

Central Vermont Solid Waste Management District

Upper Primary Grade & Middle School Programmatic Offerings

Updated August 2023



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Introduction:

Greetings and welcome! What follows are descriptions of programs and support provided by John Jose, School Zero Waste Coordinator, on behalf of the [Central Vermont Solid Waste Management District](#) (CVSWMD).

On a basic level, CVSWMD supports schools in meeting [Act 148, Vermont's Universal Recycling Law](#) requirements, particularly for implementing systems for proper **"blue bin" recycling**, for diverting **food scraps** from trash cans, and for properly managing potentially **hazardous, campus-generated materials** (e.g.: electronic waste, paint leftovers, mercury-containing bulbs, etc.).

But beyond that, our programming and support also provides **tremendous opportunities for students**, not only in the **rich learning experiences** they are engaged in, but also in the **significant, positive contributions they make to their school community**.

Working with your teachers, staff, and students, we can **identify your school's needs, then work with everyone to deliver the services CVSWMD provides to meet those needs**.

Please read on for more detailed information, and reach out anytime to John with questions, requests for assistance, or to book a visit.

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Recycling Relays

Summary: Need 45 mins per relay.

After an intro on separating school waste, students run a recycling relay in teams. **In addition to the benefits of getting outside and engaging in a physical activity, students do very well in this waste separation exercise.**

Space Needed:

Indoors (e.g. gymnasium) or outdoors on a lawn area or athletic field.

Description:

An intro to separating is provided w/ an emphasis on materials students will encounter at school.

Each team is given a bin of unseparated recycling, trash (simulated, clean “trash”), and food scraps (simulated, plastic “food waste”). Students are given the opportunity to examine and discuss what is in their bin and do an initial sorting.

Then the relay begins and students take turns picking an item and running it to where a recycling, trash, and food waste receptacle is set-up for their team. Students drop their item in the receptacle they think it belongs in, then run back to their team, and the next student goes, and so on, until all teams have finished.

After a relay has been run, we review results of their sorting with the students.

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Note: Can be provided as a stand alone activity or as a capstone to the “Staying Sustainable at Home and School: Blue Bin Recycling” series (see page 4). Also, there are opportunities for students to be involved, who are not able to participate in a relay.

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Staying Sustainable at Home and School: Blue Bin Recycling Series

Summary: Request 45 minutes per presentation.

Four-part series on blue bin recycling for home and school.

Space Needed: Classroom

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Description:

Four-part series on blue bin recycling for home and school, includes three interactive slideshows on paper, plastics and glass/metal recycling. The plastics recycling slideshow is followed by a separate classroom visit where students are provided with different types of plastics, which we go through together to determine if they are blue bin recyclable and why.

Note: Sustainability Program Coordinators, Don Taylor at Main St. MS, Montpelier, & Kayla Henry at Crossett Brook MS, Duxbury, have both incorporated this series into their curricula, and it is provided for each class of 5th grade students that rotate through their programs each school year.

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When we put our paper recyclables in our blue bins, here are some examples of what they can be turned into, to give them a new life. For instance:



Above and below, slides from blue bin recycling presentations

Recycling metals reduces environmental impacts, because we need to do less of this...



Bauxite mine in Malaysia. Bauxite is used to make aluminum, including aluminum beverage cans.



Staying Sustainable at Home and School: Blue Bin Recycling Series (cont'd)

Description (cont'd):

In addition to blue bin recycling, the **following topics are incorporated into this series:**

- **Recycling non-blue bin materials** through a [TerraCycle Zero Waste Box](#).
- Intro to the [Central Vermont Solid Waste District](#) and the relationship between residents, including students, and CVSWMD, in terms of **who has responsibility for properly managing the solid waste materials in our lives.**
- **What happens to our recyclables** (where they go and what they can be turned into).
- **The relationship between recycling and citizenship**, as it relates to “recycling right” to benefit the recycling process, local & global communities, and the workers at VT’s [MRFs](#), as our fellow citizens providing a very important service for us.
- **VT bans on select single-use items (e.g. single-use plastic shopping bags) as evidence there are adults who care about the world students are inheriting.**

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Example Certificate of Completion

- Discussion of some of the **limits and benefits of recycling and the importance and environmental benefits of practicing the other “Rs”**, including reusing and repurposing the materials in our day-to-day lives.
- **Optional: A short quiz/assessment and/or certificate of completion** can accompany each slide-show.

