

Volume 2 Issue 6
June 2020




Climate Smart
Communities
Certified Bronze

New Paltz Climate Smart Newsletter

Meetup: 10 Money Saving Steps to 100% Renewable

Tuesday, June 2, 2020
6:00 PM to 8:00 PM EDT

<https://zoom.us/j/99773217529?pwd=UWdpRllvVWJXRdDdKNEUrNklQeFRSdz09>



10 Money Saving Steps to 100% Renewable Energy

Tuesday, June 2nd

Tom Konrad, Ph.D., CFA, Chairperson of the Marbletown Environmental Conservation Commission will present a simple structure for planning your transition off fossil fuels for anyone with even modest income.

6-8pm Online

<https://www.meetup.com/New-Paltz-Climate-Change-Solutions-Meetup>

CLIMATE CHANGE SOLUTIONS MEETUP

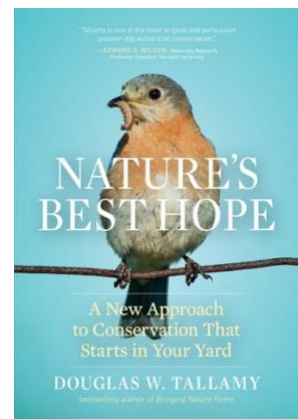
Tom Konrad, Ph.D., CFA Chair and member of Marbletown Environmental Conservation Commission will present 10 Money Saving Steps to 100% Renewable Energy. Last month Tom Konrad joined Douglas Adams for an excellent Meetup on the topic of Climate Smart Investing. We have invited Tom back to talk about his experiences transitioning off of fossil fuels.

Climate Smart Book Club

Tuesday, June 16, 2020
7:00 PM to 9:00 PM EDT

Our Climate Smart Book Club has been meeting for the past 6 months, mostly on Zoom now. We read a variety of books related in some way to the climate crisis. Some of our books are about the problem of the climate crisis and some are more solution-oriented, like this month's selection: *Nature's Best Hope - A New Approach to Conservation That Starts in Your Yard*. The author of this book is Douglas W. Tallamy and the book has been highly recommended. It is a New York Times Bestseller. Sign up at <https://www.meetup.com/Climate-Smart-Book-Club/events/270884714/>.

The Zoom link is <https://zoom.us/j/93596957876?pwd=UkV3N2pRYytaaTcrRVRIWUJzRlVSdz09>



Complete Streets Have Renewed Interest in Response to COVID-19

Neither the Bike/Ped Committee nor the Complete Streets Ad Hoc Committee has met recently but these issues remain on our minds. Many other communities around the country are making changes to their streets as a response to Covid-19. What opportunities might be worth consideration here? For example, are there any streets in New Paltz that could be closed to vehicular traffic, at least temporarily, to foster outdoor table seating in front of restaurants? Here is a link to a recorded webinar that happened on April 30 and offers many ideas: <https://smartgrowthamerica.org/webinar-recap-complete-streets-responses-to-covid-19/> There is a joint meeting of the Town and Village boards on **Thursday June 4th beginning at 7:00** via Zoom and this topic has been added to the agenda. The public can access the meeting by watching it on You Tube and making written comments in the You Tube chat in real time. To avoid Zoom bombing, the zoom info is sent only to participants of the meeting - ie people who we want to speak and interact with the board during the meeting, not those who are just watching or those who are making public comments. Please join the You Tube channel by clicking here: [New Paltz Public Access](#) and comment in real time during the meeting! We need your support.

Social Distance Tree Planting on the Wallkill

Our society is on hold, but Nature is not, and the River is still flowing! Here's an opportunity to contribute good to the world in a safe way - plant a few trees along the Wallkill River between May 23 - June 21. Here's how:

Individuals and/or families can go BY THEMSELVES to the designated planting location along OSI's River to Ridge (R2R) Trail in New Paltz. Volunteers need to sign up with the [JotForm](#) link below. A video will be provided for you to watch beforehand for instructions on how to plant correctly. When you arrive on the site, locations of where trees should go and tree names will be clearly marked. We ask that each individual or family bring their own tools and commit to planting at least 3 trees. Tools will be available on the site to borrow if you don't have your own. Tree planting tasks include: clearing the area of weeds, digging a hole, planting the tree, laying & staking down a fabric mulch, inserting a tree tube, and watering. Required tools include: a shovel and a pair of work gloves per person; 1 hammer and 1-2 buckets per family.

