are based on ESA observations; hauler did not provide information
% Diversion	39%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Cardboard
- Food scraps
- Yard trimmings

2. What doesn't get reduced or recycled here that could be?

Nothing; this school is using its services fairly well.

3. What is working well?

Each classroom pod is equipped with two sets of black, blue and green 10-gallon Rubbermaid containers. In the 3rd grade classroom, the contents of each container was correct; paper towels and food scraps in the green, school paper and containers in the blue, plastic baggies and a used pen in the trash.

The 3rd grade teacher and Green Team leader, Wendy Meunier, noted that there is a strong relationship with custodial staff, they are willing to do what is needed, no resistance. The main custodian persuaded the school administration to purchase trash grabbers and buckets, as well as some kid-size brooms so students can help keep the campus clean. He appreciates the fact that the garbage is much, much lighter and is very supportive of the kids who are out there helping every few days.

4. How do people here know what can be recycled?

All three 3rd grade classes visited the Marin Sanitary Services' facility in the fall. The Green Team kids volunteer during and are very capable of training others as well. The schools uses signage during lunch to help.

5. What are the unmet needs?

The school is brand new, and it was built with only a warming kitchen, so there is no possibility of preparing food on site. The back door of the warming kitchen opens to the trash enclosure.

Ms. Meunier was interested in learning from other schools and sharing best practices.

6. What tools or devices are needed?

If the outdoor public space recycling containers used at lunch were blue, it would be less confusing.



Programs

Zero Waste Marin Presentation. Positive

Grier from O'Rorke, Inc. did a presentation to the 3rd grade classes, about 60 students. The presentation consisted of a series of images; the kids were encouraged to call out which container to put the item in. The students were VERY clear about the rules of sorting. Grier then asked the kids for suggestions on waste prevention. They suggested using Tupperware instead of single use plastic bags for lunch items. At the end of the presentation, she gave out Zero Waste Marin tote bags to all the students.



Green Team Lunch Monitoring. Positive

The "Green Team" came about in 2014. Ms. Meunier had a desire to provide the 3rd graders with an opportunity to take on a leadership role at their brand-new school that would have an immediate and measurable impact, be visible, provide learning and volunteering opportunities, and provide a hands on science connection. The focus is on lunch monitoring and participation is completely voluntary. Six students per day monitor three discard stations during the lunch period. They also weigh the material and keep a daily tally. The school PTO paid for the green containers, the scale and the Green Team pinnies that the kids wear when on duty. At this point Ms. Meunier is the only faculty member involved.

Hot Lunch Vendor: Negative

The PTO decided to switch from Good Earth to Choice Lunch as the lunch vendor. The main reason is that serving a Good Earth meal requires more parents to volunteer than Choice Lunch does. For example, Grier, who is also a parent in the district, noted that it requires nine parents to serve the Good Earth burrito bar lunch. It may be possible to have older students volunteer to assist with serving lunch to offset the shortage of parent helpers. There are a great number of kids who are willing to do community service at the school per Ms. Meunier. She contacted Choice Lunch in the winter of 2014 to see if there was something to be done about the black non-bio containers they use for some of the hot food. They said they are working on it. Ms. Meunier observed, "The only way we can get close to zero waste would be to eliminate Choice Lunch and return to a company like Good Earth."

Writing Prompt. Positive

According to Ms. Meunier: "For the 3rd grade writing assignment on "opinion", the model essay will be a letter to the PTO about how wasteful the current lunch program is. It's a great way to integrate the curriculum with Zero Waste."

On site Compost Bins: Positive

In fall 2015, the school will partner with a few high school students to build a composting bin on campus.

Zero Waste Curriculum:

The 3rd graders are supposed to learn about the "3R's" (and composting) as part of the science standards. While the Green Team is voluntary, the program is discussed in the science classes and they also did a composting investigation last fall with some of the lunch waste.

Zero Waste Marin School Site Profile: Dixie Elementary



As of:	May 4, 2015
Present:	Natalie Clark – Teacher, Casey Poldino – Zero Waste Marin, Larry Kass - ESA
# of Students:	360
Grades:	K-5
School District:	Dixie
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	1-3CY
<i>Recycling</i>	2-64Gal
<i>Paper</i>	4-64Gal
<i>Cardboard</i>	1-1CY
<i>Compost/Food Scraps</i>	1-64Gal
Notes:	Large amounts of CRV self-hauled
% Diversion	27%
Lunch Service:	Dixie Diner (organizes rotating food vendors)

Questions

1. What gets recycled here?

- CRV from Classrooms, 3rd-5th grade play-yard, Students' families
- Paper from Classrooms, Staff room, 3rd-5th grade play-yard, Plant debris from Garden
- Cardboard
- Used Shoes



2. What doesn't get recycled here that could be?

- Food scraps
- Paper towels (go to recycle cart instead of compost)
- Yard trimmings
- Recyclables/Compostables from K-2 yards

3. What is working well?

Dixie Elementary has an active Green Team that consists of parent volunteers as well as students (Green Goddesses). Dixie's CRV program collects containers from school and home. Proceeds go to support the Home and School Club.

4. How do people here know what can be recycled?

Green team parents and kids perform skits about recycling at school assemblies. Recycling receptacles are well signed in most areas.

5. What are the unmet needs?

Paper towels need to get from classrooms to the green compost cart. Right now, custodians and students are putting them in brown recycling carts.

6. What tools or devices are needed?

- The staff room needs labeled bins for compostables, recyclables, and trash.
- Secure-lidded compost carts / bin would address the risk of animal raiding that is keeping lunch scraps from being collected for composting.
- Recycle-Trash all-in-one stations need more robust wheels so they can be moved around campus to follow activity throughout the day.



Programs

Durable Party-Ware Kits: Positive

Every classroom has a bag containing a complete class set of washable service-ware to use instead of disposables for class parties. Washing of this service-ware is up to each classroom teacher, who can enlist the help of students/parent volunteers if needed.

Promoting No-Waste Lunches: Positive

Students can earn "Green Bucks" for bringing a no-waste lunch. They can be used at the school's donated toy exchange store.

CRV Collection: Positive, Negative, Neutral

Dixie’s CRV program collects containers from school and home. Proceeds go to support the Home and School Club. Green Team parents help sort CRV containers into a well-organized and secure on-site storage enclosure.

Garden Composting: Positive

Plant debris generated in the school garden is composted on-site.