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Initiatives to Enhance “Blue Bin” Recycling

Summary: “Blue bin” recycling, the recycling system we all engage in at school and home everyday, can be confusing. Initiatives to enhance understanding of blue bin recycling **provide opportunities for students to engage in environmental problem-solving**, while supporting their school community.

Description: Blue bin recycling includes certain paper products and plastic, metal and glass items. Not only recycling but “recycling right” is very important to this process.

School communities benefit from ongoing support and reminders to understand how this system works. That is where trained students come in, as they pass their knowledge of how to recycle along to their fellow students and adults in their school.

Initiatives can take many forms, including a media campaign, students making classroom visits, creating signage (see next slide), all school assembly presentations, art projects, etc. Older students paired with younger students for any of the aforementioned.



#1 & #2

**“Single-use” Containers
(Empty & clean!)**

**Aluminum foil
& pans (clean!)**

**Paper Products
(Clean & dry!)**

**This is what blue bin
recycling at home &
school is about
for Vermonters!**

All these recyclables are banned from the landfill in VT!

A summary of what constitutes blue bin recycling for Vermonters

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Cafeteria/Classroom Waste Separation Signage

Summary: Students are engaged in creating waste separation signage, specific to the waste generated in their classroom and/or school cafeteria.

Description: One-dimensional, generic waste separation signage, provided by an outside source, is often not effective in supporting and engaging students (and adults) in proper waste separation in classrooms and cafeterias.

However, when students are engaged in making signage, they gain first-hand experience in what constitutes trash, recycling, and food scraps and have a tangible, visual reference for waste separation as a final product they created themselves.

Also, when signage is customized, there is the potential to add new items as the school year progresses.

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Examples of student-created waste separation signage



Special Recycling Collections for Non-Blue Bin Items

Summary: Special collections, for items not suitable for blue bin recycling, can be undertaken through [TerraCycle's Zero Waste Box](#) program.

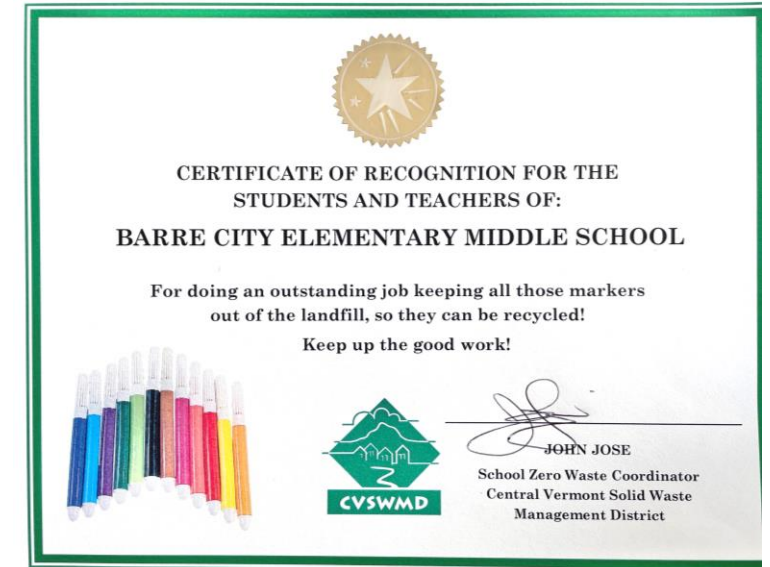
Space Needed: Classroom or cafeteria, (depending on initiative undertaken).