The location is on the River to Ridge Trail in New Paltz between the trailhead parking lot and the Route 299 bridge, between the trail and the river, across the river from the New Paltz wastewater treatment plant. This is a collaboration between the Wallkill River Watershed Alliance, Open Space Institute and NYS DEC Hudson River Estuary Program.

If you would like to participate, sign up here on this [JotForm](#) link: <https://form.jotform.com/201365605985057> **You will receive an email with more information including the training video once you submit the form.**

If you have other questions, contact Martha at mcheo@hvc.rr.com.

Engineering Students from SUNY Investigate Renewable Energy Options to Save the Village Money

Using Climate Smart Communities' Format, Students Seek Solar and Energy Storage Solutions at the Village's Wastewater Treatment Plant to Save Residents Money on Their Sewer Bill

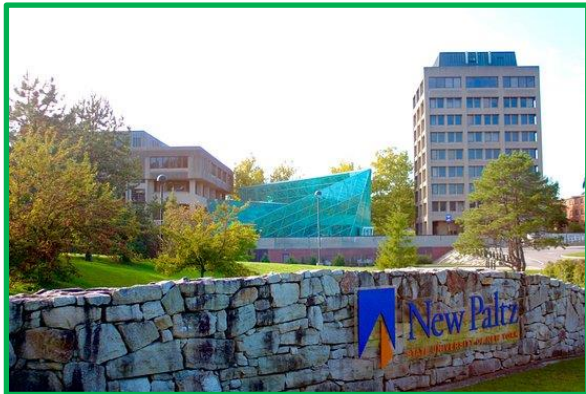


Photo Credit: Kenneth Gabrielsen

In spite of a challenging Spring 2020 semester, three engineering students from the State University of New York at New Paltz (SUNY) completed a months-long class project (Study) through their university's Division of Engineering Programs to conduct a feasibility study for renewable energy for the Village of New Paltz's Wastewater Treatment Plant (WWTP). This Study sought to find solar energy and energy storage (batteries) solutions that could result in cost savings for Village residents. The Study will also apply toward the next level of achievement for the community as a Climate Smart Community.

The New Paltz Engineering (NPE) team of Zachary Johnson (Mechanical Engineering, '20), Nikki Maher (Computer Engineering, '21), and Nolan West (Electrical Engineering, '21) was tasked by Dr. Kevin Shanley of SUNY New Paltz Engineering Department to work with Mayor Tim Rogers of the Village of New Paltz, Chris Jaeger of Environmental Consultants, Inc., and Thomas T (Ted) Nitza, Jr., P.E. of Walden Environmental Engineering PLLC. NPE's Study also sought to investigate and provide (if possible) a feasible example of a successful use of renewable energy in the Hudson Valley. Unlike some traditional class assignments, the 'answer' was not known, but required a thorough review of the data and existing conditions and a thoughtful use of these emerging technologies in this specific municipal application.



Village of New Paltz WWTP (Photo Credit: Ted Nitza)

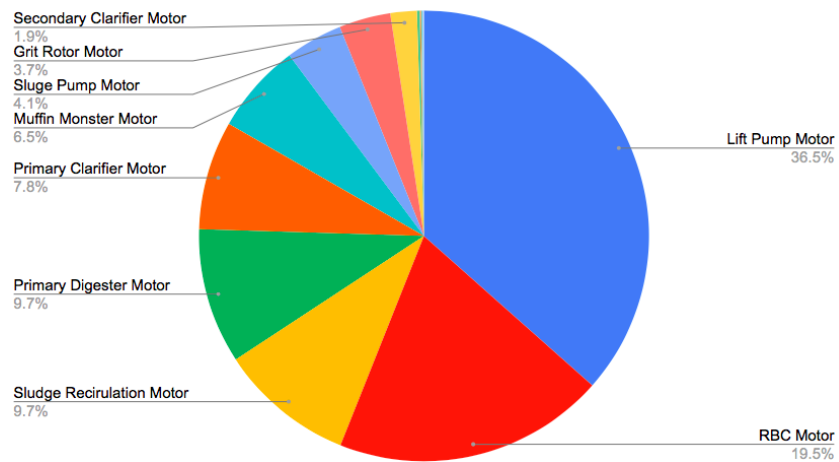
In addition, the Study will help the Village and Town of New Paltz who are seeking to advance to the next level of New York State's Climate Smart Communities (CSC). Specifically, NPE's Study will fulfill **PE4 Action: Renewable Energy Feasibility Studies** requirements with an