Assemblies: Positive

Green team parents and kids perform skits about recycling

Green Team: Positive

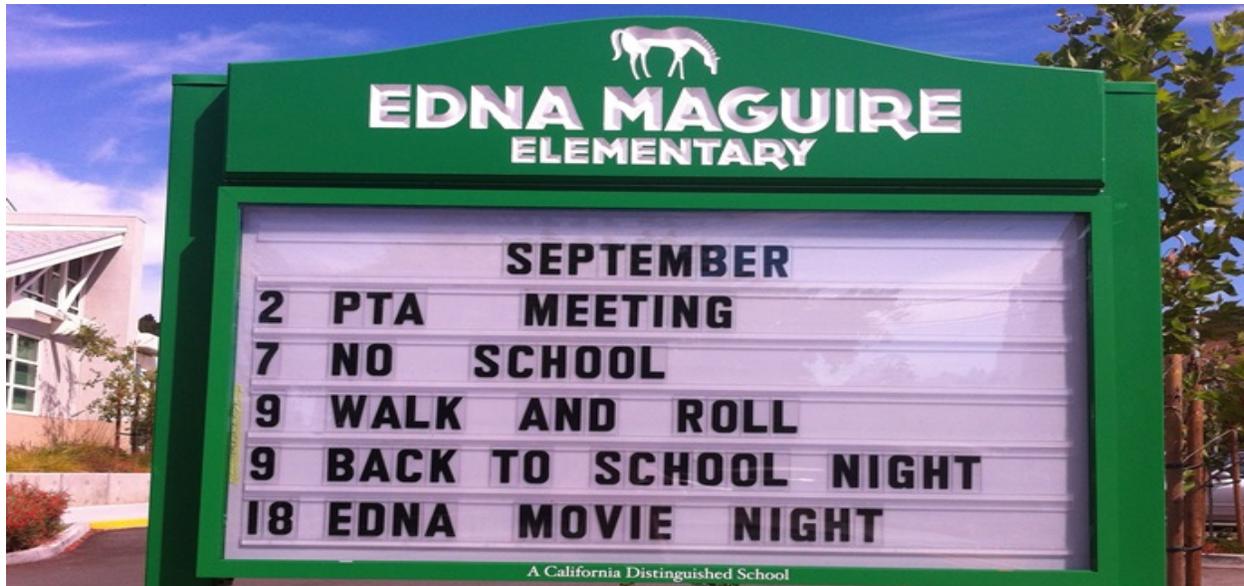
Dixie Elementary’s Parent Green Team runs CRV program, monitors lunchtime recycling, and performs with student green teams at assemblies. The student green team often collects paper towels from classrooms and puts them in the brown bins (for paper recycling, not composting).

Student monitors: Positive

“Green Goddesses” monitor discard stations and give out “green bucks” that can be used at the school’s donated toy exchange store.



Zero Waste Marin School Site Profile: Edna Maguire Elementary



As of:	6/8/15
Present:	Judith Silver; Shawn Gatewood, District Maintenance and Operations Director; Pat, lead custodian
# of Students:	470
Grades:	K - 5
School District:	Mill Valley
Hauler:	Mill Valley Refuse (MVR)
Service level reported by hauler:	
Trash	3 – 2 yard
Recycling*	13x 64 gal carts
Cardboard	1 – 2 yard
Compost/Food Scraps	1 – 2 yard
% Diversion	25%
Notes:*	Number of recycling carts is not tracked by MVR. ESA observed 13 carts during visit.
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Yard trimmings
- Cardboard

2. What doesn't get reduced or recycled here that could be?

- Bathroom paper towels.
- Food Scraps

3. What is working well?

- The school garden is a lovely outdoor classroom with a kitchen, vegetables and fruit trees; it connects the students to food and composting education.
- There is a green team made up of teachers and students. PTA funds were used to purchase classroom and administrative area recycling bins when the school reopened in 2014.



4. How do people here know what can be recycled?

The lunch area containers are not well marked. However the classrooms, staff work room and administrative offices are all equipped with recycling containers that are blue and /or have signs.

5. What are the unmet needs?

There are no off site tours or school assemblies related to Zero Waste. There is no food scrap program in place. Lunch area containers need better signage.

6. What tools or devices are needed?

Mill Valley Refuse does not use color coded bins or stickers to identify their bins by commodity type (trash, yard debris, cardboard) in the enclosure area; all the bins look the same. It would be helpful to have better coding or stickers on the various bins. Pat would like the kids to be more engaged in monitoring and assisting with the recycling. He says he spends up to two hours per day managing the recycling. In addition, though he has been at the school for 27 years, he has never been on a tour of a recycling facility or landfill.

Programs

School Lunch: Negative

The outside lunch trash and recycling (?) containers are simply there. There is no signage that explains what goes where. Pat, the school custodian, lamented that the students generate “30 bags of trash during lunch each day.” Currently there is no attempt to collect food scraps. Although in the past, a more robust and



Lunch Containers – where are the signs?

organized deconstruction lunch program did exist per Pat. The food server, Ahsa, said that Choice Lunch will take back uneaten food.

Facility rental: Neutral

The school facility is used by sports teams, afterschool programs and the Marin Day Preschool. Pat commented that extra trash and recyclables are left behind after soccer and baseball games creating extra work for him. In addition Marin Day Preschool occupies space on the property, though they do manage their recyclables. Sample subtenant language should be provided to schools that require proper use of the school's recycling systems including not creating additional labor for custodial staff.

E-Waste Electronics Fundraiser: Positive

The PTA has run an E-waste recycling fundraiser event. The last one was in 2012. The PTA is currently pursuing other types of fund-raising events.

Zero Waste Marin School Site Profile: Greenwood Montessori



As of:	3/12/15
Present:	Judith Silver, Julie Hanft, 8 th Grade teacher
# of Students:	130
Grades:	Pre K – 8 Private
School District:	N/A
Hauler:	Mill Valley Refuse
Service level reported by hauler:	
<i>Trash</i>	2x 32 gal carts + 1 x 2 yard
<i>Recycling *</i>	5x64 gal cart
<i>Compost/Food Scraps</i>	2x64 gal carts
Notes:*	Number of recycling carts is not tracked by MVR. ESA observed 5 carts during visit.
Diversion %	60%
Lunch Service:	Good Earth

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Food scraps
- Yard trimmings
- Bathroom paper towels

2. What doesn't get recycled here that could be?

Nothing.

3. What is working well?

The Montessori educational approach is focused on developing habits. Therefore students as young as first grade are tasked with discarding the classroom containers each day. The school is relatively small, both in numbers of students and in the distance from the classroom to the exterior cart staging area, which further enables students to manage the recycling. Each 1-8 grade classroom is equipped with a set of 5 gallon color coded buckets (black, blue and green) for the various streams. In the Pre K and K classes, the teachers have a full kitchen set up including durable plates, etc. which they wash. There is a bucket for food scraps which the staff discard daily. Lunch is not consumed in classrooms; the lunch area is a multipurpose room.

4. How do people here know what can be recycled?

Recycling fits into the school's project based learning approach. The Montessori system is designed to engage students early and often, creating habits, including the habit of sorting material types. The 8th grade NEST (Nature and Environmental Studies) students train the other students by visiting each class. NEST students use sorting games to help train their peers. NEST students noticed that even though the buckets were color coded, some specific signage for confusing items such as pencil shavings and seaweed containers would be helpful.

5. What are the unmet needs?

As Ms. Hanft works in a small independent school, she expressed an interest in networking with other teachers on Zero Waste in order to learn best practices and share resources.

6. What tools or devices are needed?

No needs of this type were apparent.

Programs

Color Coded Bucket System: Positive

The school has developed an effective three sort system for landfill, single stream recycling and organics. The 5-gallon color coded buckets are purchased "off the shelf." Outside, the carts have photos of the buckets that the kids have in their hands to facilitate the proper discard process. (However, Mill Valley

Refuse (MVR) has switched from blue recycle carts at the request of residents. Therefore the recycle carts are brown and the 5 gal buckets for recycling are blue.) The buckets have handles, and they are inexpensive, easy to find online, and easy to replace.

Organics Cart Modification: Positive

In order to properly clean the organics buckets, there is a staging area with brushes and a spigot nearby. The green MVR carts have been modified by the NEST students; they cut a small square opening and installed a mesh covering so that the five gallon bucket contents (food + water, after rinsing) can be discarded into the green cart. The water seeps out of the mesh opening but the food stays in. This is done on a paved area with a gentle slope, so ponding does not occur.



Bucket cleaning station



Mesh opening for discarded green bucket water

Tour of Recycling Facility: Positive

All 6th graders take a field trip to Marin Sanitary Services.

