



Coventry Challenges: **Contending With Act 148 And A Changing Waste Stream**



An open cell at Casella Waste Systems, Inc.'s NEWSVT Landfill in Coventry, Vermont. Because WEC produces electricity from the trash that's sent there, the content of the waste stream is a matter of importance to the Co-op.

In October of 2013, the Vermont Department of Environmental Conservation (DEC) issued a two-page "fact sheet" laying out the timetable and particulars of what was still a fairly new law. Act 148, passed by the Legislature the previous year, prescribed a phased-in process through which Vermont's lawmakers aimed to renew, refresh, and expand the state's commitment to widespread, institutionalized recycling.

When Act 148 was passed in 2012, an earlier law, which had been Vermont's first solid waste-related statute, was 25 years old. Act 78 dated back to 1987; it created solid waste management districts to implement recycling and waste-disposal programs on a regional basis. Proponents of the new law felt that after that earlier effort Vermonters' commitment to recycling reached a plateau and then sputtered to a standstill. Aiming for more sweeping measures, the Legislature titled Act 148 the "Universal Recycling Law."

On a nearly annual basis, Act 148 imposes further restrictions on the kinds of waste materials, and the volume of waste, that Vermonters can legally throw away. It also adds requirements upon trash haulers and

management districts to ensure that residents and businesses will be able to comply with these demands. It can even be said – especially in regard to composting facilities for food scraps, which presently are not abundant in the state – that Act 148 envisions a new infrastructure for handling society's waste products.

Vermont was a leader in the recycling movement in the 1990s, and probably still is. (When Vermonters travel to other parts of the country and are forced to simply throw away perfectly recyclable bottles, cans, and plastics, it's a jolting experience.) But studies found that the state had reached a recycling rate of around 33 percent, for recyclable materials, and pretty much stopped there. The DEC contends that Act 148 will enable the state to reach 60-percent recycling after it's fully in effect, which happens in 2020. That's why Environmental Secretary Deb Markowitz has said the law will "reboot" Vermont's commitment to the cause.

The department's 2013 fact sheet lists the intended benefits of Act 148. Among them are "stimulating 'green' jobs;" "lowering greenhouse gas emissions" by an estimated 38

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Member Satisfaction Survey Just Ahead *WEC Members Could Receive Calls in August, September*

Washington Electric Cooperative will be conducting a Member Satisfaction Survey that will take place during the months of August and September, 2015. Not only is the survey helpful to the Co-op as a way to improve its service to members, it is also a periodic requirement of the Vermont Public Service Board, which regulates electric utilities in our state.

The Member Satisfaction Survey will be managed by a professional survey and polling organization. It will be conducted by telephone, and will not require an extensive amount of time on the part of those who respond. Some 400 responses will be needed for the results to be considered scientifically accurate. Not all WEC members will be called; the surveying organization will select members at random for the interviews until it determines that it has spoken with a representative sampling of Washington Electric Co-op members.

The purpose of this notice is to assure WEC members who may receive a call that it is legitimate. Participation, of course, is voluntary. However, if you are called we hope you will agree to answer the surveyor's questions, knowing that your responses will help inform us of our strengths and weaknesses so we can perform better for WEC members. The Co-op thanks you very much, in advance, for your assistance.

Washington Electric Cooperative

East Montpelier, VT 05651

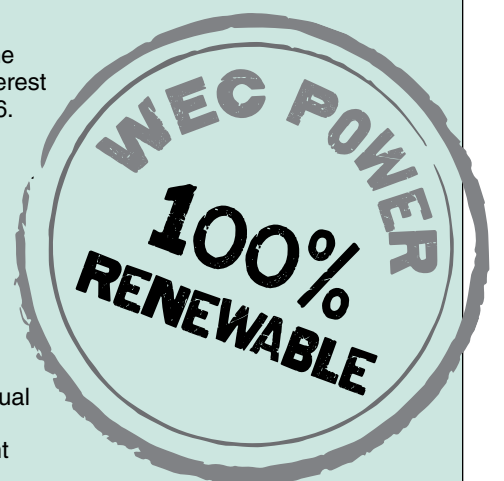
Inside

WEC's Community Meeting is still two months away, but plans are in the offing for the event that we hope will interest Co-op members. For details, see page 6.

A great addition to the fleet. WEC's new Bobcat excavator has hardly gotten a moment's rest. Page 8.

Creating habitat. Bees and other pollinators play a vital role in the web of life; a new WEC project would help restore their population. Page 4.

Follow your trash to Coventry and see how it's put to use. WEC's annual Open House at the generating plant will interface with an interesting landfill event this year. Page 7.



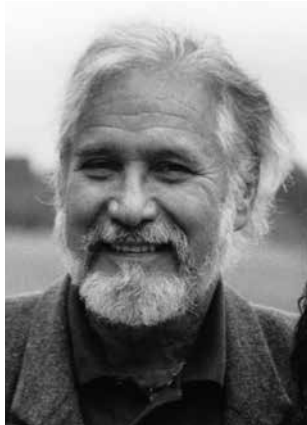
President's Message

Power Production A Hands-On Proposition At WEC Facilities

Also: The Many Contributions of John Warshow

By Barry Bernstein

Summer is now in full swing, and the farmers were able to get their first cutting of hay in after the wettest June recorded. Of course, the last wettest June was just last year. I know my neighbor, Co-op member and logger Kirk Thompson in Woodbury, has had a hard time getting firewood out of the woods and is behind in his deliveries. But all in due time.



contracted right-of-way crews, under the direction of WEC Right-Of-Way Management Coordinator Mike Myers, are taking advantage of the summer weather to cut the undergrowth beneath the distribution lines in designated areas. This prevents the vegetation from reaching the lines and equipment, which

can cause damage and outages; controlling the vegetation also provides safe access for our crews in the event of necessary maintenance and repair work. It should be noted that WEC has a policy of not using herbicides on our power line corridors, to protect your health.

