



## The EverGREEN Committee For Campus Sustainability *At Jefferson Community College*

### 2018-2019 Annual Report 9/1/2018 - 8/31/2019

#### Evergreen Committee Membership 2018- 2019

Bruce Alexander - Director of Facilities (Co-Chair)  
 Dr. Chris Ebey - Assistant Professor of Geology (Co-Chair)  
 Tina Bartlett-Bearup - Vice President of Administration Designee  
 Linda Dittrich - AVP Math/Science Division  
 Dr. Monica LeClerc - Professor of Biology  
 Dr. Venkat Chebolu - Professor of Chemistry  
 Peter Boenning - Associate Professor of Social Sciences  
 Mindy Boenning - Empire State College  
 Jessica Jones - Typist English Department  
 Jessica Jones - Adjunct Instructor Lab Sciences  
 Dr. Raymond Petersen - Professor of Political Science  
 Michael Avery - Associate Professor of English  
 Dr. Christine Grimes - Professor of English  
 Sue Gwise - Cornell Cooperative Extension (at-large)  
 Mike Lumbis - Community Forestry Representative (at-large)  
 Mike DeMarco - City of Watertown Planner - Certified Arborist (at-large)  
 Matt Lambert - Past Chairman (at-large)  
 Josie Elie - Student Representative  
 Serena Soldani - Student Representative

## I EverGREEN Committee Mission

Mission: The EverGREEN Committee was established to provide the campus with programs, resources and information to help raise the awareness of the importance of sustainability in conserving and protecting the natural resources that our lives are dependent upon.

## II Report Period Highlights

- JCC celebrated Earth Day and Arbor Day events that included daily sustainability lectures and activities.
- JCC also participated in the Black River Trash Bash, Daylight Hour and Campus Crunch
- The EverGREEN Committee's annual seedling sale accounted for over 100 seedlings being distributed to campus and community members, bringing the eight year total to over 2,700 trees.
- Two new Pollinator Gardens were established on campus for a current total of seven
- The campus hiking trails were repaired and upgraded (ongoing)
- A booth was set up for the Club Fair to encourage student participation
- The Community Garden again donated over 150 pounds of produce to the Urban Mission
- The College Campus Tree Inventory was completed with 1,500 trees tallied
- Tree Campus Master Plan is drafted and the final will be sent to NYSDEC in December

## III EverGREEN Committee History - The Presidents Climate Commitment

During the winter of 2008, a JCC student named Rita Woledge who was President of the ECOS club (Monica LeClerc served as ECOS Club Advisor), made an appointment to meet with President Carole McCoy. At that meeting she asked Dr. McCoy to sign the American College and University Presidents Climate Commitment.

(<http://www.presidentsclimatecommitment.org/html/commitment.php>)

Before making a decision about signing an unfamiliar document, President McCoy requested that volunteers from the campus community serve on a new committee tasked with examining the "array of environmental and climate issues important to the campus and community." Dr. McCoy appointed Monica LeClerc (ECOS Club Advisor and Professor of Biology) to be the chairperson, and the committee charge was to make recommendations that would help to shape the College's response to these challenges, to include guidance on signing the Presidents Climate Commitment.

The original committee members were: Mary Lou Bertrand (Business Faculty), Venkat Chebolu (Chemistry Faculty), Deb Felice (Phys. Ed. Faculty), Matt Lambert (Student Life Staff), Monica LeClerc (Biology Faculty), Todd Vincent (Biology Faculty), and Tom Vincent (IT Staff), and Kerry Young (Administrative Assistant to the Dean of Administration)

The following year (2009-10), the EverGREEN Committee forwarded to the President its recommendation to sign the Presidents Climate Agreement. The logistics pertaining to the personnel and resources necessary for implementation were settled and President McCoy signed the Commitment on January 10, 2012.

### **American College and University Presidents Climate Commitment Excerpt:**

"... We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop."

## **IV Tree Campus USA**

JCC was first recognized as a TREE Campus USA in 2012 under the direction of Emeritus Matt Lambert. The EverGREEN Committee members unanimously agreed to add the role of the TREE Campus USA Committee to its existing functions and that role has been maintained to the present time. A Tree Care Plan was developed in accordance with Tree Campus USA guidelines and implemented. The plan was updated in 2017 and will be updated again in 2019. The College has worked closely with the City of Watertown, NYSDEC and other area groups involved with preserving local greenspace. The award of a NYSDEC Urban Forestry Grant has significantly helped to improve tree management programs on the campus.