Community Engagement Project: Positive

According to Ms. Hanft, NEST kids are working to reduce trash in the town of Mill Valley by getting store owners to sign a pledge to pick up trash around their stores. The students are also engaging with Tamalpais High School Student Council to ask for their assistance and participation. The NEST students believe that the high school students are responsible for a large portion of the litter close to the High School and that they should engage in the solution.

Lunch Program: Positive

The school uses Good Earth for the daily lunch program. Good Earth uses compostable plates and service ware. Parents help serve lunch. Good Earth requires several parent volunteers to assist and serve the lunch as the food delivered in bulk pans and bowls, not in single-portion servings as with other food vendors. The buckets around the lunch area were more contaminated than the ones in the classrooms, indicating that parent volunteers need to be targeted for training.

Zero Waste Marin School Site Profile: Lagunitas School

As of:	3/18/15 and 4/2/15
Present:	Judith Silver, Casey Poldino, Gina (garden coordinator), David Lakes (Community Center) Madeline Hope (Zero Waste Marin), Leonora Denarie (Food Services Director)
# of Students:	143
Grades:	K-8
School District:	Lagunitas
Hauler:	Ratto Group
Service level reported by hauler:	
<i>Trash</i>	1 x 4yard 1 x 3 yard
<i>Recycling</i>	2 x 4 yard
<i>Cardboard</i>	
<i>Compost/Food Scraps</i>	5 x 95 gal
<i>% Diversion</i>	60%
Notes:	
Lunch Service:	District

Questions

1. What gets recycled here?

- Cardboard, steel cans, large plastic jugs from the kitchen
- Office and school paper from administrative offices and classrooms
- Food scraps

2. What doesn't get recycled here that could be?

Nothing.

3. What is working well?

- Leonora, the Food Services Director, separates pre-consumer food scraps into a five gallon lidded bucket and gives them to a local family to feed their chickens.
- The collected recyclables and the OCC from the kitchen are put to the side and managed by the custodial staff.
- Food scraps are collected from the outdoor “three-sort stations” and consolidated for collection.

4. How do people here know what can be recycled?

The sort stations are well marked with images of “what goes where.”

5. What are your unmet needs?

Lunch was a beautiful plate of pinto beans, cheese, chips, salad, cut fruit and an opportunity to add salsa (homemade) and other toppings on the day of our visit. Leonora talked with us about what she prepares

and when she uses “commodity” foods (food provided inexpensively from the Federal Government) and when she uses locally sourced organics.

Inside the Multi Purpose Room, where lunch is served, the only option for discarding the uneaten food served on paper plates was two large brute trash cans. Leonora will not allow unlined compost containers in her “zone” even if they will be emptied right after lunch and Buck, the PE teacher who handles the food scraps, is against liners of any kind. Therefore, much of the discarded food scraps end up in the trash. The sort stations outside were being used correctly. However, their use was predicated on the students walking outside to them. Most of the students we observed were using the inside trash containers. Therefore compost liners would be advisable.

6. What tools or devices do you need?

While Ratto reported that they collect organics from the school, the school representatives said they were frustrated that Ratto does not collect food scraps from them. School staff were using the neighboring community center’s collection containers for the school lunch organic discards. The school would like Zero Waste Marin’s assistance to resolve Ratto’s ability to expand commercial food scrap service to include area schools.

Also, the school needs a better refrigeration system for storing food. This would enable the food prep staff to do more with unserved leftovers.

Programs

Food Diversion System: Negative

The custodians have not agreed to handle the organics yet. Currently Buck, the school P.E. teacher is managing the food scraps. He removes the food scraps from the compost portion of the three bin sort stations each day. He brings the organics to the community center green carts.

Wellness Committee: Positive

The Wellness Committee offers a venue to resolve the organics program situation. Buck does not want to use compostable bags; he is opposed to any liners at all. That is why there are no compost liners in the Multi Purpose Room trash containers. While Buck is on the Wellness Committee, custodians are not directly represented.

The Committee meets each month and based their wellness policy on that of the City of Berkeley. Section 6 of the policy, entitled “Waste Reduction and Sustainable Agriculture Education,” states that the District, will to the greatest extent possible, “ensure that cafeterias are part of the environmental education of students and staff through reducing waste, composting, recycling and purchasing recycled and ecological materials.”

Three Sort Stations: Positive

There are ten new three- sort stations around the campus. They were built by a parent with donated wood. The containers are equipped with plastic sturdy liners rather than with film plastic or compostable bag liner.

Zero Waste Grant for Garden Program: Positive

The school district receives \$10,000 from Zero Waste Marin each year to support the garden program. Gina, a parent, sees the students twice per week. She has been working for five years, has learned about curriculum and does cooking with kids on a camping stove, connecting food and the garden.

Lunch Program Food Waste: Negative

Student portion were very large; Leonora explained that it is easier than having kids get back in line for seconds. On the day of our visit, Leonora prepared organic pinto beans from scratch. However, she discard any extra beans into the compost, rather than give them away to staff, because otherwise the staff would not buy the lunch the following day and the program needs the cash flow. She also explained that kids are obliged to take fruit servings that they may not eat. They can't select the food they want because of federal service serving requirements and this creates waste.

The School District used to use Good Earth as its Hot Lunch vendor; Good Earth was starting the service, but now Good Earth's commercial kitchen is in Novato and the distances are too great to justify using them as a lunch service provider.

Zero Waste Marin School Site Profile: Laurel Dell Elementary



As of:	May 29, 2015
Present:	Pepe González – Principal, Larry Kass - ESA
# of Students:	218
Grades:	Preschool - 5
School District:	San Rafael City Schools
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	4-96Gal
<i>Recycling</i>	2-64Gal
<i>Paper</i>	5-64Gal
<i>Compost/Food Scraps</i>	1-64Gal
Notes:	Custodians add cardboard to paper bins when there's room. Otherwise, trashed.
% Diversion	21%
Lunch Service:	San Rafael City Schools Central Kitchen

Questions

1. What gets recycled here?

- Paper from classrooms
- CRV from students & parents
- Cardboard (when there's room in the carts)

2. What doesn't get recycled here that could be?

- Compostables and recyclables from lunch
- Cardboard that doesn't fit in the carts

3. What is working well?

CRV collection works well at Laurel Dell. Students recycle paper in classroom and reduce paper consumption by re-using back side of paper for scratch work.



4. How do people here know what can be recycled?

Paper recycling is part of classroom procedures. CRV recycling instructions are given to students and families as part of Laurel Dell's "Cash for Trash" program.

5. What are the unmet needs?

Laurel Dell needs staff to monitor lunchtime composting and recycling in order to feel comfortable that they won't contaminate too much. At the point that they implement, they would also like support for school-wide recycling/composting assemblies and to train junior coaches/monitors.

6. What tools or devices are needed?

Laurel Dell would like to obtain curriculum resources that tie lunchtime composting into their garden program. They would also like help addressing collection service logistics. They're collected by residential routes, so custodians have to cram flattened cardboard boxes into carts, which happens only when they have time and the carts have room. Curbside set-out space limits the number of blue carts they can have, so they sometimes put cardboard into the landfill carts.

The principal is in favor of advocacy and strategies for greener purchasing and packaging by SRCS nutrition services.

Programs

CRV Recycling: Positive

Students and families bring CRV containers to Laurel Dell's "Cash for Trash" program, which brings in about \$20 per week.

Reducing School Lunch Program Disposables: Positive

Over the past few years, SRCS central kitchen has been reducing disposables that come with the district lunch. The principal feels that more could be done on purchasing and packaging.