Our line crews are out in the field working on our continual process of upgrading our distribution lines as part of our recently updated Four-Year Construction Work Plan. And our

WEC Generation

Coventry

Our Coventry LFG-(landfill gas) to-electric plant, which we opened in 2005, has continued to have increased output, generating more kilowatt-hours, thanks to the team effort of NEWSVT (a subsidiary of Casella Waste Management, Inc.), our plant operator, Aria Energy, and WEC management.

We are planning some improvements at the plant to keep up with best practices for such operations, and to assure that its emissions are in compliance with state rules. We will also be watching the gas production, and the content of the gas entering our system from the landfill, as the mix of waste materials going into the landfill changes partly as a result of ACT 148, which aims at removing food wastes from the garbage stream by 2020. We begin the discussion of these issues in *Co-op Currents* with our story on page one, and we'll have more on the subject in upcoming editions.

As always, our goals are to ensure that the plant meets the highest operational and environmental standards and continues to be a reliable and abundant producer of favorably priced, renewable energy for WEC members.

Wrightsville Hydro

Our Wrightsville hydroelectric system, which we brought on line in 1985, is in its first year of operation since we retired our mortgage! This is a run-of-river generating plant located on the North Branch of the Winooski River in Middlesex, which means that our power production is dependent on the volume of water in the river. Our operating license, and state policy, are based on run-of-river to support a healthy river ecosystem downstream of our installation.

Production over the past year has been somewhat below average, due to lower than normal water runoff – which may seem like a paradox, considering the heavy snow amounts the past two winters. However, the weather conditions were more conducive to evaporation, so the snowfall did not translate into a boost in the flow of water running through our turbines. Although I complained above about how we have just experienced the “wettest June recorded” (in terms of rainfall), the positive aspect was that it resulted in better production recently at our hydro site.

Tribute

In June WEC lost another Co-op member who had contributed



Photo courtesy of The Barre Montpelier Times Argus

At his service people referred to John as a person who walked the talk, and he truly did.

importantly to WEC and our greater community. John Lewis Warshow, of Marshfield, was an early leader in the movement for replacing nuclear and fossil fuel energy with local, renewable energy. John passed away too early, at the age of 59, on June 28.

At his service people referred to John as a person who walked the talk, and he truly did.

In 1978 the WEC Board set up a Committee on Alternative Energy to explore how our Co-op could best respond to the aftermath of the 1973 oil embargo, which had produced long waiting lines at the gas pump and very high energy prices. Co-op member Matt Rubin chaired the committee and he brought in John, who was then in his early 20s, to work with him on small hydro dam options. John had already been exploring a hydro site in Plainfield Village. Although the Alternative Energy Study was shelved by a new WEC board after it had been completed, John and Matt purchased the rights to the Wrightsville hydro plant dam site, and later sold the site to WEC in the early 1980s. WEC developed it in 1985, and our Wrightsville facility has been contributing to our power supply since then, as noted above.

As a Co-op member, John continued to support our cooperative. After a new board majority, in 1990, changed direction and began to invest in energy efficiency and explore other renewables, he volunteered countless hours serving on the Power & Operations Committee, helping to explore and develop a proposal for WEC to purchase an available hydro site in Hartland. The site

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Co-op Currents

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WEC is part of the alliance working to advance and support the principles of cooperatives in Vermont.

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The Board of Directors' regularly scheduled meetings are on the last Wednesday of each month, in the evening. Members are welcome to attend. Members who wish to discuss a matter with the Board should contact the president through WEC's office. Meeting dates and times are subject to change. For information about times and/or agenda, or to receive a copy of the minutes of past meetings, contact Administrative Assistant Deborah Brown, 802-223-5245.

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Coventry

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percent, and “reducing the need for landfills.”

If you're a Washington Electric Cooperative member, that's where you might stop reading for a moment and consider the implications. Vermont now has just one lined landfill accepting waste generated by the state's residents, businesses, and municipalities. It's located an hour's drive from WEC's East Montpelier headquarters, in the town of Coventry, and Washington Electric generates, on average, the equivalent of 53 percent of its electric supply from a power station the Co-op constructed there in 2005. The system channels methane gas from within the vast landfill to serve as fuel for the five Caterpillar engines that produce the electricity. The power then travels over seven miles of transmission lines to where it is connected to the statewide grid.

This represents a sizeable investment for WEC, and it's been well worth it because the Coventry power is affordable (5.3 cents per kilowatt-hour) and environmentally sound, making good use of methane that would otherwise have to be flared to prevent it from escaping into the atmosphere and intensifying global warming.

The main thrust of Act 148 is to drastically reduce the amount of organic waste that is sent to the landfill, including food scraps. According to

the DEC, organics account for about 28 percent of residential waste, exceeding all other types of disposed materials. Moist organics, like discarded food, are also the materials that get the ball rolling within the depths of the landfill, because they decompose more readily than much of the other content, and expose that content to active decomposition. This decomposition is the process that produces methane.

So it's worth wondering whether the well-intentioned Act 148 will have a negative effect on the Co-op's Coventry enterprise, and upon WEC members' long-term access to this source of renewable, reasonably priced, electricity.

(It's also worth wondering, some people say, whether it's a great idea to divert food scraps away from the landfill, where they contribute to a source of renewable energy for Vermonters, when other processes – even including backyard composting, a revered Vermont tradition – discharge their methane directly into the atmosphere. In any case, the law will require it.)