## **V EverGREEN Report 9/1/2018 - 8/31/2019**

The JCC Evergreen Committee was again busy during the year. Earth Week and Arbor Day activities high-lighting lectures, entertainment, tree sales, trail cleanup and a ceremonial tree planting were enjoyed by students, faculty, staff and visitors. Other activities included the creation of pollinator gardens, participation in the Black River Trash Bash, Super Science Saturday, Campus Crunch, Daylight Hour and harvesting the JCC Community Garden.

### **Earth Week 2019**

2019 activities included lectures on Invasive species in Eastern Lake Ontario area, NYSDEC Urban Forestry Program and Environmentally friendly gardening. The annual Arbor Day tree planting was held on April 26<sup>th</sup> and a free raffle was held with the winner receiving an official Tree Campus USA hat. Students, Faculty and Staff participated in the annual Trail Cleanup and maps of the improved trail system were passed out for a “Walk on your Own” activity. Over 100 tree seedlings were sold. Lectures and activities included:

#### Monday April 22<sup>nd</sup>

Emily Sheridan - NYSDEC - *Managing and Stewarding NY's Great Lakes Watershed*

#### Tuesday April 23<sup>rd</sup>

Glen Roberts - NYSDEC - *Urban Forestry Program*

#### Wednesday April 24<sup>th</sup>

Sue Gwise - Cornell Cooperative Extension  
*Environmentally Friendly Gardening*

Mike Avery - *Indie Rock in the Student Lounge*

#### Thursday April 26<sup>th</sup>

Linda Gibbs - *Tug Hill -Tug Hill Tomorrow Land Trust*  
Campus Trail Pickup

#### Friday April 27<sup>th</sup>

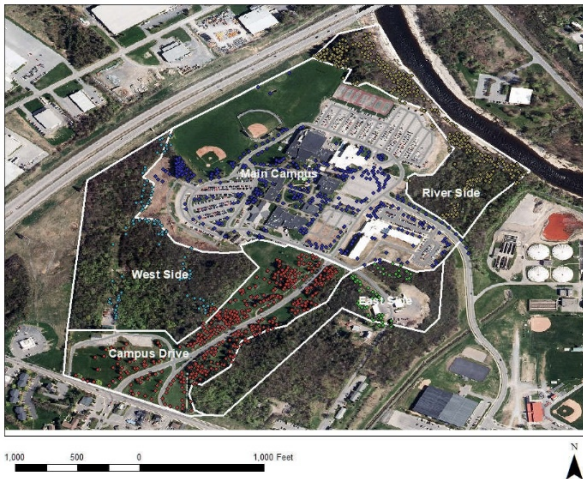
Annual Arbor Day Tree Planting in the Quad





## Urban and Community Forest Grant Update

Jefferson Community College Tree inventory 2019



In the fall of 2018, JCC was notified that the college would be receiving an \$18,350.00 grant from the New York State Department of Environmental Conservation to complete a Campus Tree Inventory and create a Tree Management Plan. The goal of this project is to provide long term guidance that will foster a safe and beautiful campus for years to come, enhance local greenspaces and align JCC tree management with other area tree management efforts.

The College sought proposals in the spring of 2019 and the work was awarded to Bill Elliot and Sons Tree Service. Jordan Elliot - ISA Certified Arborist and JCC Alumni conducted the project. Mr. Mike DeMarco, City of Watertown Planner - ISA Certified Arborist and JCC Alumni - provided professional oversight and a review of the inventory.

Work began in the summer of 2019 and a total of 1,497 trees were located, identified, tagged, assessed and inventoried. JCC Facilities Staff assisted the arborist with this work. Over 20 trees classified as immediate hazards were removed by JCC Staff or by outside contractors. A typical example is a large hazard tree along the main power line (photo on right) that was removed by National Grid. The inventory listed an overall total of 126 trees that need to be removed.

The draft management plan includes many items - both for immediate action and long term planning. This document will provide guidance for JCC to maintain and enhance its green spaces.