Graphic Credit: Primus power

analysis of at least two (2) renewable energy technologies qualifying for four (4) possible points on their way to Silver Level. NPE's work included many steps starting with reviewing, compiling and charting three years of power bills. That allowed the members of NPE to fully understand the nuances of the power bill and they were able to mimic the complex calculations with their own customized spreadsheets. NPE participated in tours, inspections and other visits to the WWTP and reviewing existing information from aerial maps of the land. NPE determine the electrical

demands of individual pieces of equipment such as motors, pumps and mixers. After gathering specification sheets on all electrical equipment at the WWTP and performing an economic analysis on the monthly electric bills, NPE identified a specific piece of electrical equipment that requires the most amount of energy at the WWTP, known as the Lift Pumps. These Lift Pumps comprise more than a third of the electric consumption on the WWTP's average monthly bill and a significant part of the peak loading the WWTP.



Percentage Distribution of Monthly Electric Consumption of WWTP Equipment



One of the Lift Pumps at Village WWTP (photo credit Zachary Johnson)

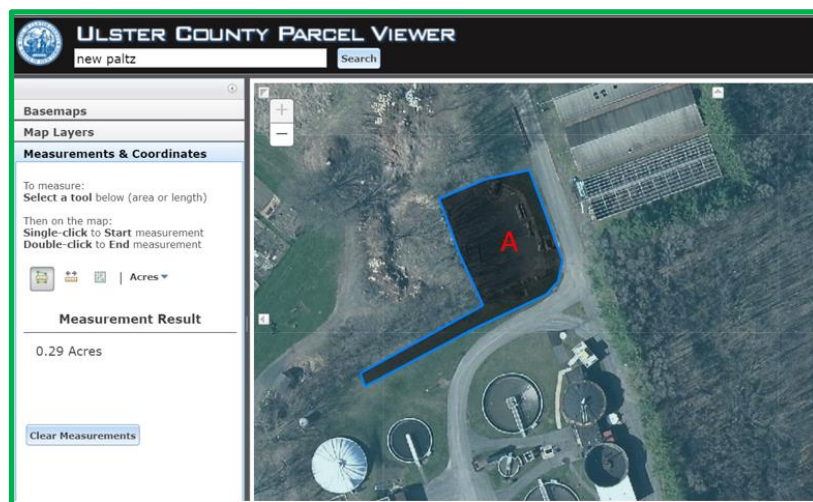
NPE targeted an approach with solar panels and battery storage to provide a significant amount of renewable energy but also eliminate 100% of the peak load for this specific piece of electric equipment. By doing so, NPE estimates this will provide almost half the average power needs and eliminate 75% of the average peak kWh per month. NPE developed three options for solar installation locations: Location A (located on a Hillside and staging area), Location B (that would require Demolition of some existing sludge drying buildings), or Location C (the

Parking areas near the front of the WWTP and the nearby municipal parking area) with different advantages and disadvantages.

Approximate Costs and Power Estimations for Different Solar Panel Locations

Location	Acres	Number of Panels	kWp Generated (kWp)	kWh / year (kWh)	Percent of total kWh/year (%)	Cost per kWp (\$)	Total Cost (\$)
A - Hillside	0.29	290	113.1	129,533	44.47	2.50	282,750
B – Demolition	0.35	350	136.5	156,333	53.67	2.50	341,250
C - Parking	0.3	300	117	134,000	46.00	3.50	409,500

NPE compared the pros and cons of each solar installation location and gathered information, perspective and insight from companies that provide battery storage or solar panels such as Key Capture Energy and Sun Common. NPE found that implementing a combination of 290 standard solar panels and a 67Kw - 4-hour duration battery storage unit to an open hillside area (Location A) at the WWTP could reduce the WWTP's average monthly electricity bill by about 50%.



Aerial Map of WWTP Solar Location A – Hillside

The use of this option at Location A is estimated by NPE to save the Village approximately \$1,650 a month, or almost \$20,000 per year. After considering the total cost to install these technologies – about \$381,000 – along with the estimated total savings, NPE estimated the break-even point for this solution to be approximately twenty years if such an installation does not include grants or other financial

assistance. Notable at the same time, the cost savings also means that the same sewer service is being provided to the community with a direct use of greener energy.

This Renewable Energy Production and Storage Review and Feasibility Study at the Wastewater Treatment Plant for the Village of New Paltz was completed in May of 2020. The NPE Team is scheduled to present a summarized version of their findings to Mayor Tim Rogers and the Board of Trustees of the Village of New Paltz at their June 4th Village Board Meeting (via Zoom). Then, on June 7th at 11:00am, NPE will present a more thorough full report of the Study to the community (via Zoom) and be available for questions. If you are interested in attending, contact Janelle Peotter at newpaltzclimatesmart@gmail.com for schedule information.