We're probably good

As for WEC's continued success generating power at the Coventry

It's reasonable to ask whether Act 148 will have a negative effect on the Co-op's Coventry enterprise, and upon WEC members' long-term access to this source of renewable, reasonably priced, electricity.

plant, Lenny Wing isn't concerned. Wing is the site manager for New England Waste Services (NEWSVT), the subsidiary of Casella Waste Management that operates the Coventry landfill. He concurs that the content of the waste stream – the truckloads and

carloads of refuse that arrive almost every day at the Coventry landfill – has changed, and will continue to change, due in part to Act 148 but also other factors, such as the way consumer goods are manufactured.

But the impact, upon power production, of Act 148?

“I don't think Washington Electric has to worry,” says Wing.

That's not to say that the law will be ineffective. “The amount of waste coming from the household and commercial trash stream will be reduced,” he says, noting that that process is already underway. Large-quantity food-scrap producers like restaurants and hospitals were required to begin diverting their food waste in 2014 if they generated an average of more than two tons a week and they were located within 20 miles of a certified processor (such as a composting or anaerobic digesting facility). On July 1 of this year (2015) that requirement was broadened to include establishments and institutions that generate an average of *one* ton a week; similar installments kick in in 2016 (just half a ton a week) and again in 2017.

“By 2020 it will include you and me,” says Wing.

And indeed, the law says that by then “all food scraps, including those from households, must be diverted, with no exemption for distance” (quoting the DEC).

Then why won't WEC's energy production, in Wing's estimation, be impacted? Putting it bluntly, it's because of a food-processing system that comes a little more, one might say, upstream.

“Ten percent to 15 percent of the total waste we receive is

sewage-treatment-plant sludge,” Wing explains. “You won't have the orange peel initiating the decomposition process in the landfill, but the treatment-plant sludge has already got the little bugs in it.” (He's referring to the microbes that consume waste and produce methane.) “We mix the sludge with the garbage and we get the gas going in a matter of a month or two, where it could take several months without the sewage-treatment sludge.”

The NEWSVT landfill accepts sludge from the Chittenden Sewage District, serving the most populous part of the state, as well as from Montpelier, Barre, Newport, Morrisville, St. Johnsbury, Lyndonville, and other municipalities. The lined landfill is a logical place to dispose of this microbe-rich sludge, and Wing hasn't heard of any movement to ban it from the landfill.

“Because there isn't any reason to ban it,” he says. “So my personal opinion is that you don't have to worry at Washington Electric Co-op. You're safe with the sewage sludge.”

The fact that there are no real (legal) alternatives for bulk waste disposal also helps ensure WEC's continued energy production. The Coventry landfill is a thriving enterprise that was recently granted a license to expand – and Wing says this is where he does, in fact, take exception to the official justifications for Act 148. That DEC list that include “lowering greenhouse gas emissions” and “reducing the need for landfills” also cites a theory that the state is running out of landfill capacity. Says Wing, “That's just not the case.”

Washington Electric Co-op has been generating power from the stuff that 625,741 (and counting) Vermonters throw away for 10 years now. And Wing says he still has moments when he's surprised all over again at what's happening right under his nose.

“The WEC plant makes enough electricity for 8,000 houses a day. And that's out of a pile of garbage!” he says. “That still amazes me, and I've been in the garbage business for 20 years. What WEC has done at this landfill took a lot of courage. It's a big deal. There have been glitches, but it's working really well.”



An excavator at work on a steep, covered section of the NEWSVT Landfill (left). Above, a newly lined portion of the landfill. Site Manager Lenny Wing believes that other waste materials will neutralize any limiting effects on power generation caused by Act 148.



The Bees' Needs

Hope, And Beauty, In a Small Gesture

Most people are afraid of bees. That's because no one likes to get stung.

But nearly everyone likes to see bees at a safe distance, because we've learned how important they are to the natural world that keeps us alive.

Bees are pollinators. In their daily flights they move pollen from a flower's stamen to its (or to another flower's) stigma; thus fertilized, the stigma produces fruits or seeds, within which lie the specie's next potential generation. Seeds are dispersed by various means – by wind, perhaps by being consumed by an animal and deposited elsewhere in its scat – and the plant species multiplies.

How this natural process came about has a long and fascinating history. Plants diverged in their evolution during the Devonian Era (some 400 million years ago) from life forms such as algae, spore-bearing mosses, and ferns, to early flowers that were wind-pollinated, like the flowers of many trees and grasses are today. It was around 100 million years ago that they became the flowering plants we see in our fields and forests, with beautiful, nectar-bearing blossoms and flowers. In those intervening 300 million years complex relationships were developed between plant and pollinator that have benefitted both species.

Pollinators' daily activities contribute to the beauty that a field of colorful wildflowers brings to our lives. They also contribute to our well-being in less-obvious ways. According to the American Association for the Advancement of Science (AAAS), bees and other pollinators tend to support the propagation of crops that are rich in vitamins and minerals, and which therefore benefit human health. Among these are apples, squash, and almonds. (The wind, which can also facilitate pollination, helps propagate other crops, like corn.)

Our pollinating compadres are also good Americans who do their part for the Gross National Product. Scientists determined that in 2010 honeybees in North America contributed to the success of more than \$19 billion worth of crops.

There are other kinds of pollinators besides the honeybee (which actually isn't native to this continent). These include birds, bumblebees, and other kinds of bees and insects – among them the monarch butterfly. As Vermonters know, we're not seeing many monarch butterflies these days. Or bees, either.

Scientists theorize that climate change has something to do with that. But so, too, does a loss of habitat.