“ ... This plan was developed for SUNY Jefferson with a focus on maintaining and improving the current urban forest on campus, as well as increasing preparedness for significant events that may affect tree health campus wide such as storm damage and the arrival of invasive species such as the Emerald Ash Borer (EAB). A complete tree inventory of campus is used to understand the needs of the urban forest and to create a management plan suited to the individual needs to this campus. This plan takes in to consideration ecological, environmental, and economic benefits of the trees on SUNY Jefferson Campus ...” \* The overall plan covers items such as tree attributes, hazard assessments, species diversity, invasive species, benefits and a five-year action plan with associated costs.



\*From JCC Draft Management Plan 11-22-2019

### **Emerald Ash Borer**

It is unfortunate that the Emerald Ash Borer was recently found in the Watertown area. On the good side the new management plan includes options and cost estimates for JCC to best deal with the impending threat. The four options described include the following:

1. Do nothing and let nature take its course: This option would allow the infestation to take hold in the ash trees in the urban forest, killing the majority of them within 2-3 years. This option will result in considerable danger as dead trees become present in the landscape and present safety concerns, leading to possible damages and more difficult removal down the road.
2. Removal of all ash trees: The option to remove and replace all ash trees within campus property would remove all public safety concern regarding the EAB, however this option is the most expensive of the three, and losses to the landscape would take a significant period of time to recover. Removal of all 192 trees would also be a substantial investment in the short term. The total cost of this project is approximated to be \$118,986.00.
3. Treatment of all ash Trees: The treatment of all Ash trees will stabilize trees that are currently in good health, however the treatment of trees with low health condition may yield unsuccessful results. This option is less expensive within the six-year treatment period of this plan, however continued treatment may be required after that time. The cost of treating all Ash trees on campus is approximately \$79,035.00 for six years.
4. Combination Approach: This option allows for a combination of management practices to be utilized in preparing for and dealing with EAB. This approach attempts to strike a balance between cost, workload, and forest cover / Tree benefits. Trees of low condition and small size are marked for removal due to uncertainty in treatment successfulness. Mature and healthy Ash trees (Excellent or Good condition) were selected from within the Main campus and Campus Drive strata to serve as the population best suited from continual pesticide treatment. 61 trees were selected for this group, leaving 131 Ash trees that would be marked for removal. The cost of this measure is estimated at \$105,603.00. (From JCC Draft Management Plan 11-22-2019)