Article written by Nikki Maher with the support of Zachary Johnson and Nolan West

Volunteers Needed to Maintain Wildflower Area

Volunteers are needed to help along the wildflower area sown last fall along the Empire State Trail along 299. We are happy to train people on what to do and help with plant identification. Volunteers will monitor the area to make sure that invasives don't take over and the wildflowers get a good head start. Wildflowers all germinate at different times and we will need to be on the watch for them while any major invasive weeds will have to be removed for a couple of years while the baby wildflowers get established. A chart will be put together with the seedlings and plant names that were included in our seed mix for easier identification. **To volunteer and help with this phase of the project, please contact Liz Elkin at 845-233-0799 or liz.elkin@gmail.com**



Activities During Covid-19... A Green Perspective

By Wendy Ruddy, Climate Smart Task Force Member

To tell you the truth, until now, I had not devoted much thought to this topic. In fact, it was mostly the opposite. For example, I noticed how many more take out containers we're using for those restaurant meals that we must now eat at home, or the throw away personal protection gear, or the increased use of disinfectants- so much of which is toxic to the environment.

Still, there is plenty of good news. We are all aware of how much less traffic there is on the roads, the skies and the waterways. And the shut-down of industry across the country has helped the skies and rivers, and **us** breathe so much better again. And one of my happiest observations is that consumption is so far down. We know the negative effects these have on the economy, but the earth has been appreciating it, I'm sure.

What are some of the other things that I noticed happening that are better for our earth? Here are a just few:

As a way to help during the worst part of the crisis, people began making masks and protective equipment en masse and donating it where it was needed. This inspired a cottage industry of sorts, to make useful items to give to others- or just use at home. This includes quilting, knitting and sewing among other pursuits.

Although I confess that I have a black thumb and do not especially enjoy gardening myself, I recognize its appeal to so many other people. And I so appreciate the beauty of plants and

flowers, that even I indulge a bit every spring, planting flowers in pots, for instance. Since more people are home and noticing their landscapes, and have the time to devote, gardening seems to have become a national pastime. And not just flowers and shrubs are being planted, but vegetable and herb gardens now abound. Everybody wins when a garden is planted- the individual, the pollinators, and the planet, as a whole.

Just a note: The New Paltz Gardens for Nutrition are currently full and do not have any plots available, but this could be a great option for next year, for apartment dwellers without the space for a garden plot, or for anyone that wants to be part of a grow-your-own food-community. Or, it's still not too late to join a CSA (Community Supported Agriculture) which is more my style, wherein someone does the work for you and you simply reap the delicious benefits when the harvest season begins.

Speaking of food... a couple other activities that have become very popular of late, are cooking and baking. Possibly because we were faced with a number of shortages early on, or because it's healthier, cheaper, doesn't require leaving home -if you have the ingredients you need- or because it can be just plain fun, especially for families, a number of people really got into preparing those home cooked meals and other do-it-yourself delights such as baking their own bread. Among the many benefits of these culinary innovations are the palate and the wallet. Staring at the same walls day in and day out has motivated many people to want to beautify and improve their living space in various ways. One result: interior decorating, particularly painting, -both walls and art- and making crafts are both very popular and achievable activities. And the results give most homeowners pride and pleasure. And for the handier types, home improvement projects are the way to go. The hardware and do-it-yourself home improvement stores have been opened throughout the shutdown. I've noticed the parking lot at Lowes is always full of cars. My theory is that besides being a haven for the construction crews and home improvers, it's one of the few open retailers. This means people find a reason to go, just to get out of the house, and lo and behold, they end up with the materials for a new project... People are connecting in ways they hadn't considered earlier. And many of these ways result in less waste and less carbon footprint. Shopping and picking up supplies such as medications for others; making phone calls and using video chats to visit and check in with loved ones and friends -instead of jumping in the car to drive somewhere; sending letters and notes by snail mail – the Post Office needs that too, so keep it up.

People are walking, jogging, hiking, and biking more also. Our lovely region has always been filled with folks that enjoy the outdoors. Now, those of us who have considered the Hudson Valley's myriad paths through nature our personal playgrounds, have to share it with more and more appreciators. This is a good problem, though, for the most part (except when the parks have to close because they've reached the maximum.) By and large, I love to see so many more neighbors strolling through my neighborhood, as I know others are doing all over the Hudson Valley – and the world, for that matter. The rail and nature trails and parks throughout the area are also seeing an exponential increase in foot and bike traffic. Other forms of outdoor recreation, such as horsebackriding, skateboarding, and rollerblading are being enjoyed as well. All of these activities are so healthy in so many ways: for us, for the community, and for the earth! Let's keep them up.