Washington Electric Co-op is committed to responding to climate change and to being a sensitive and responsible steward of the environment



– as evidenced by such policies as not using herbicides, serving our members with power that is 100-percent renewable, and managing our 1,300 miles of power line corridor with a focus on saving as many high-value trees as possible.

As for habitat restoration, WEC has begun taking more direct action there, too.

And so can we all, says Jessica Nellson Bunker, marketing and “customer success” manager with a Holderness, New Hampshire, company called Resource Management, Inc.

In her work with RMI, Jessica participates in conferences and activities that are often related to the healthy restoration of natural resources. RMI (quoting from its web page)

According to the AAAS, bees and other pollinators tend to support the propagation of crops that are rich in vitamins and minerals, and which therefore benefit human health.

“markets and distributes products derived from recycled organic residuals” – meaning, organic waste. One of RMI's products is what the company describes as a “manufactured topsoil,” called NutraSoil. RMI has successfully marketed NutraSoil as a way for restoring gravel pits, or – particularly after

Tropical Storm Irene – washouts from flooding. It provides a medium for plant recovery.

Early last winter Jessica attended a conference that featured a presentation by Amy Papineau, a field specialist with the University of New Hampshire's Cooperative Extension Service. Papineau had done research on pollinator habitat, and spoke about ways to re-establish meadows rich with wildflowers, to attract and support

pollinator populations.

“Amy explained that before you can do this you have to kill the existing vegetation,” says Jessica, “because the wildflower seeds can't compete.”

But the ways Papineau suggested for doing that were costly, took a long time to accomplish, or were things many people would be loath to do, like applying herbicides. (The long and costly method was covering the ground with plastic for months, and letting the sun bake the vegetation to death.)

Jessica began wondering what an alternative might be.

“And then I thought about using our manufactured topsoil as a smothering method. I got in touch with Amy at UNH. They were interested in hearing how it might work. I got some recommendations from them on what wildflower seeds to use and the times of year to do it.”

So Jessica set out to find individuals and groups that would be interested in launching pilot projects. She identified farming organizations, conservation districts, and town conservation commissions as likely candidates, and sent out an inquiring e-mail to town offices all around the region.

In Marshfield, Town Clerk Bobbie Brimblecombe received the message and forwarded it to a member of the town's conservation commission. That person was Annie Reed, an avid gardener and naturalist, and, it so happens, the Secretary of Washington Electric Cooperative's Board of Directors.

She took a look, and – in her own words – thought, “hmmmmmm.”



Jessica Nellson Bunker, of Resource Management, Inc., tosses wildflower seeds around WEC's new “bee garden” at the Co-op's substation in East Montpelier. It was Jessica who came up with the idea of using her company's NutraSoil to create new pollinator habitat.

You've Got Mail!

April 8, 2015

"Jessica: I have been following your efforts to introduce your bee garden initiative. I am also on the board of the Washington Electric Co-op in East Montpelier. Our garage has a large, open field, surrounded by woods, that would be ideal to start a bee garden. We have person power and equipment available to make this happen. Is your initiative solely for municipalities, or would it extend to a nonprofit electric utility?"

Warm regards,
Annie"

The response came back quickly from Jessica Bunker.

April 10

"The initiative is not limited to municipalities. I would be excited to work with Washington Electric Co-op!

Sincerely,
Jessica"

(It turns out, Jessica said later, that as part of her duties with RMI she had worked occasionally with New Hampshire Electric Cooperative, which left her with good associations about electric co-ops.)

Thus began a series of messages involving Annie Reed, Jessica Bunker, Washington Electric General Manager Patty Richards, and WEC Operations Director Dan Weston. A couple meetings were held, and they agreed to give it a try. WEC took its first delivery of NutraSoil on April 23. A second load

"What I love about this is that every single person can do something to make an immediate difference. That message is so imbued with hope and empowerment!"—

Jessica Nellson
Bunker



was sent in June.

"We ended up with two great sites and received enough NutraSoil for two bee gardens instead of just one," says General Manager Richards. "In addition to improving the aesthetics in both areas and expanding pollinator habitat, this didn't represent an expense for the Co-op because Jessica is running a pilot project to demonstrate whether this approach for creating bee and pollinator habitat will work. So the first load of soil, which we spread over at the WEC garage, was free. The second load is at the substation right above our administrative offices in East Montpelier. There was a \$300 trucking fee for that load, but it will reduce our grounds-keeping

costs.

"Another reason for selecting the site at the substation is that we could place the load where it will be seen by the neighboring houses. The families and residents are living with a substation in their backyards, and we want to take care of that area. The substation is set back off the road, and we have screening in place, but the wildflowers will help bring color and beauty, and it's something we can do to be a good neighbor.

"We also want to contribute positively to nature and the environment," Richards adds. "Bees and monarch butterflies and other pollinators are disappearing. Helping them recover, with all the benefits they provide to humanity, is simply the right thing to do."

DO try this at home!

NutraSoil itself is not lovely – not as thrilling for gardeners, for instance, as a rich, dark shipment of composted topsoil. It's a pale gray in color and tends to be a little lumpy. NutraSoil is manufactured from short-fiber recycled paper (the long-fibered material can be turned back into usable paper), plus sand and biosolids. The biosolids (clean material harvested from wastewater treatment plants) contribute the nutrients needed for the wildflower seeds to thrive.

Jessica Bunker recommends spreading NutraSoil about nine inches thick in order to completely smother the unwanted vegetation below. It seems to be an effective procedure. A couple weeks after she visited WEC to spread the seeds at the first site, and then cover it with straw, the vegetation was fairly thick with plants anywhere from a couple inches to almost a foot high. The flowers had not bloomed, but they would soon. The schedule will run a little later at the substation site, which may see flowers sometime in August. (To hasten the beautification there, Jessica planted nasturtiums around the perimeter.)