Description: Examples of this type of collection include a TerraCycle Zero Waste Box for a [Candy and Snack Wrappers](#) or a [Pens, Pencils, & Markers](#) collection. For a TerraCycle Zero Waste Box, fees generally apply, but can be covered through a CVSWMMD [School Zero Waste Grant](#) or through other funding (e.g. PTA funds).

These initiatives demonstrate to students that harder-to-recycle items can be recycled through a collective, community effort.



Markers collected at Barre City Elementary Middle School in an initiative led by teacher Allyson Healey (on far right) and her kindergarten students.



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Paper Making

Summary: One hour per program.

Students have the opportunity to engage in a hands-on activity, making recycled paper from used paper scraps.

Space Needed:

Classroom or other space with a source of water within the space or nearby.

Some water may end up on the floor - something to keep in mind, when considering a space to use. This can potentially be done outdoors if students have surfaces (e.g. picnic tables) to work on.

Description:

Shredded paper, whether collected in-school or provided by CVSWMD, must be soaked in advance, at least the night before this program is held (the details of this need to be worked out in advance with your School Zero Waste Coordinator). On the day of the program, the paper scrap/water mixture is placed into containers and shaken up by students to create pulp, which is poured into a bin with water. Then a mould and deckle (see top right image) is used to form each sheet, which is then padded dried with a sponge (see lower right image) to remove as much moisture as possible, before each sheet is set aside to dry on newspaper.

Note: The paper has to dry, at least overnight, before anything else can be done with it.



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From T-shirts to Totes (w/o a Sewing Machine)

Summary: 45 mins. to one-hour per program.

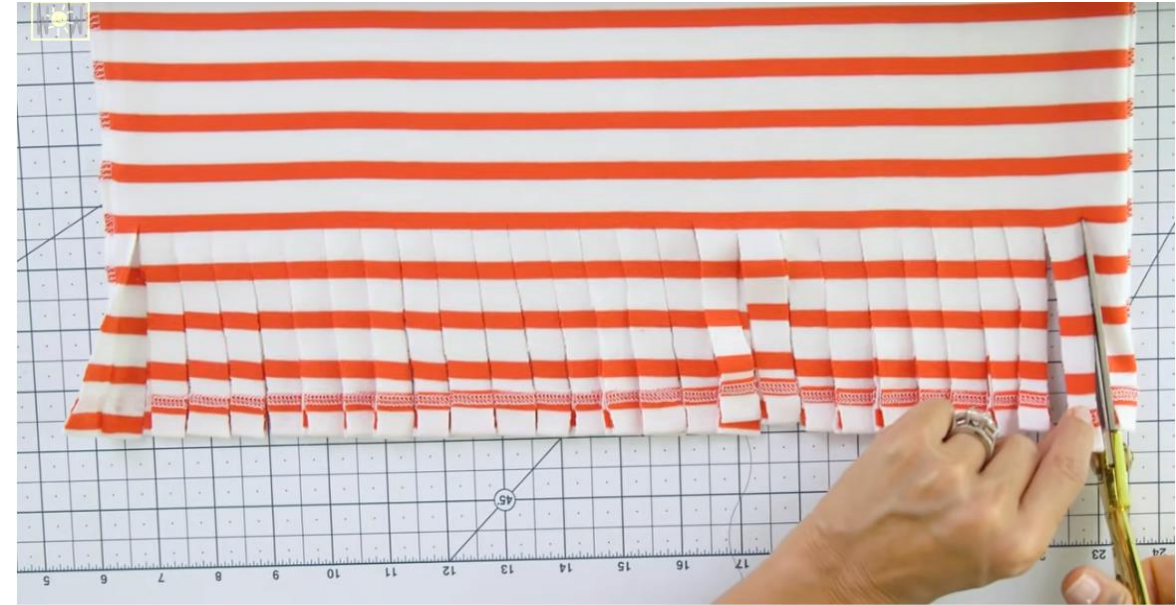
As an example of “repurposing”, an important sustainability practice, students engage in a hands-on activity, making totes from used t-shirts, without the use of a sewing machine.

