

# ORGANICS & COMPOSTING

“The care of the Earth is our most ancient and most worthy, and after all, our most pleasing responsibility. To cherish what remains of it, and to foster its renewal, is our only hope.”

---- Wendell Berry

## **OVER-ARCHING DISTRICT PHILOSOPHY**

Everything that exists naturally on our planet is part of a balanced cycle of life that replenishes itself regularly. This cycle has withstood the test of millennia and proven, in its miraculous simplicity, the ability to sustain the world. In committing to move toward a zero waste



approach to solid waste management, the CVSWMD places at the heart of its endeavors a commitment to the renewal of our earth through the preservation of its natural order and resources. We choose to infuse the solid waste hierarchy with an environmental ethic that presumes a goal of integrating our social existence into the sustaining cycle of life.

Sadly, humankind’s ego and insatiable desires have led to the current imbalance in the natural order. We have created chemical compounds that do not occur naturally

in the earth (i.e. plastic polymers) and use them to create products (i.e. milk jugs, children's toys, and grocery bags) which cannot be absorbed into the earth's self-sustaining cycle. With our "genius" we have defiled and polluted our environment. Yet, the typical solid waste hierarchy is an extension of a mindset that continues to insist that we can "manage" the mounting toll of foreign matter being introduced into our ecosystem.

The work that the CVSWMD is charged with undertaking reflects this situation. The solid waste industry has generally turned the managing of discards and leftovers into a business that has little consideration for the preservation of the earth or the sustainability of its resources. In our zero waste approach, however, the first and most natural step in ordering the management of these leftovers is different. We must honor the natural cycle and emulate its sustainability in all our management efforts. It is therefore logical that our immediate priority is to remove and return what belongs to the earth from what is now considered waste. Through this action, we may be able to establish a tentative balance sufficient to allow us to remediate our wastefulness. We do not hold this perspective in isolation. The 1998 Central Vermont Regional Plan offers a similar thought in its Land Use section, where the following can be found.

*Yes, we remain inextricably dependent upon natural systems. Traced to their origins, all of life's necessities are products of the earth and its processes. So are we... While people may always argue about the pros and cons of technology and land development, they are part of our current reality. The challenge before us now is to guide these forces of change so as to bring about a marriage between our culture and our place that is sustainable, harmonious, and mutually beneficial. In the years to come, nothing will say more about the success of our efforts than the way in which people use the land and its resources.*

Because organic material in both the residential and the commercial waste streams represents approximately 40% of the total, it is both a natural and sensible idea for us to target this commodity for diversion and use. While we have no data specific to Central Vermont on the total volume or weight of organic matter contained in our

waste stream, we can use figures from other, recognized sources to create a plausible scenario of the opportunity available to us.

Referring once again to the DSM studies, the total residential and mixed commercial organic material found in the waste stream after all other diversion represented 35.4% of the total. Using our 1999 annual tonnage figure of 37,731 tons of garbage and applying the DSM percentage, we can assume that a potential total of 13,358 tons of available organic matter is generated within our District and currently goes into a landfill. If we apply data from the U.S. EPA, we arrive at a slightly different potential total. At 4.6 pounds per day generated, EPA data suggests that an estimated 3,589 tons is typically already being composted, leaving about 9,257 tons still in the waste going to landfill. In either scenario, the available mass is considerable, and represents the single largest material type available for the District to target to achieve significant, additional diversion.

Organic matter also represents a rich source of nutrients that nature can turn into a soil amendment called compost that has a remarkable affect on the health of the soil into which it is integrated. This is our opportunity to begin our zero waste efforts and achieve the potential inherent in that philosophy.

### **RECOMMENDATION(S) FOR ACTION**

The most logical expectation by readers would be for us to establish a goal for the amount of organic diversion we intend to achieve in the next five or 10 years. This Plan does not identify such a percentage or tonnage. We do not believe that this is the best way to establish sustainable programming.

Instead of simplifying our goal to that of a specific number, we set out a series of goals related to the importance of organic diversion from which our staff initiatives, training, budget considerations and actual programming will flow. In order to measure these goals, we will compare organic initiatives to other District efforts so that we are able to achieve equity between programmatic endeavors and offer services throughout the region.

- The CVSWMD will make the diversion of organic matter from waste the single most important program activity undertaken in the next five years (2003-

2008.) To do this, it will focus staff resources on developing an understanding of composting options; place emphasis on creating sustainable programming or business endeavors; pilot more new organic programs than any other initiative; devote the majority of its financial resources targeted for new programming to organics; and, adopt and urge member communities to adopt legislation, policies and practices that create incentives and/or opportunities for the diversion of organic matter from the waste stream.