The wildflower seed mixture she brought was a blend of plants native to New England, recommended by UNH's Amy Papineau. WEC members knowledgeable about horticulture might recognize some of the names – lavender hyssop, red columbine, butterfly milkweed, pale purple


coneflower, sweet joe pye weed, and black eyed susan. (There are many more.)

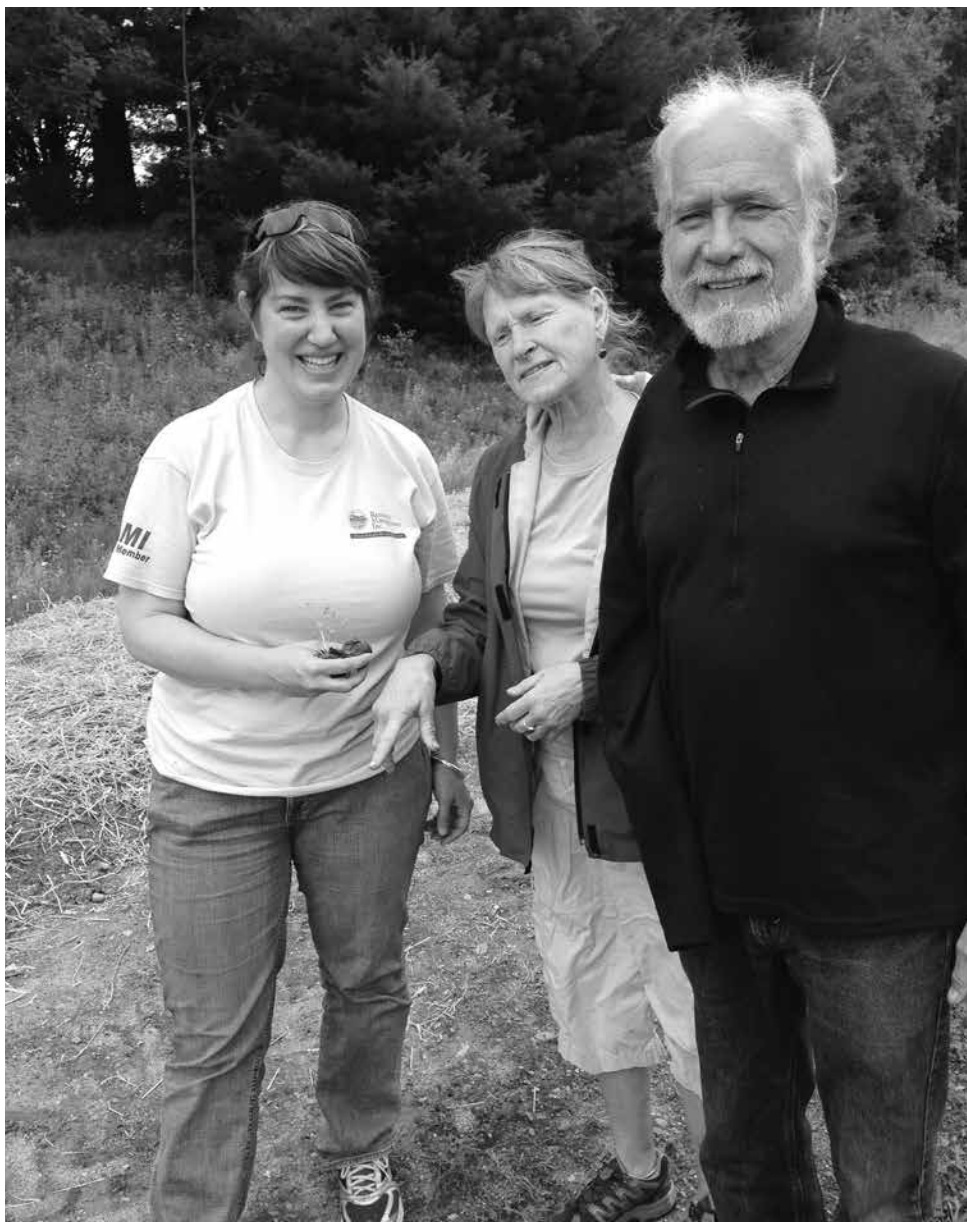
The placement and size of the wildflower beds is important. Some smaller bees have very limited range – Jessica says they are only able to fly around 50 feet – although others can fly for miles. The solution is to place a bee garden in an open area, but preferably close to a forest edge for greater protection and in case they want to nest in nearby trees. For some bees, the bee garden will pretty much be their home, so dense plantings provide them more sources for nutrition, shelter, and a habitat for reproduction.

Washington Electric's two bee gardens are now complete, awaiting only the blossoming of the colorful wildflowers and then, it is hoped, the arrival of the bees and other pollinators. Jessica Bunker – who also has a similar project underway in Wallingford, and at her company's headquarters in New Hampshire – enjoyed working with the WEC staff and is hopeful that the gardens will soon be abuzz with our friends the pollinators.

This is a project she finds refreshingly positive.

"When population decline threatens large species like mammals," she says, "it seems so difficult to figure out a way to stop it or fix it. By contrast, what I love about this is that every single person can do something to make an immediate difference. You can have garden boxes outside your window. We can plant wildflower patches that pollinators can use for sustenance. That message is so imbued with hope and empowerment!"

With nature's careful balance of species in mind, it would even be worth getting stung a time or two (unlikely as that is) to see bee gardens thrive, whether they're on WEC's premises or where you can watch them from your kitchen window. 