Cool the Earth: Positive

Laurel Dell distributes Cool the Earth action coupon booklets to students to encourage resource-saving behaviors such as using reusable bags, and choosing products with post-consumer recycled content. Students enter completed coupons in a school raffle.

Zero Waste Marin School Site Profile: Mary E. Silveira Elementary



As of:	May 6, 2015
Present:	Will Anderson – Principal, Casey Poldino – Marin JPA, Larry Kass - ESA
# of Students:	430
Grades:	K-5
School District:	Dixie
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	2-3CY
<i>Recycling</i>	2-64Gal
<i>Paper</i>	7-64Gal
<i>Cardboard</i>	2-2CY
<i>Compost/Food Scraps</i>	4-64Gal
Notes:	
<i>% Diversion</i>	26%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Compostables & Recyclables from Lunch Area
- Paper from Classrooms
- Garden debris

- Cardboard

2. What doesn't get recycled here that could be?

- Compostables from Teachers' Room

3. What is working well?

The school's garden is working well, along with composting of garden-generated plant material.

4. How do people here know what can be recycled?

The school principal makes announcements and gives mini-lessons at lunch. Carts have signs on them.

5. What are the unmet needs?

The school needs a train-the-trainer system for student lunchtime discard station monitors.

Teachers need encouragement/education so they can participate well in composting and recycling: There is currently only trash in the teachers' room, and an outdoor discard station after a teachers' event showed very high contamination.

6. What tools or devices are needed?

They would like to see a website with various resources, including green purchasing information, best-practices sharing among schools, and curriculum resources (how to incorporate instruction on compost/recycling/waste prevention into the academic standards they're required to meet).

Programs

Principal Announcements at Lunch: Positive

Will Anderson – Principal makes announcements and teaches interactive composting/recycling mini-lessons at lunch. However, contamination continues to be high in all streams (see next item).

Student Discard Monitoring: Negative

Principal Anderson mentioned that their lunchtime student discard station monitoring program has disappeared since the students whose parents who used to lead it have aged out of the school.

School Garden Composting: Positive

The school's garden is working well, along with composting of garden-generated plant material, thanks to the Garden Team (parent-led).

Waste Prevention in Teachers' Room: Positive

The teacher's room uses washable cups/plates/silverware, and has a water fountain.

Zero Waste Marin School Site Profile: Miller Creek Middle School



As of:	May 4, 2015
Present:	Kathy Jung – PE Teacher, Casey Poldino – Zero Waste Marin, Larry Kass - ESA
# of Students:	600
Grades:	6-8
School District:	Dixie
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	2-3CY
<i>Recycling</i>	2-64Gal + 1-96Gal
<i>Paper</i>	6-64Gal
<i>Cardboard</i>	1-1CY
<i>Compost/Food Scraps</i>	8-64Gal
Notes:	
<i>% Diversion</i>	32%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Compostables & Containers/Foil from Lunch Area
- Paper & Bottles/Cans from Classrooms
- Paper & Bottles/Cans from Teachers' room

- Plant debris from Garden
- Cardboard

2. What doesn't get recycled here that could be?

- Compostables from Teachers room
- Paper towels from Restrooms
- Yard trimmings from grounds

3. What is working well?

Miller Creek's lunchtime recycling program has extremely low contamination. Landfill service has been reduced to half of its previous level.



4. How do people here know what can be recycled?

Composting and recycling are integrated into the "school culture"

lessons at the beginning of each school year, which includes showings of Annie Leonard's "Story of Stuff". Lunchtime discard station is monitored by one parent and one student per day.

5. What are the unmet needs?

Miller Creek would like support and strategies to get their teachers on board with composting and recycling. At the time of the site visit, they didn't have composting in the staff room, but were planning to purchase a 3-part set-up. They also would like the District Office to direct maintenance on green purchasing and on disposing grass in the compost instead of the trash.

6. What tools or devices are needed?

For their beginning-of-the year school culture lessons, the school would like a video that takes the general "Story of Stuff"-type lessons and relates it specifically to Marin County.

Programs

Teaching Recycling/Composting as part of "School Culture" Orientations: Positive

Composting and recycling are integrated into the "school culture" lessons at the beginning of each school year, which includes showings of Annie Leonard's "Story of Stuff". Teachers proposed showing the "Story of Solutions" as well, but administration felt it was too laden with propaganda.

Lunchtime Discard Station Monitoring: Positive

Lunchtime discard station is monitored by one parent and one student per day. Contamination was very low on the day of the site visit.

Teacher Collects CRV: Positive

CRV containers are separated by kids at classrooms and lunch station. Teacher uses funds to benefit classes.

Assemblies: Positive

Monthly spirit assemblies usually include a recycling-related component, with a chance for homerooms to win points.

Garden Composting: Positive

Terra Linda's Marin School for Environmental Leadership built Miller Creek's garden compost bins, which are used for plant debris from the garden. The parent led Garden Club meets every Wednesday at lunchtime.



Special Event Recycling: Neutral

A parent volunteer sets up monitoring schedules for the public discard stations at school events that are attended by the public, but it is not effective yet.

Zero Waste Marin School Site Profile: Mill Valley Middle School



As of:	6/8/15
Present:	Judith Silver, ESA
# of Students:	1000
Grades:	6-8
School District:	Mill Valley
Hauler:	Mill Valley Refuse
Service level reported by hauler:	
<i>Trash</i>	3 – 2 yard
<i>Recycling*</i>	12 -64 gal carts
<i>Cardboard</i>	1 – 2 yd
<i>Compost/Food Scraps</i>	2- 2 yard
Notes*:	Number of recycling carts is not tracked by MVR. ESA observed 12 carts during visit.
% Diversion :	21%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Yard trimmings
- Batteries

2. What doesn't get recycled here that could be?

- Bathroom paper towels
- Milk Cartons
- Food scraps

3. What is working well?

There are well signed recycling containers in the administrative offices, classrooms, library and staff work/copy room; however, there are no recycling containers paired with the trash containers in the outside spaces of the school. They have received support from the Conservation Corps of the North Bay in the past.

4. How do people here know what can be recycled?

Through the signage. Per the school secretary, the kids understand what goes where and if convenient, they will sort correctly. The school does not conduct any assemblies or field trips related to zero waste.

5. What are the unmet needs?

Per the school secretary, Linda, there have been green teams at this school in the past however, currently, it is not active.

6. What tools or devices are needed?

- The school would benefit from technical assistance to introduce and maintain a food scraps program at lunch.

Programs

Refillable Water Stations: Positive

The school installed three refillable water stations and directed Choice Lunch not to offer single use water bottles in their lunches, only milk is offered.

Printer to Teacher website: Positive

The main school printer allows teachers to scan information to their individual websites where students can access it. This has greatly reduced the amount of paper printed.

Lunch Program: Negative

Students do not have the option of recycling or diverting food scraps at lunch.