Space Needed: Classroom

Description: In addition to recycling, the other “Rs” are very important as sustainability practices, providing environmental benefit, including **repurposing, or finding a new life for an item to keep it out of the landfill**. As an example, students engage in a hands-on activity, making totes from used shirts.

A brief, interactive slideshow of examples of how people have repurposed various items in their lives is also provided, to give some context for this activity for students. A pair of fabric scissors is provided for each student.

Note: For this activity, if students are not able to provide a t-shirt of their own, CVSWMMD will provide used t-shirts. This ensures no students are left out of this activity, whether or not they have a t-shirt to bring to school.



View [this YouTube video](#) to see how it works.

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Vermonters & Their Food Scraps

Summary: 45 mins for a presentation. A brief, contemporary history of food waste management in central VT.

Space Needed: Classroom

Description: Historically, many Vermonters recognized food waste as a natural resource that could be fed to domestic livestock and used to create composted soil amendments to support the growing of more food. But with the enactment of the Act 148, Vermont's Universal Recycling Law, and the concomitant, phased-in ban on food scraps from being landfilled, **much has changed over a short period of time in how VT manages its food waste**, and much of Vermont's food scrap disposal now occurs on a statewide, commercial scale.

Prior to the ban on food waste being landfilled, all schools within CVSWMMD either composted their food scraps on-campus and/or had them hauled off to facilities with composting operations. However, that has changed dramatically, with ~ **75% of public schools within CVSWMMD now having their food waste disposed of via biodigesters.**

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Vermonters & Their Food Scraps:

A Story of People, Chickens, Compost, a Landfill, Electricity, and a Law



John Jose, School Zero Waste Coordinator
Central VT Solid Waste Management District



This presentation looks at:

- **Why** VT enacted a ban on food scraps from being landfilled.
- **The changes** that have taken place around food scrap disposal/management in central VT and the potential positive/negative consequences that have resulted.
- **Options** for what can be done with our food scraps.
- **Experiential educational initiatives** adopted by some schools to compost all or a portion of their food scraps on-campus.

Classroom Food Scrap Collection Initiatives

Summary: Creating opportunities for students to take a lead role in keeping food scraps out of trash receptacles and getting them into classroom food scrap pails.

Description: Food scraps are banned from Vermont's one, remaining landfill. This ban is in response to the economic, environmental, and social concerns associated with food waste disposal in our state.

Capturing classroom-generated food scraps and having them disposed of properly (through biodigestion, composting, etc.) **provides excellent modeling for students in recognizing food scraps as a natural resource and not just a waste material**, which contributes to climate change when buried in the anaerobic environment of a landfill. **It also supports schools in being in compliance with Act 148, Vermont's Universal Recycling Law.**

Green Teams and Student Leadership Teams are candidates for this type of project, but it can be any group of students (or even one, highly motivated student) who want to engage in some real-life environmental problem solving and make a difference, on behalf of the their school community.



2016-17 Classroom Compost Team of E. Montpelier ES

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Vermiculture: Classroom Worm Bins

Summary: 45 min. introductory program w/ follow-up check-ins during the school year. A classroom worm bin provides the opportunity for students to engage in vermiculture, as an example of how food scraps can be put to beneficial use, if kept out of the landfill.

Space Needed: Classroom

Description: A small, 3-gall. bin houses “red wiggler” composting worms. Students feed the worms select food scraps and maintain the bin. **The worms turn the bin bedding and food scraps into castings, which are then harvested by students and used as a rich soil amendment. This process takes students full circle through the cycle of going from food scraps to producing a soil amendment to grow more food.**

CVSWMD provides all the materials & support needed, including the worm bin, worms, and bedding, and check-ins to make sure a bin and the worms it contains are healthy.