Annie Reed (center), got wind of the bee garden idea through her service on Marshfield's Conservation Commission. Annie, who is also an elected member of Washington Electric's Board of Directors, proposed using WEC's property for a pilot project. Also pictured are Jessica Bunker of RMI, and WEC President Barry Bernstein.



WEC General Manager Patty Richards takes a breather from her desk duties to help spread NutraSoil at the bee garden site near the Co-op's garage.

Come Visit Us!

WEC Community Meeting Will Include a Tour of the Co-op's Office

Washington Electric Co-op is fortunate to have a good neighbor, the Old Brick Church, next door to its office building in East Montpelier. The electric co-op and the church share a parking area on the little spur of paved roadway (which is called Church Street) just off of Route 14 near the traffic light at Route 2, on the Plainfield (rather than the Montpelier) side of the village.

Officials with the Old Brick Church have allowed WEC to use their kitchen and dining area many times – for meetings, for retirement parties, during the 12 months when the Co-op's staff was displaced by the renovations necessary after the May, 2011, flood damaged WEC's headquarters, and again last December when the church offered its facilities for more than a week so that staff members and volunteers could provide warm breakfasts and dinners to the crews working 16-hour days to restore power to thousands of Co-op members affected by a severe snowstorm.

Robert Frost wrote, with implied sarcasm, that good fences make good neighbors. No fence has been needed for the Old Brick Church to be a good neighbor for Washington Electric Co-op, and the Co-op has been grateful.

WEC will host its next Community Meeting at the church on Thursday evening, October 8. These annual autumn gatherings have been a regular part of WEC's calendar for years, providing an opportunity for the staff, management, and elected board members to get together with Washington Electric Co-op members in a more intimate setting than the Annual Meeting that's held in the spring. Dinner is provided (often as a modest fundraiser for a local organization) and Co-op members bring up whatever might be on their minds about the cooperative that they mutually own: its services, its policies, and its effect on their lives as supplier of their electric power.

WEC's directors and management often use the community meetings to provide information and answer questions about some particular issue or project WEC is undertaking. One

Holding the meeting at the Old Brick Church will give the Co-op a chance to do something it hasn't done before: to take members next door to the office building and show them around.

subject on the agenda this year will be the Member Satisfaction Survey that utilities are required by the state Public Service Board to conduct every five years, and which will have taken place just prior to the October 8 meeting.

"We'll be able to provide an overview of the responses and feedback," said WEC General Manager Patty Richards. "We probably won't have the full report by October, but we'll have enough data to summarize how our members feel about their Co-op, including what we do well and what we could do better. The Community Meeting will be a chance for us to discuss the survey with the folks who attend – and we hope there will be a lot of them!"

The Co-op makes a point of holding these community meetings in locations

all around its service territory. By now there's no part of the territory that the board and WEC team have not visited. But this year, holding the meeting just across the parking lot from Washington Electric's administrative office will give the Co-op a chance to do something it hasn't done before: to take members next door to the office building, where they'll see the member-services area where the employees they interact with the most do their work. Perhaps most interesting, people will see the dispatch area and the stations used to respond to outage emergencies, including the large monitors that the dispatching team uses to track and coordinate progress; it's the "nerve center" of Washington Electric's activities when people need their Co-op's services the

most.

"We think a tour like this might give people a better feel for the Co-op," said Richards. "And it's a great way to see the renovations that were made to the building after the 2011 flood, including improvements that have helped us reduce our energy usage and carbon footprint."

So SAVE THE DATE! (This is a much earlier notice than we usually provide in *Co-op Currents*, but it's the best opportunity provided by our publishing schedule.)