- Large generators will be the focus of our work in this area in order to accomplish the greatest immediate impact. Programs for residents will occur only when budgets allow, or when we can affect groups. The District will consider passive compost demonstration gardens throughout the region, an incentive for curbside collection of organic material, pilot programs for food waste diversion and other similar efforts that would affect large numbers of individual residents.
- The CVSWMD will identify sources of organic material, type of matter being generated and rate of generation occurring in our region. This listing will be prioritized by generation and/or source for potential programming.
- Despite the prioritization identified in the preceding bulleted item, the District will target schools as its top priority for compost-related programming. The number of schools – public and private – within our region affords us an unprecedented opportunity to maximize our resources and achieve significant diversion. The opportunity for education and behavioral change that will occur as the result of changing organic handling at these institutions is not to be underestimated. Because of the number of families who participate in these institutions, and the pre-disposition to learning from this type of institution, the District has an opportunity to affect a much larger population via this effort than any other.
- In addition to school diversion, suitable programs for diverting organic matter from waste will be identified using the prioritized source listing. Pilot programs will be initiated from this prioritization.
- The District will consider other options besides composting to accomplish organics diversion, when appropriate. Partnering generators and users of specific types of organic material may prove more appropriate to the type of resource conservation envisioned as part of a Zero Waste approach than composting. Likewise, there may be situations in which recovery of organic

material for composting may be unrealistic. Diversion of food waste from multi-family housing may be one such situation; requiring garbage disposals in each apartment could accomplish greater diversion if the biosolids were being composted.

- Whenever the District chooses to support or partner with others in the creation of organic programming, we will give priority to those entities that meet organic standards – preferably NOFA’s and secondarily Federal standards. To offer our resources to farm endeavors that incorporate the use of toxic chemicals into their operations is inconsistent with our mission to reduce hazardous waste in the region. If we are in a position where there are no suitable organic enterprises to support, we may consider supporting a non-organic enterprise. At the least, however, we will require, as part of our contract, strict adherence to best management practices for the handling and disposal of all toxic products used on site.
- The CVSWMD will review its surcharge ordinance, hauler requirements, and other pertinent regulations, rules and policies in order to ensure that there is an incentive for generators to divert organic matter to non-waste uses.
- The CVSWMD will model behavior for all municipal entities in the generation, purchase and use of organic material.
- The District will play “matchmaker” whenever possibilities arise to connect organic generators and users in sustainable partnerships.
- In anticipation of the region’s future growth, the District will consider ordinances and regulations requiring diversion of organic matter from waste, especially in regard to residential generation. This may include banning leaf and yard waste from garbage disposal, urging local planning and zoning to require garbage disposals in all new residential construction or kitchen renovations, exempting organic matter from the District surcharge fee, as well as other actions that may be appropriately handled via requirements.
- Because the District will be encouraging increased diversion of organic matter to composting, our actions may encourage the siting of compost endeavors in our region. Currently we would not require a facility of this type to meet any more stringent or additional criteria than is required by local zoning and planning, State or Federal requirements. However, we recognize that there may be concern by our constituents that these regulations are not precautionary.

- In 2003 the District will convene a stakeholders meeting to discuss whether there are concerns that should be considered in establishing siting criteria for this type of solid waste effort that are not addressed by current regulations. Subsequent to the stakeholders meeting, we will also sponsor a public forum for discussion of issues raised by stakeholders and related issues members of the public may voice. Our board will then consider whether to amend our plan to establish regional requirements.

## **OVERVIEW OF CURRENT SITUATION**

Currently, District organic programming is slim. While recognizing its importance, we have focused on developing an infrastructure for diverting recyclables and moving waste. Our organic programming focuses primarily on individuals – compost bin sales, workshops and technical assistance, and seasonal Christmas tree chipping events.

In the past five (5) years, the District began looking at larger generators. We undertook a survey of our member municipalities' needs; proposed a program of partnering local, commercial food waste generators with small farms; and, tested the viability of gifting funds to commercial composters attempting to test ideas for sustainable organic diversion efforts. These endeavors proved fruitful in many ways.

Through the *Organics Needs Assessment* we now have viable information on what our municipal members generate, how they handle organic material and where they perceive the need for assistance. We are presently contemplating programs that can help communities divert tree and brush waste from disposal. We will use other information garnered through this survey to develop other beneficial diversion ideas.

In 2002, our on-farm partnership focused on leaves instead of yard waste. We were able to connect the City of Montpelier with two (2) large scale users in need of clean leaf waste - FoodWorks' Two Rivers Organic Farm and Vermont Compost.

And, for two years, we have contributed a small amount of capital to Vermont Compost's efforts to test the viability of using food waste as a means of creating a sustainable model for chicken farming and composting. The data and informative

feedback offered us through this association will serve as a foundation for our discussions on how best to create incentives for organic diversion.

**OTHER REGIONAL ENDEAVORS.** Central Vermont is blessed with several entities whose work has included organics diversion. Most notable of these is Vermont Compost, located in Montpelier. Currently, Vermont Compost is diverting food waste from our District (New England Culinary Institute –NECI- waste only), and is also diverting liquid food wastes from out-of-district locations, as well as slaughter offall, which is not considered diverted material.