Zero Waste Marin School Site Profile: San Rafael High School



As of:	May 4 th , 2015
Present:	Alan Downing – SRCS Production Kitchen Manager, Steve Temple – Physics & Green Team Teacher, Brendan Pipkin – Strategic Energy Innovations, Larry Kass - ESA
# of Students:	1000
Grades:	9-12
School District:	San Rafael City Schools
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	1-5CY, 1-3CY Compactor
<i>Glass</i>	1-64Gal
<i>Paper</i>	10-96Gal + 1-64Gal
<i>Cardboard</i>	1-2CY, 1-64Gal + Loose cardboard
<i>Compost/Food Scraps</i>	
Notes:	% Diversion includes district central kitchen
% Diversion	19%
Lunch Service:	SRCS Central Kitchen (on-site, prepares food for all district schools)

Questions

1. What gets recycled here?

- Paper & Bottles/Cans from classrooms
- Cardboard & Pallets from Kitchen

2. What doesn't get recycled here that could be?

- Compostables (including restroom paper towels)
- Recyclable containers from kitchen
- Recyclables from campus discard areas

3. What is working well?

San Rafael High's student green team is working to improve composting and recycling, and other areas of its school's environmental performance, by reaching out to their own student population, as well as to school district and county government.

Containers and paper are recycled from classrooms.

4. How do people here know what can be recycled?

Container and paper recycling is incorporated into classroom procedures.

5. What are the unmet needs?

Many trash bins throughout campus (including within the cafeteria) are not paired with any recycling option.

Outdoor recycle bins (mini-enclosures for bottles & cans) had been serviced by Conservation Corps North Bay, but once CCNB funding ran out, the contents started being collected as trash because no one at the school would take on the task. Production kitchen is not set up or trained in recycling or composting.



6. What tools or devices are needed?

Recycling programs would function more effectively if recyclables and compostables were among the materials custodians were authorized/expected to transport, not just trash.

The school would like help and resources for on-site composting.

Programs

Student Environmental Club: Positive

Student Green Team meets weekly and focuses on campus sustainability initiatives, as well as policy at the district and county level. Facilitated by physics teacher – Steve Temple, and Strategic Energy Innovations fellow – Brendan Pipkin.

Recycling Integrated Into Classroom Procedures: Positive

Advanced leadership class collects paper + bottles/cans and donates money to fund elementary school field trips. Janitorial staff will only collect and transport trash. This is one of the issues the Student Green Team is trying to address with San Rafael City Schools.

Garden Compost Bins: Negative

Green team set up compostables collection bins in school kitchen to bring to garden compost bin. Program only lasted one month because kitchen staff consistently put citrus peels in the bins and they wouldn't break down.

Waste Audit: Positive

Green team conducted campus-wide waste audit.

Meals Prepared On-Site: Negative

Significant use of disposables; kitchen and cafeteria do not have recycling or organics containers.



Zero Waste Marin School Site Profile: Sun Valley Elementary



As of:	May 21 & September 10, 2015
Present:	Land Wilson – Parent, Julie Harris – Principal, Judith Silver – ESA, Larry Kass – ESA
# of Students:	471
Grades:	K-5
School District:	San Rafael City Schools
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	1-1CY Compactor
<i>Recycling</i>	1-64Gal
<i>Paper</i>	10-64Gal
<i>Cardboard</i>	1-2CY
<i>Compost/Food Scraps</i>	5-64Gal
Notes:	
<i>% Diversion</i>	72%
Lunch Service:	San Rafael City Schools Central Kitchen

Questions

1. What gets recycled here?

- Paper, Glue sticks, Markers from Classrooms
- Compostables from Lunch area
- Paper and Recyclables from Teachers' room
- Paper from Administration
- Cardboard

2. What doesn't get recycled here that could be?

- Compostables from Teachers' room

3. What is working well?

Sun Valley Elementary has many systems in place to prevent waste as well as divert it. Custodians include moving recyclables and compostables in their responsibilities. Many students bring low/zero waste lunches and refillable water bottles from home. Land Wilson – Parent, Green team leader, author, and leader of national efforts to reduce waste, recycle and reduce carbon impact – leads school-wide environmental awareness assemblies based on the image of Earth from space. Marin Sanitary also runs school-wide assemblies. Sun Valley's green team is in the process of creating a good practices video for initiating marker take-back programs. The school is Green Business certified and has previously participated in the Cool the Earth Program.

4. How do people here know what can be recycled?

Signs on bins and lunch tables, some lunchtime station monitoring, school-wide assemblies, and classroom procedures help people know what can be recycled at Sun Valley Elementary.

5. What are the unmet needs?

It's hard to get and keep lunchtime discard station monitors. Students monitor the stations three days per week. This works well on the one day they are led by a parent volunteer, but without an adult leader to focus them, the students are often ineffective.

6. What tools or devices are needed?

Sun Valley Elementary needs lunchtime discard station monitors. Even one day per week could make a difference. Land Wilson is hoping to develop (with assistance?) a script for an improved "Earth from Space" assembly, perhaps incorporating more humor. Principal Harris suggested that one page flyers and/or short videos about what goes where, available from a website, would be helpful in getting the word out to the school community.

Programs

Crayola Marker Collection / Conversion: Positive

Crayola markers are collected at each classroom, brought by Green Team Kids to a centralized storage container. They are eventually processed into oil. Students were active in the campaign, led by parent – Land Wilson – to get Crayola to take back their markers.

Refillable Whiteboard Markers: Positive

Sun Valley Elementary uses AusPen, one of several brands of refillable whiteboard markers to do their part to reduce the 400 million whiteboard markers that are disposed in the United States each year.



Low/Zero-Waste Lunches: Positive

Many students bring low/zero waste lunches and refillable water bottles from home.

Lunchtime Discard Station Monitoring: Neutral

Students monitor the stations three days per week. This works well on the one day they are led by a parent volunteer, but without an adult leader to focus them, the students are often ineffective.

Junk Mail Prevention Campaign: Positive

Sun Valley Elementary has held a few school-wide Catalog Cancel Challenge competitions

Litter Pick-up Competition: Positive

PUP (Pick Up Plastic) games challenge students to pick up the most plastic in their community.

Assemblies: Positive

Land Wilson leads school-wide environmental awareness assemblies based on the image of Earth from space. Marin Sanitary also runs school-wide recycling/composting assemblies.

Zero Waste Marin School Site Profile: Tamalpais Valley Elementary



As of:	6/8/15
Present:	Judith Silver, ESA and Juan, Custodian
# of Students:	514
Grades:	K-5
School District:	Mill Valley
Hauler:	Tamalpais Community Services District
Service level reported by hauler:	
Trash	3- 3 yard 1x/week
Recycling	10 x 64 – gal carts 1x/week
Cardboard	1 – 3 yard 1x/week
Compost/Food Scraps	1x64 1x/week
% Diversion:	28%
Notes:	Food scraps are diverted to the school garden, landscaping debris is collected by Tamalpais Community Services District (TCSD).
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Food scraps
- Yard trimmings

2. What doesn't get recycled here that could be?

- Paper towels from bathroom, if traditional compost service could be provided.

3. What is working well?

The custodian has been with the school for 12 years, and the Principal has been there for 20 years. The students and staff have easy access to the Community Services District headquarters (a short walk away) and can get more recycling containers from there, as needed. Recycling containers are currently in the

office, staff work room, library and classrooms. Cardboard is collected separately. There was little evidence of contamination in the recycling containers that were observed. Food scraps from lunch are collected in a separate container and shuttled each day to the compost area in the school garden across the playing field.

4. How do people here know what can be recycled?

Color coded recycling containers are properly paired with trash containers in each classroom, outside and in the shared spaces of the school (Multi-purpose room, library, front office).

5. What are the unmet needs?

The school is satisfied with their services and the level of diversion they are achieving.

6. What tools or devices are needed?

Students would benefit from more education (assemblies and /or field trips) and curriculum related to Zero Waste.

Programs

Classroom Recycling Containers: Positive

Each classroom is set up with a black container for trash and a blue container for recycling. There is little evidence of contamination in the classroom containers. Students do not typically eat in the classrooms. The custodian is responsible for collecting the trash and recycling each day.