Additional EV Charging Stations Coming Soon?

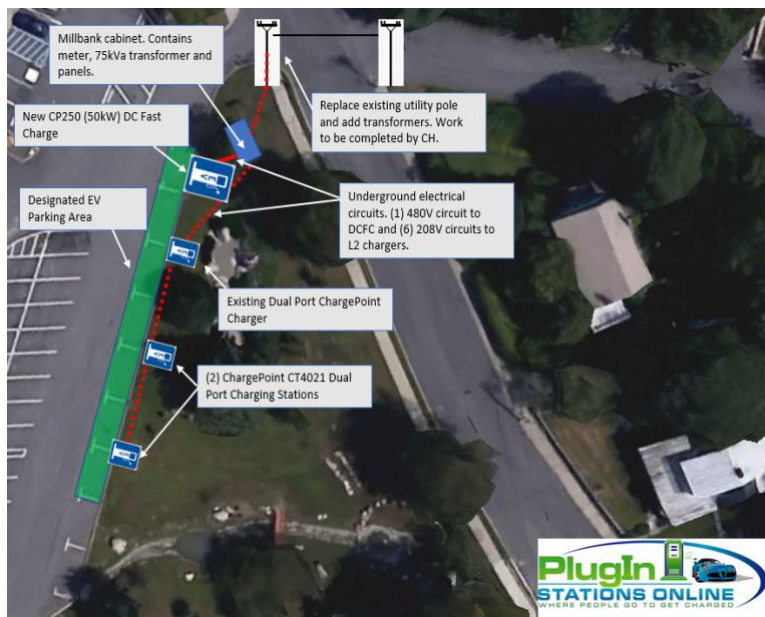
The Climate Smart Task Force has submitted a letter to support the efforts of the Village of New Paltz to install additional, publicly accessible, electric vehicle charging stations at the New Paltz Village Hall parking lot adjacent to Peace Park. The installation of two additional level 2 chargers and one fast charger will bring the total number of EV charging parking spots up to seven and create an EV charging hub. The DEC grant application was submitted last Friday.

The installation of these charging stations within the Village of New Paltz offers the opportunity to attract ecologically minded visitors to the area and will increase awareness of available vehicle technologies and associated benefits. Additionally, these charging stations will enhance our local environment by reducing vehicle-related pollution, and help drive economic activities as electric vehicle drivers stop in to enjoy the various amenities and local businesses.

The Village of New Paltz presents a particularly attractive opportunity for an EV charging station hub for a number of reasons. First, the location is in close proximity to the New York State thruway and is the ideal midway point between New York City and Albany as well as points west. Second, expanding upon the Village's existing charging station in this location will

Station Location:

Below is a marked-up site drawing which includes recommended station, conduit and panel location. The station locations were chosen based on several considerations including; proximity to the electrical panel, ease of vehicle access, reduction of station damage risk and visibility to the public.



create an EV charging hub that will attract users who can be confident that there will be an available charging port. Third, the wonderful restaurants and downtown businesses will attract and benefit from additional foot traffic as EV drivers can enjoy a short walk to Main Street from the EV charging hub.

We applaud the Village of New Paltz in moving forward with their application to this program to install additional charging stations. Though there is a 20% match for the village, it has been calculated that we can meet that match with no cash cost to the Village.

We look forward to supporting the Village as they pursue this exciting initiative and once the charging stations are installed, we will surely help to promote their use amongst our membership and beyond.

Calendar (see above Newsletter articles for Zoom links)

Tuesday June 2nd at 6:00 Meetup on Zoom Topic: 10 Money Saving Steps to 100% Renewable

Thursday June 4th at 7:00 Joint Town and Village Board Meeting on You Tube. Discussion of Complete Streets.

Tuesday June 16th at 7:00 on Zoom, Climate Smart Book Club

Monday June 18th at 7:00 on Zoom, New Paltz Climate Smart Task Force

Anytime now until June 21: Tree Planting on the Wallkill

Anytime this month: Maintenance of wildflower area along Empire Trail

For more information about New Paltz Climate Smart or any content in this newsletter, please contact:

Janelle Peotter

New Paltz Climate Smart Coordinator

**Call/text 920-883-1788 or
email newpaltzclimatesmart@gmail.com**