### **i-Tree Report**

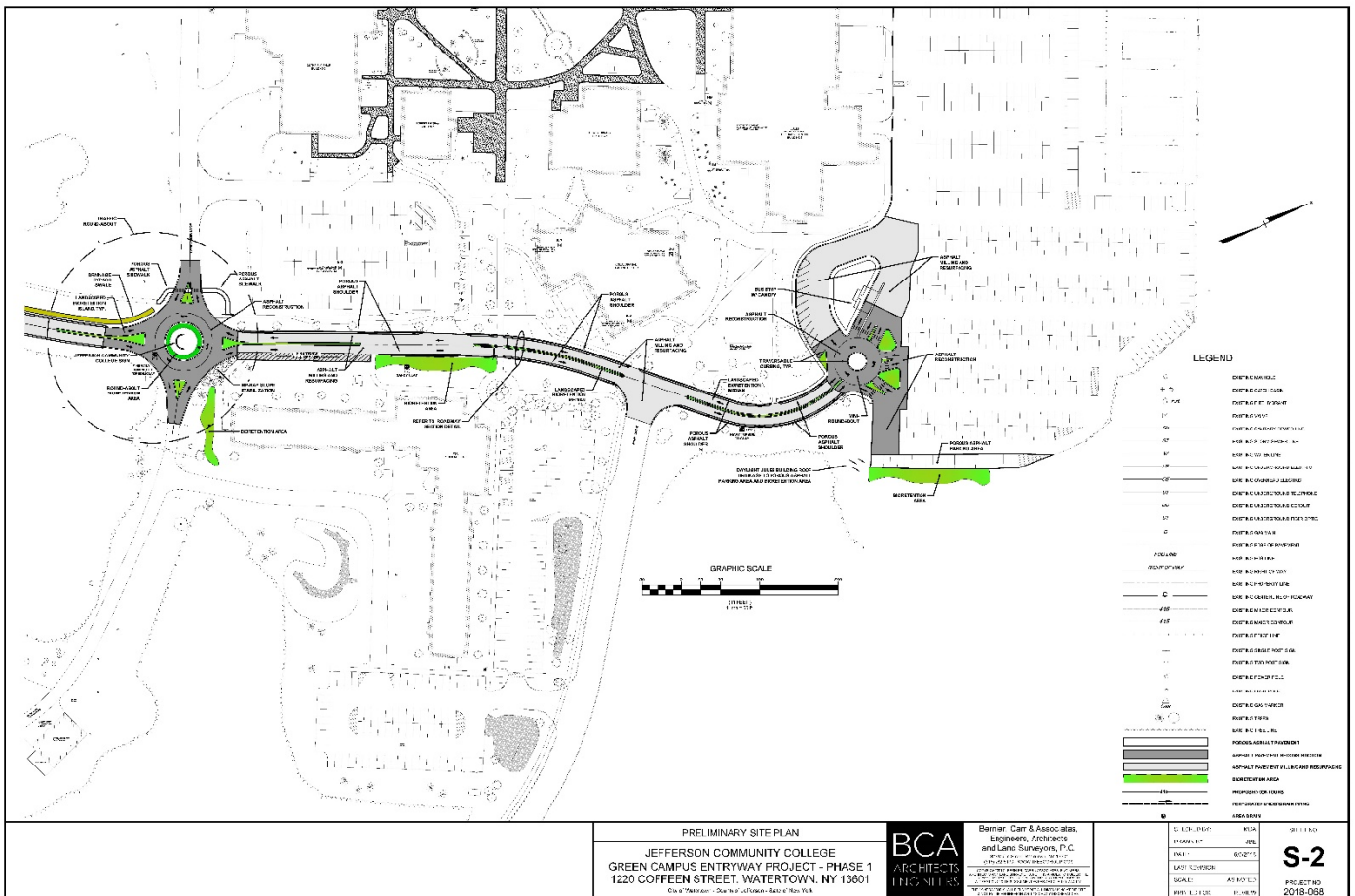
An Important deliverable in this project was the i-Tree Ecosystem Analysis done as part of the inventory process. This feature uses a model developed by the US Forest Service to assess the ecological benefits of green spaces in the local environment. The data below demonstrates the ecological value of JCC Greenspaces to the local environment:

“... Understanding an urban forest's structure, function and value can promote management decisions that will improve human health and environmental quality. An assessment of the vegetation structure, function, and value of the SUNY Jefferson 2019 Inventory urban forest was conducted during 2019. Data from 1497 trees located throughout SUNY Jefferson 2019 Inventory were analyzed using the i-Tree Eco model developed by the U.S. Forest Service, Northern Research Station ...” (From JCC Draft Management Plan 11-22-2019)

- Number of trees: 1,497
- Tree Cover: 12.6 %
- Most common species of trees: Norway spruce, Green ash, Northern red oak
- Percentage of trees less than 6" (15.2 cm) diameter: 19.5%
- Pollution Removal: 770.8 pounds/year (\$3.85 thousand/year)
- Carbon Storage: 569.8 tons (\$97.2 thousand)
- Carbon Sequestration: 10.99 tons (\$1.87 thousand/year)
- Oxygen Production: 29.3 tons/year
- Avoided Runoff: 39.44 thousand cubic feet/year (\$2.64 thousand/year)
- Building energy savings: \$828/year
- Carbon Avoided: 1707 pounds/year (\$146/year)
- Structural values: \$2.86 million



In January 2019, Jefferson Community College was the only community college in New York State to receive a Green Innovation Grant Program (GIGP) grant totaling \$880,000 from Governor Cuomo's New York State Regional Economic Development Council fund. This grant will be used to complete a major reconstruction of the main entryway to campus for aesthetic, environmental and safety improvements. Currently, storm water flows along impervious surfaces throughout campus directly into the Black River. The main entryway to campus will be transformed with bio-retention medians, porous roadway shoulders and educational signage with ongoing monitoring. It will serve as a living laboratory for students, improve campus aesthetics, reduce Jefferson's environmental impact, slow traffic, support public transportation and create a green corridor to enhance other storm water management projects on campus. In mitigating an environmentally damaged water source, the project will serve as an example of different techniques that can be used to control and treat runoff. Work to transform the campus entryway will begin summer 2020. A conceptual drawing for the project is attached below.