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Image above: Bin on left contains new, fresh bedding, while bin on right is full of castings - a result of worms consuming bedding and food scraps - and is ready to be harvested by students. Above, right: Red wiggler composting worms, also know as yellow tails. Bottom image: A classroom worm bin.



On-Campus Composting

Summary: 45 mins for an initial presentation.

A review of on-campus composting initiatives undertaken by central VT schools, what is entailed, resources required, support available, and the potential for schools to adopt an on-campus composting initiative.

Space Needed: Classroom

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Description:

Almost all schools within CVSWMD have their food scraps hauled off to facilities to be composted, fed into a vermiculture operation, or be disposed of via biodigestion. However, **the potential exists for a school to compost at least a portion of school-generated food scraps.**

Composting food scraps on-campus is a considerable undertaking. But schools within **CVSWMD that have experienced success with both full-scale and smaller, educational initiatives to compost** a portion of a school's food waste (e.g. food scraps collected in classroom pails) using either **Jora tumblers** or **traditional 3-bin systems** (see images to right).

Available support for these initiatives includes: [grant funding](#), connecting schools with collaborators & informational resources, consulting support, and sourcing supplies and equip.



Photo above: Student tending a three bin system at Berlin ES.



Photo to the left: Students tend a Jora tumbler at Berlin ES. The tumbler captures afternoon, classroom snack waste, which is turned into compost as a soil amendment for school garden raised beds.

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Individual Student to Small Group Support

Description: Support is available for initiatives that support enhanced solid waste management (increased classroom food scrap disposal, enhanced “blue bin” recycling, special recycling initiatives, etc.) in a school, on any level, including:

- Individual students
- Green Teams
- Classrooms
- Grade levels
- Schoolwide Initiatives

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Union ES School, Montpelier, fourth grade students collaborated with kindergarteners in a project to keep items, like used markers, out of the trash and to have them recycled through a special recycling initiative.

Student Recognition

Recognition can be provided for students who stand-out in their efforts to enhance recycling, waste reduction, proper separation of materials, proper food scrap disposal, etc., in their school.

Contact John Jose, CVSWMD School Zero Waste Coordinator, if you have a student(s) you would like to have recognized for their good work.



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Locker Clean-outs

Description: End-of-school-year locker clean-outs provide an excellent opportunity for students to experience, first-hand, keeping useful materials out of the landfill, to be utilized by themselves or others.

Notebooks that have seen only limited use, leftover binders, and working writing utensils are examples of items from student lockers that are often perfectly usable and can benefit other students, particular those in need looking for materials at the start of a new school year. And non-usable but recyclable items can be kept out of trash bins.

These initiatives, suitable for organized groups (e.g: Green Teams) to take on, should be planned for well in advance of the end of the school year.

[This guide](#), created with support from stopwaste.org, provides templates for how a clean-out can take place.



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Teacher Requests for Programs on Particular Topics

Description: Teachers can submit requests for the development of programs not listed in this summary of programmatic offerings.

As an example, a slide presentation, *Finding and Using Scientific Information to Help Protect the Earth*, was developed at the request of a 5th grade teacher to support meeting **Next Gen Science Standard: E-ESS3-1 Earth and Human Activity: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.**

This particular slideshow provides a broader overview of this topic, and focuses on how CVSWMD, a governmental agency, obtains and disseminates accurate scientific information to the public.

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FINDING & USING SCIENTIFIC INFORMATION TO HELP PROTECT THE EARTH



1. How to find good scientific information
2. How you can use that information
3. Focus on Central VT Solid Waste Management District and taking responsibility for the solid waste we all produce.



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Your Presenter/Facilitator/Consultant

John Jose, School Zero Waste Coordinator for the [Central Vermont Solid Waste District](#), has a diverse background in the realm of environmental work, including wildlife conservation, water & soil resource protection, environmental education, and solid waste management, along with experience working in public schools in various capacities.

John has been with CVSWMD since August 2016, supporting schools in meeting the requirements for solid waste management outlined in [Act 148, Vermont's Universal Recycling Law](#).