On site Food Scraps Composting: Positive

During lunch, food scraps are collected and brought to the school garden for composting. The custodian is responsible for bringing the food scraps to the garden each day. The garden is managed by a PTA Garden Coordinator. The coordinator works with each teacher to develop an appropriate curriculum to inspire environmental stewardship and awareness during the student's time in the garden.

Zero Waste Marin School Site Profile: Tomales High School



As of:	4/2/15
Present:	Judith Silver, ESA; Casey Poldino, Zero Waste Marin; Madeline Hope, Zero Waste Marin; Adam Jennings, School Principal; Bernard Gregoris, AP Science Teacher (phone follow up)
# of Students:	185
Grades:	9 -12
School District:	Ratto
Hauler:	Shoreline Unified
Service level reported by hauler:	
Trash	1 - 4y d & 1- 2yd
Recycling*	1 - 4 yd
Compost/Food Scraps	3 x 64 cart
% Diversion:	45%
Notes:	
Lunch Service:	District

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Food Scraps
- Food Soiled Paper

2. What doesn't get recycled here that could be?

- Bathroom paper towels

Also, currently a noticeable fraction of the recyclables are being disposed with the trash.

3. What is working well?

Under the leadership of science teacher Bernard Gregoris, in partnership with Conservation Corps of the North Bay (CCNB), the school established a Green Team. It created recycling and composting signs and obtained interior recycling containers to pair with the trash containers. Evidence of these efforts, which started in 2013, still remains; however, as seen in the composition of the trash, proper use of the containers is limited.

4. How do people here know what can be recycled?

There is signage but there are no assemblies or class trainings on how to properly sort materials.

5. What are the unmet needs?

Ongoing professional development for staff. For example, after the site visit, ESA sent a follow up message to Adam Jennings, school principal, reminding him what can be recycled and composted and to communicate this to his staff. Simply setting up the kitchen with a recycling container to capture large steel cans & bottles and getting them into the recycling container located right outside the kitchen door, is relatively straight forward and does not involve a large number of people, just the kitchen and custodial staff. ESA also encouraged the school to draw on the Recycling Coordinators at the Ratto Group and ask them to come out again to review the existing program, make recommendations, participate on the Green Team and provide input on types of packaging that can be most easily recycled or composted.

Also, a more uniform set of recycling rules, containers and signs across the County's schools would enable students entering middle or high school to simply continue the practices learned in the lower grades, without having to understand a system that looks different.

6. What tools or devices are needed?

This school needs an impetus to reinvigorate its Green Team or use its Leadership Class to provide awareness and reminders about what can be recycled and composted. It may be helpful to partner with Strategic Energy Innovations (SEI) to develop leadership skills for students around zero waste; providing financial support for SEI or CCNB to work with Tomales High School would be beneficial. Developing systems of education and training that can be replicated each year so that diversion occurs year after year is key.

Programs

Stakeholder Training: Negative

Currently there is no direct education, professional development or coaching of the custodial staff related to handling recyclables and organics. There is no component to the annual staff professional development or onboarding of new kitchen staff and teachers related to how to properly participate in the recycling and compost programs.

Lunch Discard Monitors: Negative

All students eat lunch on campus. Currently there are no students trained and designated to help with "what goes where."

Kitchen Recycling System: Negative

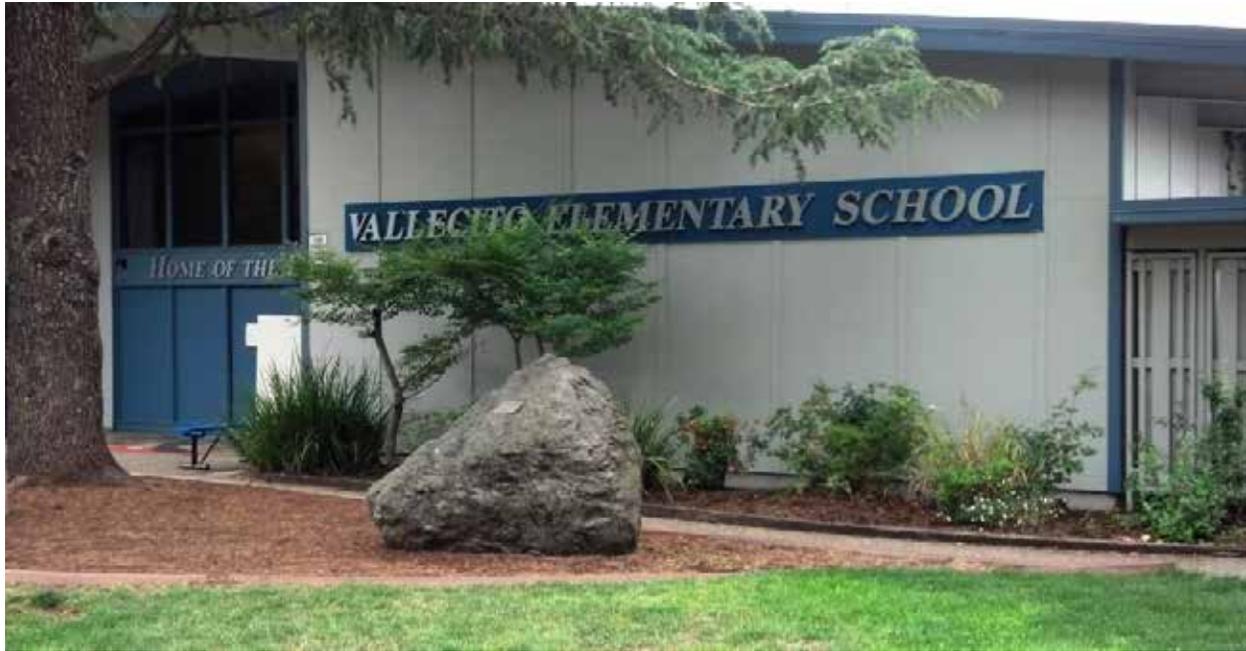
Develop a system to capture the large steel cans, plastic jugs and cardboard from the kitchen and divert to the recycling container outside the kitchen door.

Pairing of campus collection containers: Positive

The school has invested in containers for recycling and trash which are clearly identifiable and paired for ease of use.



Zero Waste Marin School Site Profile: Vallecito Elementary



As of:	May 4, 2015
Present:	Marla Northcutt – parent volunteer, Barbara Stewart – teacher, Larry Kass - ESA
# of Students:	470
Grades:	K-5
School District:	Dixie
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	1-3CY
<i>Recycling – Dual Sort</i>	5-64Gal
<i>Paper</i>	12-64Gal
<i>Cardboard</i>	1-2CY
<i>Compost/Food Scraps</i>	10-64Gal
Notes:	
<i>% Diversion</i>	74%
Lunch Service:	Choice Lunch

Questions

1. What gets recycled here?

- Compostables/Paper/Containers/Foil from Lunch Area, Kindergarten, Yard, Teacher Rm
- Garden Trimmings from Garden
- Paper towels from restrooms

- CRV plastic from students' homes
- Cardboard

2. What doesn't get recycled here that could be?

Glass containers, Crayola markers

3. What is working well?

Vallecito Elementary's waste prevention/diversion programs are integrated into their school operation: Outdoor compost/recycle/landfill all-in-one stations are made from readily available containers, are easy to use & empty, support effective signage, and are much cheaper than commercially produced recycling stations.



Student monitoring schedule is well organized and distributes load evenly among classes.