### Community Garden

In 2019 students, faculty and staff planted and maintained the JCC Community Garden. It was a great growing season with over 150 pounds of produce donated to the local Urban Mission. A special thanks to Jessica Jones, Tina Bartlett-Bearup, Joel McCune and Rich Peebles for their work on this project.

### Pollinator Gardens

JCC now has a total of seven pollinator gardens. The latest garden was constructed in the fall of 2018 and features plants that are native species to the Northeastern US. A plan map was installed to show the various plant species so it can be used as an interactive learning station. The campus "Pollinator Pathway" is slowly being built. The GIGP project will include additional pollinator friendly plantings along the roadways and in the new bio-swales.





## Trash Bash 2019



**“JCC Trash Bashers 2019”**

In 2019 JCC students and staff participated in the Black River “Trash Bash” for the third time. This annual event is coordinated by the NYS Great Lakes Watershed Program and takes place along the Black River watershed during the fall. Items collected were cigarette butts, food wrappers, construction materials, tobacco wrappers, beverage cans and bottles, and diapers. The trash was sorted and recyclable items were diverted from the landfill. In 2019 JCC had its best turnout ever with thirty-seven students, faculty and staff participating. This event is supported by the Tug Hill Commission and the data collected goes to the International Ocean Conservancy’s Coastal Cleanup program database. This is the world’s largest volunteer effort for ocean and waterway health. The photo above shows JCC students with Emily Sheridan, NYS DEC Cleanup Project Coordinator.



## Campus Outdoor Trails

Further improvements were made to the campus trail system over the summer of 2019. Drainage was added, new base and surface installed, extensive pruning was done and brush cleared providing enhanced opportunity for biking, walking, running, snowshoeing and cross-country skiing. There is a three mile cross-country track course established (Map Below) and the trail is linked to the City of Watertown River Walk.

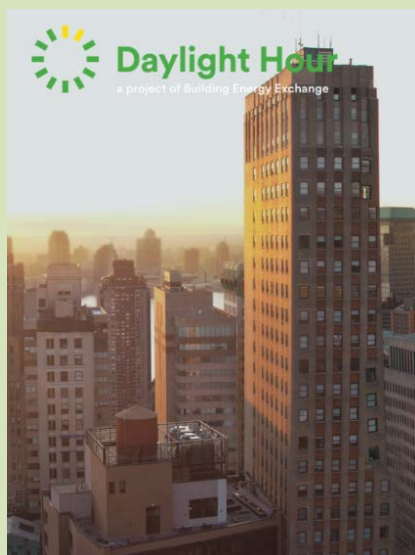


## Campus Crunch

The Evergreen Committee again sponsored the annual "Campus Crunch". This state-wide event celebrates local food on college campuses. It was held on October 24<sup>th</sup> (also Food Day). A half-bin (10 bushels) of New York "Empire" apples were handed out to students, faculty and staff. (That is roughly 1,250 apples!!)

## Solar Power for JCC - 2019 Update

In 2015 JCC entered into a consortium agreement through Jefferson-Lewis BOCES to purchase solar energy. The ground-breaking for the first array took place in 2016 and construction started in October of 2017. This was a significant step for the College with potential to save on energy costs and, just as important, help reduce the campus' overall carbon footprint. In 2018-2019 JCC's share of the solar power was 208,472 KW or approximately 6.0% of use on the main campus. Further arrays are in the planning process. This is a significant step for JCC towards meeting SUNY Energy reduction goals.



### Daylight Hour

On June 21, 2019 JCC again participated in the annual "Daylight Hour. City and State offices as well as private sector offices around the globe participate by turning the lights off in their day-lit offices and posting pictures of the spaces to social media.

Reducing the lighting load during peak periods significantly reduces carbon emissions. At the same time, day-lit spaces are often the most pleasant to spend time in, and studies suggest these spaces promote our health and wellbeing, improve productivity and reduce absenteeism.