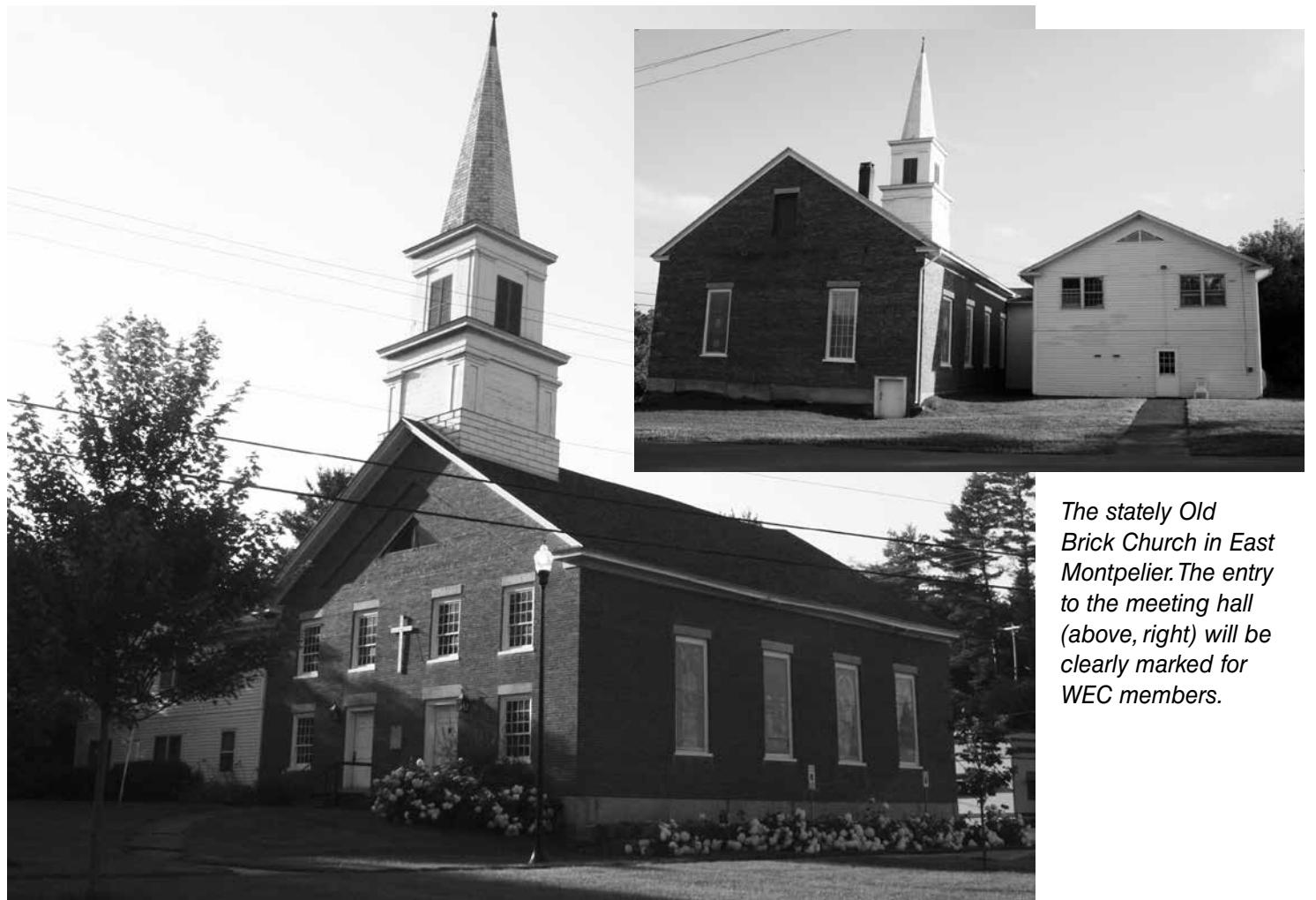
Date: Thursday, October 8, 2015

Place: The Old Brick Church Hall just off routes 2 and 14 in East Montpelier, and next to WEC's office building.

Time: Doors will open at 5:30 p.m., with dinner at 6:00.

See you there!

Look for dinner reservation forms in your August or September bills, or on the Home page of WEC's web site. 🐉



The stately Old Brick Church in East Montpelier. The entry to the meeting hall (above, right) will be clearly marked for WEC members.

President's Report

continued from page 2

eventually was sold to another entity, but exploring the pros and cons of that proposal for our Co-op was a great learning experience that helped us as we explored further opportunities for renewable energy.

A year later John again volunteered as an unpaid consultant on our Coventry landfill gas-to-electricity project. John helped and advised us through our negotiations to purchase

the engines that are used to produce the power, sitting in on interviews; he continued to offer advice as the plant came on line, and during its first years of operation.

John was a long-term, volunteer member on our Power & Operations Committee, and served on the board of the Coventry Clean Energy Corp. (CCEC), the WEC subsidiary that runs the Coventry plant. I always told John he was our "highest unpaid consultant."

John and Matt Rubin, his business partner at Spruce Mountain Design,

built four hydro dams in Vermont, including the 7.4-megawatt Winooski One plant, which was recently purchased by the Burlington Electric Department; that acquisition allowed BED to join WEC as the two Vermont utilities that have 100-percent renewable power. John also spent countless hours helping to set up the Vermont Independent Power Producers Association (VIPPA), an organization representing the developers of small hydro sites in Vermont.

In addition, John served on the

Marshfield Select Board for 20 years, with several stints as chair. He and his wife Jenny helped lead the effort to purchase 600 acres in Marshfield to establish the Stranahan Memorial Town Forest, and to raise funds for the restoration of a historic covered bridge.

This just skims the surface of the many ways John Lewis Warshow touched so many people in our community and state. The void left by the loss of his advice and counsel will be very hard to fill. 🐉

A Difference This Year In WEC's Coventry Open House

Sept. 9 Date Should Ensure Nicer Weather; Plus, An Informative Landfill Tour

The annual Open House at Washington Electric Cooperative's electric-generating plant in Coventry, Vermont, is going to be held earlier in the year than it has been previously. For some time this event, which features a tour of the plant that generates more than 50 percent of the power-supply mix that WEC provides to its members, has taken place in early November. WEC has decided, instead, to combine its Open House with a corresponding event hosted by the NEWSVT landfill, beside which the Co-op's generating station is located.

The date will be September 9.

"NEWSVT is a great partner for us in this operation," said Patty Richards, Washington Electric's general manager. "The landfill provides the

methane gas that we use to fuel our engines that produce the power. It's a great, renewable resource, and the partnership serves both companies well."


New England Waste Services also invites the public to visit its facility, which is not only the state's largest lined landfill but is the only Vermont landfill currently accepting waste. It's an interesting and complex operation – impressive to see in action – and WEC's board and management concluded that students, government and nonprofit officials, Co-op members, tourists (these tend to be the categories of visitors at WEC's Coventry tours, though all are welcome) and others who would like to know more about the landfill gas-to-electricity technology will

benefit even more from the opportunity to see the vast facility that provides the methane. (And which, in all likelihood, is where their own household and municipal waste ends up.)

"Recent history has also proven that November doesn't always provide the best weather for a trip to the Northeast Kingdom and a visit to our plant," Richards added. "Why not do it when the weather will probably be better and people can be more comfortable?"

WEC will host its tour from 10 a.m. to 2 p.m.. As always, refreshments will be provided (and earplugs for the noisy engine room). Reservations are not required by individuals, family members, and friends, but for logistical reasons groups that are interested in attending (school and college classes, for

example) are asked to contact Debbie Brown at the Co-op (802-224-2313, or Debbie.brown@wec.coop) to reserve a specific time for their visit. People interested in carpooling with other attendees, or who need directions, can also call Debbie. Directions are provided on the Co-op's web site (www.washingtonelectric.coop); go to the Home page, scroll to the bottom, and click on the link to Coventry Open House.