Teachers prevent and divert waste in their staff room by using washables where possible, drinking from a water fountain, and by recycling and composting.

4. How do people here know what can be recycled?

Classroom instructional videos, waste station signage, and student/parent discard station monitors teach people what can be recycled at Vallecito Elementary. The school green team also puts on skits and posts reminders about recycling.

5. What are the unmet needs?

- Curriculum linking composting/recycling with garden
- Other resources for integrating composting and recycling into curriculum
- Donation locations / other ideas for over-abundance of on-site generated garden compost
- Help on reducing lunch waste - promoting zero waste lunches
- How to re-cycle other school supplies (white board markers? marking pens)

6. What tools or devices are needed??

The garden needs additional compost bins to accommodate the long on-site processing cycle, or a more efficient composter to speed it up. Also need more garden composting tools.

Programs

Lunchtime Discard Station Monitoring: Positive

Rotation system: ½ class per week. Student monitors get “golden eagle” tickets. Led by 3 parent volunteers. Hard to get/keep parent volunteers. One parent is getting burnt out volunteering 3X/Wk on this. The vision is to do this program without parent volunteers.



Waste Prevention/Diversion in Teachers’ Room: Positive

Dishwasher and washable cups/plates/silverware, water fountain, Composting/Recycling Station which teachers mostly use correctly.

Lunch Vendor Interfaces with Hauler: Positive

Parent facilitated coordination between Choice Lunch and Marin Sanitary has resulted in substitution of recyclables for hard-to-process compostable plastics.

Special Event Discard Station Monitoring/Sorting: Positive

Terra Linda HS Marin School Environmental Leadership students help sort and monitor for school festivals/field days.

Garden Composting: Neutral

Garden trimmings and fruit/vegetable scraps from special buckets at campus discard stations go to garden compost bins. Parent claims program is no longer active because it goes too slow. They need a more efficient composting system, or more bins to cycle material through. Don't know what to do with excess compost.



All-In-One Campus Sort Stations: Positive

Four 10gal plastic receptacles are assembled inside a 75gal Rubbermaid outdoor storage tub. Signage is applied to the front face and to the inside of the lid to create all-in-one sort stations. These stations are placed in strategic locations throughout the school, and seem to work well to collect compostables, recyclables, and landfill items.

Instructional Recycling/Composting Video: Positive

Produced by collaboration of parents/teachers/students: Teachers show the video at the beginning of the school year.

Promoting Re-usable Containers: Positive

“Bring your own water bottle to walk-a-thon” campaign.

Green Team: Positive

The school green team puts on skits and posts reminders about recycling.

Zero Waste Marin School Site Profile: Venetia Valley School



As of:	May 6, 2015
Present:	Tes Lazzarini – Resource teacher, Casey Poldino – Zero Waste Marin, Larry Kass - ESA
# of Students:	725
Grades:	K-8
School District:	San Rafael City Schools
Hauler:	Marin Sanitary
Service level reported by hauler:	
<i>Trash</i>	1-3CY Compactor
<i>Cardboard</i>	1-2CY
<i>Recycling</i>	2-64Gal
<i>Paper</i>	8-64Gal
<i>Compost/Food Scraps</i>	2-64Gal
Notes:	Compost Carts (2 listed + 1 additional observed) stationed at garden.
<i>% Diversion</i>	24%
Lunch Service:	SRCS Central Kitchen

Questions

1. What gets recycled here?

- Paper from Office / Classrooms
- Bottles/Cans from Some Classrooms
- Recyclables from Aftercare Program
- Yard/Garden trimmings from Garden

- Cardboard

2. What doesn't get recycled here that could be?

- Compostables/Recyclables from Lunch Area
- Recyclables from Some Classrooms
- Recyclables and compostables from school-wide special events such as the October Carnival

3. What is working well?

One fifth grade class per week (rotating) collects paper from each classroom. Central Kitchen tries to limit packaging where possible, i.e. canned peaches are served in bulk rather than in individual cups. Many students bring low or zero waste lunches from home. Venetia Valley's aftercare program uses washable dishware/utensils. North Bay Conservation Corps lunchtime composting/recycling went fairly well until the program was removed in early 2014 because of funding cuts.

4. How do people here know what can be recycled?

Some teachers instruct students to recycle in their classrooms.

5. What are the unmet needs?

In order to restart lunchtime composting/recycling, they need people to monitor discard stations, and training for student volunteers/lunch supervisors, who would then retrain all students. Parent volunteers are hard to come by at this school.

To reduce waste at school functions, the school needs support for purchasing (of low-waste and durable items), set-up, and outreach. With enough support, the school's Family Center could serve as a demonstration/training model for the parents who prepare food for, and run, the school-wide functions.

Functional recycling and composting programs for the multifamily complexes that house many of Venetia Valley's students would reinforce composting and recycling at school.

6. What tools or devices are needed?

The school needs sufficient carts for their lunchtime composting/recycling program (the previous CCC program did not supply enough capacity to meet their needs). They also need small recycle bins for classrooms.

The school could also use assistance selecting (and perhaps purchasing?) janitorial carts that allow for most efficient collection of multiple materials.

Programs

Students Collect Paper from Classrooms: Positive

One fifth grade class per week (rotating) collects paper from each classroom.

Washable Serviceware/Utensils: Positive

Aftercare program only

Uneaten Food Exchange: Positive

Some teachers put a food exchange bowl for uneaten food in their classroom.

Garden Composting: Positive

School garden compost handles yard/lawn trimmings and plant debris from the garden, while providing education and awareness for students.



Zero Waste Marin School Site Profile: West Marin Elementary



As of:	March 3, 2015
Present:	Judith Silver, Madeline Hope, Gilberto (Gilo) Skilled Maintenance/custodial manager
# of Students:	142
Grades:	2-8
School District:	Shoreline Unified
Hauler:	Unicycler (Ratto Group)
Service level reported by hauler:	
<i>Trash</i>	1x 6yd
<i>Recycling</i>	1x 4 yd
<i>Compost/Food Scraps</i>	3x95
Diversion %:	47%
Notes:	food scraps to pig farmer
Lunch Service:	School staff

Questions

1. What gets recycled here?

- Mixed Recyclables (containers and fibers)
- Food scraps

- Yard trimmings
- Cardboard
- Terra Cycle Foil

2. What doesn't get reduced or recycled here that could be?

- Bathroom paper towels.

3. What is working well?

The school has a strong and committed staff. For example Gilo has been at the school for over 10 years. He is very friendly and connects with the students. Madeline has met with Ratto staff to understand what to purchase in terms of materials. For example, she learned it was not worth spending money on compostable service ware as cutlery is screened out when processed at Redwood Landfill. The kitchen has a dishwasher and students use reusable trays. Grass is mowed and left on grounds.

4. How do people here know what can be recycled?

There is signage around the lunch area on the walls next to the trash, recycling and food scrap container and staff communicate with students verbally.

5. What are the unmet needs?

An annual training at the start of the school year to train all staff and students on what goes where.

6. What tools or devices are needed?

The school does not have recycling containers paired with the outside trash containers that are dotted around the campus. Also, one opportunity would be to switch to bulk dispensers of ketchup, etc. Currently they use small single-use packets. They do buy peanut butter in bulk and then make small "homemade" single containers.

Programs

Terra Cycle foil recovery: neutral

One of the lead teachers manages a Terra Cycle foil collection program as a fundraiser. She will get \$0.10 per wrapper. Once she accumulates seven pounds of material, she will mail the material to Terra Cycle. There is a cardboard box in the cafeteria with a small opening that the kids stuff the foil wrappers into.