Teacher feedback on the services John provides is consistently positive, and he always strives to make improvements to deliver high quality, educationally-enriching programming for both students and adults in schools he provides support for.

This support includes:

- Providing **classroom and schoolyard programming** for pre-K-12 grade students.
- **Creating meaningful, experiential learning initiatives and opportunities** for students to benefit the Earth and make a positive contribution to their school communities.
- **Supporting Green Teams and other student groups** in enhancing their school's solid waste management/sustainability efforts.
- **Supporting school food service departments** in minimizing food waste, the use of single-use items in lunches, etc.



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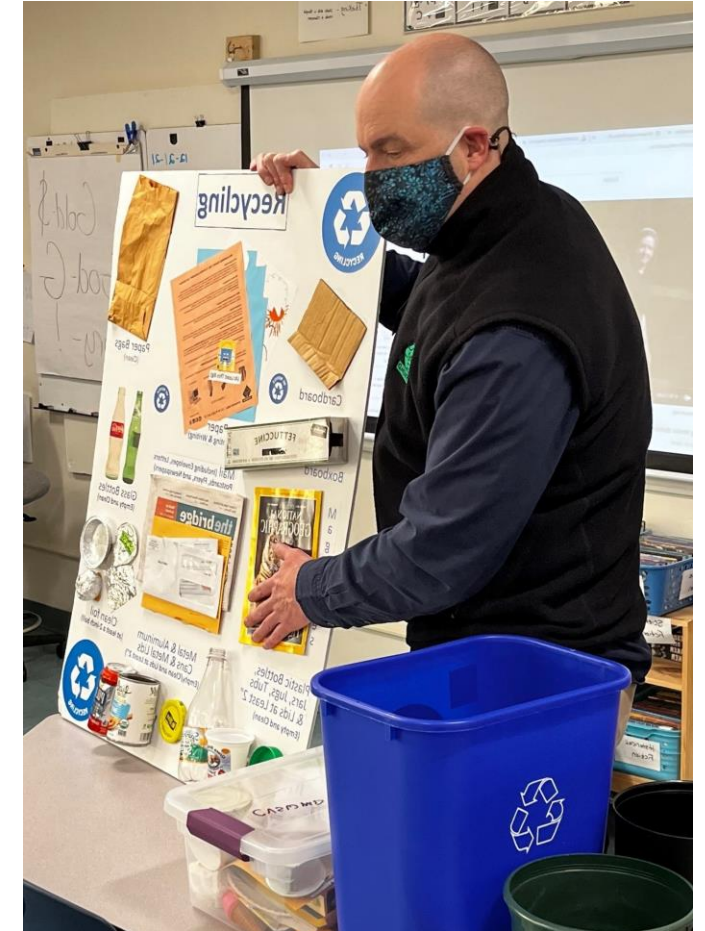


Your Presenter/Facilitator/Consultant (cont'd)

- **Supporting custodial/facilities staff** in proper disposal of items requiring special recycling/disposal (e.g. e-waste), in creating healthier indoor school environments, and properly separating and disposing of campus-generated solid waste.
- **Providing recognition for students** who take the initiative to make a difference in some aspect of their school's solid waste management.
- **Providing consulting support** for sustainability-focused classes and schoolwide sustainability programs.
- **Providing teacher trainings** in classroom recycling, etc.
- Producing the [School Zero Waste Corner](#).
- Administering the CVSWMD [School Zero Waste Grant program](#).
- Coordinating the CVSWMD [School Zero Waste Events Kit program](#).

Services provided by John, on behalf of CVSWMD, are **FREE** to schools located in municipalities within CVSWMD, which include: Barre City, Barre Town, Berlin, Bradford, Calais, Chelsea, Duxbury, East Montpelier, Fairlee, Hardwick, Middlesex, Montpelier, Orange, Plainfield, Tunbridge, Walden, Washington, Williamstown, and Woodbury.

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