Come and see how a large, modern landfill manages all the stuff we cast off in our lives, and how your electric co-op essentially makes lemonade from those lemons – turning the waste into the electricity we all depend on. It's more interesting than you might think! 



Solar Hot Water Made Simple WEC DISCOUNTS AVAILABLE

Now: Efficiency Vermont Incentives Available for Solar Hot Water!

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= \$3,652 in Savings!

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Call the Co-op at **800-932-5245**
or visit us on the web at:
www.washingtonelectric.coop/pages/prod.htm



Bob-Bob-Bobbin' Along

New Excavator Is Seeing a Lot of Action

It's versatile, it's highly maneuverable, it provides many capabilities that the Co-op hasn't had before, and WEC was able to purchase it at a competitive price.

It even has an opposable thumb.

So what's not to like about the newest addition to Washington Electric's mechanized fleet, an eight-ton Bobcat excavator? Actually, not a thing.

"Our crews and line supervisors all agreed that our off-road capabilities could be augmented by the addition of the right-sized excavator," says WEC Operations Director Dan Weston. "This fits our budget, it fits our needs, and we've found it to be extremely useful, maybe even more than we expected."

"To show you how useful it is," says WEC Lineman First Class Mike Baril, "there hasn't been a day since we got it that we haven't used it." His coworker, Hans Pope-Howe (also a lineman first class) peers inside at the instrument panel. "We haven't had it much more than a month," he notes, reading the usage gauge, "and it's already got 97 hours on it."

The Bobcat is a track vehicle, smaller and therefore more maneuverable than the heavy-duty vehicle already in WEC's garage that's used for major construction and repair projects in off-road locations that a utility truck can't get to. The Bobcat has a cab and hydraulic arm that can swivel 360 degrees on top of its base, so the operator can rotate the whole cab and arm and work behind him, rather than backing up and taking another approach. It has a blade, too, which is useful for smoothing out soil or pushing large objects.

"Actually, we used it to spread the material they shipped us for the bee gardens (see 'The Bees' Needs,' page 4)," says Weston.

One of the Bobcat's most useful features is the hydraulic arm and the attachments that can be connected to it. There's a bucket for trenching, for excavating rocks, and a variety of other purposes. And there's a gripper – a horizontal metal bar on the bottom and the hinged "thumb" (which is actually what it's called) on the top. A skilled operator – and Hans Pope-Howe, the primary driver of this new rig, is becoming quite skilled – can pick up and move heavy objects with this apparatus, not having to try to scoop under them.

Because of its medium size, the Bobcat can get into off-road places WEC's other machines cannot reach. And because of its tracks it can safely traverse up and down steep slopes. If one of WEC's larger machines would suit a task better, but the ground surface is rough and inhospitable, the Bobcat



The new eight-ton Bobcat excavator has more than proved its worth since the Co-op purchased it in May. Its compact size, off-road capabilities, and versatility have enabled WEC to keep more of its projects "in-house," and get jobs done more quickly. A feature that gets lots of attention is the Bobcat's "thumb," which it uses to grasp and carry heavy objects.

excavator can level the terrain so the other equipment can be brought in.

"We've used it for setting new poles in bony places, where the augur has hit rock," says Pope-Howe. "The bucket can work those out, instead of having to work around them."

There are instances, also, when setting a pole requires the placement of a ground anchor and guy wire to balance the tension caused by the angles of the power lines at the

top. The anchor must be inserted in a very specific location for this purpose – but sometimes the line crew will run into rock or unstable soil. A fix for this situation is digging a trench eight feet deep, then laying in a section of pole (like a log) with the guy wire attached to it, and burying the entire thing. It's not going anywhere – and the Bobcat has made that rather extensive project much more easily doable.

"Another thing is moving an underground service if we need to transfer it to a new pole," says Baril. This refers to the buried PVC conduit that typically extends from a utility pole to the metered pedestal, for WEC members who have paid extra to have underground rather than overhead service lines to their homes. (A separate line then runs from the pedestal to the building.) "We used to do a lot of that by hand," Baril notes, "and it could take most of a day. Now

we can do two or three of those a day."

Before the Bobcat, the alternative to digging those trenches manually was to contract the job to another company. Weston wasn't always pleased with the results.

"With the Bobcat we can do it ourselves," he says, "do it efficiently, and tidy up the terrain before we leave. We like to do as much in-house as we can. We have high standards for member-satisfaction, and this new machine helps us in meeting that goal."

Weston and his team shopped around before purchasing the Bobcat. The manufacturer, he says, provides a discount for municipalities and nonprofit customers like electric co-ops. Of equal importance Bobcat, founded in

1947, has a reputation for building very reliable, long-lived equipment.

A rural utility like Washington Electric does much of its work off-road, in woods and fields and on pitched and uneven terrain. Such difficulty of access, and the complications the landscape presents even after WEC's crews have gotten to the work site, sometimes make for laborious and time-consuming projects.

That will always be the case. But the Bobcat has given WEC a new dimension. Any job that gets done more quickly and neatly allows the crew to complete a task and move on the next one. It's a ripple effect that, in the end, benefits all of WEC's members. 🐾



The heavy rains of July 19, which caused flooding in Plainfield and Barre, produced mud blockage of a drainage system behind WEC's office building. The Bobcat was able to maneuver into place and clear it out, then clean up the debris in WEC's parking lot.