While this seems like a great idea, it takes months to accumulate seven pounds of wrappers. However, it is a fundraiser and it engages the kids. This is just one teacher's effort, not a school or district wide activity.



Snack Wrapper Collection Container

Grasscycling: Positive

The mowed areas of the school are grasscycled. Gilo weeds the landscaping in the front, and those weeds go into the Unicycler green waste container.

SF/Marin Food Bank Grant: Positive

Lourdes, the School Family Advocate, obtained a grant to purchase food for afternoon snack. Food is purchased through the Food Bank and also donated by West Marin Organics. If there is extra, it is put by the main entrance at the school (Example: a large box of oranges and organic lettuce, seen during this site visit). The food is available and taken by families during pick up.

School Lunch Signage: Negative

The school lunch set up uses “homemade” signs developed through the San Francisco Department of the Environment Sign Maker Program. The signs are showing signs of age. Metal outdoor signs rather than laminated would be better in the long term. More generally, Ms. Hope expressed a concern that the school does not have a cohesive BRAND that ties Zero Waste Marin to the school’s zero waste program through signage or containers.

Lunch Preparation: Positive

School kitchen prepares lunches for West Marin Elementary (2 – 8 grades) + Inverness School (K-1). Gilo drives individual food trays (one per student) from the West Marin Elementary school location in Pt. Reyes Station to Inverness each day. The trays are brought back and washed in the West Marin Elementary Kitchen. They were losing too much metal cutlery so they switched to single use utensils.



Stack of reusable lunch trays

Food Scraps to pig farmer: Positive

Currently, food scraps are taken by a local family pig farmer. Lunch scraps, including milk, are collected in an unlined small “brute barrel” on wheels. It is picked up each day. There is no food scrap collection by Ratto at this time, due to constraints at Redwood Landfill.

Green Team: neutral

There have been green teams in the past but not currently.

Zero Waste Marin School Site Profile: Willow Creek Academy



As of:	March 10, 2015
Present:	Royce Connor - Head of School, Terry Lange – Parent Volunteer, Larry Kass - ESA
# of Students:	360
Grades:	K-8
School District:	Sausalito Marin City
Hauler:	Bay Cities Refuse Service
Service level reported by hauler:	
<i>Trash</i>	1-2CY
<i>Recycling</i>	5-65Gal
<i>Cardboard</i>	1-2CY
<i>Compost/Food Scraps</i>	6-65Gal
Notes:	(# of recycle & compost carts set out varies), Trash used to be double current volume
% Diversion (@ time of visit)	64%
Lunch Service:	Conscious Kitchen (was Revolution Foods @ time of site visit)

Questions

1. What gets recycled here?

- Paper from classrooms & teachers' room
- Compost/Recycling at lunch rooms
- Cardboard

2. What doesn't get recycled here that could be?

- Restroom paper towels
- Compostables from teachers' room

- Compostables/recyclables from school grounds



3. What is working well?

Strong sense of ownership among parents and teachers, who head up many school environmental programs and committees. Head of School encourages and facilitates.

4. How do people here know what can be recycled?

Paper recycling is integrated into classroom procedures. Lunchroom discard station includes signed, color-coded bins and coaching by main parent volunteer (Terry Lange) & a few other volunteers & student monitors.

5. What are the unmet needs?

Advocacy / facilitation with hauler(s) RE: Who provides what services; current and potential collection procedures/schedules/options

6. What tools or devices are needed?

Stories & descriptions (online?) of best practices at other schools: Places to visit? Who's doing what? Audit resources. Complete discard stations around the grounds (currently, there are a few recycle cart/trash bin combos, but mostly unpaired trash bins, and no composting options).

Programs

Lunchroom Discard Station Monitoring: Positive

Terry Lange (parent volunteer) set up and manages a discard station in student lunchroom with a cart each for compostables, recyclables, & landfill. Terry made signs (some from web). Terry and some student volunteers she's recruited monitor. Sometimes other parent volunteers monitor as well.

Terry brings full carts ¼ mi. down the hill to the BCRS pick-up location, and brings empty carts back. Cafeteria used to produce 6 lg trash bags per day, and now produces ½ of one bag (plus 1.5 64gal organics carts + 0.5 - 0.75 recycle carts). Program works great, but is dependent on 1 highly dedicated

person. Custodian isn't involved, but the Head of School says it's feasible he could do some of the material moving.

BCRS used to pick up carts right outside the cafeteria, but no longer does. Terry says BCRS cites safety issues with turning around at the school when children could be present. Terry could use help communicating/negotiating with the haulers about service options: location, frequency, etc.

Zero Waste Week: Positive

Students run school-wide assemblies and activities/contests (who can pick up most garbage, etc.) Head of School asks teachers to solicit participation from students.

Food Scraps to Chickens: Positive

Five chickens on site eat some food scraps. Small quantity, but works well

Integrate Recycling into Classroom Procedures: Positive

Paper recycling

Paperless Communication Where Possible: Positive

School-wide Friday Newsletter is now electronic, except for 0-5 parents who request a printed copy – Head of School estimates this saves 240K sheets of paper per year, since newsletter is about 20 pages.

Working on getting Conscious Kitchen for next year (2015-16): Positive

Current lunch vendor – Revolution Foods – provides many more disposables.

UPDATE: Conscious Kitchen in operation: Positive

As of September, 2015, breakfast, lunch, and snack are prepared from scratch on-site. Durable plates, cups & silverware are washed on site. According to the Head of School, subscription to school lunch has increased 3-fold from last year, and both pre-and-post-consumer wastes are drastically reduced.

Head of School Picks up Litter Every Morning in Plain Sight of Students: Positive

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Appendix B

Dixie School District Waste Management Policy

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Business and Non-Instructional Operations

WASTE MANAGEMENT POLICY

The Governing Board has presented a Green Initiative Program that shows the commitment of the school community to be stewards of the environment. Appreciating the understanding of the flow of resources that sustain us and understanding ways in which we can minimize the impact of our activities on resources is the stalwart of that policy program.

As of July 1, 2012 State Law AB 341 (Chesbro) will require the Dixie School District to have an organized recycling service, as a beginning step in achieving the new statewide goal of 75% source reduction, recycling, and composting by 2020. The County of Marin has adopted an 80% diversion rate by 2013 and 94% by 2020 as a goal for waste diversion from landfill. In an effort to be responsive to county and statewide initiatives, the Dixie School District will set goals for attainment to be consistent with these waste reduction objectives, as well as stay current with these policies as they evolve in coming years.

Scope:

- Minimize waste generation at the source and facilitate reducing, reusing, repairing before replacing and recycling over the disposal of wastes.
- Develop a comprehensive waste reduction program to include recycling, composting, and disposal as the basis of the waste management program.
- Identify and promote waste management best practices.
- Provide clearly defined roles and responsibilities to identify and coordinate each activity within the waste management chain.
- Provide training for staff, students and other stakeholders on waste management issues.
- Conduct waste audits (professional or informal) to provide valuable information and feedback as to how school sites are meeting specified goals and set new goals.
- Prepare and institutionalize tailored classroom recycling procedures to each school site's needs.
- Ensure the safe handling and storage of all wastes on campus.
- Promote environmental awareness in order to increase and encourage waste reduction, reuse and recycling.

Responsibility

This policy applies to all activities undertaken by (or on behalf of) the Dixie School District including its staff, clubs, organizations, and sporting events.

First Reading: April 24, 2012

Second Reading: May 8, 2012