Vermont Compost accepts approximately three wet tons of food scraps per week from NECI's multiple campuses and restaurants in Montpelier. This would amount to more than an estimated 150 tons per year. Presently, this is the only organic material being diverted from institutional and/or commercial sources to a commercial enterprise that produces a finished compost selling directly to large-scale users and through area retail outlets to the home gardener.

The non-profit organization Food Works' Two Rivers Center for Sustainability (also based in Montpelier) works through schools and their recently initiated Two Rivers Farm to establish and educate small groups of residents on the benefits and methodologies of composting. In calendar year 2002 the CVSWMD staff assisted Two Rivers in coordinating with the City of Montpelier Public Works Department to accept leaves collected by the City for use on the farm.

Most recently, the District gained a new organic enterprise, with the Highfield Institute opening its West Hill Farm Compost Demonstration site in Hardwick.

Through the years the District has had periodic relationships with each of these entities via small contracts, grants or technical assistance to accomplish specific work of mutual interest to both parties. As we consider new, larger initiatives, we will choose to explore partnerships with existing organizations with expertise in specific areas. These organizations will be among the resources we look to in regard to composting.

We also believe that there are many more non-commercial partnerships that divert organic materials to local farms. Many individuals may take responsibility for ensuring that food waste from school and restaurant kitchens, yard waste from cemeteries and municipal collections, and food residue from production enterprises end up on farms or in small, residential compost efforts instead of in dumpsters along with other solid waste. These efforts are not to be underestimated for their importance nor their sustainability. The District values the simplicity of such arrangements and the direct benefits, and will seek to preserve this enterprising spirit. Where possible, we would like to identify and create new, similar associations between small generators and local farms.

### **ISSUES AND QUESTIONS TO BE ANSWERED**

“How does it benefit the generator of organic material to divert this material from disposal?” is the single most important issue to be resolved by the District in regard to successfully affecting sustainable change. Large scale generators, whether institutional or commercial, are typically focused on the bottom line, or at least effective use of resources. Simply put, if it costs (in time and/or money) just as much to divert it (or more) than it does to throw it in a dumpster, organic material will continue to be buried at a landfill. Our society does not yet place balancing the ecosystem on the same par as balancing the budget.

This is where the District must use its resources, influence and power to affect change. Our ideal goal is to change perspective; to raise the value of renewing the earth to the same (or higher) priority as that of watching the bottom line. We will emphasize the worthiness of embracing this type of change in personal and/or business principles through our efforts. However, change without motivation is almost impossible to achieve. The District must become the agent of change in our region.

Through inventing and funding opportunities for composting; establishing a financially viable incentive for diversion via our control of surcharge fees; and, connecting generators and users who might otherwise not know of each other or have the resources to devote to establishing such an arrangement, we can establish a climate high in motivation. By using the tools of the currently operating

commercial system, we will succeed in shifting behavior into a habit that becomes commonplace.

What types of safeguards does the region need to establish, if any, for compost efforts? Regulations in the United States do not necessarily take a precautionary approach, while the District has embraced this perspective. It would be irresponsible of us to intentionally alter the incidence, size and components of composting initiatives in our region without considering the effect this might have on our population. To be able to gauge concern and identify issues, the District commits to a process of listening and learning that engages experts and the general public in discussion prior to making decisions.

### **COMMITMENT TO ACTION (NOT SPECIFIC PROGRAMS)**

Zero waste activity requires more than reduction and diversion. An essential component of this approach is to create and/or strengthen connections between generators and users in order to maximize resource usage. Beginning our journey down this path with organics allows us to accomplish our goals while benefiting the region. Here, we can join with the Central Vermont Regional Planning Commission to “preserve and promote a viable agricultural economy, culture and land base.”<sup>1</sup> During the life of this Plan, the CVSWMD will help create opportunities for the separation of organic materials from waste in order that the natural and beneficial cycle of decomposition and renewal of the earth can be realized.

### **EDUCATIONAL EFFORT**

The best way to teach is by example and the best way to learn is by experience. This is the foundation of our educational approach in regards to the diversion of organic matter from the waste stream. We expect that our pilot programs, partnerships and other efforts will involve hands-on education for a specific audience - those generating large volumes of organic matter. The sustainable design of our programming will ensure that once we educate the initial participants, the new behavior will become habitual and perpetuated by others while we move onto a new endeavor.

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<sup>1</sup> 1998 Central Vermont Regional Plan, adopted August 11, 1998

Printed education materials will primarily focus on whatever tools are needed to explain programming to potential and actual participants. We anticipate little advertising to be involved with targeted programs, but will engage in ongoing public relations regarding our initiatives. This would include press releases describing the programs and honoring partners and sponsors, write-ups in our existing publications, *CVSWMD News*, the *Executive Director's Report*, and our *Annual Report*, and work with the press to cover significant milestones or achievements.

Education of the general public will be limited in scope, as we do not anticipate focusing our resources on individuals. We will, however, produce and distribute plans for building several types of compost bins, offer troubleshooting handouts, and support in-classroom efforts to teach composting. Information for the general public will be available on our web site as well as in print form.