The global social media campaign by the Building Energy Exchange to promote the energy, cost and health benefits of using daylight instead of electric lighting in commercial office spaces is the type of activity that fits well with the EverGREEN Committee's mission.

## REV Energy Grant Update

In 2017 JCC was awarded a grant from NYSEDA as part of Governor Cuomo's "Reforming the Energy Vision" (REV) Campus Challenge program. This is a strategy to build a clean, resilient, and affordable energy system for all New Yorkers. The REV Campus Challenge recognizes achievements among institutions of higher education and enables exchange of best practices and lessons learned. The REV Campus Challenge aims to help colleges and universities meet their financial, environmental, academic, and community goals through clean energy solutions that also help scale up total clean energy use in New York State. JCC received \$52,528.00 to provide the campus with technical assistance. The final report was submitted to NYSEDA in May of 2019. Many items were identified on campus that will help provide energy cost-reduction measures in the future.

## Energy CAP

In 2019 JCC began participating in the SUNY Energy CAP program. This program recently became available to Community Colleges and JCC is one of the first to subscribe. This became possible when the SUNY Chancellor requested the Energy Office to provide usage and cost statistics for Community Colleges. EnergyCAP software was already utilized by the State Operated Campus' for cost/use tracking and there were no additional costs \$\$ to Community Colleges to take advantage of all the features within EnergyCAP. JCC will provide monthly total commodity usage and cost data to the Energy Office. EnergyCAP will serve as the hub for Campus vendor, utility, and facility data and JCC will have the benefit of a new software with powerful analysis and reporting functions that benefit building operations, energy management and sustainability, as well as accounting. The SUNY Energy Office is currently doing the initial set-up for JCC staff to maintain that information in the future.



## NYSERDA On-site Energy Manager Program

In January of 2019 JCC received a NYSERDA grant for an On-site Energy Manager (OsEM) program. This project was initiated to continue the work started in the NYSERDA REV Grant that provided an energy study of campus facilities. JCC does not currently have a dedicated energy manager position and uses outside consultants, Trane Inc. and A&E firms to provide guidance on energy savings projects. The college does have a service contract with Trane and relies on their technicians to monitor and provide general oversight as to how the systems are running. Due to staffing and budgetary realities there has been a lack of time to drill down to the micro-level in running the building systems at JCC. The approval of this NYSERDA Grant provides a one-half time FTE OsEM to perform that function and help the team to identify and implement energy management objectives.

The College has set an initial site energy reduction target of 7% for this project. This was felt to be reasonable for JCC as many energy efficiency measures have been done in the past that improved physical plant items. The OsEM - On-site Energy Manager Position was filled by restructuring an existing employee's work load to spend 20 hours each week on this project. The Director of Administrative Services, Mr. Bruce Alexander - LEED AP was selected to fill this role.

To date the program has been very successful. Many low cost / no cost energy conservation measures have been implemented including space temperature set points, building schedules, HVAC equipment operation and lighting. These have realized a significant reduction in campus-wide electrical use - approximately 17% to date. (Below)

	KWh Used		KWh Used
April 2018	213717	April 2019	202725
May 2018	210950	May 2019	177662
June 2018	206204	June 2019	137394
July 2018	213494	July 2019	186645
August 2018	209976	August 2019	180946
September 2018	273531	September 2019	190134
October 2018	210836	October 2019	193846
November 2018	209823	November 2019	181552
		297627 kWh	
		Reduction	
	% 2019 vs. 2018		

## Institutional Support

It should again be noted that College Administration continues to be very supportive of the EverGREEN activities and the Tree Campus program. As with many institutions, JCC is experiencing budget concerns due to decreased enrollment. Finding funds to replant trees and continue to upgrade campus green space will again be challenging in the upcoming year. The Urban and Community Forest Grant is a very important piece of the funding puzzle as it is a pre-requisite to apply for future grant money to do tree maintenance or plant new trees. Once the inventory and tree management plan are completed JCC will apply for additional grant funds as they become available.

Respectfully Submitted:

Bruce Alexander - EverGREEN Committee Co-Chair

Chris Ebey - EverGREEN Committee Co-Chair

12/10/19